HB
238
Gen. Info.
File 2

AS 46.08.030

Says:

It is the intent of the legislature and declared to be the public policy of the state that funds for the abatement of a release of oil or a hazardous substance will always be available. (§ 1 ch 59 SLA 1986)

Sec. 46.08.040. Purposes of the fund. (a) The commissioner may use money from the fund to

(1) investigate and evaluate the release or threatened release of oil or a hazardous substance, and contain, clean up, and take other necessary action, such as monitoring and assessing, to address a release or threatened release of oil or a hazardous substance that poses an imminent and substantial threat to the public health or welfare, or to the environment;

(2) pay all costs incurred to

(A) establish and maintain the oil and hazardous substance response office;

(B) review oil discharge prevention and contingency plans submitted under AS 46.04.030;

(C) conduct training, response exercises, inspections, and tests, in order to verify equipment inventories and ability to prevent and respond to oil and hazardous substance release emergencies, and to undertake other activities intended to verify or establish the preparedness of the state, a municipality, or a party required by AS 46.04.030 to have an approved contingency plan to act in accordance with that plan; and

(D) verify or establish proof of financial responsibility required by AS 46.04.040;

(3) pay the expenses incurred by the Alaska division of emergency services for the oil and hazardous substance response corps and the oil and hazardous substance response depots when presented with appropriate documentation by the division;

(4) provide matching funds for participation in federal oil discharge cleanup activities and under 42 U.S.C. 9601 — 9657 (Comprehensive Environmental Response, Compensation, and Liability Act of 1980);

(5) recover the cost to the state or to a municipality of a containment and cleanup resulting from the release or the threatened release of oil or a hazardous substance;

(6) prepare, review, and revise

(A) the state's master oil and hazardous substance discharge prevention and contingency plan required by AS 46.04.200; and

(B) a regional master oil and hazardous substance discharge prevention and contingency plan required by AS 46.04.210; and

(7) restore the environment by addressing the effects of an oil or hazardous substance release.

(b) When the governor declares a disaster related to an oil or hazardous substance discharge emergency under AS 26.23.020(c), the governor may, during the effective period of the disaster emergency, use money from the fund to respond to the disaster emergency.

(c) Notwithstanding other provisions of this section, money from the fund may not be used for a purpose specified in (a)(2)-(7) of this section unless funds are available from an appropriation made specifically for that purpose.

(d) Upon a request from the Alaska Legislative Council, the commissioner shall use money from the fund to reimburse the Alaska Legislative Council for expenditures that it makes for the operation of the Citizens' Oversight Council on Oil and Other Hazardous Substances; established under AS 24.20.600. (§ 1 ch 59 SLA 1986; am § 3 ch 90 SLA 1989; am § 2 ch 113 SLA 1989; am §§ 14, 15 ch 190 SLA 1990; am § 28 ch 191 SLA 1990; am § 3 ch 199 SLA 1990)

Funding History - Division of Spill Prevention and Response

Prior to Fiscal Year 91 no permanent staff of DEC were charged directly to the Oil andd Hazardous Substance Release Response Fund (Response Fund). In FY90 and 91 DEC experienced large staff growth bringing existing programs to core level and adding additional staff associated with new legislation. Beginning in FY 91 and continuing to present, general funding of the Spill Prevention and Response functions has been gradually eliminated. In addition, regional staff have been shifted from other projects to the Spill Prevention and Response projects commensurate with the work load in the respective regions.

STAFFING - FISCAL YEAR 89

FY 89 (est)	FTEs	Gen Fund	Resp Fund	Other Funds
SPPM	19.5	758.5	0.0	226.2
Csites	24.8	1,213.8	0.0	1,457.1
Total	44.3	1,972.3	0.0	1,683.3

LEGISLATION ENACTED 89 SESSION

SLA89 Chapter 29 SB256

Required Department of Law to seek cost recovery at the request of DEC.
Clarified Municipal reimbursements from Response Fund.

SLA 89 Chapter 39 HB68

Authorized DEC to use liens against property as security for State expenditures.

SLA 89 Chapter 112 SB260

Established nickel a barrel surcharge on regulated industry production.

SLA 89 Chapter 90 SB261

Required DEC to prepare and annually revise State Master Plan and Regional Plans.
Authorized DEC to use Response Fund to pay costs of State Master Plan and Regional Plans.
Expanded the uses of the Response Fund to include restoration of the environment by addressing the effects of a release or threatened release.

SLA 89 Chapter 113 SB264

Established Response Office in DEC for catastrophic or declared emergency spills.
Established emergency response equipment depots in DEC's response office.
Established emergency response volunteer corps in DEC's response office.
Expanded uses of Response Fund to pay for Response Office and Depot and Corps.

SLA 89 Chapter 41 SB271

Clarified civil penalty for the unpermitted discharge of oil and the failure to implement an oil discharge contingency plan.

STAFFING - FISCAL YEAR 90

FY 90 (est)	FTEs	Gen Fund	Resp Fund	Other Funds
SPPM	25.0	1,013.3	0.0	235.6
Csites	36.3	876.4	0.0	1,863.5
Total	61.3	1,889.7	0.0	2,099.1

Analysis of Staffing Change from FY 89 to FY 90

The FY90 operating budget request included a structural change from multiple components for individual programs such as Air, Oil, Water to the large single component Environmental Quality (EQ) Projects. The SPPM and Csites projects were included in the EQ Projects component.

Staff increased in the SPPM project in FY 90 due to DEC implementation of a multi year plan to increase staffing to core level necessary to meet statutory, regulatory and legislative intent requirements. Prior to these increases, DEC was not meeting those requirements. The FY 90 increment established a small capacity for spill response and seasonal positions to inspect tankers and facilities for compliance with contingency plan requirements.

Contaminated Sites staff increased in FY 90 due to inclusion of Kenai cleanup project staff previously funded as non permanent or in the CIP budget in the operating budget request. These staff identify and cleanup existing contaminated sites on the Kenai Peninsula which pose a threat to public health.

LEGISLATION ENACTED 90 SESSION

SLA90 Chapter 141 HB315

Categorized environmental crimes and determined appropriate level of criminal behavior for each.

SLA90 Chapter 142 HB316

Established the level of criminal damages to be assessed in fines against organizations for damages caused by environmental crimes.

SLA90 Chapter 190 HB566

Added incident command system requirement to State and Regional Plans.
Required DEC to use the State plan to designate depot and response corps locations .
Required DEC to submit the State master and Regional plans and revisions to the State Emergency Response Commission for review and approval.

Transferred responsibility to establish depots and corps to Division of Emergency Services.
Expanded uses of Response Fund to include DES reimbursement for depots and corps.
Established State Emergency Response Commission (SERC).
Established Local Emergency Planning Committees(LEPCs).
Established Hazardous Substance Spill Technology Review Council (HSSTRC).

* SLA90 Chapter 191 HB567

Required industry contingency plans to include prevention measures.
Added certification requirement for approved contingency plans.
Clarified proof of financial responsibility and limits liability for tank vessel or oil barge operations.
Clarified DEC inspections of regulated industries.
Established DEC participation in structural integrity of vessels, barges, pipelines and facilities.
Expanded uses of Response Fund to include:

Review of oil discharge prevention and contingency plans
Conduct training, response exercises, inspections and tests to verifiy inventories and ability of state, municipality or parties required to have an approved contingency plan
Verification of financial responsibility

SLA90 Chapter 199 HB578

Established Citizen's Oversight Council
Expanded uses of Response Fund to include Oversight Council costs.

STAFFING - FISCAL YEAR 91

FY 91 (est)	FTEs	Gen Fund	Resp Fund.	Other Funds
SPPM	72.0	1,860.1	3,203.6	0.0
SRO	14.0	0.0	2,703.5	0.0
Csites	41.0	457.8	715.1	1,804.3
Stg Tank Program	11.0	6,009.2	0.0	0.0
Total	138.0	8,327.1	6,622.2	1,804.3

Analysis of Staffing Change from FY 90 to FY 91

FY 91 was the final year of increments to bring the Spill Prevention and Response projects to core level funding. An increment was requested and approved for both the SPPM and Contaminated Sites projects.

The Spill Response Office and Storage Tank Assistance Program were identified as separate projects.

Funding was requested and approved for the Environmental Investigation and Enforcement unit. This unit is responsible for the specialized investigatory and legal resources associated with determination of responsible parties for a release or a contaminated site.

Fiscal notes were attached to HB 566 and HB 567 increasing staffing an additional 22 FTEs to provide resources to perform the additional work necessary to meet the statutory obligations enacted in HB 566 and HB 567.

Additional staff were approved for the Prince William Sound District Office.

LEGISLATION ENACTED 91 SESSION

SLA91 Chapter 48 SB165

Expanded uses of Response Fund to include refurbishment or construction of marine response vessels.

SLA91 Chapter 83 SB25

Expanded uses of Response Fund to municipal grants.

SLA91 Chapter 31 HB194

Required the Board of Marine Pilots to cooperate with DEC in the review and approval of training programs for pilots of tanker vessels.

SLA91 Chapter 92 HB196

Required the Citizen's Oversight Council to submit a report on whether State laws for response action contractor civil liability and vessel contingency plan requirements should be amended.

SLA91 Chapter 09 SB263

Provided a one-year delay to June 1, 1992 for compliance of non crude oil operations with the financial responsibilities in AS 46.04.040.

Authorized DEC to issue interim approval for contingency plan amendments that substantially comply with the requirements of Chapter 191, SLA90.

STAFFING - FISCAL YEAR 92

FY 92 (est)	FTEs	Gen Fund	Resp Fund	Other Funds
Director	6.0	248.7	182.1	0.0
SPPM	69.0	981.8	4,661.5	77.0
SRO	14.0	0.0	1,107.5	0.0
Csites	40.0	414.8	1,182.4	1,949.4
Stg Tank Program	9.0	0.0	0.0	6,700.0
Total	138.0	1,645.3	7,133.5	8,726.4

Analysis of Staffing Change from FY 91 to FY 92

FY 92 budget structure recognized the creation of the Division of Spill Prevention and Response. The Director's Office and Storage Tank Program were separate components in the FY 92 budget request, but, the projects (SPPM, SRO and Csites) continued as a part of the EQ projects budget request.

Overall staffing levels did not increase, but, were re-aligned commensurate with the needed level of effort in the two components and three projects. The process of shifting funding for Spill Prevention and Response work from General Funds to Response Funds began in FY 92 with central office staff.

LEGISLATION ENACTED 92 SESSION

SLA92 Chapter 83 SB540

Required DEC to develop regulations governing the registration and approval of oil spill primary action contractors.

Required DEC to collect fees in the amount necessary to cover the costs of this program.

STAFFING - FISCAL YEAR 93

FY 93 (actual)	FTEs	Gen Fund	Resp Fund	Other Funds
Director	12.0	115.6	1,459.2	0.0
SPPM	72.5	90.8	9,027.5	0.0
Csites	53.5	351.8	4,717.1	2,582.7
Stg Tank Program	7.0	0.0	0.0	3,822.7
Total	145.0	558.2	15,203.8	6,405.4

Analysis of Staffing Change from FY 92 to FY 93

The FY 93 budget structure established the Division of Spill Prevention and Response as a separate BRU with the projects above as separate components. The Spill Response Office was decentralized with expert spill responders in each region. Administrative Support, Safety and Data Management were transferred from the programs to the Director's Office.

Staff were added for Response Fund Management (1), the Department of Defense cooperative agreement (2), Geographic Information Systems (1 - non perm) and the Leaking Underground Storage Tank program (1 - non perm).

Conversion of the Spill Prevention and Response effort from General Funds to Response Funds continued focusing on regional efforts leaving the Division with 393.0 in General Funds and 165.2 in General Fund Match.

STAFFING - FISCAL YEAR 94

FY 94 (request)	FTEs	Gen Fund	Resp Fund	Other Funds
Director	13.0	0.0	1,296.7	36.4
SPPM	75.2	0.0	8,105.2	225.0
CSites	57.2	165.2	3,727.5	2,225.0
Stg Tank Program	10.0	0.0	0.0	6,621.9
Total	155.4	165.2	13,129.4	9,108.3

Analysis of Staffing Change from FY 93 to FY 94

Non permanent staff previously off budget were included in the FY 94 budget request. Historically the department had not included those positions in budget requests and requested revised programs to move monies from contractual to personal services to pay for non perms.

Non permanent staff are included in the FY 94 operating budget request as follows:

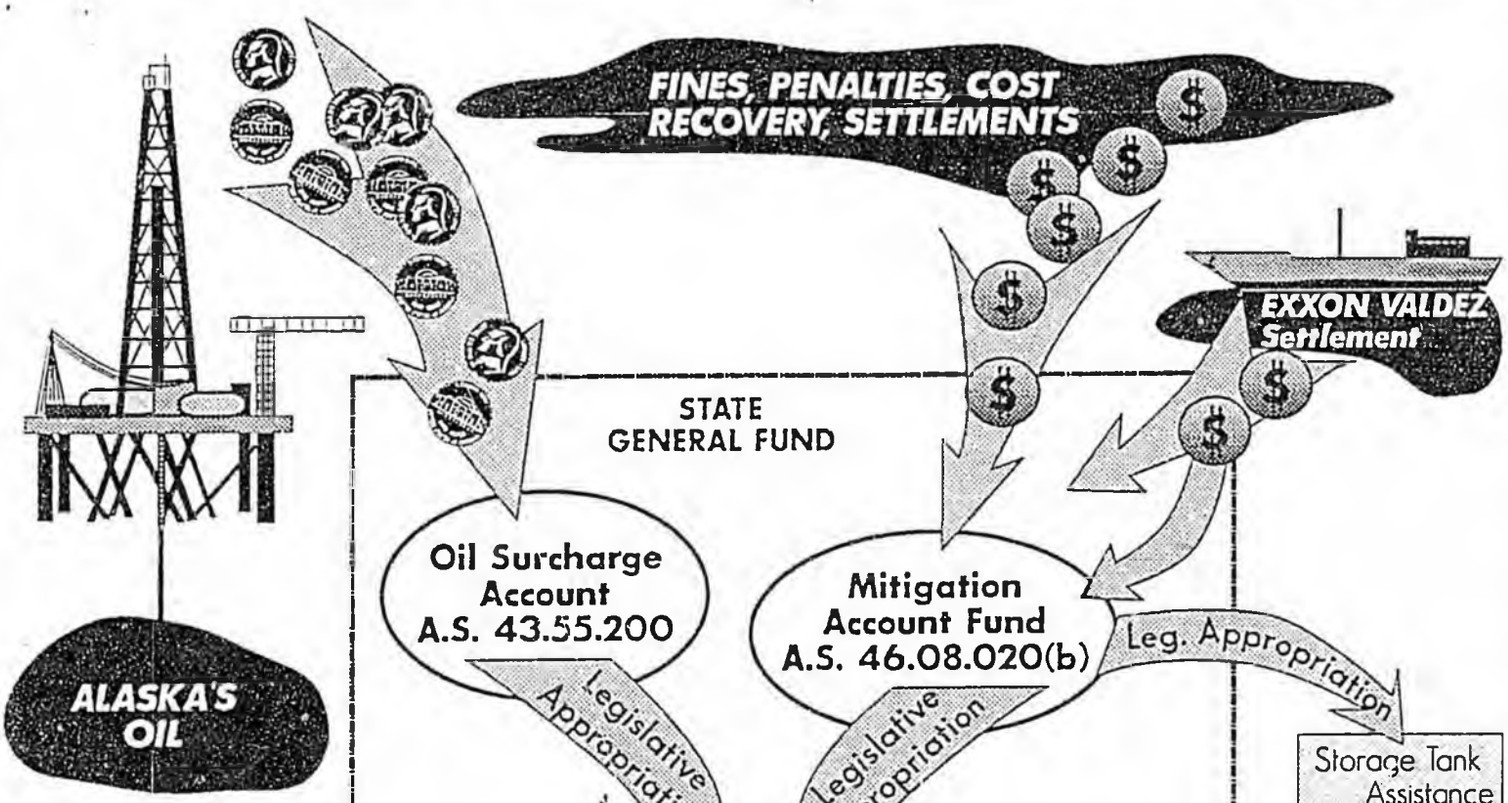
Director's Office - 1 Non Perm Student Intern
Spill Prevention Planning and Management - 1 Non Perm Environmental Specialist
Contaminated Sites - 3 Non Permanent Environmental Specialists
Storage Tank Program - 2 Environmental Specialists (seasonal) and 1 Clerk Typist (seasonal)

A permanent position was added in the Contaminated Sites Program (Site Discovery) and a long term non permanent position in the Underground Storage Tank Program was brought on budget as a permanent part time position.

Regional budgets included an additional .4 FTEs not previously assigned to Spill Prevention and Response projects.

All general funds were eliminated leaving 165.2 in general fund match in the budget request.

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OTHER AGENCIES

Military and Veterans Affairs (DES)
- Response Preparedness & Planning
- Response Depots & Corps
- Hazards Analysis

Transportation and Public Facilities
- Oil Response Ferries

Law
- Cost Recovery
- Regulations/Guidance

Public Safety
- Environmental Crimes
- 24-Hour Dispatch

Fish and Game
- Contingency Plan Reviews

Natural Resources
- Contingency Plan Reviews

Administration
- Telecommunications Installation/Maintenance

State Emergency Response Commission

Citizens' Oversight Council - not funded in FY94

ENVIRONMENTAL CONSERVATION

State Emergency Response Commission
Local Emergency Planning Committees
Hazardous Substance Spill Technology Review Council
Contaminated Sites
Government Preparedness and Response
Industry Preparedness and Response
Pollution Prevention
Geographic Information Systems

SPILL RESERVE (Emergency Reserve)

Alaska's Oil and Hazardous Substance Release Response Fund — Prepared by ADEC 4/93

SPILL RESERVE EXPENDITURES BY FISCAL YEAR

(in thousands)

	FY 90	245.5
	FY 91	256.8
	FY 92	71.4
	FY 93	299.3
(to date 11/22)	FY 94	272.5
	TOTAL	1,145.5

*note: Expenditures for FY 94 include 156.7 for Project Chariot which will be reimbursed by a federal grant.

SPILL RESERVE AS A PERCENTAGE OF TOTAL RESPONSE FUND EXPENDITURES

0.9 %

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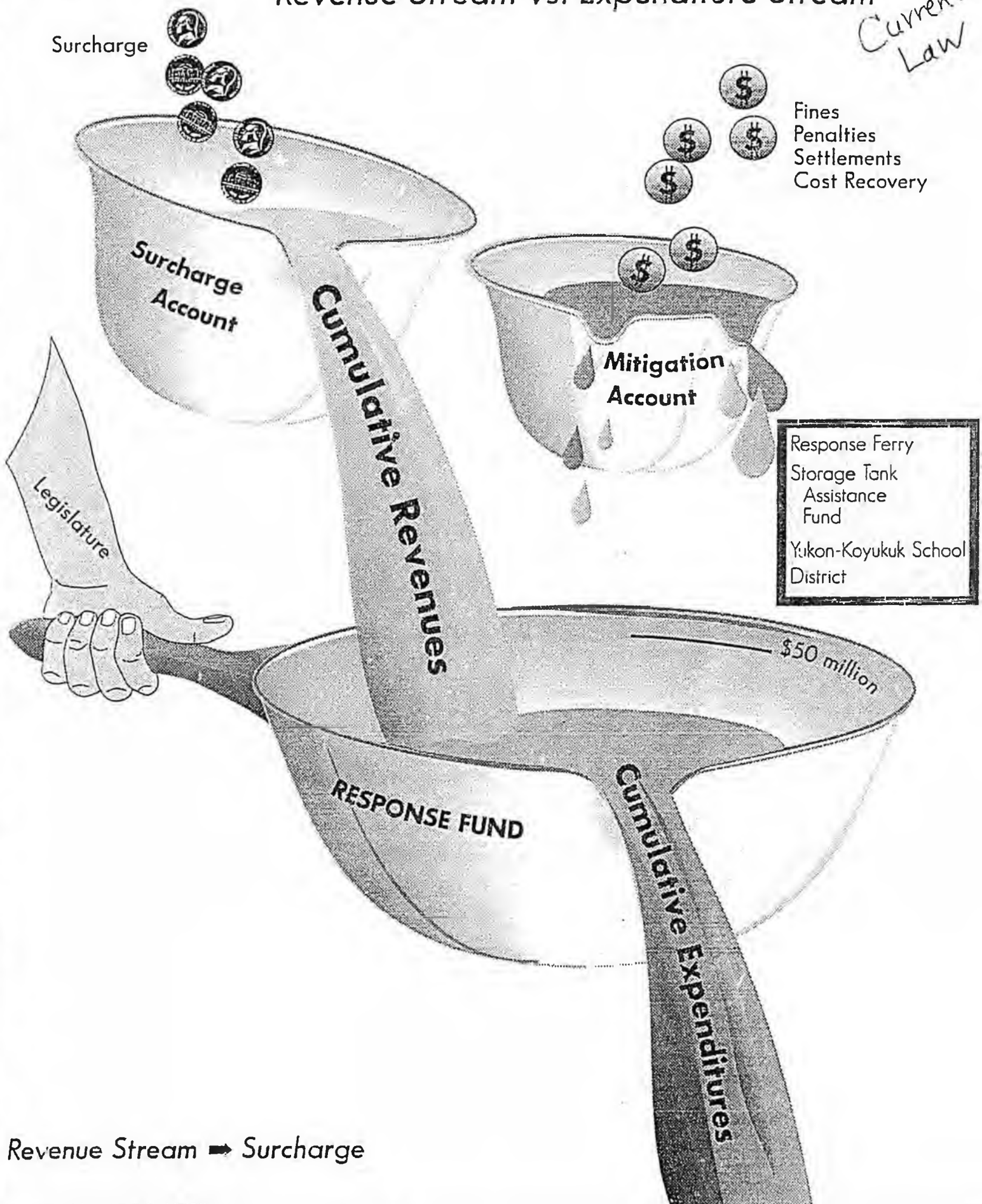
Response Fund Summary as of November 6, 1993

	AS 43.55.230(b) Calculation	Response Fund
Cummulative Surcharge Collected	112,086,145	109,200,000
Cummulative Expenditures	-127,190,873	-127,190,873
Difference	-15,105,728	-17,990,873
Cummulative Other Deposits		
General Fund	0	44,447,000
Program Receipts	0	30,000,000
Mitigation Account	0	5,007,800
Miscellanous/Accounts Receivable	0	-3,048,952
Reserve For Encumbrances	0	-8,880,882
Reserve For Capital Appropriations	0	-3,181,125
Reserve for FY 94 Operating Appropriations (Excluding Spill Reserve Appropriation)	0	-9,302,318
Balance or Spill Reserve	-15,105,728	37,229,869

OIL CONSERVATION SURCHARGE TAX

Revenue Stream vs. Expenditure Stream

Current Law



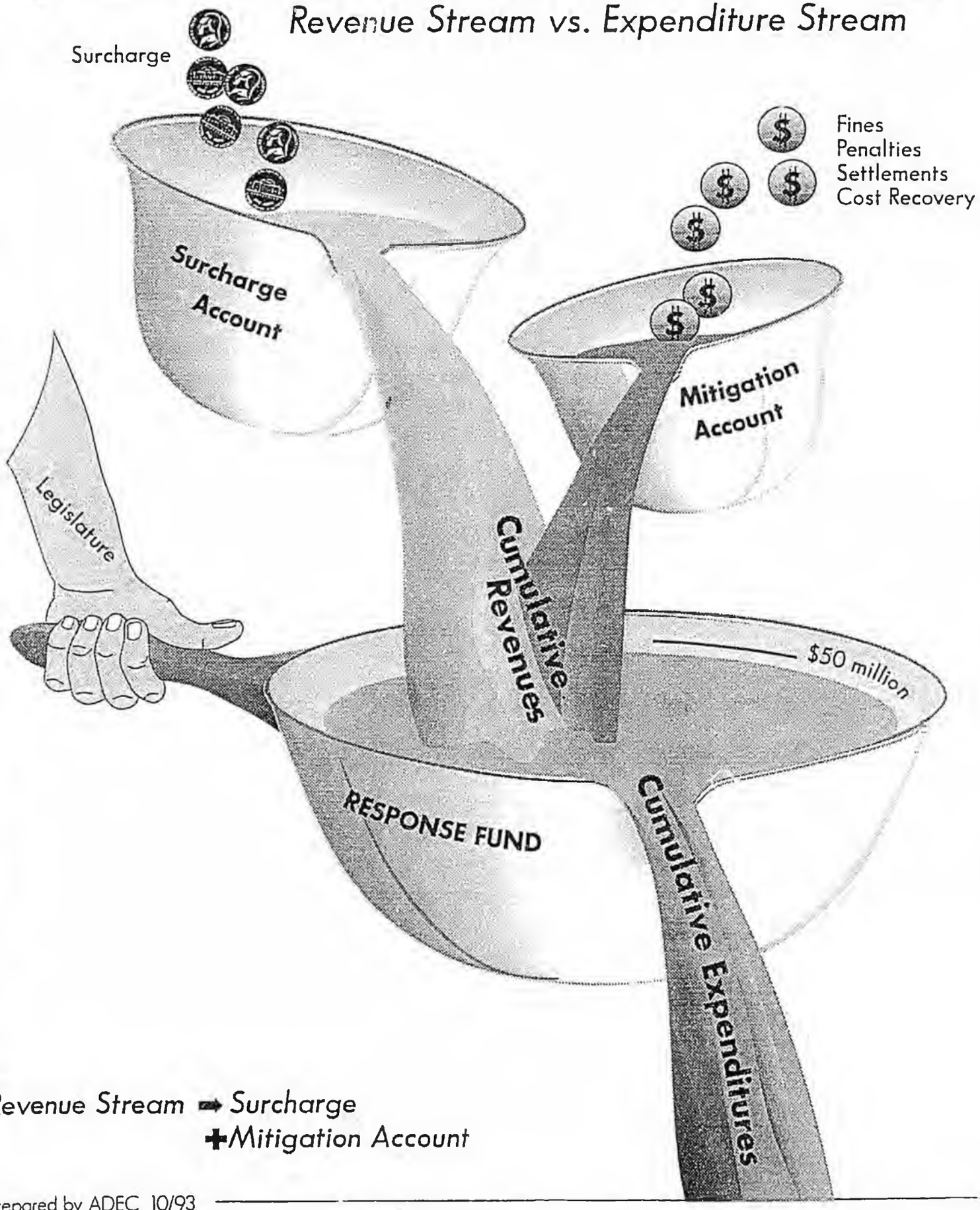
Revenue Stream ➡ Surcharge

Prepared by ADEC 10/93

Proposed Statutory Change (DEC's ~~new proposal~~)

OIL CONSERVATION SURCHARGE TAX

Revenue Stream vs. Expenditure Stream

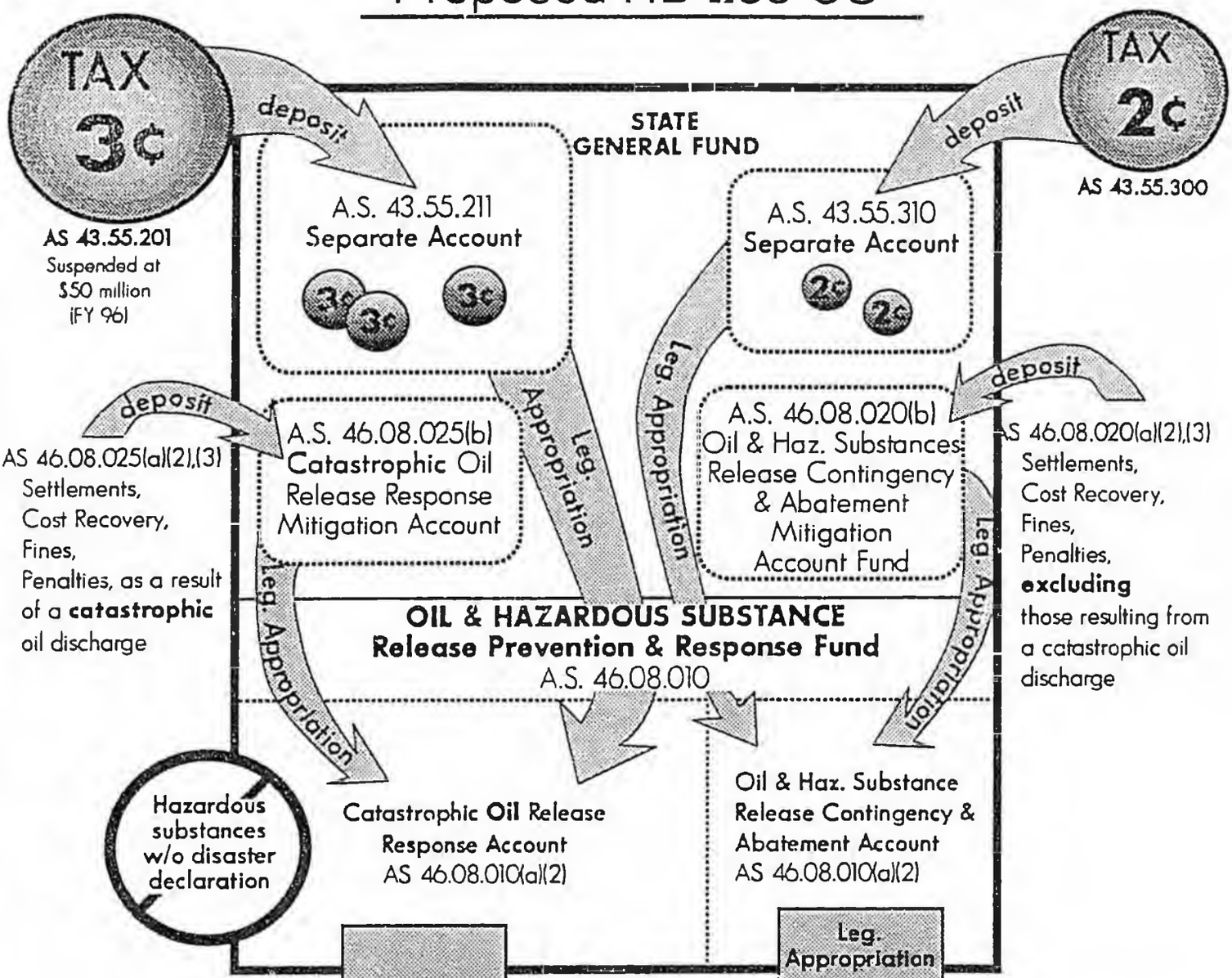


Revenue Stream ➡ Surcharge
➕Mitigation Account

Prepared by ADEC 10/93

HB 238-Version D

Proposed HB 238 CS



4,200,000 gallons!

30 day max. w/o concurrent resolution; may require special session

Accessed ONLY in the event of a catastrophic oil spill - over 100,000 barrels AS 46.04.900(2)(a)

OR

Declaration of a disaster emergency by the Governor - oil and hazardous substances AS 46.04.900(2)(b)

RESTORATION ???

~~RESEARCH & DEVELOPMENT~~

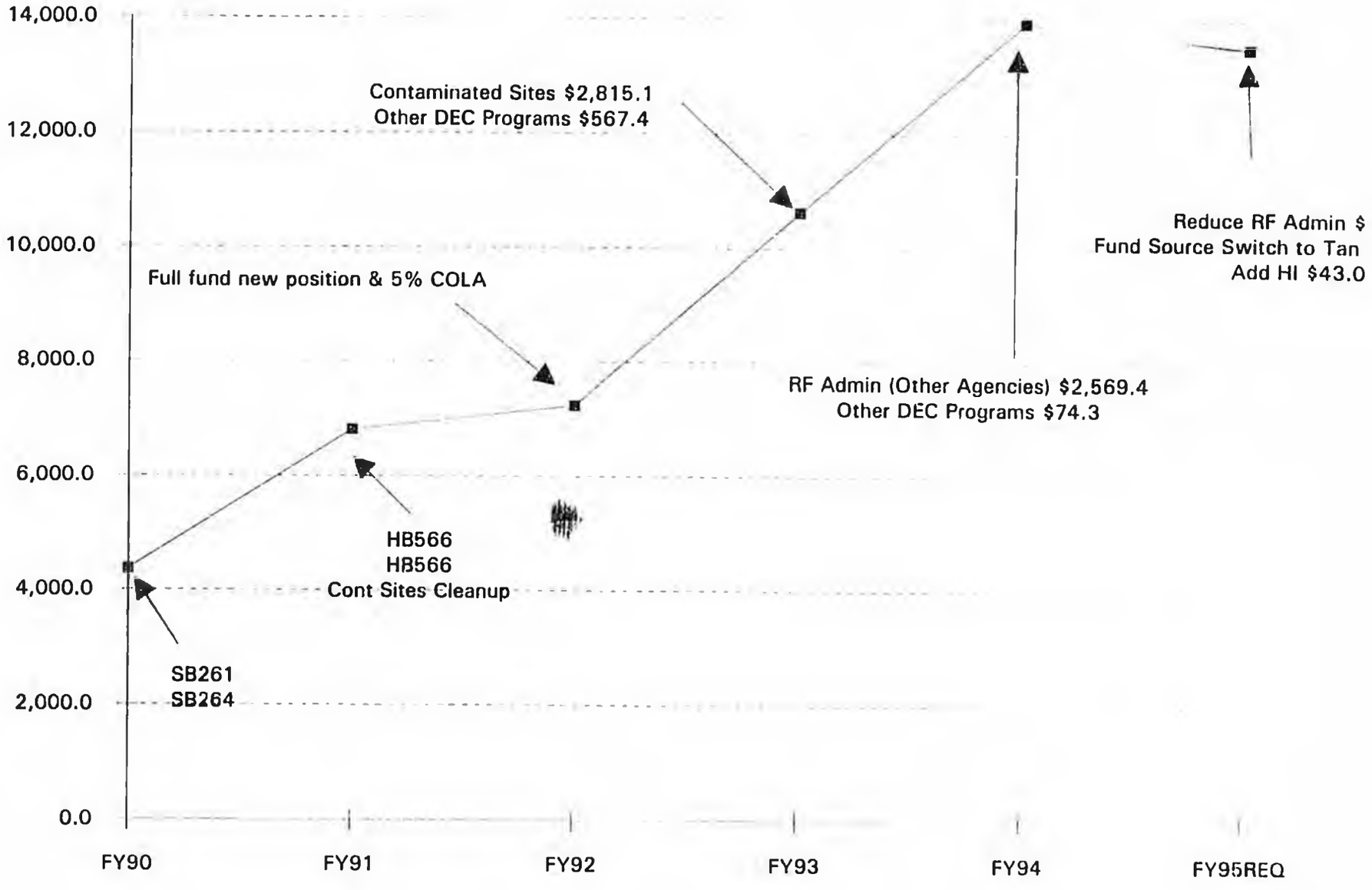
- Investigate and evaluate release or threatened release of oil or a hazardous substance (non-catastrophic)
- Cost recovery
- State master plan
- Oil and Hazardous Substance Response Office
- Contingency plan review
- Response preparedness and training
- Depots & corps DMVA/DES

RESTORATION ???

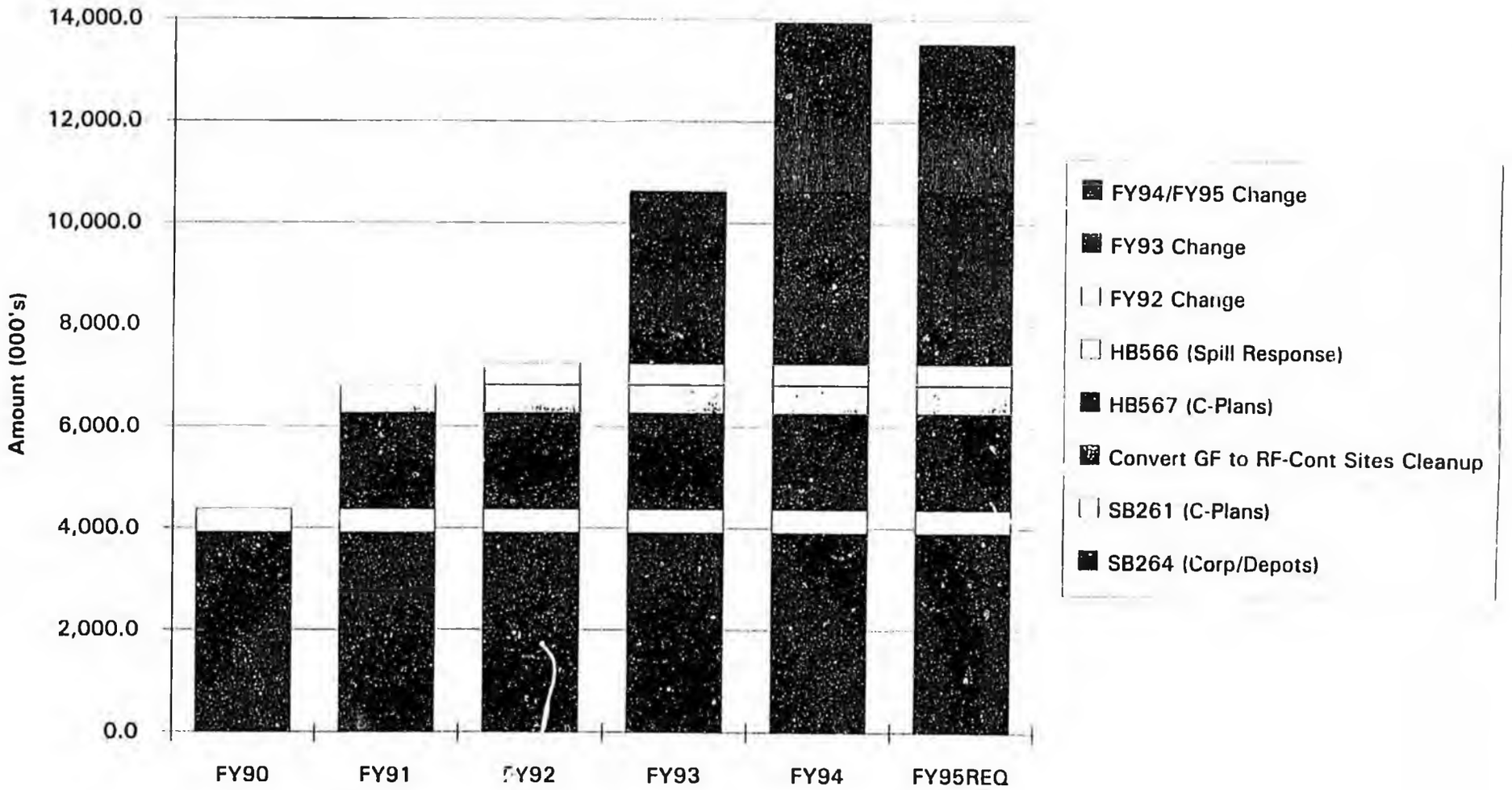
~~RESEARCH & DEVELOPMENT~~

Prepared by ADEC 4/93

Department of Environmental Conservation
Response Fund Operating Budget Growth



Department of Environmental Conservation
Response Fund Operating Budget Growth



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Response Fund Appropriations

Department of Environmental Conservation

3/1/94

Operating Budget Only

Funding Auth	Operating Budget Items RF	GF	OTHER	Comments
FY90	**4,371.8**			
	3909.9			SB264(Corps & Depots)
	461.9			SB261(C-Plans)
FY91	**2,439.0**			
	518.0	(518.0)		Convert GF to RF for Cont Sites cleanup
	1,371.0			HB567(C-Plans)
	550.0			HB566 (Spill Response)
FY92	**434.3**			
	485.2			Full fund new fiscal note positions & 5% COLA
	182.1	(182.1)		Convert GF to RF for SPAR Director component
	(233.0)			Move Kenai cleanup to front of budget($280.0), $47.0 other miscellaneous
FY93	**3,382.5**			
	1,582.7			Contaminates Sites conversion from Non-operating to operating budget
	639.1	(639.1)		IAS Component conversion from GF to RF
	181.3	(181.3)		SPAR Director Component conversion from GF to RF
	102.3			SRO(Spill Response Office) component increment for response preparedness, safety & equipment
	(355.3)			SPPM(Spill Prevention/Planning Mgt) component -reduce projects/delete 1PFT to STR Council
	1,232.4			Contaminated Sites
FY94	**3,312.4**			
	101.5			IAS Component
	123.0			EQ Director Component-Pollution Prevention
	186.5			EQ Monitoring & Lab Component
	108.0			Storage Tanks
	224.0			Increment to SouthCentral Region for Cont Sites & Spill Response
	2,569.4			Response Fund Administration Component-other Agency funding
FY95 Request	**(417.4)**			
	(358.4)			Reduce RF Admin Component $358.4
	(102.0)		102.0	Fund Source switch to Tanks $102.0
	43.0			Increase Health Insurance - all Components
RF Total	**13,522.6**			**Less Projected Spill Reserve $49,686.8**

Audit Report



DEC

DEPARTMENT OF ENVIRONMENTAL
CONSERVATION
OIL AND HAZARDOUS SUBSTANCE
RELEASE RESPONSE FUND

January 10, 1994

Audit Control Number:

18-4463-94

Division of Legislative Audit
P.O. Box 113300, Juneau, Alaska 99811-3300

LEGISLATIVE BUDGET AND AUDIT COMMITTEE

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The Legislative Budget and Audit Committee is a permanent interim committee of the Alaska Legislature. The committee is made up of five senators and five representatives, with one alternate from each legislative chamber. The chairmanship of the committee alternates between the two chambers every legislature.

The committee is responsible for providing the legislature with audits of state government agencies. The programs and activities of state government now cost more than $5 billion a year. As legislators and administrators try increasingly to allocate state revenues effectively and make government work more efficiently, they need information to evaluate the work of governmental agencies. The audit work performed by the Division of Legislative Audit helps provide that information.

As a guide to all their work, the Division of Legislative Audit complies with generally accepted auditing standards established by the American Institute of Certified Public Accountants and with government auditing standards established by the U.S. General Accounting Office.

Audits are performed at the direction of the Legislative Budget and Audit Committee. Individual legislators or committees can submit requests for audits of specific programs or agencies to the committee for consideration. Copies of all completed audits are available from the Division of Legislative Audit's offices in either Anchorage or Juneau.

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ALASKA STATE LEGISLATURE

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Division of Legislative Audit

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Juneau, AK 99811-3300
(907) 465-3830
FAX (907) 465-2347

January 10, 1994

Members of the Legislative Budget
and Audit Committee:

In accordance with the provisions of Title 24 of the Alaska Statutes, the attached report is submitted for your review.

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
OIL AND HAZARDOUS SUBSTANCE RELEASE RESPONSE FUND

January 10, 1994

Audit Control Number

18-4463-94

The objective of the audit was to review policy issues relating to the Oil and Hazardous Substance Release Response Fund within the Department of Environmental Conservation.

The audit was conducted in accordance with generally accepted government auditing standards. Fieldwork procedures utilized in the course of developing the findings and discussion presented in this report are discussed in the Objectives, Scope, and Methodology beginning on page one.

Randy S. Welker, CPA
Legislative Auditor

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OBJECTIVES, SCOPE, AND METHODOLOGY

In accordance with Title 24 of the Alaska Statutes and a special request by the Legislative Budget and Audit Committee, we conducted a review of policy issues relating to the Oil and Hazardous Substance Release Response Fund (Response Fund) administered by the Department of Environmental Conservation (DEC).

Objectives

The objective of the review was to gain an understanding of policy issues relating to the Response Fund. Specific objectives of the review were to:

1. Review the history of the Response Fund; including the original purposes of the fund, the reasons for establishing a 5¢ per barrel of oil surcharge, and the current purposes of the Response Fund.

2. Determine the criteria DEC uses in its decisions to fund certain projects and whether the criteria is consistent from project to project.

3. Determine what accounting procedures are currently in place that allow the legislature to track where and how Response Funds are being spent.

4. Recommend possible statutory changes that will clarify how Response Fund monies should be administered by agencies outside of DEC.

Scope

We focused our examination on the legislative history of the Response Fund, the budgeting process for FY 91 through FY 94, and FY 92 and FY 93 expenditures that were related to selected projects.

Methodology

Our evaluation of policy issues relating to the Response Fund involved review and analysis of the following documents:

1. Alaska Statute 46.08, Oil and Hazardous Substance Releases.

2. Information pertaining to 1986's House Bill 470 which eventually passed as Chapter 59, SLA 1986.

3. Information pertaining to 1989's Senate Bill 247 which eventually passed as Chapter 13, SLA 1989.

4. Information pertaining to 1989's Senate Bill 256 which eventually passed as Chapter 29, SLA 1989.

5. Information pertaining to 1989's House Bill 68 which eventually passed as Chapter 30, SLA 1989.

6. Information pertaining to 1989's Senate Bill 261 which eventually passed as Chapter 90, SLA 1989.

7. Information pertaining to 1989's Senate Bill 260 which eventually passed as Chapter 112, SLA 1989.

8. Information pertaining to 1989's Senate Bill 264 which eventually passed as Chapter 113, SLA 1989.

9. Information pertaining to 1990's House Bill 566 which eventually passed as Chapter 190, SLA 1990.

10. Information pertaining to 1990's House Bill 567 which eventually passed as Chapter 191, SLA 1990.

11. Information pertaining to 1990's House Bill 578 which eventually passed as Chapter 199, SLA 1990.

12. Information pertaining to 1991's Senate Bill 165 which eventually passed as Chapter 48, SLA 1991.

13. Information pertaining to 1991's Senate Bill 25 which eventually passed as Chapter 83, SLA 1991.

14. Fiscal Years 1991, 1992, 1993, and 1994 budget documents related to the Response Fund.

15. Fiscal Years 1991, 1992, and 1993 Reimbursable Services Agreements between DEC and other agencies and between divisions within DEC for use of Response Funds.

16. Response Fund Annual Reports for FY 87 through FY 93.

17. DEC Policy Statements on the Response Fund.

18. Attorney General Opinions and memorandums on the Response Fund.

19. Industry contingency plans and corresponding documentation maintained at DEC.

20. Documents pertaining to DEC spill responses through November 8, 1993.

21. DEC database information and other documentation related to contaminated sites.

22. Oil Spill Commission Final Report.

23. A pamphlet put out by the Prince William Sound Regional Citizens' Advisory Council entitled "*Then and Now: Changes Since the Exxon Valdez Oil Spill.*"

24. Newspaper coverage regarding the Response Fund and its usage.

Additionally, we interviewed the following:

1. Staff within DEC.

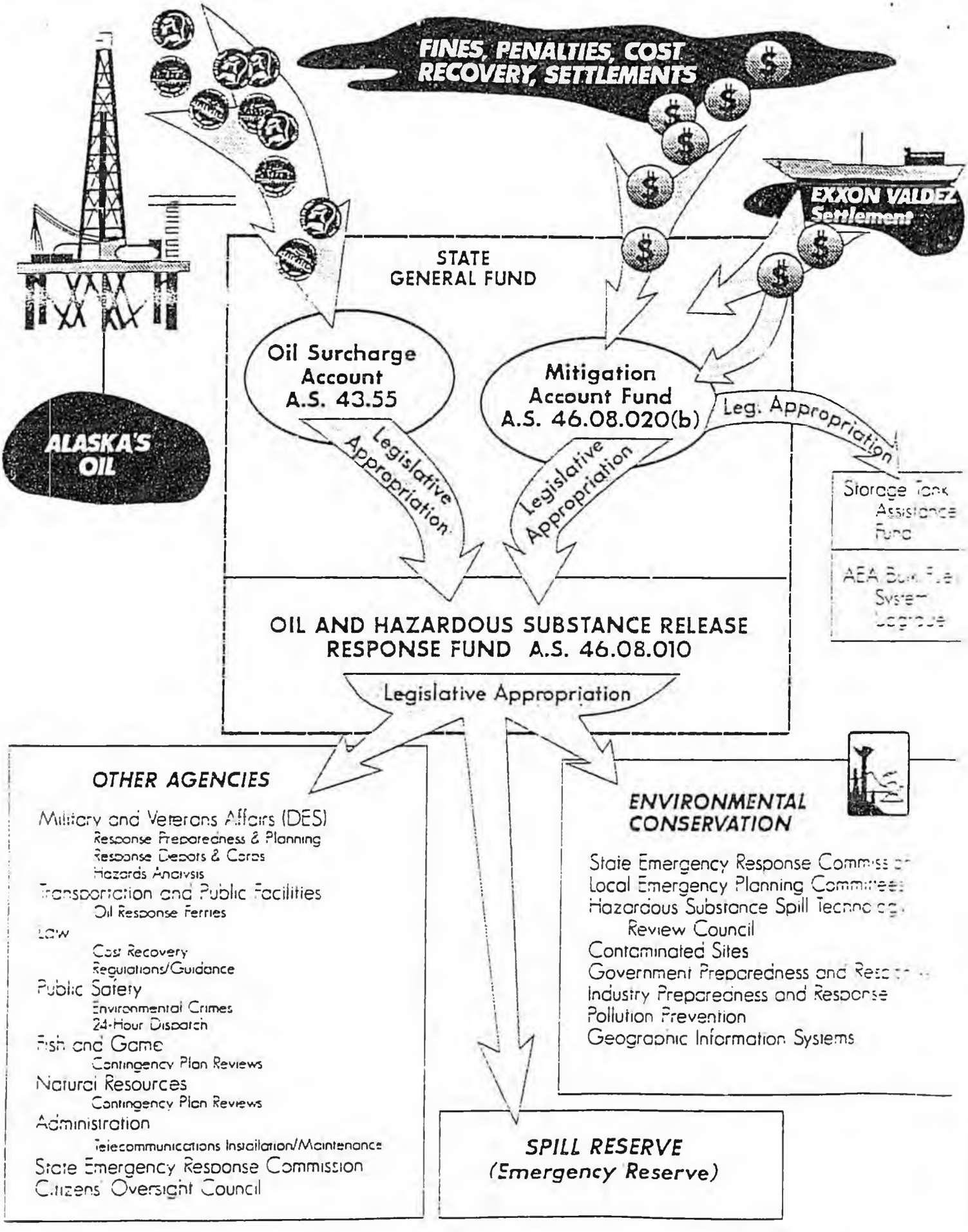
2. Staff within Department of Military and Veterans Affairs.

3. Staff within Division of Legislative Finance.

4. Staff of Office of the Governor, Office of Management and Budget.

5. Staff within Division of Legal Services.

6. Chairman of the former Alaska Oil Spill Commission and current chairman of Hazardous Substance Technology Review Council.



Alaska's Oil and Hazardous Substance Release Response Fund

Prepared by ADEC

ORGANIZATION AND FUNCTION

The 1986 Alaska State Legislature passed House Bill (HB) 470 (Ch 59, SLA 86), a bill relating to the release of oil and hazardous substances. This legislation established an Oil and Hazardous Substance Release Response Fund (Response Fund) on July 1, 1986 with appropriations from three different sources totalling $680,666: $158,677 from the balance of the Oil Spill Mitigation Account, $221,989 from the balance of the Oil Spill Expense [illegible] and a [illegible]0,000 FY 87 capital budget appropriation. The facing page illustrates flows into and out of the Response Fund.

Between 1986 and 1989, deposits into the Response Fund were made from general fund appropriations and from the Oil and Hazardous Substance Release Mitigation Account (mitigation account). This account is composed of money recovered from parties responsible for oil and hazardous substance spills through cost recovery and fines, penalties, or damages. Money in the mitigation account may be appropriated each year to the Response Fund. In the past, the legislature has also appropriated money from the mitigation account into the storage tank assistance fund and to the Alaska Energy Authority's program directed at upgrading bulk fuel storage systems.

In 1989, the legislature enacted statutes which levied a surcharge of 5c per barrel of taxable oil produced from each lease or property in the State. The commissioner of the Department of Administration accounts for the money in a separate general fund account, which is commonly called the Oil Surcharge Account (surcharge account). As explained on page 13 in Background Information, the surcharge is subject to suspension and reimposition if certain criteria are met. Between FY 87 and FY 94, a total of $109,200,000 has been appropriated to the Response Fund from the surcharge account and $5,033,600 has been appropriated from the mitigation account. In addition, the legislature has appropriated in excess of $74,000,000 from the general fund to the Response Fund through FY 93.

Money left over in the Response Fund after all appropriations have been made to agencies for their operating costs has been appropriated to the spill reserve. The spill reserve may be accessed by the Department of Environmental Conservation (DEC) only for costs necessary to investigate, evaluate, contain, clean up, and take other necessary action to address a release or threatened release of oil or a hazardous substance that poses an imminent and substantial threat to the public health or welfare, or to the environment. DEC does not budget for "response" to releases of oil or other hazardous substances, so all spill reserve expenditures are unbudgeted response activities.

DEC can only make expenditures out of the Response Fund with specific legislative appropriation, except for emergency releases of oil or hazardous substances paid out of the spill reserve. Each year the legislature determines what projects and activities will be paid for out of the Response Fund. In addition to DEC, twelve state agencies have been funded with monies from the Response Fund. These agencies have been active in contingency plan review, state master and regional contingency planning, and working with the State Emergency Response Commission.

Spill Prevention and Response Division

Within DEC, the primary user of the Response Fund is the Spill Prevention and Response Division (SPAR). SPAR was created in July 1991 for the purpose of preventing and responding to negative impacts to public health and the environment caused by oil and hazardous substance spills. The division administers four programs:

1. The Government Preparedness and Response Program (GPRP) was developed to protect public health and the environment by ensuring a planned and safe response to releases or threatened releases of oil or hazardous substances. The emphasis of this program is on the State's ability to prevent and respond to spills. The program is responsible for facilitating local, regional, and statewide response preparedness. To achieve this, GPRP prepares, reviews, and revises state and regional prevention and response plans for oil and hazardous discharge. An integral part in the planning process is the State Emergency Response Commission (SERC).

   GPRP provides staff support to SERC. SERC evolved from the federal Superfund Amendments and Reauthorization Act (1986). This legislation required the State to minimize the impact on human health and the environment from oil and hazardous substance releases by facilitating local, regional, and statewide response planning. SERC was established by executive order in 1987 but did not become operational until FY 91.

   The commission is comprised of the commissioners or their designees of eight state agencies, the adjutant general or his designee, and seven public members appointed by the governor. To the extent practicable, public members have expertise in the emergency response field. The main duties of the group are to designate Local Emergency Planning Districts, appoint the membership of Local Emergency Planning Committees (LEPCs), comment on local emergency plans, provide technical assistance to LEPCs, and receive and process information requests from the public.

2. The Industry Preparedness Program (IPP) focuses on the oil industry's ability to prevent and respond to releases or threatened releases of oil. Statute requires industry to submit proof they have both the financial ability and physical ability to respond to releases. Their physical ability is demonstrated by a contingency plan which must be approved before obtaining a permit to operate. Contingency plan requirements apply to oil tank vessels, barges, crude oil pipelines, and onshore and offshore oil exploration and production facilities. In addition, oil terminal facilities that contain an amount of product specified in statute must have a contingency plan. IPP is responsible for reviewing, approving, and testing contingency plans as well as ensuring operators meet the financial responsibility requirements set out in statute.

3. The Contaminated Sites Remediation Program was created to abate threats to public health and the environment posed by sites contaminated by improper disposal or discharges of hazardous substances. The number of contaminated sites is large and ever increasing. The program attempts to identify and assess contaminated sites and

ascertain their potential threat to public health and the environment. With this information, contaminated sites can be prioritized so those sites posing the greatest threat are addressed first. The method by which the program addresses a contaminated site depends on the identity of the party responsible for the contamination. Cooperative agreements are in place with the federal government to clean up sites where the federal government is the responsible party. A memorandum of agreement exists between several state departments to address those sites where the State is the responsible party. For sites where a responsible party is willing to help clean up, the program provides oversight. If a site poses a substantial threat and no responsible party has been identified or the responsible party is unable or unwilling to clean up, the State will take the lead cleanup efforts.

4. The Underground Storage Tank program assists owners and operators in meeting federal regulations. These regulations require new underground storage tank installations to meet national standards and tanks already in operation phase-in to meet those standards. Federal law also requires each facility to demonstrate financial responsibility in the event of a spill. In Alaska, a Storage Tank Assistance Fund was established which offers grants and loans to owners and operators to test, clean up, upgrade, or close their facilities. The Storage Tank Assistance Fund receives monies from the mitigation account thereby reducing funding that flows from the mitigation account into the Response Fund.

These four programs are developed and managed by the director of SPAR. Program managers are centralized in SPAR's central office and their role is to develop policy and provide technical guidance to the four regions of DEC so that programs are implemented in an effective and consistent manner across regions.

DEC has been divided into Northern Region, Southcentral Region, Southeast Region, and Pipeline Corridor Region. Regional managers report directly to the commissioner and are responsible for making sure SPAR program objectives, as well as other divisions' program objectives, are accomplished. Regional offices assume line authority of district and field office staffs. Actual work on contaminated sites, spill response, spill drill and inspections, and review of contingency plans is accomplished primarily by district offices with support from their region.

PURPOSES OF THE RESPONSE FUND
AS 46.08.040

Senate Bill 25 [Ch 83, SLA 91]	(a) In addition to money in the fund that is transferred to the commissioner of community and regional affairs to make grants under AS 29.60.510 and to pay for impact assessments under AS 29.60.560, the commissioner of environmental conservation may use money from the fund to
Senate Bill 261 [Ch 90, SLA 89]	(1) investigate and evaluate the release or threatened release of oil or a hazardous substance and
House Bill 470 [Ch 59, SLA 86]	contain, clean up, and take other necessary action, such as monitoring and assessing, to address a release or threatened release of oil or a hazardous substance that poses an imminent and substantial threat to the public health or welfare, or to the environment;
Senate Bill 264 [Ch 113, SLA 89] reworded by: HB 567 [Ch 191, SLA 90] HB 566 [Ch 190, SLA 90]	(2) pay all costs incurred to (A) establish and maintain the oil and hazardous substance response office;
House Bill 567 [Ch 191, SLA 90]	(B) review oil discharge prevention and contingency plans submitted under AS 46.04.030; (C) conduct training, response exercises, inspections, and tests, in order to verify equipment inventories and ability to prevent and respond to oil and hazardous substance release emergencies, and to undertake other activities intended to verify or establish the preparedness of the state, a municipality, or a party required by AS 46.04.030 to have an approved contingency plan to act in accordance with that plan; and (D) to verify or establish proof of financial responsibility required by AS 46.04.040;
Senate Bill 264 [Ch 113, SLA 89] reworded by: HB 567 [Ch 191, SLA 90] HB 566 [Ch 190, SLA 90]	(3) pay the expenses incurred by the Alaska division of emergency services for the oil and hazardous substance response corps and the oil and hazardous substance response depots when presented with appropriate documentation by the division;

House Bill 470 (Ch 59, SLA 86)	(4) provide matching funds for participation in federal oil discharge cleanup activities and under 42 U.S.C. 9601--9657 (Comprehensive Environmental Response, Compensation, and Liability Act of 1980); (5) recover the costs to the state, a municipality, or a village of a containment and cleanup resulting from the release or the threatened release of oil or a hazardous substance;
Senate Bill 261 (Ch 90, SLA 89)	(6) prepare, review, and revise (A) the state's master oil and hazardous substance discharge prevention and contingency plan required by AS 46.04.200; and (B) a regional master oil and hazardous substance discharge prevention and contingency plan required by AS 46.04.210; and (7) restore the environment by addressing the effects of an oil or hazardous substance release.
House Bill 566 (Ch 190, SLA 90)	(b) When the governor declares a disaster related to an oil or hazardous substance discharge emergency under AS 26.23.020(c), the governor may, during the effective period of the disaster emergency, use money from the fund to respond to the disaster emergency. (c) Notwithstanding other provisions of this section, money from the fund may not be used for a purpose specified in (a)(2)--(7) and (d)(2) of this section unless money is available from an appropriation made specifically for that purpose.
House Bill 578 (Ch 199, SLA 90)	(d) Upon request from (1) the Alaska Legislative Council, the commissioner shall use money from the fund to reimburse the Alaska Legislative Council for expenditures that it makes for the operation of the Citizens' Oversight Council on Oil and Other Hazardous Substances, established under AS 24.20.600; and
Senate Bill 165 (Ch 48, SLA 91)	(2) the commissioner of transportation and public facilities, the commissioner shall transfer money from the fund to the Department of Transportation and Public Facilities to pay for the construction or refurbishment of one or more vessels of the Alaska marine highway system that have the capability to assist in responding to spills of oil and hazardous substances; in expending money in the fund whose use for vessels of the marine highway system is authorized by AS 19.65.025 and this paragraph, the commissioner shall give priority to construction of one or more new vessels that have the characteristics required by this paragraph.

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BACKGROUND INFORMATION

The Response Fund was established with the passage of House Bill 470 in 1986 (Ch 59, SLA 86) by the legislature and the governor signing the bill into law. The bill, which was sponsored by Representative Mike Davis, created the Response Fund in the state general fund. The legislature set out their reason for establishing the Response Fund in the Purpose, AS 46.08.005. In that stated purpose, they declared the release of oil or hazardous substances presents a substantial threat to public health, to the environment, and to the economy of the State. The Response Fund was to provide a readily available fund for the payment of expenses incurred by DEC in protecting the environment fro il and hazardous substances releases.

Original uses of the Response Fund

The commissioner of DEC was named the Response Fund administrator and was authorized to use the fund for three distinct purposes:

1. Contain and clean up, which includes monitoring, assessing, investigating, and evaluating, the release or threatened release of oil or a hazardous substance that poses an imminent and substantial threat to the public health or welfare, or to the environment.

2. Provide matching funds for participation in federal oil discharge cleanup activities.

3. Recover the cost to the State or to a municipality of a containment and cleanup resulting from the release or threatened release of oil or a hazardous substance.

Alaska Statute 46.08.010 specifically disallowed using the fund for capital improvements.[1] During meetings of the House Special Committee on Oil and Gas, the commissioner of DEC explained that he did not want the fund to be viewed only as a means to deal with future spills, but also *"to investigate and deal with sites where poor management of waste disposal may have occurred in the past."*

Original methods to finance the Response Fund

The legislature could appropriate money received from federal, state, or other sources into the Response Fund. Money recovered from parties responsible for the containment and cleanup at a specific site and fines, penalties, or damages recovered because of an oil or hazardous release would be deposited in the general fund into a special account called the mitigation account. The legislature could annually appropriate to the Response Fund a sum

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[1] "Capital improvement" is defined in AS 46.08 to mean *"construction, renovation, repair of, and improvement to, a building, but does not include other improvements to real property, such as construction of a dike or retaining wall."*

equal to the amount received in the mitigation account during the calendar year preceding that legislative session.

Legislature reacts to *Exxon Valdez* grounding

No new legislation was introduced or passed regarding the Response Fund between June 1, 1986, the effective date of the original legislation, and March 24, 1989 when the *Exxon Valdez* hit Bligh Reef in Prince William Sound. After that incident, six bills were enacted in 1989 that affected the Response Fund. The current purposes of the fund with annotation of the bill and date of each section change can be found on pages 8 and 9. Senate Bill 247 (Ch 13, SLA 89) went into effect just 20 days after the *Exxon Valdez* oil spill and was to cover expenditures necessitated by the state response. The legislature appropriated $20 million to the Response Fund, of which $10 million came from the general fund and $10 million came from general fund program receipts, which were to be reimbursement of cleanup costs from Exxon.

Senate Bill (SB) 256 (Ch 29, SLA 89), while being approved by the governor on May 11, 1989, was made retroactive so that the effective date was March 24, the day of the grounding. The bill amended AS 46.08.070 so cost recovery had to be immediately sought by DEC for money expended to contain or clean up oil or a hazardous substance. Previously the statute had allowed DEC to seek cost recovery, but did not require the department to do so. Senate Bill 256 also permitted DEC to reimburse a municipality for actual expenses incurred in the abatement of a release if the municipality entered into an agreement with DEC.[2]

House Bill 68 (Ch 39, SLA 89), which had an effective date of May 13, 1989, provided for strict liability for the release of a hazardous substance. A new section was added to AS 46.08 to allow the State to place a lien for expenditures by the State from the Response Fund against all property owned by a person who is determined by the commissioner to be liable for the expenditures.

The authorized uses of the fund were expanded with the passage and signing into law Senate Bills 261 (Ch 90, SLA 89) and 264 (Ch 113, SLA 89). From testimony at public hearings, it was apparent that residents of the State did not trust the oil industry to live up to their responsibilities identified in contingency plans. Residents discussed the need for oil facilities to be inspected and for unannounced drills to test industry's ability to implement their contingency plans. Residents also expressed that DEC needed to be adequately funded to upgrade monitoring and response efforts. Many residents voiced support for the oil industry to be held strictly liable for their spills, but at the same time have an independent state response capability. The two senate bills recognized this concern by containing identical Findings and Purpose, which included, "*the March 24, 1989, oil spill disaster in the Prince William Sound demonstrates a need for the state to have an independent spill containment and cleanup capability.*"

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[2]Prior to the statute amendment, the municipality could only be reimbursed if the agreement had been entered into before the expenses were incurred.

Senate Bill 261 added a state master plan and regional master plans to the duties of DEC. The State Master Plan, which was to be addressed in AS 46.04.200, included requiring or scheduling unannounced oil spill drills to test the sufficiency of an oil terminal facility discharge prevention and contingency plan. The preparation, review, and revision of the state master plan and regional master plans were added as the fourth authorized use of the fund. In addition, the first use of the fund was amended to include investigate and evaluate as well as the contain and clean up previously allowed. A fifth purpose allowed the Response Fund to be used to restore the environment by addressing the effects of an oil or hazardous substance release.

Senate Bill 264 established an oil and hazardous substance response office in DEC. That office was authorized to establish emergency response depots, which would be staffed and equipped in areas of the state determined to be potential sites of releases of oil or hazardous substances. The response office was authorized to establish response corps, which were to be in the Department of Military and Veterans' Affairs (DMVA), Division of Emergency Services (DES). The corps would consist of volunteers who register with the office and are trained by the office in techniques for containment and cleanup. The costs for the response office, depots, and corps were included as a purpose of the Response Fund.

Imposition of a 5c per barrel conservation surcharge

The passage of SB 260 (Ch 112, SLA 89), which was sponsored by Senator Jalmar Kerttula and co-sponsored by Senator Mike Szymanski, levied a 5c per barrel surcharge on crude oil. The sponsor statement dated April 11, 1989 said the intent of the legislation was that revenues from this additional tax would provide a continuing source of funding for the Response Fund. This would ensure that adequate funds are available to meet the State's responsibility for oil spill clean up.

Since the legislature cannot dedicate revenues in any piece of legislation without a constitutional amendment, a clause was included in SB 260 to encourage the appropriation of the surcharge from the surcharge account into the Response Fund. If the legislature does not appropriate the balance of the surcharge account to the Response Fund or if the governor vetoes or reduces the appropriation of the surcharge account to the Response Fund, the surcharge would not be imposed that fiscal year.

The surcharge would also be suspended by the commissioner of the Department of Revenue if the commissioner of the Department of Administration reported that the difference between the cumulative total of surcharge money appropriated to the Response Fund equals or exceeds the amount expended by the fund by $50 million. If the surcharge had been suspended, it could be reimposed if the commissioner of the Department of Administration reports that the difference is less than $50 million.

During committee meetings regarding SB 260, discussion was held as to how long the imposition was likely to remain in effect based on expenditures from the Response Fund. One senator pointed out that 13 oil spill related pieces of legislation were currently pending and passage of them all would create more expenditures from the Response Fund than had

occurred so far. A member of legislative counsel agreed that there would be an unlimited draw from the Response Fund, but the sponsor of the legislation said the draw could not be unlimited. Expenditures from the Response Fund were limited by what revenues were produced by the 5c per barrel. Legislative counsel explained that, *"through legislation and statutes, the legislature establishes the purposes for which the fund can be used."* In the Findings and Purpose of the enacted piece of legislation, the legislature explained their purpose by stating:

> *(a) The legislature finds that the March 24, 1989, oil spill disaster in Prince William Sound demonstrates a need for the state to have an independent spill containment and cleanup capability in the event of future discharges of oil or a hazardous substance.*
>
> *(b) It is the purpose of this Act to provide assurance to the people of the state that their health, safety, and well-being will be protected from the adverse consequences of oil and hazardous substance releases of a magnitude that presents a grave and substantial threat to the economy and the environment of the state.*

Uses of Response Fund continue to expand

House Bill 567 (Ch 191, SLA 90) extended the number of the purposes of the fund which were to review oil discharge prevention and contingency plans; to conduct training, response exercises, inspections, and tests in order to verify state, municipality, and industry preparedness; and to verify or establish proof of financial responsibility. The bill also clarified DEC's reporting requirements on the Response Fund to include describing each personal services position and total compensation for the position, each contract in excess of $20,000, and each purchase in excess of $10,000.[1]

House Bill 566 (Ch 190, SLA 90) established SERC in DEC. The oil and hazardous substance response office in DEC established by Senate Bill 264 would serve as staff for SERC. SERC was to designate boundaries of local emergency planning districts and establish local emergency planning committees. SERC was to review and approve local, regional, and state plans for hazardous substance discharge response.

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[1] House Bill 470 had required the commissioner of DEC to submit an annual report to the legislature. The report had to include the amount of money expended from the fund in the preceding fiscal year, the amount and source of money received, a summary of municipal participation in responses paid by the fund, a detailed summary of department activities paid by the fund, and the projected cost for the next fiscal year of monitoring sites oil spill or hazardous waste sites. The report also had to include a summary of contaminated sites, the threat these sites represented to public health or the environment, and the cost and action needed to clean these sites.

A Hazardous Substance Spill Technology Review Council,[1] which was to review and recommend research topics to DEC, was created under SERC. The bill clarified that the Response Fund was to pay expenses incurred by DMVA, DES for response corps and depots when presented with appropriate documentation by the division. This bill allowed the Response Fund to be used for response to a declared disaster emergency related to an oil or hazardous substance discharge.

House Bill 578 [Ch 199, SLA 90] created a Citizens' Oversight Council on Oil and Other Hazardous Substances in the legislature (oversight council). The oversight council would request money from the Alaska Legislative Council, which in turn would seek reimbursement from the Response Fund. The oversight council would determine whether state and federal agencies were fulfilling their responsibilities for the prevention and response to oil and hazardous releases. The oversight council was to file an annual report with the legislature and governor and make policy recommendations to prevent releases.

Senate Bill 25 [Ch 83, SLA 91] amended the authorized uses of the Response Fund to include making grants to a municipality or village that is affected by a release involving extraordinary expenditures that are beyond the reasonable capability of the municipality or village to meet from current revenue sources. Senate Bill 165 [Ch 48, SLA 91] allowed the Response Fund to be used to construct or refurbish one or more ferries so the ferries would have the capability to assist in responding to oil or hazardous substance spills.

Legislature plays active role in shaping purpose of fund

In addition to expanding the purpose of the Response Fund through statutory amendments, the legislature has taken an active role in shaping the purpose of the fund by appropriating on a project specific basis. In FY 93 over $50 million was appropriated from the Response Fund. The legislature was specific in the purpose of the appropriations by allocating each appropriation to individual projects. On several occasions, the legislature was detailed to the point of listing a specific project's purpose and location. For example the appropriation for the Nearshore Demonstration Project reads:

> *The sum of $1,200,000 is appropriated from the oil and hazardous substance release response fund (AS 46.08.010) to the Department of Environmental Conservation, division of spill prevention and response, for fiscal year 1993, for nearshore strike team demonstration projects along the Gulf of Alaska coast and in southeast Alaska that are developed in consultation with the division of emergency services and the regional citizens' advisory councils in the affected region.*

The legislature has chosen to supplant general fund appropriations with Response Funds. They have done so when services previously funded out of the general fund qualified for

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[1]The Division of Legislative Audit conducted a Sunset Audit on the Department of Environmental Conservation, Hazardous Substance Spill Technology Review Council, dated November 29, 1993.

Response Funding. For example in FY 93, the legislature changed the funding source for over $950,000 in SPAR management costs from the general fund to the Response Fund. In addition, when DEC requested capital appropriations to clean up contaminated sites where the State was the responsible party, the legislature changed the funding source to the Response Fund from the general fund.

Various budgeting procedures used to track Response Fund expenditures

In FY [illegible] ...riations from the Response Fund were made to other agencies. This made it very difficult for DEC, as fund administrator, to manage expenditures. In an attempt to give DEC greater control and responsibility for activities supported by the Response Fund, especially those of other agencies, the legislature put the entire Response Fund appropriation into the front section of the FY 92 budget bill (Ch 73, SLA 91). This had the effect of greatly increasing the complexity of accounting for Response Fund expenditures. To gain access to the Response Fund appropriation, DEC was forced to use intra-agency reimbursable services agreements (RSAs) between itself and the Response Fund. DEC would then fund approved projects from other agencies such as DMVA and the Department of Fish and Game (DFG) via inter-entity RSAs. This created a chain of interlocking RSAs which made it very difficult to track expenditures related to the Response Fund.

Different budget processes were used in FY 93 and FY 94

DEC took a more effective role in the management of the Response Fund in FY 93 and FY 94. For FY 93, DEC notified other agencies that they must file a formal request for any activities they wanted funding with Response Funds. This procedure improved coordination, but was untimely. By the time agency requests had been received, reviewed by DEC, and forwarded to the Office of the Governor, Office of Management and Budget (OMB) with DEC's recommendation; the State's budget had essentially already been submitted.

DEC followed the same interagency process for the FY 94 budget, but the memorandums were submitted to the other agencies in a timely manner. DEC reviewed the requests based on the anticipated statutory requirements those agencies needed to fulfill. DEC submitted to OMB a list of allocations of Response Funds DEC recommended for approval. OMB has the final approval authority in making recommendations to the governor's budget.

Except for two notable appropriations,[1] there were no direct operating appropriations to agencies other than DEC in FY 93. However, direct capital appropriations were made to other agencies for cleanup of contaminated sites. In FY 94, no "front section" appropriations were made to DEC except for the transfer from the oil surcharge and mitigation accounts to the Response Fund. The SPAR division is the direct recipient of the funds. SPAR is responsible for RSAs between DEC and other agencies.

[1]The two FY 93 appropriations made to agencies other than DEC were, $7,500,000 appropriated to the Alaska Marine Highway Ferry Replacement Fund and $237,300 appropriated to the Legislative Council for the Citizens' Oversight Council on Oil and Other Hazardous Substances.

Reimbursable Services Agreements extensively used for Response Funds expenditures

DEC entered into 16 RSAs with other agencies in FY 92 and entered into 17 RSAs with other agencies in FY 93 where the primary funding source was the Response Fund. In addition, DEC had 17 internal RSAs between its own divisions in FY 92 and 16 internal RSAs in FY 93. Response Fund expenditures on both internal and external RSAs combined totalled almost $16 million in FY 92. In FY 93, there were over $6 million in Response Fund RSA expenditures related to FY 92 RSAs and over $8 million on FY 93 RSAs.

Agencies provide minimal supporting information to DEC for their RSA expenditures when requesting reimbursement from the Response Fund. Generally the supporting summary of accounting information provides limited detail of the agencies' activity, especially those related to personal services. DEC requires copies of invoices for purchases exceeding specified dollar amounts. Many of the Response Fund RSAs require quarterly reports be submitted to DEC project managers. Examples of individual external FY 92 and FY 93 RSAs are included in Table D of this report.

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REPORT CONCLUSIONS

Purposes of the Response Fund prevail over contradictory purpose of major funding source

As explained on page 13 of Background Information, SB 260, which established the 5¢ per barrel surcharge on taxable oil produced, indicated the purpose of the surcharge was for the *"state to have an independent spill containment and cleanup capability in the event of future discharges [emphasis added] of oil or a hazardous substance."* Under the provisions of the bill, the revenue generated by the surcharge was to be appropriated to the Response Fund.

The Response Fund had already been used to address cleanup of existing contaminated sites. This resulted in a situation whereby the major funding source of the Response Fund had the more narrow focus of being used for **future discharges**. But the activities of the Response Fund itself were broader, in that they addressed the results of historical oil and hazardous substance spills, i.e., contaminated sites.[7]

Members of the oil and gas industry have expressed dismay at how the expanded uses of the fund, particularly as it is being used to cleanup existing contaminated sites, does not meet their understanding of the reason for the surcharge. There are claims that *"there have been abuses to the oil spill fund since it was established in 1989."*[8] Such arguments appear to us to be based on the emphasis on future discharges that was placed on the 1989 imposition of the surcharge. As quoted above, this emphasis was part of the Findings and Purpose of Senate Bill 260. The Findings and Purpose does not carry the degree of authority that an enacted statute does.

Therefore AS 46.08.040, Purposes of the Fund, is the overriding authority on appropriate uses of the fund. At payment date, the surcharge becomes an unrestricted revenue to the State, albeit from a specified source. It is the prerogative of the legislature to determine the best use of the State's unrestricted revenues. Specific cleanup activities cited by an oil and gas industry group as being inappropriate uses of the Response Fund include *"cleaning up state campgrounds, state airports, responding to chlorine leaks and buying new ferries."* All of these specific projects are appropriate uses of the Response Fund: the first two involved cleanup of contaminated sites; the third project is a response to a hazardous substance spill; and the fourth item is a specific allowed use of the fund under expanded legislation. However, the dichotomy between the purposes of the fund and the purpose of

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[7] In 1986 during committee meetings regarding the bill originating the Response Fund, the commissioner of DEC had made it clear he intended cleanup activities from the Response Fund to address both current and past spill activity. The final legislation was silent as to what time period would be used to determine cleanup activities. In addition, the purposes of the Response Fund were expanded in 1989 and have continued to expand since that time.

[8] Quote came from an article entitled "AOGA supports bill to fix the oil-spill-response fund," which was published in the Forum/Letters section of the *Anchorage Daily News* on November 27, 1993. The letter was written by Ardie Gray, who is the public affairs manager of the Alaska Oil and Gas Association.

the major funding source has created a continuing controversy about the appropriateness of how the fund is being used.

Current spill reserve balance is close to DEC goal for adequate response

As of the end of FY 93, the unreserved balance of the spill reserve was $27,084,100. In a draft report, DEC stated the spill reserve had two primary purposes. One was to address costs faced by communities, municipalities, and villages in responding to a major spill incident. The second purpose would be to cover state costs. DEC has a goal of depositing and maintaining $30 million in spill reserve for these two purposes: $10 million for communities, municipalities, and villages; and, $20 million for the State.

Alaska Statute 29.60.510 states in part that the commissioner of the Department of Community and Regional Affairs "*may not expend not more than $10,000,000 of the balance of the fund that is appropriated to the spill reserve or of the unrestricted balance of the fund for grants authorized under this section. . .*" The other $20 million in the spill reserve may be accessed by DEC.

Allowed uses include costs necessary to investigate, evaluate, contain, clean up, and take other necessary action, to address a release or threatened release of oil or a hazardous substance. Such release or threatened release must pose an imminent and substantial threat to the public health or welfare, or to the environment. One reason for having the spill reserve is for an immediate source of start-up cash in the event of a catastrophic spill. It is estimated that $50 million would last about 10 days in a spill the magnitude of *Exxon Valdez*.

Spill reserve balance and the 5c surcharge suspension formula are unrelated

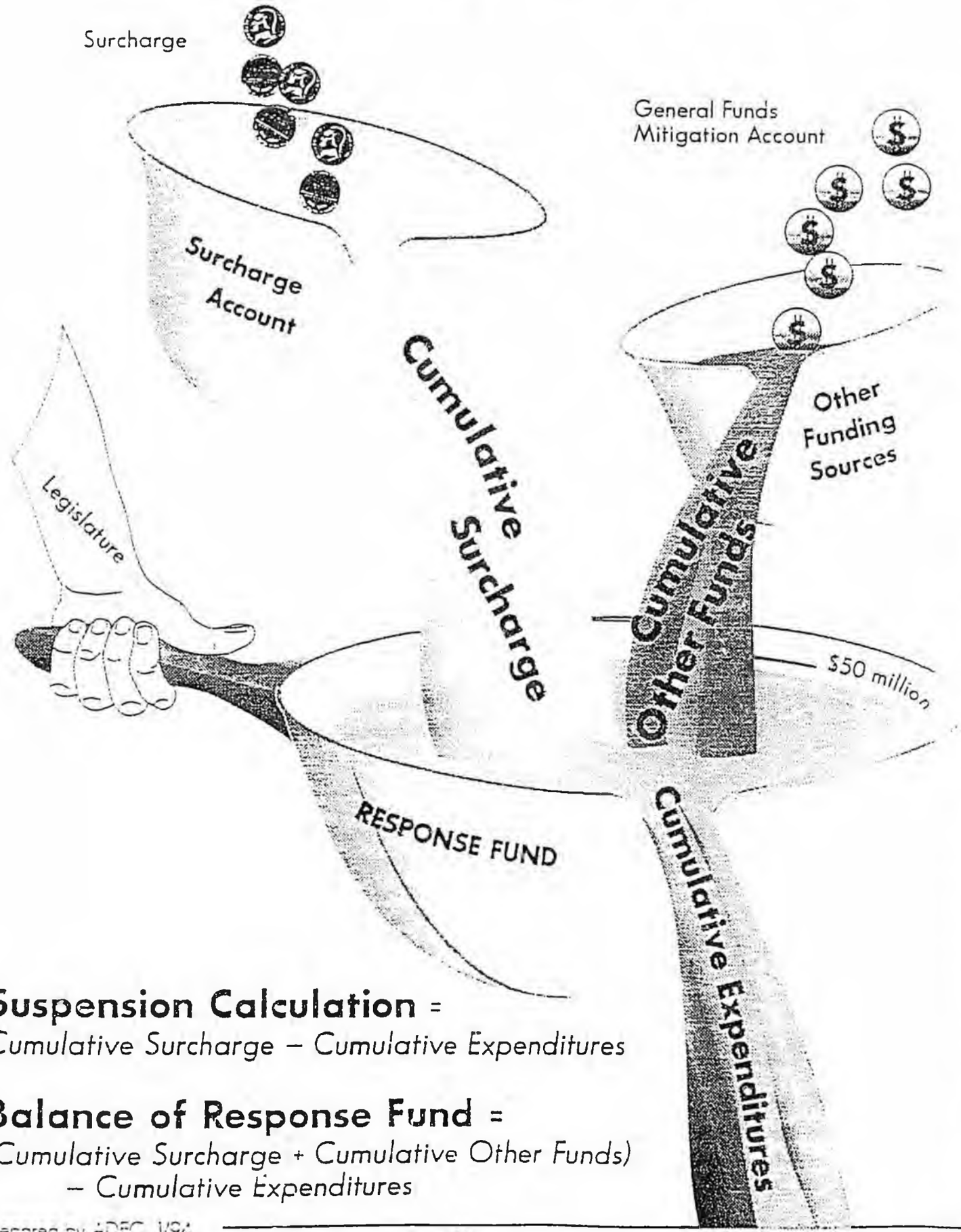
As discussed above, the State had over $27 million set aside in the spill reserve to respond to future spills as of the end of FY 93. The calculation for determining the suspension of the 5c surcharge had a deficit balance of over $8.5 million as of the same time. It should be recognized that there is a difference between the spill reserve balance and the surcharge suspension balance. The difference between these two is based on the revenues that go into calculating each balance. The facing page illustrates the difference between the suspension calculation and the balance of the Response Fund.

The $27 million set aside to respond to spills includes all revenue sources, i.e., fines, penalties, damages, surcharge revenues, and additional general fund appropriations. While the suspension calculation only considers surcharge revenues. Both the spill reserve and suspension calculation consider cumulative expenditures.

DEC lacks authority and capability of monitoring other agencies Response Fund expenditures

Although DEC is the administrator of the Response Fund, the department lacks the authority to control the spending of other agencies. Further, DEC does not have the personnel to

SURCHARGE SUSPENSION vs. RESPONSE FUND BALANCE



Suspension Calculation =
Cumulative Surcharge – Cumulative Expenditures

Balance of Response Fund =
(Cumulative Surcharge + Cumulative Other Funds)
– Cumulative Expenditures

Prepared by ADEC 1/94

monitor or audit the appropriateness of other agencies' expenditures. Other agencies have had access to the Response Fund through the use of RSAs. According to Alaska Administrative Manual 40.060, an RSA is an inter-entity transfer where one agency is reimbursed for costs associated with services provided to another agency. As administrator of the Response Fund, DEC has been forced to enter into RSAs for which the agency has limited inherent interest or expertise. In some cases, the RSA represents a project or budget request for which DEC did not originally endorse or support the other agency's request for access to the Response Fund.

DEC has made it a standard practice on all RSAs with other agencies to require five pieces of information. This information is required in order for DEC to fulfill its annual reporting requirements to the legislature. DEC requires the servicing agency to provide:

1. a listing of each position control number (PCN) with title and the amount compensated the position;

2. copies of all contracts in excess of $20,000 and all subsequent amendments, and copies of all RSAs with the University of Alaska in excess of $20,000 and all subsequent amendments;

3. documentation of each purchase in excess of $10,000;

4. the amount paid to each municipality, community, or village; and

5. RSAs to other state agencies funded by the RSA must also report the information requested in items 1 through 4.

Many of the Response Fund RSAs require quarterly reports be submitted to DEC project managers. The reports are generally submitted; however, the extent of information varies between servicing agencies.

DEC has spent an inordinate amount of time trying to monitor RSAs with other agencies. DEC's experience has been, in a practical sense, the department has no power to monitor the expenditures or deny a request for funds from other agencies. An example of the lack of power, is provided for by an FY 92 reimbursement request: the Department of Fish and Game (DFG) came to DEC and wanted reimbursement for expenditures that DFG could not support; DEC initially refused reimbursement; but because the only alternative left to DFG would be to request a supplemental appropriation, DEC staff was directed to pay the RSA reimbursement request.

Criteria for allocating resources within SPAR varies by program

The only Response Fund expenditures that DEC has direct control over are the expenditures actually made by the department, the majority of which occur in the SPAR division. The criteria used by SPAR in determining which projects will be undertaken varies between programs. SPAR can exercise discretion when allocating resources for the following

services: spill response, reviewing and testing contingency plans, and contaminated site cleanup.

1. Response depends on the risk posed by a spill: The Government Preparedness and Response Program within SPAR is charged with responding to spills that pose an imminent and substantial threat to public health or the environment. No preset policy exists as to which spills will be responded to in a region. Determining if a spill poses an imminent and substantial threat is a subjective process. Every region and district has taken into consideration a myriad of factors and developed its own method for deciding whether a spill warrants a response. Common criteria for response among regions include proximity of a spill to populations and water source, size of spill, and type of spill. The level of response can vary from responding via telephone, to monitoring the cleanup, to taking the lead in response through a contractor.

2. Progress in reviewing contingency plans has lagged behind agency projections: As discussed in Background Information, the *Exxon Valdez* oil spill caused major revisions to the statutes that set forth requirements for oil discharge prevention and contingency planning. As a result of the new statutes, SPAR's IPP was required to draft new regulations. These regulations forced affected operators to either prepare contingency plans or make amendments to their existing plans. The new regulations also created the need for technical assistance to be provided to those operators who were either drafting amended, or developing new, contingency plans. IPP has focused their resources on drafting new regulations, providing technical assistance to operators and reviewing contingency plans.

   As a result of the new regulations which became effective in August 1992, a large number of new and amended plans were submitted to IPP. To cope with the influx of plans requiring review, regulations provided for a transitional period. During this period, IPP was permitted to review the plans in a predetermined order of priority.

   Review of contingency plans has fallen behind agency projections. Almost 200 contingency plans required approval by IPP. Most of the submissions requiring approval are amendments to existing plans that were previously approved under the old regulations. These plans continue to be considered approved until plan amendments that incorporate the new regulations have been reviewed. Of the almost 200 plans, only 30 have been approved under the new regulations as of December 9, 1993. However, many plans are in the final stages of review and, according to DEC staff, most should be approved by the end of 1994.

   A successful oil spill prevention program is composed of interrelated parts. The success of IPP is dependent on the combined strength of its facility inspections, oil spill drills, contingency plans, and financial responsibility sections.

   Contingency plans must be tested and facilities inspected to provide assurance that personnel are being trained and that equipment and resources are available and can be mobilized quickly. To help speed up its contingency plan review process, IPP has

shifted resources away from performing oil spill drills and facility inspections.

As a result, most of IPP drill activity has been limited to oversight of industry-initiated drills and fewer inspections have been performed. Once the review process has advanced to a point where the program is reviewing contingency plans on a regular rotational basis, SPAR plans to shift its IPP resources back to testing contingency plans through department-initiated drills and inspections.

3. Priority for contaminated sites perceived differently: One of the major purposes of the Contaminated Sites Remediation Program is to determine the priority (see sidebar to the right for a discussion on the Hazard Ranking Model, which is used to prioritize sites) in which sites should be addressed. This is necessary so that resources can be allocated in such a way that the sites which represent the greatest risk to the public and the environment are addressed first — regardless of ownership.

Hazard Ranking Model

The Hazard Ranking Model is the primary tool available to the Contaminated Site Remediation Program to determine caseload priorities. The hazard ranking model is an exposure model that uses factors such as the level of toxicity, exposure to ground or surface water, and population density to determine a site's relative priority. The model provides for unknowns, allowing sites to be ranked when information is missing. The ranking scores compose an index of relative threat posed by the contaminated sites to public health and the environment.

DEC personnel do not consider the hazard ranking score an absolute indicator of priority because ranking scores can be skewed by factoring in unknowns and because the model does not take into consideration certain elements. In practice, the ranking score is considered one of many indicators when determining caseload priorities.

Although central office presents prioritization as one of the program's main emphases, a statewide list of all contaminated sites in priority order does not exist. Instead, resources are allocated based on the identity of a responsible party, their willingness and capacity to clean up, site priority when known, and the amount of public interest in a site.

As discussed in Organization and Function, SPAR's central office is responsible for developing policy and providing technical assistance to regions and districts. Work on contaminated sites is accomplished at the district level with support from their region. Most of staff time at the district level is spent providing oversight to responsible parties who are willing to perform cleanup.

The logic behind addressing willing responsible parties (RPs) is simple. Helping willing RPs is efficient in that more sites are cleaned up by oversight than by working with uncooperative RPs or by taking state lead in cleanup. The other motivation behind helping RPs is a socioeconomic concern. RPs are often stimulated to clean up their site because a real estate, construction, or some other financial transaction is involved. In the past when DEC staff explained they did not have time to monitor

cleanup of a site, the RP contacted their legislator, who in turn contacted the district and insisted their constituent be assisted.

It is not uncommon for political pressure to play a role in the way resources are allocated. In the past, sites, which were a lower priority relative to other sites, have received funding because of an heightened interest in the site taken by the general public, the governor, or a particular legislator.

4. District personnel reluctant to initiate state-lead in contaminated site cleanup: For a site to be eligible for state-lead, potential RPs must be identified and an extensive notification process must be completed. Because state-lead sites are labor intensive, district personnel are reluctant — or do not have the resources — to conduct RP searches or go through the notification process.

District personnel are also hesitant to take state lead because they feel their role should be one of service agency rather than enforcement agency. Rather than taking the lead in cleanup and holding the RP liable, staff want to help RPs find some way to assume responsibility. False promises from unwilling or incapable RPs have also slowed down the process of cleaning up sites with state-lead money.

Because of the amount of resources required to identify state-lead sites and a general reluctance by district staff, the program does not have a complete listing of contaminated state-lead sites.

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FINDINGS AND RECOMMENDATIONS

Recommendation No. 1

The legislature should make statutory changes to clarify the role of the fund administrator.

A. Currently there is no clearcut criteria in place stating how DEC should "manage" the Response Fund.

In order to be properly evaluated as the fund administrator, DEC needs the legislature to clarify their expectations of the department's role. Alaska Statute 46.08.050 identifies two accounting duties of DEC. This statute says DEC

(1) shall maintain accounting records showing the income and expenses of the fund; and

(2) shall develop procedures governing the expenditure of, and accounting for, money expended from the fund.

This statutory requirement has not been amended since the Response Fund was first established in 1986. The duties were appropriate when the fund was used to respond to emergency spills, and DEC was virtually the only user of the fund. But DEC lost its effectiveness as administrator when the Response Fund began to be used as a funding source for a number of projects managed by many different agencies.

As explained on page 22 of Report Conclusion , DEC has spent an inordinate amount of time trying to monitor the appropriateness of expenditures made by other agencies. It has been difficult for DEC to monitor the appropriateness of reimbursement requests from other agencies when the service provided is beyond DEC's interest or expertise. DEC is often put in the position of having to approve for reimbursement an expenditure for which the department has no way of determining represents a valid project cost. DEC has not experienced as many problems on those RSAs with other agencies for services which the department would normally contract.

DEC has, with the assistance of Office of the Governor, Office of Management and Budget (OMB) and Legislative Finance, developed an adequate budget process showing appropriations into and out of the Response Fund. DEC can track allocations to specific projects. The department has also developed an internal process to review other agencies' Response Fund requests and make recommendations to OMB for inclusion in the Governor's budget. These duties are appropriate for DEC to fulfill in its role as fund administrator.

We recommend the legislature amend part (1) of AS 46.08.050 to state that DEC shall develop procedures governing the expenditure of, and accounting for, money expended from the fund for activities of their own department. Other agencies wh

receive monies from the Response Fund must develop their own procedures governing the expenditure of, and accounting for, money expended from the fund. To receive reimbursement from the Response Fund, other agencies must submit to DEC the detailed information required to be included in the annual report on the Response Fund's activities. DEC shall rely on the other agencies' internal procedures when responding to a request for reimbursement. The legislature may request Division of Legislative Audit to review the procedures developed by each agency and audit that agency's expenditures against the Response Fund.

B. Some of the information DEC is required to submit in their annual report is either too voluminous or to uncertain to provide meaningful information to the legislature.

Information required by AS 46.08.060 to be included in DEC's annual report is as follows:

(1) a summary of the sites identified by the department;

(2) the immediate and long-term threats to the public health or welfare or to the environment posed by these sites; and

(3) the appropriate actions needed to abate these threats, and their estimated cost.

DEC has not been providing this information as part of the annual report because of the volume and uncertainty of information involved. DEC has indicated this information is available for review in their office in the Statewide List of Contaminated Sites. A list of contaminated sites dated November 8, 1993, which is 104 pages long, contains site name and address and hazard ranking model score on 1,858 sites, of which 338 are in a closed status and 1,520 are in an active status. Of the 1,520 active sites, 240 sites are unranked, and 38 sites cannot be ranked due to lack of information available on the site. In addition to the known sites, DEC is aware that there are likely to be a large number of sites which are not yet on their database.

We recommend the legislature amend part (b) of AS 46.08.060 to allow DEC to report information on contaminated sites that can be readily prepared and still be of use to the legislature. DEC should be asked to identify how many sites are in active and closed status on the database. DEC should identify the number of sites and prioritize those sites based on immediate and long-term threats to the public health or welfare; or to the environment. Since the information is too uncertain, DEC should not be asked to provide individual discussion on each site, nor due to the volume of sites, should the department be asked to report the appropriate actions and estimated costs involved.

Recommendation No. 2

DEC should revise the department's draft Cost Recovery and Policy and Procedures manual, implement the policy with due public notice, and provide training to all relevant personnel.

In the original legislation on the Response Fund, DEC was not required to seek recovery of money expended by the department to contain and clean up oil or hazardous substances. The actual wording was:

> *The attorney general, at the request of the commissioner, **may seek** [emphasis added] to recover money expended by the department under this chapter or other law to contain and clean up oil or a hazardous substance that has been released or to control threatened release of oil or a hazardous substance.*

While DEC did seek recovery and levy fines and penalties in some instances, many contaminated sites were cleaned up without any intention of seeking cost recovery. In addition, appropriations were made from FY 88 through FY 90 to cleanup contaminated sites on the Kenai peninsula. There were no cost recovery requirements related to these appropriations.

Because of the lack of cost recovery requirements DEC district staff and the public developed a cooperative relationship regarding DEC's monitoring of the clean up of contaminated sites. The public came to view monitoring of clean up of contaminated sites as a service provided by DEC, rather than as an enforcement action. Since cost recovery would not be sought, DEC staff did not consistently track their personal service costs related to cleanup.

The passage of Senate Bill 256 [Ch 29, SLA 1989] changed the optional nature of the statutory phrasing. The legislation made it definite that cost recovery must be sought. Specifically the statute called for:

> *The attorney general, at the request of the commissioner, **shall immediately seek** [emphasis added] to recover money expended by the department under AS 46.08.005-46.08.080 or other law to contain and clean up oil or a hazardous substance that has been released or to control the threatened release of oil or hazardous substance.*

DEC has been slow to develop policy and procedures related to accumulating cost information that can be used to support recovery efforts. DEC has developed a draft Cost Recovery Policy and Procedures manual that addresses when and how to code costs to sites. As of the date of this report, this policy still has not been fully implemented. Of particular concern is the failure to consistently charge personal service costs to specific sites. This makes it difficult, if not impossible, to recoup these costs from the responsible party.

The draft Cost Recovery Policy and Procedures manual also addresses how to identify and notify potential responsible parties (PRPs) of their obligation to clean up a site. Staff who

have received training on the manual reported to us a reluctance to implement the policy. Specifically staff feel the public needs to be adequately notified of DEC's policy change of seeking cost recovery for containment and cleanup efforts.

Not all applicable DEC personnel have received training on the Cost Recovery Policy and Procedures manual. In some districts, we found staff unaware that a cost recovery procedures manual was available.

We recommend DEC revise the draft Cost Recovery Policy and Procedures manual to address public notification and consistent statewide implementation. After the manual is revised, training should be provided to DEC personnel so that the department's policy will be consistently implemented. The manuals need to be made available in each region and district office.

Recommendation No. 3

DEC should develop a systematic method of addressing contaminated sites so those sites that pose the greatest risk to public health or the environment are addressed first.

A. Program personnel and resources have been allocated to contaminated sites based on the identity of the PRP and the willingness/insistence of the RP to clean up a site.

The Contaminated Sites Remediation Program is in place to carry out one of the original purposes of the Response Fund, to clean up oil or hazardous substances that pose an imminent and substantial threat to the public health or welfare, or to the environment. The program has a limited amount of resources that must cope with a large and ever increasing number of contaminated sites. Because there exists more contaminated sites than resources to address them, a system must be in place to allocate resources to the highest priority sites. Central office of the Spill Prevention and Response division, has drafted policy which sets criteria for determining priority and allocates resources to the highest priority sites. However, district personnel are reluctant to implement the proposed policy change. As a result, highest priority sites are not being addressed.

As discussed in Report Conclusions, district personnel spend most of their time providing oversight to RPs who are willing to clean up contamination. Because RP searches, PRP notification, and negotiation with unwilling RPs is timeconsuming and frustrating, district staff prefer to allocate their resources to sites where the RP is known and is willing to cleanup. This method of allocating resources is efficient in that it allows more sites to be cleaned given districts' limited staffing. It also provides the easiest way to cope with pressure from insistent RPs who need their sites cleaned for socioeconomic reasons, such as real estate transactions or potential construction. However many of the sites with a willing RP do not pose an imminent and substantial threat relative to other sites.

Such an approach only provides limited assurance that Response Funded activities are addressing sites that pose the most "imminent and substantial" threat to the general public. While we recognize district personnel have a legitimate basis for wanting to work with willing RPs, their approach does not ensure that the statutory purpose of the Response Fund is met.

DEC should work to implement their draft guidance policy entitled Prioritization of Contaminated Site Work. The policy addresses allocating resources in such a way that the highest priority sites are addressed first. In addition, DEC should redefine their role in monitoring RPs with relatively low priority sites. Any change in DEC's policy of providing oversight to willing RPs should be accompanied with a thorough public notice campaign.

B. Contrary to what the department has reported to the legislature, DEC has not maintained a current complete prioritized list of state-lead[a] sites.

In budget papers presented to the legislature, DEC stated that they maintained a list of state-lead sites and prioritized them based on their threat to human health or the environment, or unique social or economic factors. The department also claims that sites are placed on the list only after DEC staff have determined that PRPs will not clean up the site or when no PRP can be determined or located.

DEC also made it clear to the legislature that the list of state lead sites accompanying the budget request is dynamic. If a responsible party decides to perform cleanup or a site's relative priority changes, the funding allocated to that site will be used to fund the next highest priority site.

In practice, DEC has not maintained a complete prioritized list of state-lead sites. In addition, the department has not always completed the proper notification process before placing sites on the state-lead list. As discussed in Report Conclusions, district staff are reluctant to perform RP searches or go through the RP notification process because the procedures are timeconsuming. Once a site is allocated funding, taking lead in cleanup is highly labor intensive.

DEC has not documented their rationale for allocating funding among state-lead sites. We recognize that a state-lead list is dynamic. However, in our view, the dynamic nature of the program makes a current list of prioritized state-lead sites essential. In addition, the dynamic nature of the program makes it imperative that the rationale used to justify funding decisions be documented and presented to the legislature.

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[a]As stated in the Organization and Function section, if a site poses a substantial threat and no responsible party has been identified or the responsible party is unable or unwilling to clean up, the State will take the lead in cleanup efforts. These sites are commonly called state-lead or orphan sites.

DEC should make an effort to pursue state-lead on sites that present an imminent and substantial threat to public health and the environment. As part of this effort, an updated list should be prepared and maintained to guide in the allocation of funding. Before sites are placed on the state-lead site list, their orphan status should be confirmed through the proper notification process.

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AUDITOR COMMENTS

State better able to prevent and respond to oil spill, but ability jeopardized by cuts in staffing

The Prince William Sound Regional Citizens' Advisory Council (PWS-RCAC) and staff in the Department of Environmental Conservation (DEC) both believe the State has improved its prevention and response capabilities for oil and hazardous substance spills. Both organizations feel that the State is in a better position than it was on March 24, 1989, the date of the *Exxon Valdez* spill. Much of the reason for these improved capabilities is attributed to the financing of prevention and response activities made possible by the Oil and Hazardous Substance Release Response Fund (Response Fund). However, the two organizations are concerned about the current trend of reducing staff positions in DEC. In a pamphlet entitled "*Then and Now: Changes Since the Exxon Valdez Oil Spill*" the PWS-RCAC points out:

> *Laws that appear strong when enacted can be weakened through vague regulations and inadequate funding. Laws must be implemented through clear, strong regulations and enforced by committed agencies that are given the funding necessary to monitor, oversee and enforce compliance.*

PWS-RCAC's point echoes one of the observations made in the report produced by the Alaska Oil Spill Commission (AOSC). AOSC said, "*The Valdez DEC office always has been seriously understaffed, which weakened the state's position relative to Alyeska. The state cannot negotiate or enforce effectively without adequate competent personnel.*"

As we explain in Report Conclusions, DEC's progress in reviewing contingency plans has lagged behind the department's projections. To increase staff time devoted to contingency plan review and approval, inspections and drills have been severely limited. DEC's oil program consists of several interrelated parts. Prevention includes contingency plans, inspections, and drills. Other parts include response and cleanup, which occur only when prevention has failed. If any part of DEC's program is hindered, the department does not have an effective, viable program.

We understand the decision DEC was forced to make in allocating resources to contingency plan review and approval. However, inspections and drills are a fundamental portion of a successful prevention program. DEC is already dangerously close to having to implement statute with limited resources. Any reduction of staff positions in the Spill Prevention and Response (SPAR) division will jeopardize the likelihood of a successful prevention program. AOSC addressed this same problem in their final report on the events leading up to the *Exxon Valdez* grounding. "*Rigor flagged, complacency took root. Prevention was neglected with disastrous results.*"

We wonder whether complacency is again taking root. Program consequences must be considered when SPAR funding is reduced. SPAR needs to be funded at least at the current level to maintain its ongoing operations. However, if the legislature decides to reduce

funding for SPAR then statutes should be amended or repealed so that required programs can be eliminated. Reduction of funding alone does not eliminate a department's duty to fulfill statute.

SPAR needs general funds if contaminated sites are to be cleaned for socioeconomic reasons

As explained in Recommendation No. 3, district staff often monitor the cleanup of willing responsible parties (RPs). While many of these sites do meet Response Fund criteria (that is, they pose an imminent and substantial threat to public health or the environment) others clearly do not. The RP is often motivated to clean their site in order to obtain bank financing for the sale of the property or obtain a permit to do construction on the property. While these sites may not pose a substantial risk, the monitoring of the site cleanup by DEC is important to the owner for their own socioeconomic reasons. If the legislature feels that DEC is providing a valuable and valid public service by providing technical assistance on sites that do not pose an imminent and substantial threat, then the legislature needs to make general funds available to SPAR.

ISSUES NEEDING FURTHER STUDY

It was beyond the scope of this audit request for us to test Oil and Hazardous Substance Release Response Fund (Response Fund) expenditures and accounting procedures developed in agencies other than the Department of Environmental Conservation (DEC). However, as explained in the Background Information section, other agencies are significant users of the Response Fund. In FY 92 DEC entered into over $18.5 million in Response Fund reimbursable services agreements (RSAs) with other agencies; in FY 93 DEC entered into almost $5 million in Response Fund RSAs with other agencies. Consistently, the largest participants in using the Response Fund outside of DEC are the Department of Law, the Department of Military and Veterans Affairs, and the Department of Fish and Game.

As stated in Report Conclusions and Recommendation No. 1, DEC has little authority and receives limited information supporting requests for reimbursement on the RSAs. Supporting information submitted with the request for reimbursement usually provides little detail and DEC is forced to rely on the other department's accounting procedures.

We suggest that the Legislative Budget and Audit Committee may want to consider reviewing the support for selected expenditure transactions, the accounting procedures, and project results of Response Fund activity in agencies outside of DEC. Those agencies we recommend be considered for review include the Department of Law, Department of Military and Veterans Affairs, and the Department of Fish and Game.

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TABLE A

RESPONSE FUND SUMMARY AS OF JUNE 30, 1993

Sources of funding:	
Oil Surcharge Revenue	$82,500,000
General Fund	44,447,000
Program Receipts: Exxon Reimbursements 1989 & 1990	30,000,000
Mitigation Revenue	4,346,600
	161,293,600
Uses of funding:	
Expenditures through FY 93 (Note 1)	119,567,992
Reserve for Encumbrances	6,786,808
Reserve for Prior Year Appropriations	2,190,914
Accounts receivable recorded for Exxon Valdez cleanup	2,338,795
Fund Balance/Spill Reserve (Note 2)	$30,409,091

Note 1: Expenditures are inception to date as reported in Response Fund Annual Reports for FY 87 - FY 93. This amount is the same as the total reported in our Table B.

Note 2: Department of Environmental Conservation has stated their fund balance/spill reserve is $27,084,100; which is $3,324,991 less than what we have calculated. Review of their backup indicates the discrepancy occurred in FY 91 and FY 92 when information for the annual report was pulled from the Alaska accounting system. The department needs to reconcile this discrepancy.

TABLE B

SUMMARY OF EXPENDITURES BY FISCAL YEAR
(NOTE 1)

PROJECT	FY 87	FY 88
Contaminated site investigation, safety, cleanup, and cost recovery	$428,815	$329,977
Spill Response containment, safety, cleanup, and cost recovery		
Spill prevention and response preparedness		
State and regional contingency planning		
Spill response office, depots, and corps		
Mt. Redoubt Volcano/Publication of 1990 annual report		
Spill reserve		
Spill response drills		
Kenai cleanup project		
State Emergency Response Commission and local emergency response planning		
Local Emergency Planning Committees		
UAA - Soldotna Fire Training		
DFG - Spill prevention and response preparedness		
LEG - Citizen's Oversight Council		
Hazardous Substance Spill Technology Review Council		
Arctic Marine Resources Commission		
Prince William Sound Regional Citizens' Advisory Council		
Non-crude Oil Tanker/Barge Study		
Nearshore Strike Team Demonstration Projects		
Oil spill contingency plans/requirements		
Geographic Information System		
Advisory Council/transportation of oil		
Ferries with oil spill response ability		
Natural resource damage assessment		
Subtotal of Non-Exxon Related Expenses	$428,815	$329,977

FY 89	FY 90	FY 91	FY 92	FY 93	Total
$320,900	$774,500	$1,671,700	$1,262,400	$2,926,700	$7,714,992
	211,000	690,200	378,500	71,000	1,350,700
		1,056,200	3,846,200	5,385,800	10,288,200
	158,400	556,700	223,500	54,700	993,300
	199,800	967,700	1,125,100	2,663,000	4,955,600
	112,800	4,800			117,600
	245,500	313,600	71,400	268,500	899,000
		4 ..500	105,700		554,200
		583,700	555,900	177,900	1,317,500
		399,600	257,000	186,200	842,800
			575,200	1,039,700	1,614,900
				88,400	88,400
		119,800			119,800
		119,500	237,300	88,300	445,100
			112,400	275,300	387,700
			100,000	90,000	190,000
			57,200	10,200	67,400
			29,900		29,900
				3,300	3,300
			84,200	15,000	99,200
				91,600	91,600
			120,300		120,300
			102,400	7,501,500	7,603,900
			1,358,400	59,400	1,417,800
$320,900	$1,702,000	$6,932,000	$10,603,000	$20,996,500	$41,313,192

PROJECT	FY 87	FY 88	FY 89
Subtotal of Non-Exxon Related Expenses (from page 38)	$428,815	$329,977	$320,900
DEC - Exxon Valdez			5,456,300
RSAs - Exxon Valdez			609,700
Local Response - Exxon Valdez			205,600
LAW - Exxon Valdez Litigation			
DFG - Exxon Valdez Damage Assessment			
Exxon Valdez - Spill Cleanup and Cost Recovery			
Exxon Valdez - Assessment and Restoration			
Exxon Valdez Litigation			
Exxon Valdez Project			
Subtotal for Exxon expenses			6,271,600
Total Expenses	*$428,815*	*$329,977*	*$6,592,500*

Note 1: This table was prepared from expenditures reported by the Department of Environmental Conservation in their Response Fund Annual Reports for FY 87 - FY 93. We have not audited this information and therefore do not express an opinion on its reliability. Since project titles changed over the seven years, for comparability purposes we have grouped those activities that seemed the same despite small title changes.

FY 90	FY 91	FY 92	FY 93	*Exxon Valdez*	Total
$1,702,000	$6,932,000	$10,603,000	$20,996,500		$41,313,192
24,005,400	11,977,700			41,439,400	
4,560,000				5,139,700	
3,210,200				3,415,800	
	4,100,000			4,100,000	
	8,834,400			8,834,400	
		2,337,300	492,600	2,829,900	
		6,654,400	407,000	7,061,400	
		1,576,900	2,703,500	4,280,400	
		1,123,800		1,123,800	
31,775,600	24,912,100	11,692,400	3,603,100	78,254,800	78,254,800
$33,477,600	*$31,844,100*	*$22,295,400*	*$24,599,600*		*$119,567,992*

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TABLE C

DESCRIPTION OF RESPONSE FUND ACTIVITIES APPROPRIATED IN FY 92 AND FY 93

As reflected by discussion in Background Information, there have been numerous changes to the Oil and Hazardous Substance Release Response Fund (Response Fund) since its inception in 1986. Many of the amendments expanded the authorized purposes of the fund. The following table illustrates all Response Fund appropriations for FY 92 and FY 93. The table indicates if these appropriations would have been covered under the original purposes of the fund or if they are allowed due to amendments subsequent to 1986 inception.

The first two columns of the table give the name of the project or activity and a brief description of the purpose of the project. FY 92 operating appropriation amounts came from Ch 73, SLA 91. FY 93 operating appropriation amounts come from Ch 136, SLA 92 and capital appropriation amounts come from Ch 5, FSS 1992.

Some projects meet both original and expanded legislation and are so indicated by a checkmark in both columns. One project, Arctic Marine Resources Commission, in our opinion, does not appear to meet either the original or any expanded use of the Response Fund, but there is nothing that prevents the legislature from appropriating from the Response Fund for other uses.

Project/Activity	Description
Department of Environmental Conservation (DEC) Operating Programs - except Contaminated Sites	Operating programs include the Director's Office and the Division of Spill Prevention and Response (SPAR). The Director's Office is responsible for administrative support, safety and data management. In addition to contaminated sites, SPAR is composed of three sections: Government Preparedness and Response, Industry Preparedness Program, and Underground Storage Tank Program. Government Preparedness develops regulations and guidelines for SERCs and LEPCs, ensures that local plans are under development and are integrated with other plans, ensures that there is a complete compilation of hazards analysis for the State, and conducts drills on the state and local plans. Industry Preparedness reviews oil discharge prevention and contingency plans for oil operations, conducts inspections and spill drills, and administers the statewide financial responsibility program to ensure that oil operators demonstrate sufficient proof of ability to respond.
Exxon Valdez Oil Spill Project	Response funded activities in FY 92 included data compilation and documentation, monitoring, and select restoration activities. The funding was also allocated to coordinate support efforts by state agencies. FY 93 monies funded DEC's Oil Spill Response Office whose staff gathered data regarding the extent of subsurface oil and surveyed selected beaches. In addition, staff archived records and created a records database.
Contaminated site projects identified by DEC	Contaminated sites are ranked based on a hazard ranking model that prioritizes sites based on their threat to human health or the environment. DEC also takes into account unique social or economic factors. However, the ranking model allows for numerous unknowns, which affects the reliability of the numeric scores. The cleanup list is subject to constant change as responsible parties assume cleanup responsibilities and as new contaminated sites become known. DEC provides oversight only on sites where the responsible party is taking action. Contaminated sites that require cleanup, but where the potential responsible party is unknown, unwilling, or unable to clean up are referred to as orphan sites. DEC must go through a notification process to the potential responsible party before a site is placed on the orphan site list. The State initiates cleanup on orphan sites.
Contaminated sites identified by other agencies	Beginning in FY 92, contaminated sites with the State as the responsible party were dealt with by a Memorandum of Agreement between several state agencies. Department of Natural Resources, Department of Transportation and Public Facilities, and DEC formed a work group that determined which sites were the highest priority and submitted a capital budget request for funding. The major tool used by the group to rank the various sites was DEC's ranking model. The work group recommended funding for 10 projects in FY 93 for a total capital request of $2.6 million. Actual expenditures in FY 93 came to slightly over $310,000.
Oil Spill Reserve	The legislature established the spill reserve so that funds would always be available for the abatement of a release of oil or a hazardous substance. The spill reserve can only be accessed to address a release that poses an imminent and substantial threat to public health or the environment. DEC only uses the spill reserve to address unbudgeted activities that pose an imminent and substantial threat. Eleven spills were responded to in FY 92 for a total of $71,382.76, and thirty were responded to in FY 93 for a total of $245,995.37.
Oil Response capable ferry	The legislature authorized expanding the use of the fund to include refurbishment or construction of marine response vessels. Alaska Marine Highway System is currently in the design phase of constructing a vessel that could be used to respond to oil spills. For FY 93, the legislature appropriated $7.5 million from the Response Fund to the Alaska Marine Highway System Replacement Fund for the oil response ferry. But these funds will not be used until the vessel is in construction phase, which is currently targeted for the first quarter of FY 95.
State Emergency Response Commission (SERC)	SERC was established by executive order in 1987 and formalized in 1990 with the passage of HB 566. SERC guides and coordinates a state-wide emergency response plan. SERC designates Local Emergency Planning Districts (LEPDs) and approves LEPCs for those districts. SERC reviews and comments on local emergency plans, including oil facility and vessel spill contingency plans.
Local Emergency Planning Committees (LEPCs)	The State has been divided into 26 LEPDs. SERC establishes and appoints a Local Emergency Planning Committee for each district; however, only 14 LEPCs have been established to date.

FY 92 Appropriation	FY 93 Appropriation	Original Legislation	Expanded Legislation	Cite for Expanded Legislation
$5,731,300	$7,339,300	✓	✓	SB 261 [Ch 90, SLA 89] HB 567 [Ch 191, SLA 90]
$20,081,900	$3,318,000	✓	✓	SB 261 [Ch 90, SLA 89] SB 264 [CH 113, SLA 89]
$4,203,200	$3,528,600	✓		
$0	$2,193,000	✓		
$12,627,400	$23,656,700	✓		
$500,000	$7,500,000		✓	SB 165 [Ch 48, SLA 91]
$329,900	$350,800		✓	SB 261 [Ch 90, SLA 89]
$900,000	$1,200,000		✓	SB 261 [Ch 90, SLA 89]

Project Activity	Description
Response office, depots/corps	The legislature authorized that depots and corps were to be planned through the DEC master and regional contingency planning and the State Emergency Response Commission approval process. The exact determination of locations was left to the DEC and SERC planning process. The State was to pay for training volunteers in communities selected as depot sites and pay them when necessary to combat a spill or participate in training. Exact types and amounts of containment equipment and materials to be stored at depots was also left to the DEC and SERC planning process. DEC and DMVA have jointly expended over $4 million on depots and corps to date. The only depot that has been established to date is a $1.6 million project for a communications depot, which is 50% Response Funded and 50% funded by the Federal Emergency Management Authority. Other expenditures have been used to train 823 first responders and develop an Incident Command System and an Advanced Integrated Management System.
Citizens' Oversight Council on Oil and Other Hazardous Substances	This council was established in 1990 following the passage of HB 578. The council assesses the performance of state and federal agencies in preventing and responding to releases of oil and hazardous substances, identifies risks, and recommends improvements for environmental safety to the legislature, governor, and federal agencies.
Nearshore Strike Team Demonstration Projects	The legislature appropriated $1.2 million for FY 93 to provide coastal communities that are not connected by a highway system with the resources to be able to respond to a major oil spill. Currently, contingency plans do not always address industry's preparedness to respond to a spill in communities for extended distances downstream from an oil terminal facility or tank vessel route. One purpose for the demonstration project was to define the optimum array of equipment needed in communities to mobilize and respond to spills which have escaped initial containment or to orphan spills which may occur within the operating range of nearshore communities. Two informal planning committees were organized - one for the Gulf of Alaska region and the other for Southeast Alaska region. Each region developed their own project design criteria.
Hazards Analysis	A Hazards Analysis covers four stages: (1) identifying the hazard, which is defined in AS 46.03.826. (2) performing a vulnerability analysis, (3) conducting a risk analysis, and (4) assessing response capability by industry and local response. After DEC had prepared a request for proposals to perform a statewide Hazards Analysis, LEPCs indicated that they preferred to control this project themselves. In FY 92, DEC delegated the responsibility and funding to LEPCs for the Hazards Analysis. As of October 15, 1993, hazards analyses are completed for four LEPDs, are in process for twelve LEPDs, and the other ten LEPDs are scheduled for completion in June 1994 as part of a statewide Hazards Analysis contract. Once the hazard analyses are complete, DEC believes they will have an inventory of between 80%-90% of all facilities with hazardous substances required to report under SARA Title III. DEC will need t[illegible]eep their database of information up-to-date.
Geographic Information System (GIS)	The legislature appropriated $689,300 for a GIS. DEC administered $250,000 and signed a reimbursable services agreement with the Department of Military and Veterans Affairs (DMVA), Division of Emergency Services (DES) for the remaining $439,300. GIS will be a map-based system that monitors where a spill has occurred in comparison to the natural surroundings. The GIS will be able to track the response of industry or the responsible parties and can be used to project what path the spill will follow. The GIS could store countless data useful in making decisions, such as population centers, location of contaminated sites and hazardous substances, and location of equipment. Two demonstration projects have been completed for DEC. One problem that has not been reconciled is how the DEC and DMVA, DES systems will coordinate. DES is developing an Advanced Integrated Incident Management System to respond to an emergency situation. DES is interested in knowing where manpower, communication, and aircraft are located. DEC will not be able to view DES' information on a geographic base.
Hazards Substances Spill Technology Review Council	The council exists within the SERC. The council's duties include responsibility for reviewing and recommending research topics to DEC, establishing testing protocols for the department to use to evaluate the effectiveness of hazardous substance spill technologies within the State, and compiling and maintaining information relating to containment and cleanup technology.

FY 92 Appropriation	FY 93 Appropriation	Original Legislation	Expanded Legislation	Cite for Expanded Legislation
$1,700,000	$800,000		✓	SB 264 (Ch 113, SLA 89)
$237,300	$237,300		✓	HB 578 (Ch 199, SLA 90)
$0	$1,200,000		✓	HB 567 (Ch 191, SLA 90)
$0	$177,300		✓	SB 261 (Ch 90, SLA 89)
$0	$689,300	✓	✓	SB 261 (Ch 90, SLA 89)
$236,800	$420,000		✓	HB 567 (Ch 191, SLA 90)

Project/Activity	Description
Arctic Marine Resources Commission (AMRC)	The legislature appropriated $100,000 to fund the commission through FY 92, with the intent to form a Regional Citizens' Advisory Council for residents of Alaska's Arctic coastal communities. AMRC would review Arctic oil exploration and development issues affecting Alaskans and attempt to secure federal and industry recognition and support as an Arctic Regional Citizens' Advisory Council.
Alyeska Terminal Ballast Water Testing/Monitoring	The legislature appropriated $175,000 for DEC to disburse to the Prince William Sound Regional Citizens Advisory Council. RCAC was to retain technical experts who would review and evaluate three monitoring programs being conducted by DEC at the Alyeska Valdez Marine Terminal. The three programs, which have been completed with final reports, were to monitor the influent ballast water to the ballast water treatment facility, to monitor the treated discharge from the ballast water treatment facility, and to monitor sediment hydrocarbon chemistry and sediment toxicity in Port Valdez.

FY 92 Appropriation	FY 93 Appropriation	Original Legislation	Expanded Legislation	Cite for Expanded Legislation
$100,000	$100,000			See discussion on page 43
$175,000	$0	✓		

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TABLE D

EXAMPLES OF EXTERNAL FY 92 AND FY 93 RSAs

FY 92 RSA, DEC/DMVA Oil Spill Depots/Corps $1,700,000

Over $1.2 million has been spent on this RSA through fiscal year end 93.

The "communications depot" is the only depot in place. The communications depot is a $1.6 million project that will be 50% Response Funded and 50% federally funded by the Federal Emergency Management Agency. The equipment includes two 4.5 meter trailer mounted satellite communication dishes, four foamy satellite communication packages, and two mobile satellite telephones.

On the same RSA, DMVA trained 823 people to be first responders in the event of a spill. First responders include such persons as police and fire personnel. DMVA and the LEPCs worked together to determine who should be trained and in what localities. A database of people who were trained was prepared and given to GPRP.

FY 93 RSA, DEC/DMVA Oil and Hazardous Substance Release and Response Preparation and Planning $800,000

This RSA, which only had $155,000 in expenditures through fiscal year end 93, was to fund six different projects, many of the projects being continuing and open-ended. On Response Corps and Emergency Response Depots DMVA assisted and will continue to assist SPAR is preparing a 3-year strategic plan on the development of depots and corps to facilitate planning and budgeting.

For the State Emergency Response Commission, the Chief of Logistics was appointed by the Adjutant General as his designee and vice-chair on the commission. DMVA staff assisted and will continue to assist the Chief of Logistics in his membership roles on various SERC committees. DMVA provided and will continue to provide a person to serve as the State's alternate member of the Alaska Regional Response Team.

DMVA provided and will continue to provide an ex-officio, non-voting member to the board of directors on each of the two Regional Citizens' Advisory Councils in Alaska. For Emergency Response Planning, DMVA provided technical assistance to Local Emergency Planning Committees to ensure their response plans are consistent with the State Emergency Operations Plan. DMVA assisted and will continue to assist SPAR in developing a communications plan for response to oil and hazardous substance releases.

FY 93 RSA, DEC/DMVA Geographic Information Systems (FEMME) $439,300

This RSA is to be used primarily for contractual services from the University of Alaska, Anchorage and the purchase of hardware and software. DMVA will develop an emergency management decision system for the State Emergency Operations Center with this funding ensuring that the system aids management of oil and hazardous substance release incidents. The system will incorporate a graphic user interface which will be compatible with DEC's geographic information system (GIS). GIS will provide an automated decision support system and an automatic resource tracking system. The GIS system will use computer graphics to show a map of response capabilities.

For an estimated $250,000, the university will prepare a briefing paper on the emergency management decision system which includes: estimated costs for equipment, software, and training; a phasing plan; schedules and project milestones; cost/benefit analysis; and personnel utilization.

The hardware and software for the emergency management decision system is estimated to cost $175,000.

FY 93 RSA, DEC/DFG Spill Prevention Planning and Management Assistance and State Emergency Response Commission Contingency Plans $202,200

This RSA is to have DFG's participation on three distinct projects. DFG is expected to be reimbursed $5,000 for their participation in the quarterly State Emergency Response Commission meetings and in any Emergency Response Committee meetings. DFG will complete work tasks assigned by the commission or committees and provide expertise on fish and wildlife services.

DFG anticipates having $127,200 in reimbursable expenditures for their participation in oil pollution control. DFG will review and comment on approximately 180 oil spill contingency plans submitted by industry for compliance with state regulations. DFG's primary focus is to enhance protection of fish and wildlife populations, habitats, and public uses of these resources.

DFG anticipates having $70,000 in reimbursable expenditures for their participation in reviewing the state master and regional plans

FY 93 RSA, DEC/DNR Industry Contingency Plan Reviews and State Emergency Response Commission $28,900

This RSA is to have the Department of Natural Resources' (DNR's) participation on two distinct projects. DNR is expected to be reimbursed $5,000 for their participation in the quarterly State Emergency Response Commission meetings and in any Emergency Response Committee meetings. DNR will complete work tasks assigned by the commission or committees.

DNR anticipates having $23,900 in reimbursable expenditures for their participation in oil pollution control. DNR will review and comment on approximately 170 oil spill contingency plans submitted by industry for compliance with state regulations. DNR's primary focus is to ensure that sensitive natural resource areas are adequately protected.

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DEPT. OF ENVIRONMENTAL CONSERVATION
410 Willoughby St., Juneau, AK 99801 (907)465-5010

Mr. Randy S. Welker
Legislative Auditor
Legislative Budget and Audit Committee
Division of Legislative Audit
P.O. Box 113300
Juneau, AK 99811-3300

RECEIVED
MAR - 4 1994
LEGISLATIVE AUDIT

Dear Mr. Welker:

Thank you for the opportunity to reply to the Division of Legislative Audit's Preliminary Audit of the Oil and Hazardous Substance Release Response Fund (Response Fund). First I would like to formally thank Ms. Cynthia Ryan and Ms. Kristin Dolquist for the professional and thorough manner in which they conducted this audit. I have heard this comment made by several members of my staff.

In general, we believe that this draft audit report accurately reflects the legislative and Department of Environmental Conservation (DEC) history of the Response Fund. We also generally agree with the description of current DEC management of the Response Fund. In the face of the many misunderstandings currently existing about the Response Fund and its intended purpose, it is refreshing to see such an accurate explanation of the Fund.

Recommendation No. 1

The legislature should make statutory changes to clarify the role of the fund administrator.

We agree with the proposed statutory changes and will work with the Attorney General's Office and the respective Senate Finance and House Resource Committees to investigate ways that these statutory changes can be made.

Recommendation No. 2

DEC should revise the department's draft Cost Recovery and Policy and Procedures manual, implement the policy with due public notice, and provide training to all relevant personnel.

We generally agree with this recommendation and will take immediate steps to implement it.

DEC has been pursuing cost recovery on selected oil and hazardous releases since FY90. A formal cost recovery notification policy and process has been in place since April of 1992 and a draft cost recovery manual and training was completed in August of 1993.

We agree that these policies and procedures should be finalized and that any training inadequacies should be remedied as soon as possible.

Recommendation No. 3

DEC should develop a systematic method of addressing contaminated sites so those sites that pose the greatest risk to public health or the environment are addressed first.

This is an excellent recommendation and one that will require coordinated assessments with other government agencies, especially the Department of Defense (DOD). The DEC has a formal Statement of Cooperation with the DOD and an assessment of the effectiveness of joint environmental programs is now underway. Opportunities for improvements in contaminated sites management will be identified and implemented as a result of this assessment.

What the DEC has been providing is a prioritized list of high priority contaminated sites determined by the ranking model and judgement by regional staff with the suspicion that the responsible party is reluctant or unwilling to conduct the necessary cleanup. We agree with the recommendation to provide a better listing and have been developing policies and guidance during this fiscal year to put in place a more aggressive approach to confirm responsible party intent and prioritize all contaminated sites into a high/medium/low category.

Thank you again for the opportunity to respond to this draft audit and we look forward to working with your office toward the completion of the proposed management recommendations.

Sincerely,

John A. Sandor
Commissioner

STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

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FAX No. (907)465-5070

March 18, 1994

The Honorable Jeannette James
Alaska State House of Representatives
Room 501, State Capitol Building
Juneau, AK 99801-1182

Dear Representative James:

Thank you for your interest in response fund issues and for taking the time to express your concerns and questions to me. My letter will provide information you have asked for concerning long-term plans for emergency response depots and volunteer corps and contaminated sites.

In State statutes, the responsibility for establishing and managing the depots and corps rests with the Department of Military and Veterans Affairs (DMVA). I encourage you to contact DMVA directly for their response to this issue. Since our Department has worked with DMVA on this project over the years because of our responsibility to lead the State's response efforts for oil and hazardous substance spills, we are providing the following information as our best estimate at this time.

For the last two years, the Department of Environmental Conservation (DEC) has been working on the "Nearshore Demonstration Project" which was created by the Legislature in our FY 93 budget to develop a prototype nearshore oil spill response equipment package. This project will culminate in the deployment of two different equipment packages -- one for open water, crude spills and the other for inside passage, non-crude spills -- during April and May of this year for testing and evaluation. We expect to have the evaluation completed with recommendations for additional kinds of units not long after the tests. Based on the information we have developed so far, I am providing you estimates for coastal oil spill response packages that could be strategically placed around the State.

One unit, designed for open water coastal areas, consists of a small barge (to receive the product collected), deflection boom, and a skimmer designed to be operated by fishing vessels of opportunity. The estimated unit purchase price for

one of these is $500,000. Annual operations and maintenance cost will vary by location but can be estimated at $150,000 each. We think that there could be as many as a dozen sites around the State -- not covered by government or industry, but where spill risk exists -- where this kind of unit could be located. This results in a total purchase price of $6 million with an annual estimated cost of $1.8 million.

The other unit we have been working on is a rapid response vessel capable of moving equipment to a spill site in protected waters (like Southeast Alaska). The purchase price of these would be about $250,000 each with an annual operation and maintenance cost of $100,000 each. These units could be deployed in about 10 locations in Southeast Alaska and several each in Bristol Bay, Norton Sound and Kotzebue Sound, as well as throughout the Yukon and Kuskokwim Rivers. If the Legislature were to support purchase of 20 of these items, that costs out to $5 million purchase price and $2 million annual operations and maintenance.

Through local response agreements. DEC will be entering into partnership with local communities for responding to the routine spills (DEC receives about 2,000 reports of spills annually -- typically, all are non-disaster emergencies.). We will supply local communities with a basic, "first aid" response equipment capability and use the Response Fund ("470 Fund") to pay for the community costs to respond to these kinds of spills. Currently, we have a $400,000 capital budget request to start the program for FY 95. We estimate that a total of $1 million would cover this arrangement and we could seek cost recovery from spillers to maintain that capability in the future.

The Kenai Borough has put together an unsolicited request this year for a direct appropriation from the Response Fund to outfit a hazmat team for $250,000. This amount does not include personal services, operations and maintenance, nor training. Their price tag for equipment seems reasonable, although we were not involved in developing the list. Until the statewide hazards analysis is completed, the State will have the specific information needed to identify the appropriate locations for these teams. My best guess at this time is these hazmat teams could be targeted for Fairbanks, Anchorage, Kenai, Juneau and Ketchikan. The total cost to establish these would be $1.25 million. The annual training, operations and maintenance, and personnel costs are unknown, but these could be considered the local match.

You have also asked, "When are contaminated sites going to be cleaned up and what will it cost?" The following should answer your questions regarding the Department's role in cleaning up a contaminated site, the time it takes to cleanup a site, and the associated cost to the State.

<u>What does the Department do with contaminated sites?</u>

A contaminated site is a location where there has been a past improper discharge

or disposal of a hazardous substance that could threaten public health or the environment.

The Department oversees the investigation and cleanup of contaminated sites by the responsible party. By overseeing the responsible party's cleanup, the Department can assure Alaskans that the source of contamination has been removed, and that any remaining contamination is below levels that will harm the public or the environment. A strong oversight program conveys to the responsible parties their obligation under State law to clean up their contaminated site.

In addition to responsible party oversight, the Department directly cleans up sites where the responsible party cannot be found or is unwilling or incapable to do the cleanup directly. At these sites, the State hires and supervises term contractors who do the actual investigation and cleanup.

How long will it take to clean up contaminated sites?

The length of time needed to fully assess and clean up an average contaminated site ranges from three to five years. Very simple sites could take less time, while the most complex sites may take much longer. The number of contaminated sites is constantly changing. New sites are discovered and brought to the Department's attention and active sites are cleaned up. We estimate it would take 21 years to clean up the current inventory of 1051 sites and an additional 920 sites which we estimate will be discovered during that period and will need cleanup. Some sites are virtually impossible to clean up cost effectively or require only monitoring while Mother Nature does the job.

Sites that are expected to be added to the inventory in the future include:

- The Department of Defense (DOD) has estimated it will spend $1.1 billion to clean up the contaminated military sites in Alaska. To date, 350 sites have been discovered and we estimate an additional 90 sites will be discovered as a result of the high priority DOD has placed on the site discovery process over the next two years.

- Discovery of approximately 500 contaminated sites is expected to result from the current initiative to bring rural bulk fuel tank facilities into compliance with federal and State spill prevention requirements.

- Liability for contaminated properties will continue to cause buyers and sellers of real estate to practice due diligence and assess the property prior to completing a land transaction. These assessments are estimated to result in the discovery of 330 contaminated properties.

What will it cost the State to clean up contaminated sites?

Over the next 21 years at current staffing levels, cleanup standards, and technological abilities, we estimate it will cost the State approximately $220 million to cleanup all the contaminated sites that have been discovered to date and sites which are expected to be discovered. The table below lists the number of sites, average cost per site, and total cost over the next twenty one years to cleanup each type of contaminated site. One of the reasons we support a strong Research and Development program is because we can continue to help reduce these costs with more effective technology.

Projected Contaminated Sites Cleanup Costs

Type of Site		Number	Average State Cost/Site	21 Year Total Cost
RP		836	$23,429	$19,586,923
Federal		450	26,566	11,954,700
Orphan		88	644,450	56,711,600
Rural Bulk	Orphan	100	644,450	64,154,998
	RPs	398	23,429	9, 329,561
State Owned		97	600,000	58,200,000
Total		1,969		$219,937,781

The actual cost to the State differs by the type of contaminated site. The greatest cost to the State is for cleanup of sites where a responsible party is unable or unwilling to clean up or where the State is the responsible party. Where the Department oversees the cleanup of a site by the responsible party the cost to the State is much less. The Department's oversight of federal sites has the least cost to the State since the Department receives federal funds for this work under a cooperative agreement with DOD.

In addition to the contaminated sites situation described above, the Department also manages an underground storage tank program which is funded by the Storage Tank Assistance fund, not the Response Fund. Revenue for the Fund comes from the Mitigation Account of the General Fund and collection of registration fees. It is used to make grants and loans available to owners and operators of underground storage tanks for tank testing, closure, upgrade, and cleanup activities. Currently there are 826 unfunded requests for $43 million in financial assistance. The Administration is working with the Legislature to apply a 1 penny per gallon motor fuel tax for appropriation to the Storage Tank Assistance Fund to replace the mitigation account in the future.

We are sharing this letter with other members of the House Resources Committee. Thank you for asking.

Sincerely,

Mead Treadwell
Deputy Commissioner

MAC/jsg (G:\SPAR\MAC\REP.JIM)
cc: House Resources Committee Members

Representative Bill Williams, Chair
Representative Bill Hudson
Representative Con Bunde
Representative Joe Green
Representative Eldon Mulder
Representative David Finklestein
Representative Pat Carney
Representative John Davies
John A. Sandor, Commissioner, Department of Environmental Conservation
Major General Hugh L. Cox III, Commissioner, Department of Military and Veterans Affairs

STATE OF ALASKA

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March 16, 1994

The Honorable Bill Williams
Chairman, House Resources Committee
Capitol Building
Juneau, AK 99801

Dear Representative Williams:

Legislative Audit recently completed its review of the Oil and Hazardous Substance Release Response Fund (470 Fund). The Department appreciated the work of the auditors, and their commitment to understanding the Fund and both its historical and current statutory rules.

A copy of that Audit has been previously sent to you for your review. While it contains a wealth of information, we would like to direct your attention to the Auditor's Comments beginning on page 33:

> *"DEC is already dangerously close to having to implement statute with limited resources. Any reduction of staff positions in the Spill Prevention and Response (SPAR) division will jeopardize the likelihood of a successful prevention program. AOSC [the Alaska Oil Spill Commission] addressed this same problem in their final report on the events leading up to the Exxon Valdez grounding,* 'Rigor flagged, complacency took root. Prevention was neglected with disastrous results.'
>
> *"We wonder whether complacency is again taking root. Program consequences must be considered when SPAR funding is reduced. SPAR needs to be funded at least at the current level to maintain its ongoing operations. However, if the legislature decides to reduce funding for SPAR then statutes should be amended or repealed so that required programs can be eliminated. Reduction of funding alone does not eliminate a department's duty to fulfill statute."*

The Department of Environmental Conservation looks forward to working with the House Resources Committee on how to best address the recommendations of the Audit.

Sincerely,

John A. Sandor
Commissioner

JA/ch

cc: All Members, House Resources Committee

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

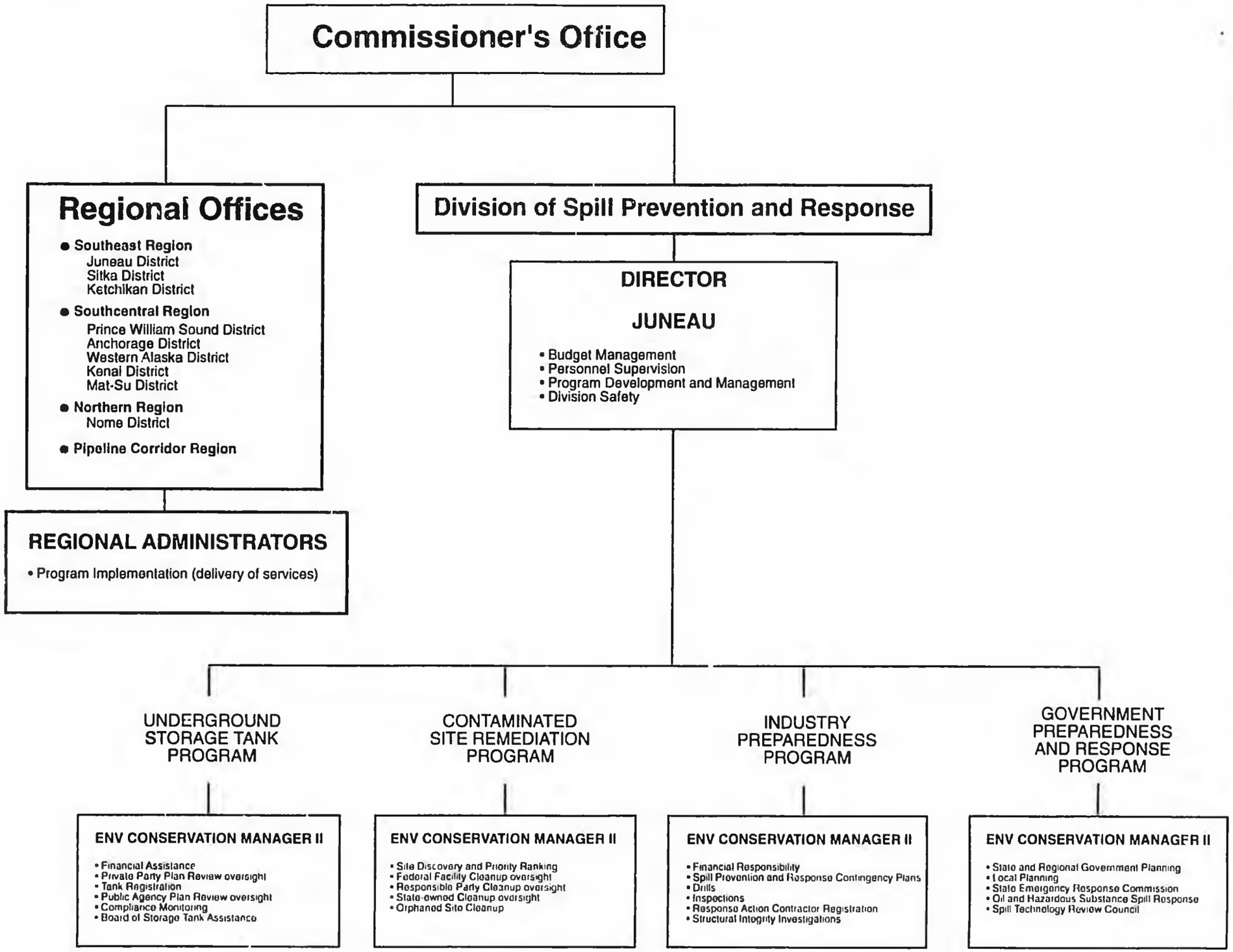
DIVISION OF SPILL PREVENTION AND RESPONSE

FY 95 BUDGET OVERVIEW

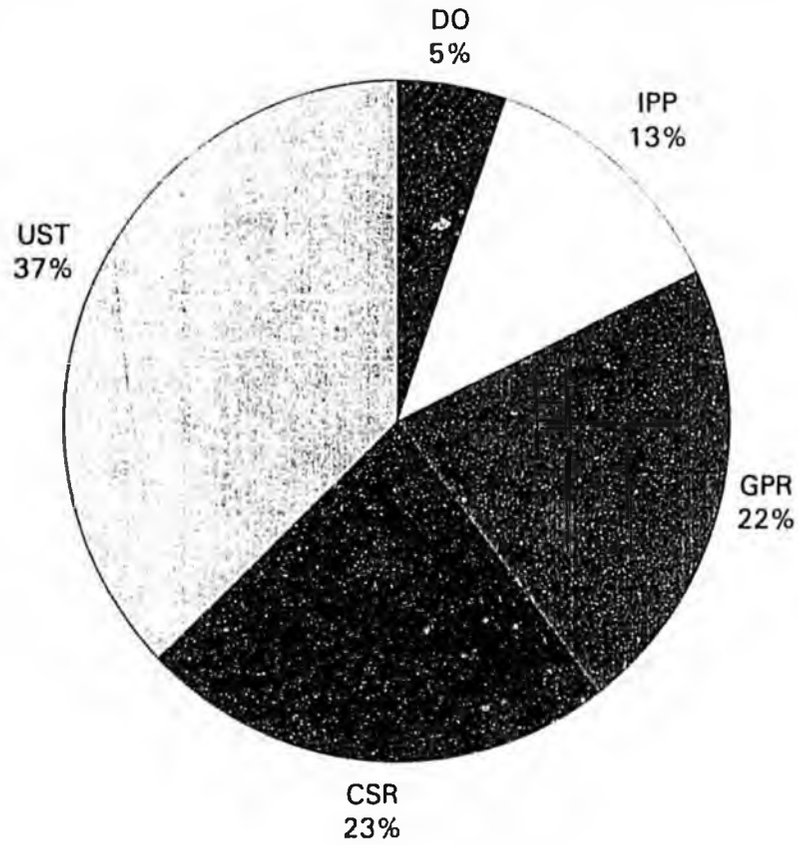
DIVISION RESPONSIBILITIES

PROGRAM GOALS, SERVICES AND ACCOMPLISHMENTS

January 1994


Commissioner's Office
Regional Offices
• Southeast Region
Juneau District
Sitka District
Ketchikan District
• Southcentral Region
Prince William Sound District
Anchorage District
Western Alaska District
Kenai District
Mat-Su District
• Northern Region
Nome District
• Pipeline Corridor Region
REGIONAL ADMINISTRATORS
• Program Implementation (delivery of services)
Division of Spill Prevention and Response
DIRECTOR
JUNEAU
• Budget Management
• Personnel Supervision
• Program Development and Management
• Division Safety
UNDERGROUND STORAGE TANK PROGRAM
CONTAMINATED SITE REMEDIATION PROGRAM
INDUSTRY PREPAREDNESS PROGRAM
GOVERNMENT PREPAREDNESS AND RESPONSE PROGRAM
ENV CONSERVATION MANAGER II
• Financial Assistance
• Private Party Plan Review oversight
• Tank Registration
• Public Agency Plan Review oversight
• Compliance Monitoring
• Board of Storage Tank Assistance
ENV CONSERVATION MANAGER II
• Site Discovery and Priority Ranking
• Federal Facility Cleanup oversight
• Responsible Party Cleanup oversight
• State-owned Cleanup oversight
• Orphaned Site Cleanup
ENV CONSERVATION MANAGER II
• Financial Responsibility
• Spill Prevention and Response Contingency Plans
• Drills
• Inspections
• Response Action Contractor Registration
• Structural Integrity Investigations
ENV CONSERVATION MANAGER II
• State and Regional Government Planning
• Local Planning
• State Emergency Response Commission
• Oil and Hazardous Substance Spill Response
• Spill Technology Review Council

DIVISION OF SPILL PREVENTION AND RESPONSE
PROPOSED FY 95 BUDGET



Contaminated Sites Component Activities	Personal Services	Travel	Contractual	Supplies	Equipment	Grants	Total
DO - Director's Office	716.3	36.2	227.2	11.6	25.9	0.0	1,017.2
IPP - Industry Preparedness	1,677.5	193.1	403.6	47.0	30.7	0.0	2,351.9
GPR - Government Preparedness & Response	2,403.7	265.8	1,277.9	82.7	97.3	0.0	4,127.4
CSR - Contaminated Sites Remediation	2,433.8	251.5	1,518.4	51.6	51.0	0.0	4,306.3
UST - Underground Storage Tanks	1,422.3	115.3	559.5	27.9	21.0	4,836.3	6,982.3
Total Component	8,653.6	861.9	3,986.6	220.8	225.9	4,836.3	18,785.1

DIVISION OF SPILL PREVENTION AND RESPONSE

PRIMARY RESPONSIBILITIES

* Serve as the State's lead agency for the prevention, control, containment, and cleanup from the release of oil or hazardous substances to the air, land, or water.

* Oversee the cleanup of oil and hazardous substance spills by the responsible party to ensure an adequate cleanup is completed.

* Maintain term contracts with professional response action contractors to control, contain or cleanup spills in cases where there is no responsible party or the cleanup is inadequate.

* Certify that companies producing, storing, or transporting large volumes of oil have demonstrated the financial ability to respond in damages from a spill.

* Certify industry spill prevention and response plans and register response action contractors listed in the plans .

* Conduct drills and inspections to test approved industry spill prevention and response plans.

* Register all commercial underground fuel storage tanks and ensure they are tested for leaks.

* Provide financial assistance to owners and operators seeking to upgrade their underground storage tanks.

* Investigate sites contaminated with oil or hazardous substances by past poor practices to determine their potential threat to public health and the environment and determine the priority in which they should be cleaned by the responsible party.

* Prepare and drill the State and Regional Master Plans for State government

DIVISION OF **SPILL** PREVENTION AND RESPONSE

WHAT KIND OF SPILLS?

* The actual or imminent uncontrolled release of oil or hazardous substances to Alaska's air, water, land or groundwater.

* The immediate release of all or some of the contents of a storage tank, pipeline, vessel, or cylinder.

* The ongoing release from a leaking storage tank, pipeline, vessel or cylinder.

* An emergency where an actual or imminent discharge of oil or hazardous substance poses an immediate threat presents an imminent or present threat to the public health or welfare, or the environment.

EXAMPLES:

* A slow, ongoing leak from an underground fuel storage tank used for gasoline or home heating oil.

* A site where drums of hazardous substances have been buried.

* An immediate release from a chlorine gas cylinder at a community sewage treatment plant.

* A release of diesel fuel from a sinking fishing vessel.

* A long-forgotten burial pit for low level radioactive waste.

* A release of PCB from leaking transformers found at a remote military site.

* A site contaminated with lead from past industrial activities.

* A release of methanol from a railroad car that has rolled off its track.

* A release of crude oil from a supertanker run aground on Bligh Reef in Prince William Sound.

DIVISION OF SPILL **PREVENTION** AND RESPONSE

HOW ARE SPILLS PREVENTED?

* Educating facility and vessel operators on methods for reducing the risks of an uncontrolled release from a facility producing, transporting or storing oil or hazardous substances.

* Reviewing facility operation plans to identify where the possibility of spills can be reduced and how best to prepare for stopping a spill and limiting its spread.

* Enforcing standards for the design, construction, operation and maintenance of facilities and vessels which have been proven to prevent, or reduce the amount of an oil or hazardous substance release.

* Responding to reports of imminent threats of pollution before the spill occurs to ensure action is taken to remove or reduce the threat.

EXAMPLES:

* Testing underground tanks for leaks and providing financial assistance to upgrade underground storage tanks to national spill containment and leak detection standards.

* Reviewing and approving industry oil discharge prevention and response plans.

* Requiring secondary containment structures around above ground storage tanks, containment booms around tankers during oil cargo transfers, and leak detection and system shut-down measures for pipelines.

* Inspecting the structural integrity of facilities that produce, transport, or store oil or hazardous substances.

* Conducting response drills to practice who will do what in the event of a spill.

* Conducting hazards analysis to measure the risk of oil and hazardous substance releases to local communities.

* Requiring crude oil tankers in Prince William Sound to be escorted by emergency assistance vessels.

* Removing abandoned drums of hazardous substances found alongside of roadways or other properties without the owners knowledge or consent.

DIVISION OF SPILL PREVENTION AND **RESPONSE**

WHAT DOES RESPONSE MEAN?

* Stopping and containing an ongoing release of oil or hazardous substance.

* Investigating the cause of the spill and identifying the responsible party for the spill.

* Ensuring responsible parties adequately stop, contain and clean up spills.

* Monitoring the adequacy of containment, cleanup and disposal by the responsible party.

* Ensuring that cleanup operations are initiated in cases where there is no responsible party or the responsible party's cleanup actions are inadequate.

* Determining the volume of oil or hazardous substance spilled and collecting samples to determine what was spilled.

* Measuring the extent of contamination to the air, land or water.

* Pursuing cost recovery actions against the responsible party to reimburse the State's response expenses and damages to State resources.

EXAMPLES:

* Providing technical and financial assistance to the owner of a gasoline station to cleanup soil contaminated from a leaking underground storage tank.

* Contracting with a professional response action contractor to cleanup contamination from a hazardous substance spill that happened in the past, or for the proper containment and disposal of leaking containers or drums when the responsible party can not be found.

* Participating with other State and federal agencies, and the responsible party in the Incident Command System to manage response operations carried out by the responsible party.

* Overseeing the Department of Defense cleanup of contamination on military bases.

* Provinding technical and financial assistance to a local fire department that is responding to an emergency release of Chlorine from a municipal sewage treatment plant.

INDUSTRY PREPAREDNESS PROGRAM

GOALS AND SERVICES

GOALS

Increase industry prevention efforts and ensure industry response capabilities.

SERVICES

- Review and approve spill prevention and response contingency plans for oil facilities and vessels.
- Coordinate with appropriate state and federal agencies to ensure complimentary rather than duplicative review policies and procedures.
- Take enforcement action on regulated vessels or facilities operating without an approved plan.
- Register qualified Response Action Contractors listed in spill prevention and response contingency plans.
- Conduct announced or unannounced spill drills to test, evaluate and improve approved spill response contingency plans.
- Inspect facilities and vessels to verify compliance with approved spill prevention and response contingency plans.
- Review financial responsibility applications and issue certificates of financial responsibility.
- Track all operator accounts to verify timely submission of applications, renewals, and affidavits.
- Take corrective or enforcement action as necessary to ensure that no regulated vessel or facility operates without approved proof of financial responsibility.

INDUSTRY PREPAREDNESS PROGRAM

ACCOMPLISHMENTS

- Every regulated operation -- nearly 400 vessels, facilities, and pipelines -- received technical assistance in complying with new spill prevention and contingency planning regulatory requirements.

- Every regulated operation in the State submitted revised spill prevention and response plans demonstrating upgraded prevention practices and response capability.

- Over 30 enforcement actions have been taken to ensure compliance with the stricter standards.

- Spill prevention and response plans for approximately 20% (35) of the highest-risk operations in the State have been approved. Of the remaining plans approximately 73% (102) are nearing approval, and 27% (39) are awaiting operator completion of missing information.

- Financial Responsibility Certificates have been issued for every regulated operation in the State.

- Regulations implementing a State registration program for oil spill primary response action contractors took effect September 25, 1993.

- 50 vessel and 150 facility inspections were conducted to verify compliance with spill prevention and response requirements. 64 discharge exercises were conducted to ensure the preparedness of regulated operators and their ability to implement their prevention and response plan.

- Signed an agreement with California, Oregon, Washington and British Columbia to form an Oil Spill Task Force for working on West Coast spill prevention and response issues.

- Resolved a number of oil pollution prevention and response regulatory issues, including plan format, noncrude response planning standards, temporary storage tank and tank inspector requirements, effective storage capacity criteria, and prevention credits.

CONTAMINATED SITES REMEDIATION PROGRAM

GOALS

Reduce risk to public health and the environment from hazards posed by sites contaminated by past improper disposal or discharges of hazardous substances.

Pursue cost effective solutions to contaminated site problems which will give the greatest overall reduction in risk for each dollar spent.

SERVICES

- Identify and assess sites to determine their potential threat to public health and the environment and rank sites to determine the priority in which they should be addressed.

- Adopt regulations for the assessment and cleanup of contaminated sites.

- Perform preliminary site assessments on contaminated sites to determine if no further action is necessary or establish the priority for further site assessment and cleanup activities.

- Ensure that contaminated sites undergo investigation and clean up in a priority order.

- Conduct responsible party searches and notifications on contaminated sites as necessary prior to expending Response Fund dollars.

- Maintain a current list of high priority orphan and responsible party contaminated sites to be assessed or cleaned up using DEC term contractors.

- Issue and maintain term contracts for contaminated site cleanup or assessment work.

- Prepare scopes of work and provide project oversight for orphaned site cleanups or site assessments.

- Provide oversight and document review for responsible party cleanups.

- Prepare community agreements to allow consideration of community values in the prioritization of contaminated site work and sharing of site cleanup information.

CONTAMINATED SITES REMEDIATION PROGRAM

ACCOMPLISHMENTS

- Provided oversight and technical assistance for assessment and/or cleanup of over 600 responsible party contaminated sites.

- Completed cleanup at the Alaska Battery Enterprises Superfund site.

- Convened an advisory working group of public and private stakeholders to develop program regulations that will define the remediation process, establish cleanup goals, and provide incentives for voluntarily cleanup.

- Established guidance to ensure that potentially responsible parties associated with high priority contaminated sites are contacted and asked to take responsibility for cleanup of contamination prior to expending the Response Fund.

- A total of 150 sites have been closed and delisted from the database inventory. 1051 sites remain in the database inventory.

- Provided technical and contracting assistance to four State agencies participating in cleanup of 33 contaminated sites on State-owned lands.

- Prepared FY 94 and FY 95 budget proposals to clean up high priority contaminated sites which have no owners willing to assume cleanup responsibilities. In FY 94, $900,000 was allocated to address 11 sites and for FY 95 a proposed budget of $900,000 was submitted for eight sites.

- Maintained term contracts with private contractors for assessment and cleanup of contaminated sites which have no owners willing to assume cleanup responsibilities.

- Completed negotiations for a three party interagency agreement between the EPA, Department of Defense and the Department for Naval Air Station on Adak and Elmendorf Air Force Base, and began negotiations for Fort Richardson. These agreements ensure that contamination problems other than Supefund sites will be addressed.

- A "no further action" status was given to 23 federal facility sites that were determined to not need further investigation. Removal or remedial actions reduced the threat to human health and the environment at 47 federal facility sites. 15 Public Meetings were held to encourage public invoivement in federal facility cleanup activities.

UNDERGROUND STORAGE TANK PROGRAM

GOALS AND SERVICES

GOALS

Know the condition of all regulated underground storage tanks in Alaska.

Help owners and operators of regulated underground storage tanks prevent leaks from their tanks.

Assist owners and operators of regulated underground storage tanks in cleanup of soil and water contaminated by their leaking tanks.

SERVICES

- Register all underground storage tanks and collect tank registration fees.
- Maintain a list of tank owners which have not paid tank registration fees and provide copies to the Attorney General for collection.
- Priority rank, public notice, and issue cleanup and upgrade grants and loans to underground storage tank owners and operators.
- Hold public workshops on state regulations, tank worker certification, laboratory methods and reporting formats and requirements for tank owners, operators, contractors and consulting firms.
- Approve applications and enforcement of private laboratory accreditation.
- Review upgrade and closure plans and enforce tank upgrade, cleanup, and closure requirements.
- Review Quality Assurance Program Plans, Tank Tightness Testing results, Site Assessment/Release Investigation Reports, Corrective Action Plans and Corrective Action reports.
- Conduct site reconnaissance, inspections, and oversight during site assessments, release investigations, corrective actions, tank installations, upgrades and closures.
- Published a quarterly program information newsletter and maintain a technical information lending library at locations throughout the State.
- Held meetings of the Board of Storage Tank Assistance to hear appeals from tank owners and operators.

UNDERGROUND STORAGE TANK PROGRAM

ACCOMPLISHMENTS

- Completed cleanups at over 100 leaking UST sites for a new total of 243 cleaned sites.

- Distributed over $10 million in Storage Tank Assistance Grants and Loans to tank tightness testing, site assessment, cleanup, upgrade, and closure projects.

- Reviewed and ranked over 500 FY 94 financial assistance applications for cleanup grants and loans, upgrade grants, and closure grants.

- Issued three Emergency Grants to sites that posed an imminent threat to public health in Fairbanks, Sterling, and Wasilla, Alaska.

- Initiated an Information Bulletin series for distribution to UST owners, operators, contractors, consultants, and others for streamlined deadline and compliance information outreach.

- Operated the UST tollfree telephone hotline to answer technical questions from over 500 callers.

- Worked with the Attorney General's Office to negotiate 5 UST compliance agreements and management plans with State, Federal, and large Corporations to facilitate a systematic approach to large facility compliance.

- Streamlined the UST regulations dealing with financial assistance and cleanup in consultation with a working group comprised of representatives from industry and the regulated public.

- Completed a nationally recognized testing contract with the International Fire Code Institute for the certification of UST workers.

- Collected UST registration fees in the amount of $443 thousand for 1993 (a 90% collection rate), and invoiced $440 thousand for 1994.

- Prioritized 744 leaking sites by ranking with the Alaska Hazard Ranking Model.

- Published the Alaska Underground, a quarterly program newsletter for distributing technical information to over 1800 program participants.

- Held public hearings throughout the state to explain technical requirements, financial assistance procedures, and enforcement as applicable to the UST leak prevention and cleanup requirements.

GOVERNMENT PREPAREDNESS AND RESPONSE PROGRAM

GOALS AND SERVICES

GOALS

Carry out the State's responsibilities to protect public health and the environment from the potential impacts of oil and hazardous substance releases.

SERVICES

- Establish minimum safety and technical training standards for DEC response team members and schedule safety training courses to comply with OSHA and the Department's minimum safety standards.

- Investigate all significant spills to determine the cause, responsible party, extent of contamination and impact on public health or the environment.

- Monitor the responsible party's response and ensure cleanup either through the responsible party or through Department contractors is carried out to the Department's satisfaction.

- Recover state costs for responding to oil and hazardous substance spills.

- Develop effective local, regional and statewide response plans which direct a coordinated governmental response to oil and hazardous substance releases.

- Prepare agreements with other State, federal and local agencies necessary to implement State, regional and local contingency plans.

- Schedule, plan, design, execute and evaluate drills to practice operating the State, regional and local contingency plans.

- Maintain a DEC spill response equipment inventory and database, with procedures for acquisition, management, and maintenance.

- Maintain an up-to-date spill response directory and 24 hour spill response number.

- Issue and maintain term contracts for oil and hazardous substance spill cleanup work.

- Take appropriate enforcement actions in consultation with the Attorney General's office on civil and criminal penalties.

- Maintain a statewide spills database to analyze spill data, trends and causes.

GOVERNMENT PREPAREDNESS AND RESPONSE PROGRAM

ACCOMPLISHMENTS

- During FY 93, received 2,185 oil spill reports and 411 reports of hazardous substance spills.

- Responded to 724 oil spills and 85 hazardous substance spills.

- Completed the State Master Plan for oil and hazardous substance spill response which was approved by the State Emergency Response Commission.

- Established and maintained spill response resources:

  * Awarded term contracts to VRCA, Northwest Enviroservice and Martec for emergency oil spill response services.
  * Maintained, calibrated, inventoried and kept all response equipment ready for deployment on a 24 hour emergency basis.
  * Developed a statewide Department equipment database to inventory and track the status of all response gear.
  * Developed a draft response agreement with Alaska Clean Seas to be used as prototype with other spill response cooperatives in Alaska.
  * Maintained an updated statewide Callout List of State and federal agency spill response personnel, for use by the Alaska State Trooper dispatchers who operate an emergency 24 hour spill notification telephone number.

- Awarded a contract to North Slope Telecom to develop a statewide telecommunications plan for emergency response to oil and hazardous substance releases

- Completed an OSHA required Safety and Training Program for Department response staff.

- Awarded a contract to demonstrate nearshore spill response strategies utilizing State equipment and local volunteers.

- Developed a draft Local Response Agreement for reimbursing municipalities who assist the State On Scene Coordinator in the containment, control and cleanup of oil and hazardous substance releases.

- Designed a command and control system as part of a new Alaska Marine Highway vessel for use in responding to major offshore oil spills.

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The Storage Tank Assistance Fund -- What is it all about?

* AN ENVIRONMENTAL CLEANUP PROGRAM RESTORING ALASKA'S DRINKING WATER SUPPLIES.

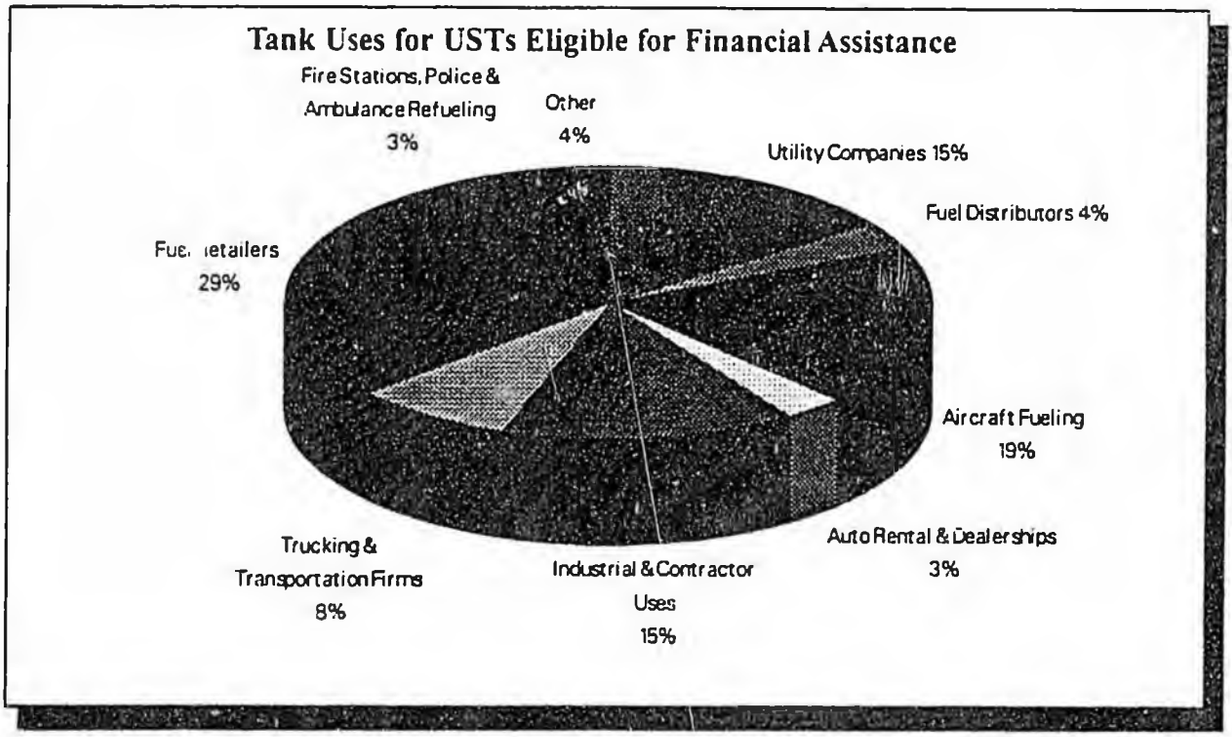
* Providing grants and loans to Alaskan businesses to offset the high cost of environmental cleanups to keep Alaskan businesses in business.

* A POLLUTION PREVENTION PROGRAM FOR UNDERGROUND PETROLEUM STORAGE TANKS

* Providing incentives and grants to tank owners and operators to upgrade or close their tanks to prevent future leaks.

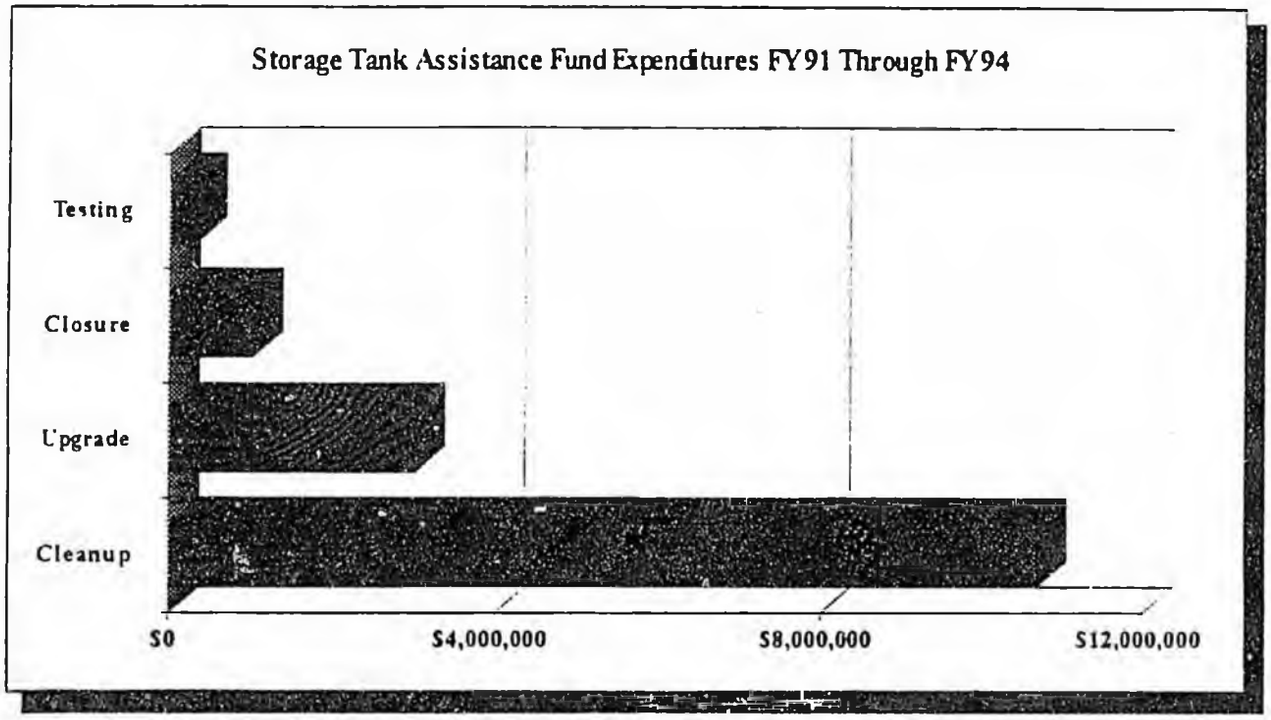
* AN ALASKAN BUSINESS ASSISTANCE PROGRAM.

* Providing relief to Alaskan businesses and private individuals faced with the high cost of environmental compliance.



Since Program Inception in 1991

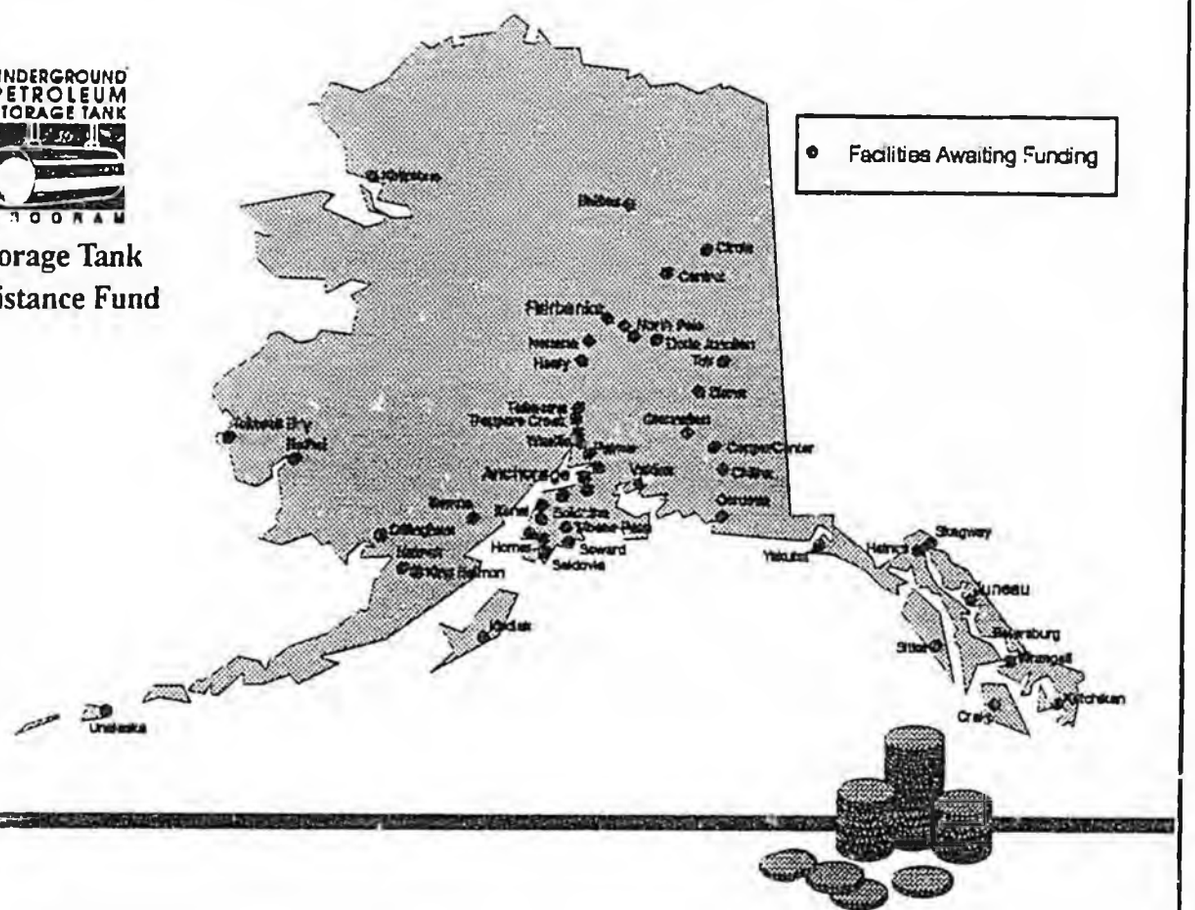
- By the end of FY 94, nearly $ 15 Million will have been expended or encumbered for financial assistance grants and loans.
- A total of 386 financial assistance requests for tank tightness testing or site assessments have been funded.
- 89 financial assistance requests for soil or groundwater cleanup will have been funded by the end of FY 94.
- 63 financial assistance requests to upgrade tanks to new EPA standards and prevent future leaks have been funded.
- 109 financial assistance requests to close out old or unused tanks have been funded.



Statewide Distribution of UST Closure, Upgrade and Cleanup Assistance Requests

UNDERGROUND PETROLEUM STORAGE TANK PROGRAM

Storage Tank Assistance Fund

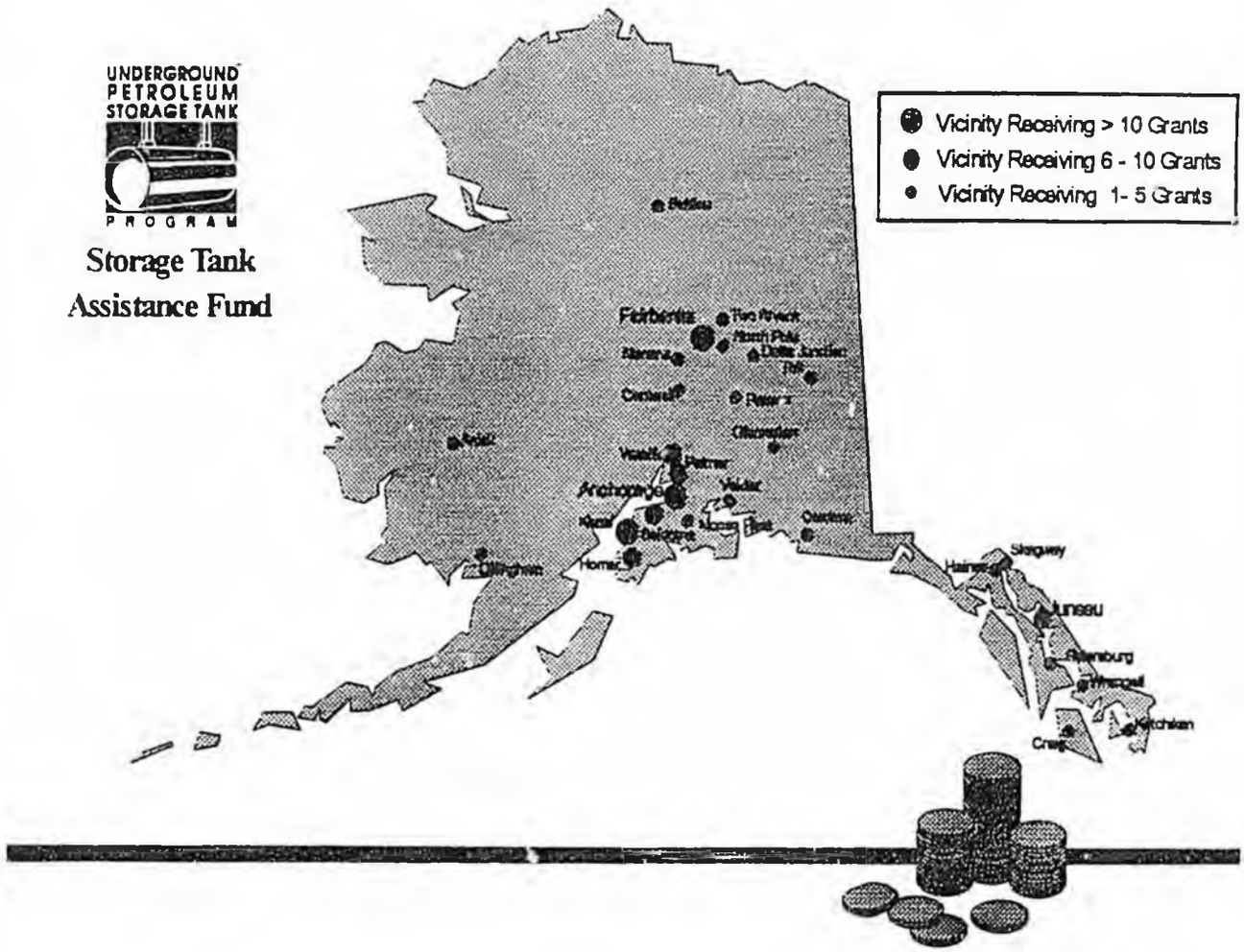


Presently, there are 826 unfunded requests for financial assistance for testing, closure, upgrade or cleanup activities in the State of Alaska. The unfunded requests total in excess of $42 million.

Statewide Distribution of UST Closure, Upgrade and Cleanup Grants

UNDERGROUND PETROLEUM STORAGE TANK PROGRAM

Storage Tank Assistance Fund

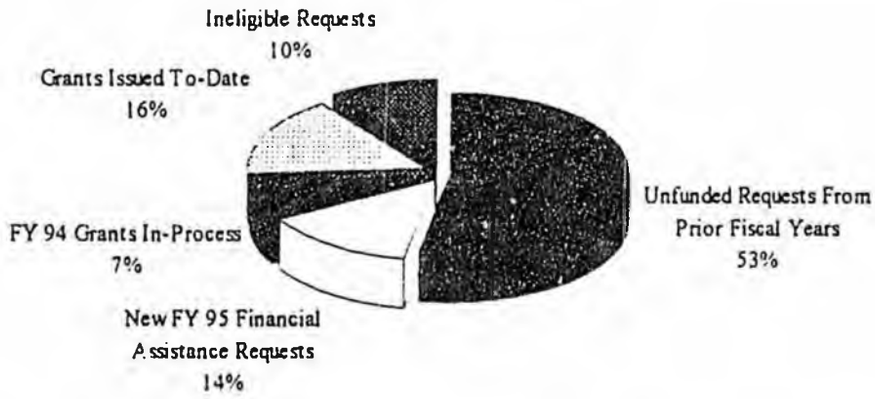


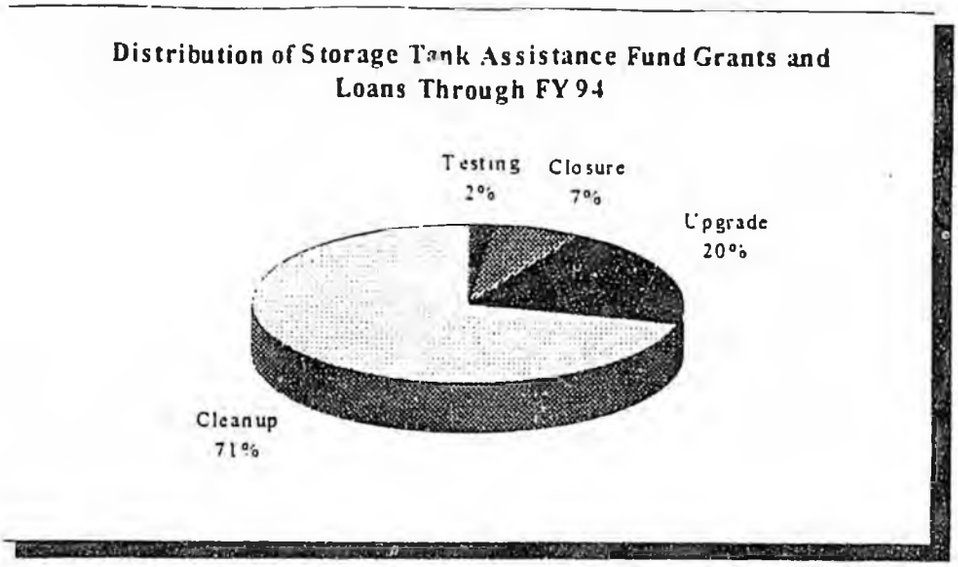
Financial Assistance Program Summary

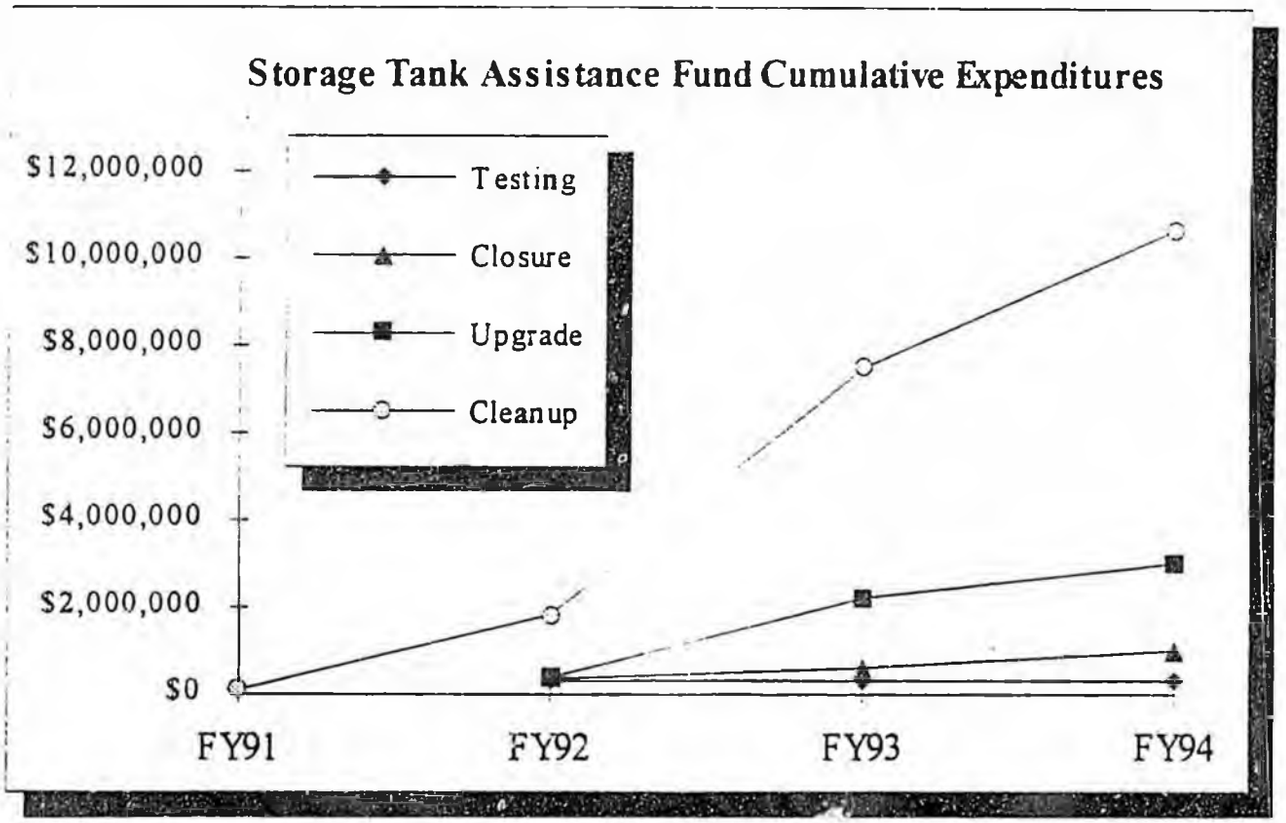
Applications Received	1617
Applications Funded	576
Applications In-Process for FY 94	64
Unfunded Applications from Prior Years	670
New Applications Received for FY 95 Funding	156
Applications Determined Ineligible By DEC	151

Applications Received	$64,529,302
Funded Applications To-Date Including Applications In-Process for FY 94	$15,040,640
Unfunded Applications from Prior Years	$34,060,137
New Applications Received for FY 95 Funding	$ 8,845,074
Applications Determined Ineligible By DEC	$ 6,583,451

Financial Assistance Summary in Dollar Percentages From Program Inception in Fiscal Year 91 Through Fiscal Year 95



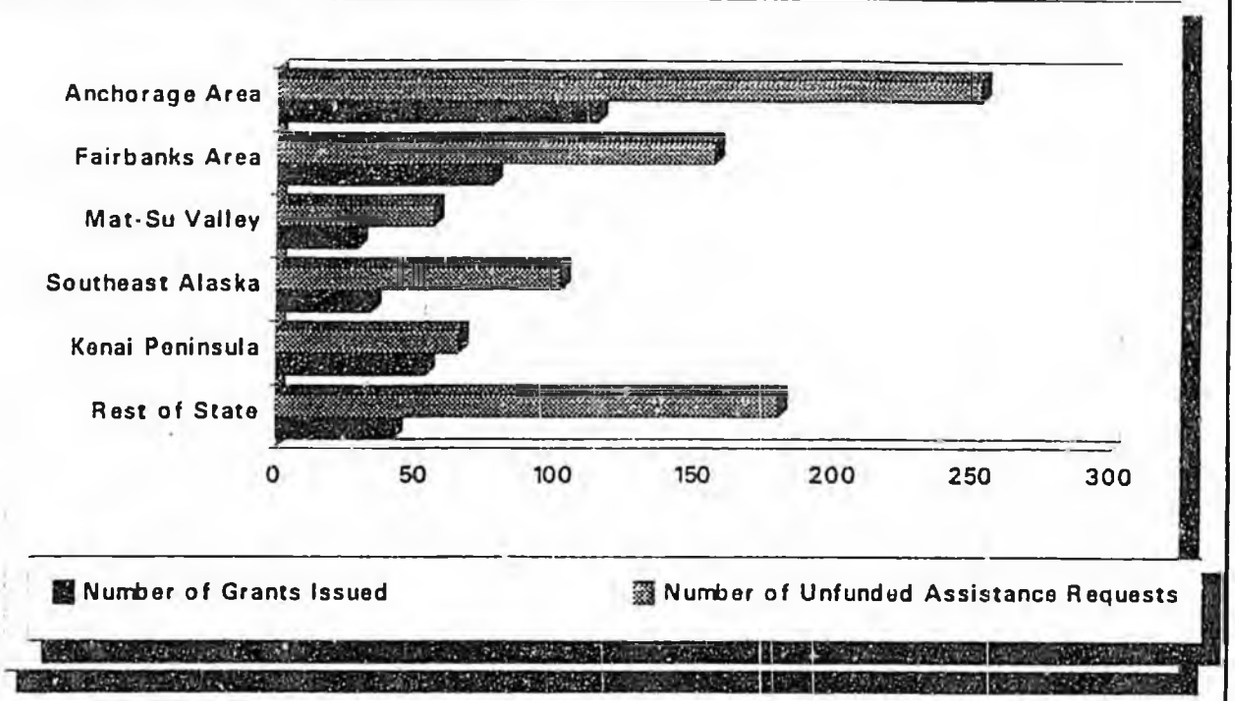


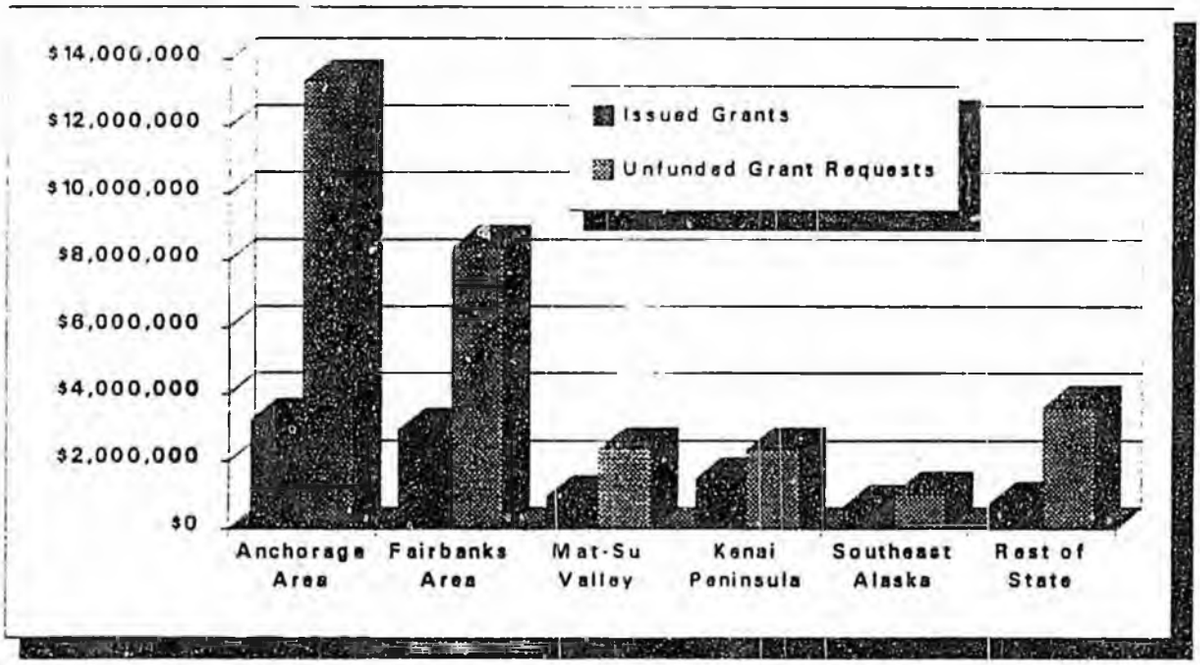


Cleanup expenditures have increased as UST Owners and Operators discover the true extent of the petroleum contamination present at their facilities.

Statewide Grant Activity

(As of 11/1/93)

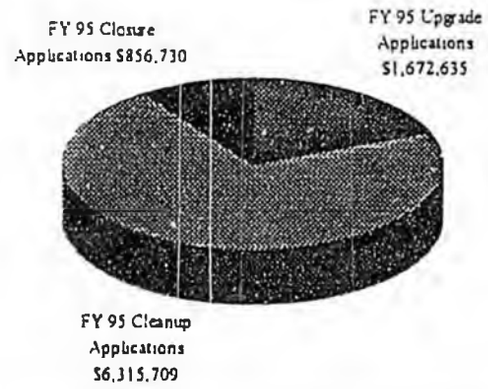




Fiscal Year 1995 Financial Assistance Requests

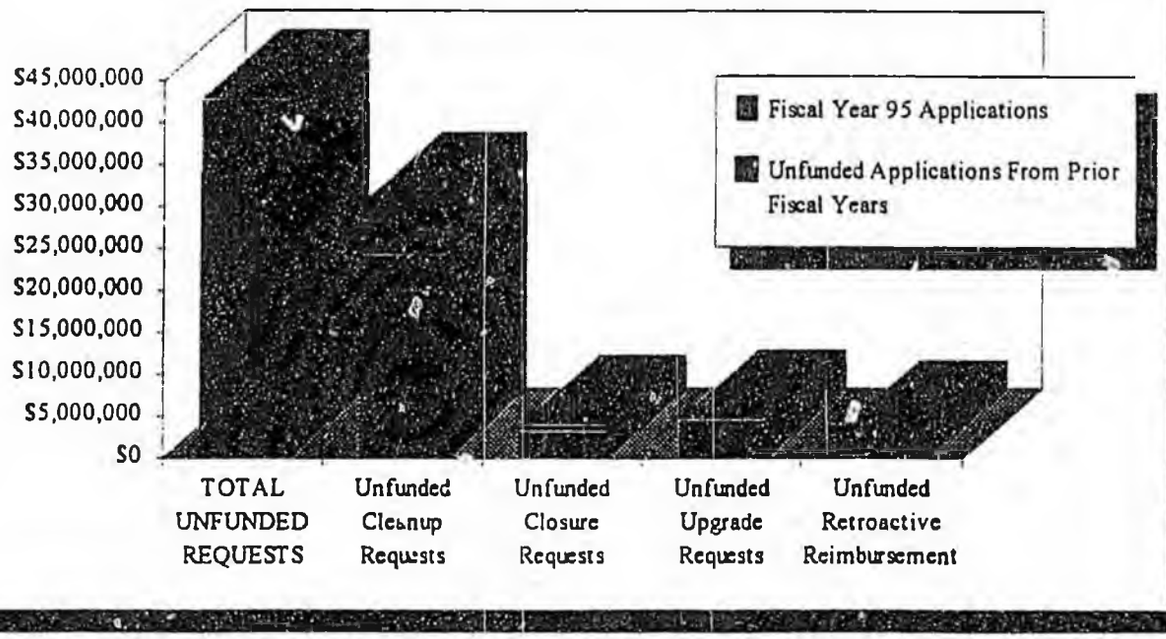
As of December 31, 1993, a total of 156 new applications for financial assistance had been received. These applications would be eligible for funding beginning in FY 95. These new requests total $ 8,845,074. Of the 156 new applications, 49 were requests for cleanup funds, 40 were for tank upgrade activities and 67 applications were received for tank closure assistance.

Fiscal Year 1995 Financial Assistance Applications Received To-Date



The total number of unfunded financial assistance applications as of December 31, 1993 is 826. The total dollars requested that still remain unfunded is $42,905,211. This total includes unfunded applications from prior years as well as new applications eligible for FY 95 funds.

Summary of Unfunded Financial Assistance Requests



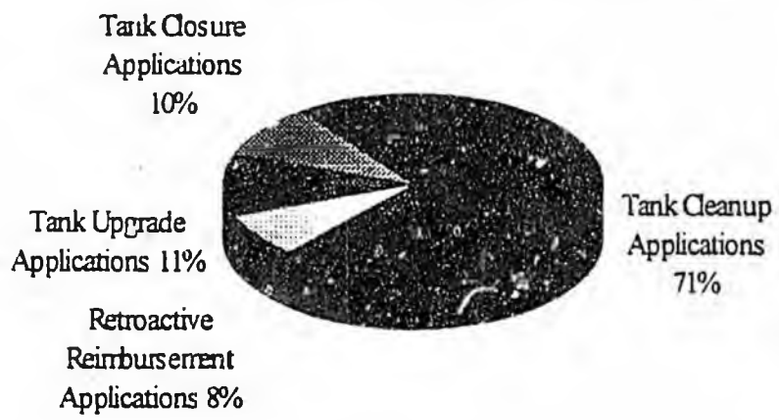
Unfunded Financial Assistance Requests

Tank Upgrade Applications	121
Tank Closure Applications	322
Tank Cleanup Applications	225
Retroactive Reimbursement Applications	158
	826

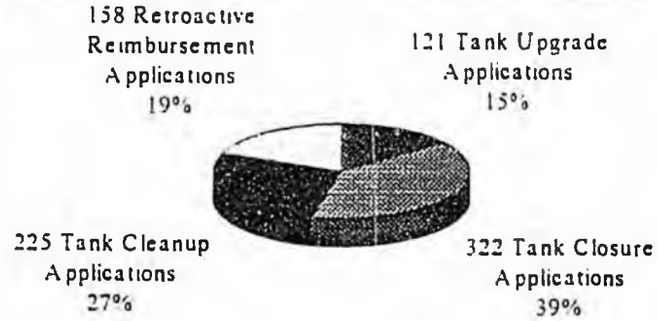
Tank Upgrade Applications	$ 4,757,337
Tank Closure Applications	$ 4,129,172
Tank Cleanup Applications	$ 30,630,265
Retroactive Reimbursement Applications	$ 3,388,437
	$ 42,905,211

Presently, there are 826 unfunded requests for financial assistance for testing, closure, upgrade or cleanup activities in the State of Alaska. The unfunded requests total in excess of $42 million.

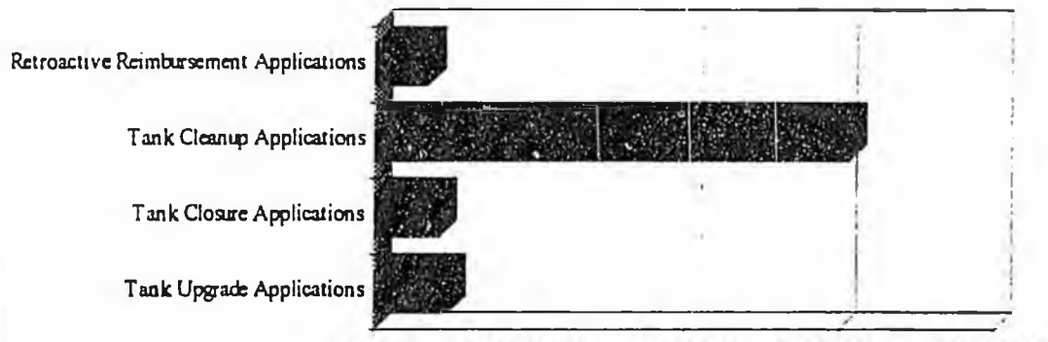
Unfunded Applications In Dollar Percentages



Unfunded Financial Assistance Requests



Unfunded Financial Assistance Requests



Emergency Grants

Emergency Grants are issued to an applicant when an imminent threat to public health occurs and funds are not readily available to undertake the appropriate assessment or corrective action activities. In order to receive an Emergency Grant, the UST owner or operator must apply to the Board. The Board will then review the circumstances and discuss alternatives with the both the UST owner or operator and the Department of Environmental Conservation. After further consultation with the Department, and with the Department's concurrence, if conditions warrant, the Board will issue an Emergency Grant.

In FY 91, one Emergency Grant was issued. This was actually the first cleanup grant issued in the program. That facility was finally determined "clean" by DEC in September, 1993.

In FY 92, no Emergency Grants were issued. During FY 93, five Emergency Grants were issued to three different facilities. Thus far in FY 94, only one Emergency Grant has been issued to-date.

Board of Storage Tank Assistance

As of 22-Feb-94

Emergency Grants

Meeting Date	Emergency Grant Authorized	Applicant	Reason for Emergency Grant
4/26/91	$109,460	Wasilla Stop & Shop Wasilla, Alaska	Customer's vehicle damaged turbine pump connection which resulted in a subsurface discharge of approximately 2400 gallons of regular gasoline. Water wells threatened.
7/21/92	$6,000	Moose Creek General Store North Pole, Alaska	Local resident detected fuel vapors in basement, possibly resulting from numerous overfills at adjacent service station. Emergency grant for tightness testing of UST's on site.
7/31/92	$75,000	Moose Creek General Store North Pole, Alaska	Local resident detected fuel vapors in basement, possibly resulting from numerous overfills at adjacent service station. Water wells threatened. Release investigation ordered.
9/18/92	$215,000	University Car Care Fairbanks, Alaska	Extensive contamination from leaking tanks and numerous overfills created large contaminant plume which was impacting adjacent property (UAF) drinking water wells.
3/30/93	$85,000	Cooks Sterling Tesoro Sterling, Alaska	Release investigation was neccessary to investigate possible off-site impacts from historic releases of petroleum from this site and other sources. Additional work on existing soil treatment cell.
3/30/93	$100,000	University Car Care Fairbanks, Alaska	Extensive contamination from leaking tanks and numerous overfills created large contaminant plume which was impacting adjacent property (UAF) drinking water wells. Supplemental work.
11/19/93	$70,000	4 Corners Tesoro Wasilla, Alaska	Significant dangar to drinking water wells in the area, including potential danger to a local elementary school. 800 cubic yards of contaminated soil needed to be removed to reduce the risk to public health.

Appeal Hearings and Dispute Resolution

Since program inception, there have been dozens of grievances filed about the financial assistance program, tank regulations or regulation implementation and enforcement. Nearly all have been resolved informally either through internal review of Department procedures or by one-on-one discussions with the concerned individual. However, the Board has acted on several formal appeals since the program was implemented.

Board of Storage Tank Assistance

Appeal Action

As of 22-Feb-94

Meeting Date	Appeal Action Board Ruled In Favor of:	Appellant / Basis for Appeal	Board Findings
7/21/92	DEC	Anchorage Clean Sweep/ENSR Anchorage, Alaska (Denied Markup Charges)	Markups were not previously allowed by financial assistance staff. Board had earlier ruled in January, 1992 that markups would be allowed after January, 1992. Work at this site was conducted prior to January, 1992.
7/21/92	DEC	Anchorage Clean Sweep/ENSR Anchorage, Alaska (Denied Customary Costs)	Customary charges invoiced by this firm were higher than listed on allowable customary cost sheets that had been published by financial assistance staff. Consultant was aware of allowable customary costs at time of work.
12/7/92	APPELLANT	ERA Aviation Juneau, Alaska (Unique Design Points)	Firm had installed a unique aircraft refueling system that exceeded normal standards and considered local climatic fluctuations to further protect public health and the environment. Unique design enabled firm to receive additional ranking points.
12/18/92	DEC	Campbell & Sons Texaco Wasilla, Alaska (Priority Ranking Position)	Firm conducted cleanup activities and prevented soil contamination from reaching groundwater. Due to groundwater not presently being threatened, facility was ranked as medium priority. Board commended action but did not rank site higher.
4/13/93	APPELLANT	Wasilla Chevron Wasilla, Alaska (Eligible Costs)	Facility's consultant collected monitoring well samples. DEC staff determined costs were not eligible due to unqualified sampler. Board determined that samples had been collected by a person who was supervised by a qualified person in accordance with existing regulations. Costs determined eligible.
12/9/93	APPELLANT	Alaska Chevron Fairbanks, Alaska (Priority Ranking Position)	Board directed DEC to re-rank Dale Millers Alaska Chevron site to reflect a corrected Alaska Hazard Ranking Model score resulting from 3000 cubic yards of contaminated soil at the site. Board found the original score to be inconsistent with submitted site data.
12/14/93	APPELLANT	Kelly's Tire and Wheel Fairbanks, Alaska (Priority Ranking Position)	Board directed DEC to re-rank Bud Kelly's Tire and Wheel site to reflect a corrected Alaska Hazard Ranking Model score resulting from 3000 cubic yards of contaminated soil at the site. Board found the original score to be inconsistent with submitted site data.
12/14/93	APPELLANT	Remers Full Serve Anchorage, Alaska (Priority Ranking Position)	Board directed DEC to re-rank Darrel Remers Full Serve site to reflect a corrected Alaska Hazard Ranking Model score resulting from private wells serving less than 25 people within one mile of the site.
12/14/93	APPELLANT	Remers Gas & Save #3 Anchorage, Alaska (Priority Ranking Position)	Board directed DEC to re-rank Terry Remers Gas & Save #3 site to reflect a corrected Alaska Hazard Ranking Model score resulting from private wells serving less than 25 people within one mile of the site.

March 1994

The Industry Preparedness Program

Alaska Department of Environmental Conservation

Division of Spill Prevention and Response

MISSION

"To ensure that each regulated oil industry operator in Alaska takes specific steps to prevent oil spills, and remains in constant readiness to clean up spills."

The Industry Preparedness Program (IPP) ensures that oil industry operators take specific steps to prevent and respond to releases or threatened releases of oil. These steps are set in laws which apply to operators of:

- ***oil tank vessels and barges***;
- ***crude oil transmission pipelines***;
- ***oil production and exploration facilities***; and
- ***oil terminal or storage facilities*** with over 5,000 barrels (210,000 gallons) of crude oil or 10,000 barrels (420,000 gallons) of non-crude (refined) oil.

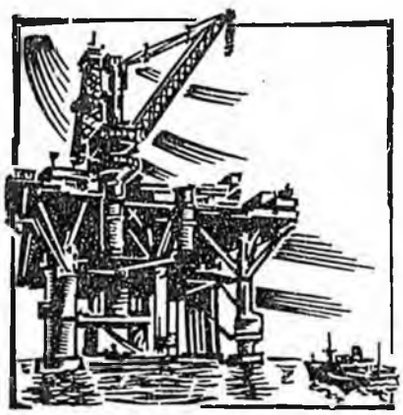
Alaska's oil spill prevention and response planning regulations spell out the requirements, which are found in Title 18, Chapter 75 of the Alaska Administrative Code. About 300 Alaskan operations fall into these categories.

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Past accomplishments

Where We've Been

IPP was created to improve the Department's focus on industry's responsibilities under state law. In its short history, IPP has:



- solicited participation of industry, interest groups and the public during implementation of new and tougher regulations for oil pollution prevention and response;
- developed new and comprehensive guidelines for all aspects of oil spill prevention and response plans;
- provided extensive technical help and outreach to ensure that each operator has submitted an improved,updated plan to meet the new requirements;
- put in place an aggressive program to review all plans for compliance with the new law, and taken appropriate enforcement action when necessary;
- developed procedures for cooperative plan reviews with other state and federal agencies, successfully convincing federal agencies to accept operators' state plans to satisfy federal planning requirements;



- developed and implemented, with extensive public input a response contractor registration program, and registered contractors in all state regions of operation;
- worked with the American Petroleum Institute and the Alaska Oil and Gas Association to present workshops on tank farm spill prevention measures; and
- completed studies of crude oil pipelines in Cook Inlet, and small oil facilities in rural Alaska.

DEC Spill Prevention and Response Assurance System



Five key projects within IPP contribute its mission's success:

- ***Financial Responsibility Project*** — which ensures that every regulated operator has access to sufficient financial resources to respond to damages from a spill, in amounts mandated by the state;
- ***Spill Prevention and Response Plans Project*** — which ensures that detailed plans are submitted by each regulated operator, and are approved as meeting state requirements;
- ***Response Action Contractor Registration Project*** — which ensures that those contractors upon which approved plans rely are state-registered, and obligated to respond to a spill;
- ***Spill Drills Project***— which tests the preparedness and ability of plan holders to respond to an actual spill, through drills and exercises; and
- ***Inspections Project*** — which ensures that regulated facilities and vessels are in compliance with spill prevention laws and applicable response plans.

Financial Responsibility

What is it?

State law (AS 46.04.040) requires regulated oil operators to prove access to enough money to pay for a spill's response and damages, and sets minimum amounts for each type of operation. The financial responsibility project ensures that every regulated operator meets this important requirement.

Why is Financial Responsibility Necessary?

Although spill prevention is the best cure, operators without access to sufficient money to pay for spill damages would place responsibility for those damages on the shoulders of the public rather than the responsible party. There must be a strong financial commitment and significant financial consequences to ensure that activities are conducted in the safest manner possible.

What are the Key Features?

IPP personnel receive, review, and issue decisions on applications for approval of proof of financial responsibility. A statewide database aids in the 24-hour monitoring and tracking of operators needed to ensure compliance with state law. Operators demonstrating acceptable proof are issued a Certificate of Approval.

Financial responsibility can be demonstrated by letter of credit, insurance, surety or guaranty bond, self-insurance, or other means approved by the Department. The majority of operators meet their requirements through self-insurance or guaranty bond from another company capable of self-insurance. About 25 operators rely on insurance to meet this obligation.

Proof of Financial Responsiblity

Type of Facility	Amount Required
Oil Terminals	
Oil Terminals/Crude (5,000 bbl & up)	$50 million
Oil Terminals/Non-Crude (10,000 & up)	$1 million minimum $50 million maximum
Pipelines and Exploration Facilities	
Pipeline and Offshore Exploration or Production	$50 million
Onshore Production	$20 million
Onshore Exploration	$5 million
Vessels and Barges	
Tank Vessel and Oil Barge/Crude	$300 per bbl. cargo capacity $100 million minimum; no maximum (largest current amount is approxiamately $500 million)

Oil Spill Prevention and Response Plans

What Are They?

Oil operators must apply for and receive Department approval of a plan to prevent and respond to spill, according to state law (AS 46.04.030). This approval must be renewed every three years. In order to receive approval, a plan must demonstrate that the operator has met the state's **response planning standard** for that particular class of operation, which is set forth in Alaska Statute.

Alaska's spill prevention and response planning requirements, which have been extensively revised in recent years, are considered among the most comprehensive in the world. A prevention plan, incorporating all agency requirements and additional voluntary measures, and a response plan demonstrating in-region resources and capability to meet specific planning targets, are essential parts. Basic prevention and response plan requirements include:

- an analysis of past and potential spills;
- a description of specific spill prevention measures in place;
- an emergency action plan for responding to an oil spill;
- spill scenarios which describe response strategies and equipment deployment;
- inventories of spill response resources and equipment;
- estimated response times;
- call-out lists of trained response personnel;

and other pertinent information.

Why Are These Plans Necessary?

First, operators have an obligation to systematically plan for spill prevention. Putting these plans on paper provides a way to communicate to agencies and the public exactly what steps are being taken to prevent spills.

Second, only comprehensive planning and pre-positioned response resources can ensure that an operator can effectively combat an oil spill. An approved plan demonstrates access to sufficient equipment and trained personnel.

What are the Key Features?

Plan review includes opportunities for the public and other state and federal resource agencies to review and comment on plans prior to DEC approval. Representing the lead agency, IPP staff provide extensive technical assistance to the operator both prior to and during plan preparation. Significant investments of staff time are also required to ensure that the valid concerns of all parties, including affected regional citizens' advisory councils, local coastal districts, and the interested public, have been fully considered.

Once the plan has been approved, spill drills and inspections (further described on the following pages) help to ensure that the plan remains an effective blueprint for prevention and response preparedness.

Response Action Contractor Registration

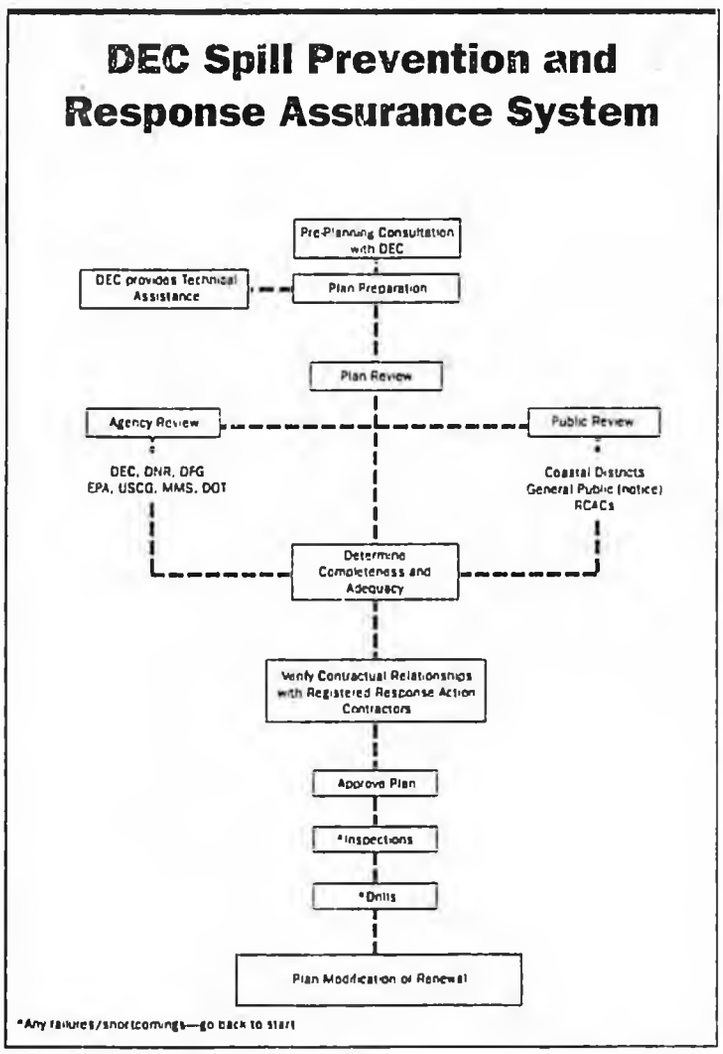
What is it?

The registration project clarifies the contractual relationship between regulated operators and those contractors who are listed as primary responders in the operator's plan. State law (AS 46.04.035) requires those Oil Spill Primary Response Action Contractors whose resources have been identified in an approved plan to be state registered and approved.

Why is Registration Necessary?

Registration protects

- the public, which depends on these plans as demonstration of adequate spill preparedness;
- operators, who depend on contractors for response services; and
- contractors, who cannot stay in business without clear obligations from plan holders.



In the past, contractors had been included in plans without their knowledge; contractors had refused or were unable to respond despite their inclusion in plans; and operators had relied upon the services of contractors which were not obligated in any way to respond to a spill — hence the passage of the enabling legislation.

What are the Key Features?

Applications for registration are submitted to IPP for approval. Contractors and spill-response cooperatives are registered for specific areas of the state, and must renew their registration every three years. A completed U.S. Coast Guard Application for Certification as an Oil Spill Removal Organization (OSRO) can be submitted in lieu of some of the information required in the application for state registration.

Operators are required to submit "statements of contractual terms" as part of their plan application. In order for the plan to receive approval, these statements must show a clear obligation to respond on the part of the registered contractor. Plan holders who rely directly upon another plan holder's response resources through "mutual aid" agreements are not required to register, but must submit similar statements which demonstrate the contractual obligation to respond.

IPP staff maintains a current list of contractors which have been registered and approved, and monitors and tracks compliance through a registration database. A Letter of Registration is provided to approved contractors.

Spill Drills

What are they?

Spill drills are exercises or demonstrations, often unannounced, which test the ability of a plan holder to implement a prevention and response plan. IPP staff review, evaluate, plan and conduct drills for all operations with approved plans in order to verify response capability. Drills can range from a simple telephone notification exercise to a full-scale, on-water equipment deployment.

Why are the Drills Necessary?

Only constant training and exercising of a plan can ensure response readiness and that the plan will really work during a spill.

What are the Key Features?

Drills and exercises are initiated either by IPP staff (including "surprise" drills) or by the plan holder. In the latter case, the Department may accept the exercise as proof of readiness if it has been invited to participate or evaluate the drill and the drill meets certain criteria. Drills are conducted at least once every three years per operation, and up to twice per year for major crude oil operations.

Evaluation of a drill takes into account many factors, and is not a "pass/fail" exercise. If problems are uncovered during the exercise, IPP staff will work with the operator to correct deficiencies and may require response plan modifications if necessary.

Inspections

What are they?

IPP staff conduct first-hand examinations of the spill prevention measures, response preparation and equipment of regulated operators to ensure compliance with state requirements and operator plans.

Why are Inspections Necessary?

Past experience has shown that good intentions are enhanced when there is regular verification. Without periodic inspections, the prevention and response efforts of some operators will suffer. Inspections can range from simple "spot checks" to detailed inventories, records verification, and physical testing of facility components.

What are the Key Features?

Inspections are conducted yearly, as resources allow. If problems are uncovered during an inspection, IPP staff work with the operator to correct deficiencies and may require modifications to an approved plan as necessary.

Inspection checklists used by IPP staff can also be used by operators to conduct periodic "self-inspections" of their operations.

For further information, contact:

Industry Preparedness Program
Division of Spill Prevention and Response
Department of Environmental Conservation
410 Willoughby Avenue,
Suite 105
Juneau, Alaska 99801-1795
(907) 465-5275

Some Success Stories

IPP and Alaska's Environment

- ***Alyeska API 653 Tank Inspections*** — The Alyeska Pipeline Service Company invited Department personnel to observe the mandatory inspections of its Valdez Terminal tanks. As a result, advanced corrosion problems were discovered and corrected and the potential for significant leakage from the tank bottoms was averted.

- ***Drift River Spill*** — An estimated 42,000 gallon crude oil spill from a tank valve ruptured by falling ice was completely contained by the secondary containment dike at the Drift River Terminal on Cook Inlet. Contractors removed the spill, with Department oversight, without any impacts to the adjacent surface waters.

- ***Spill Response Cooperatives*** — New requirements affecting the registration of response contractors and cooperatives have resulted in additional industry funding and enhanced response resources and preparedness for cooperatives such as Cook Inlet Spill Prevention and Response, Inc., Southeast Alaska Petroleum Resource Organization, and Chadux Corporation in western Alaska.

- ***Substandard Facilities*** — Around the state, substandard oil storage facilities have been faced with the need to upgrade or cease operations. A number of problem facilities have been entirely replaced with new, state-of-the-art tank farms, while others have lowered their storage capacity, thus reducing the cumulative risk to the environment.



- ***Level Playing Field*** — Operators who have taken steps in the past to voluntarily upgrade their facilities beyond the minimum requirements have received "prevention credits" for such measures as impermeable secondary containment and corrosion protection. Those who have not earned the credits must maintain a higher level of spill response preparedness, as well as ensure that their facilities meet the minimum standards now mandated by state law.

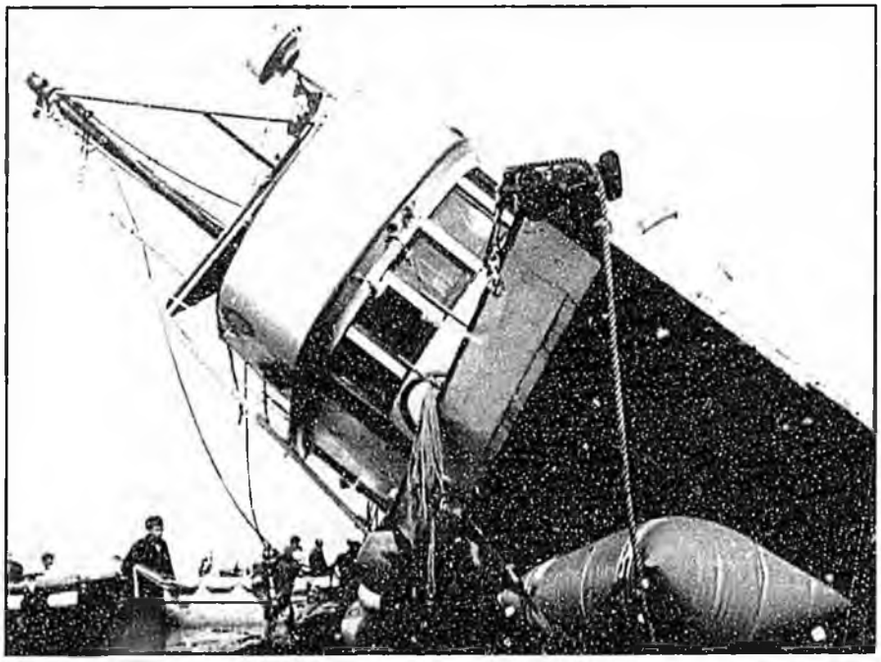
- ***Yutana Barge Lines*** — A viable plan for responding to spills for a barge operator in remote areas of Alaska was developed through extensive consultation, the technical assistance of IPP staff, and the cooperation of company officials. The plan has served as a model for other operators seeking compliance with state requirements.

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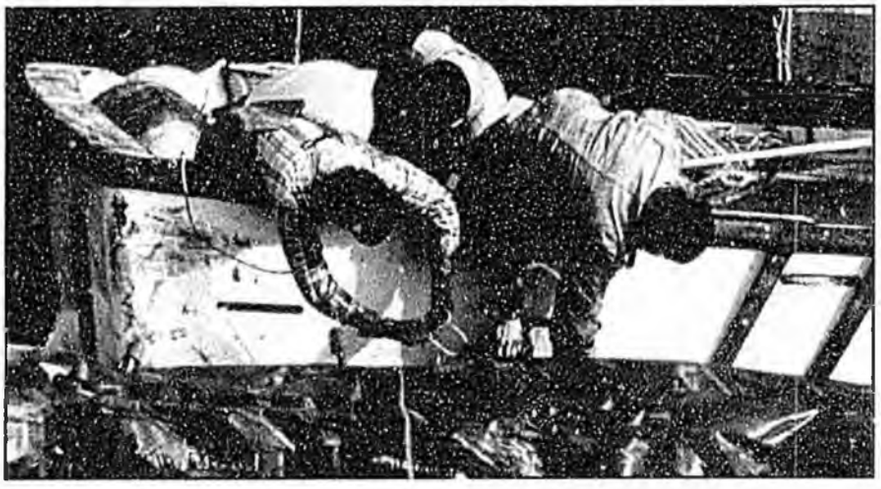
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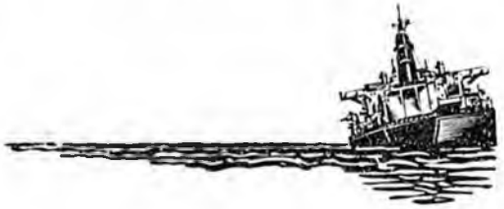
Spill Response Program











MISSION

The handling of oil and hazardous substances can pose a significant threat to the economy and environment of the state. The social and economic history of the state has been altered by oil development and expanded chemical use since the discovery and development of Kenai and Cook Inlet oil and gas in the 1950's and '60s.

Alaskans have long recognized the need for protection of its natural resources and prudent management of oil and hazardous substances and have developed the laws to ensure it will happen. These laws prohibit the discharge of oil or hazardous substances, require notification when a spill does occur, and containment, control, removal, and proper disposal of all waste materials. Under existing state and federal law the spiller is responsible for cleanup.

The Alaska Department of Environmental Conservation (ADEC) is tasked with carrying out these laws. The Division of Spill Prevention and Response is responsible for ensuring prevention of spills and response to spills that do occur. ADEC regional staff are there day-in and day-out making this happen.

To make sure spills get cleaned up Alaskans have established the Oil and Hazardous Substance Release Response Fund, which pays for state and local government costs. The Department is mandated by statute to seek cost recovery and reimburse the fund for its costs to ensure cleanup and restoration of damaged resources.

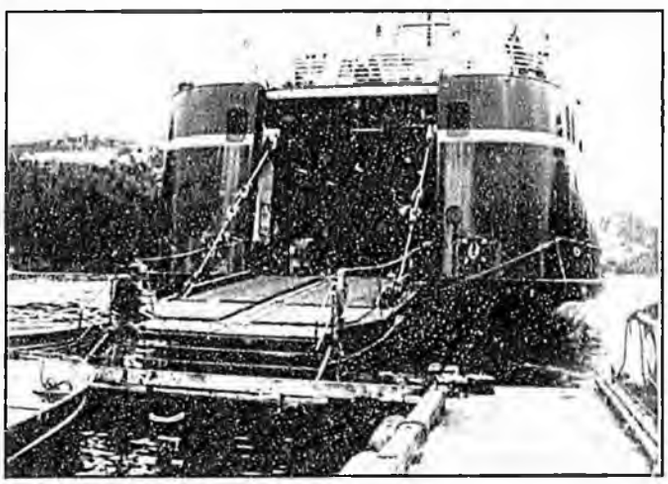
DEC SPILL RESPONSE OBJECTIVES

To focus response actions on its statutory responsibilities, ADEC has implemented the following Response Objectives:

SAFETY—Ensure safety of persons involved, responding or exposed to the immediate effects of the incident.

PUBLIC HEALTH—Ensure protection of public health and welfare from the direct or indirect effects of contamination of drinking water, air and food.

ENVIRONMENT—Ensure protection of the environment, natural and cultural resources, and biota from direct or indirect effects of contamination.



Alaska State Ferry supporting cleanup

CLEANUP—Ensure adequate containment, control, cleanup and disposal by the responsible party or take over when cleanup is inadequate.

RESTORATION—Ensure assessment of contamination and damage and restoration of property, natural resources and the environment.

COST RECOVERY—Ensure recovery of costs and penalties to the Oil and Hazardous Substance Release Respond Fund for response, containment, removal, remedial actions, or damage.

RESPONSE



Waste characterization

Response includes all of the actions taken by the Department to ensure safety, protect public health and the environment, contain, control and cleanup the spill, assess damages and recover costs to the state. In most cases the spiller conducts the actual cleanup under the oversight of the Department. Under what might be called the "responsible party" system, the Department oversees the cleanup activities, taking into account the concerns of the public. When the cleanup is inadequate or the spiller is not known or it is an "orphan" spill, the Department will "take over" and conduct the cleanup using its cleanup contractor resources.

The goal of a cleanup is to protect the public and the public's resources and to cleanup the spill. Frequently the fastest, most efficient and least expensive method is to work with the responsible party. In other cases immediate actions by the Department and local public safety and fire resources are needed to ensure the safety and health of those who may be directly affected by the initial release of a hazardous substance.

During an actual response, the Department carries out a variety of key tasks to varying degrees, depending on the size and nature of the spill. Because of the large number of reported spills, the Department only responds to significant spills which may impact public health or the environment. For the majority of smaller spills the Department works over the phone with the responsible party to ensure cleanup.

Some of the key tasks during a response are:

- Identifying the spiller or "responsible party"
- Investigating the cause
- Determining the volume spilled and recovered
- Tracking the movement of the spill
- Taking actions, such as evacuations, to protect public health
- Measuring and documenting the extent of contamination
- Monitoring the adequacy of cleanup and disposal
- Coordinating with all local, state and federal interests using the Incident Command System (ICS)
- Providing logistical support for field operations

The operations carried out during a response are varied and complex and require a very high level of training, experience and organization. These operations are carried out by Department Response Teams.

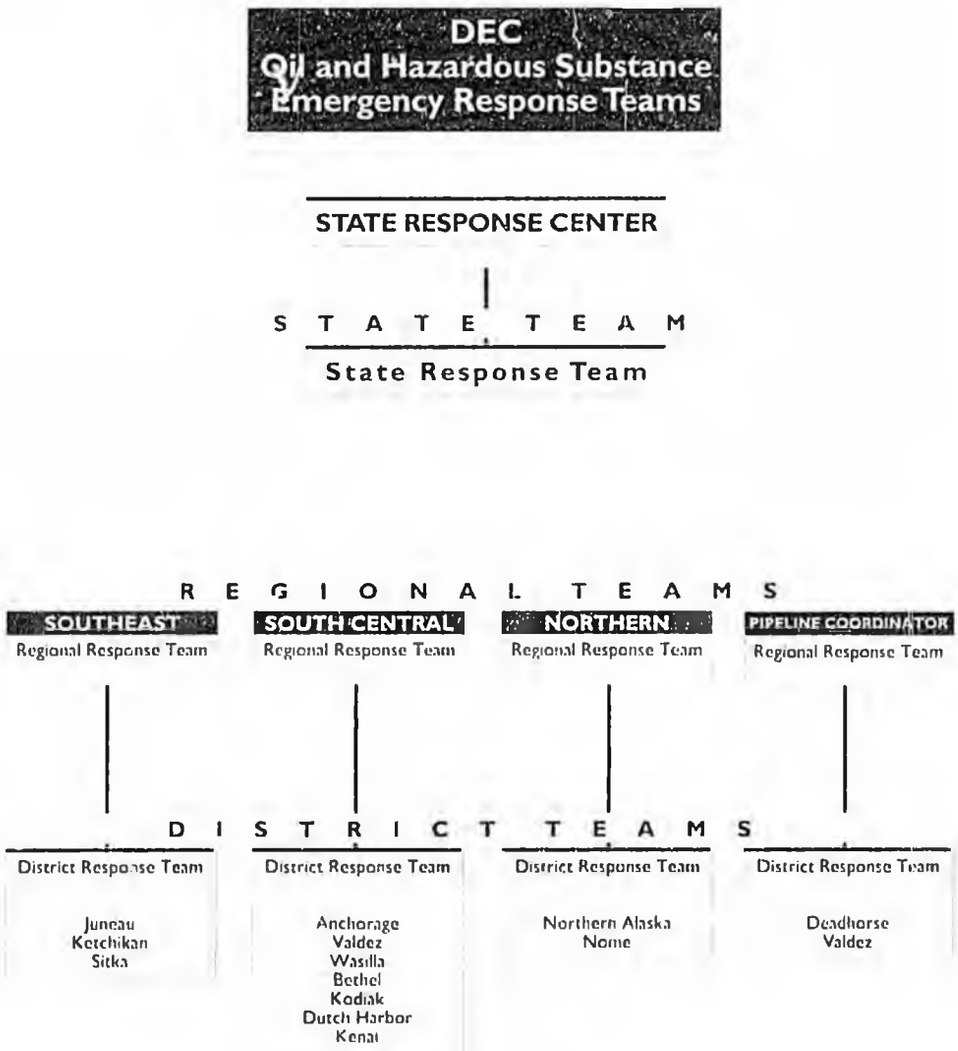
RESPONSE ORGANIZATION

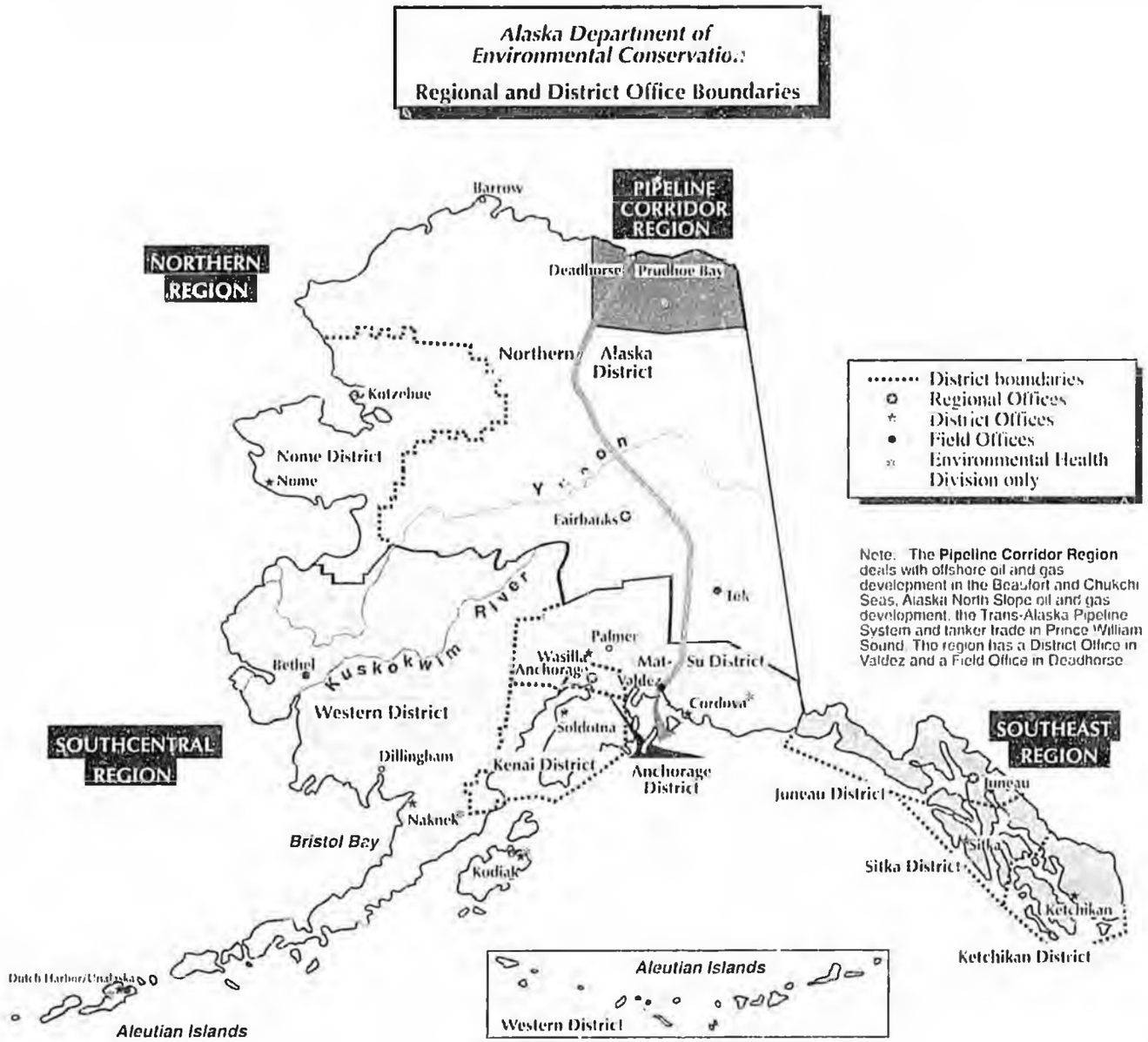
District Teams

The Department's response organization provides a tiered approach for responding to spills. The initial response is carried out by District Response Teams in closest proximity to the spill in coordination with local, state, and federal officials. Fourteen District and Field Offices give the Department a geographical logistical advantage for spill response. District teams carry out the initial characterization and assess the level of response needed. They can identify hazards, take defensive actions to contain the release, prevent exposure and secure the area.

Regional Teams

District Response Teams are backed up by Regional Response Teams based in Anchorage, Fairbanks and Juneau. Each Regional Response Team has a predesignated State On Scene Coordinator (SOSC) pre-authorized to immediately spend up to $25,000 for emergency actions. The SOSCs may also seek approval to expend greater amounts if necessary to manage the incident. Regional Response Teams have additional expertise and resources to combat a spill and also work in coordination with local, state, and federal officials.

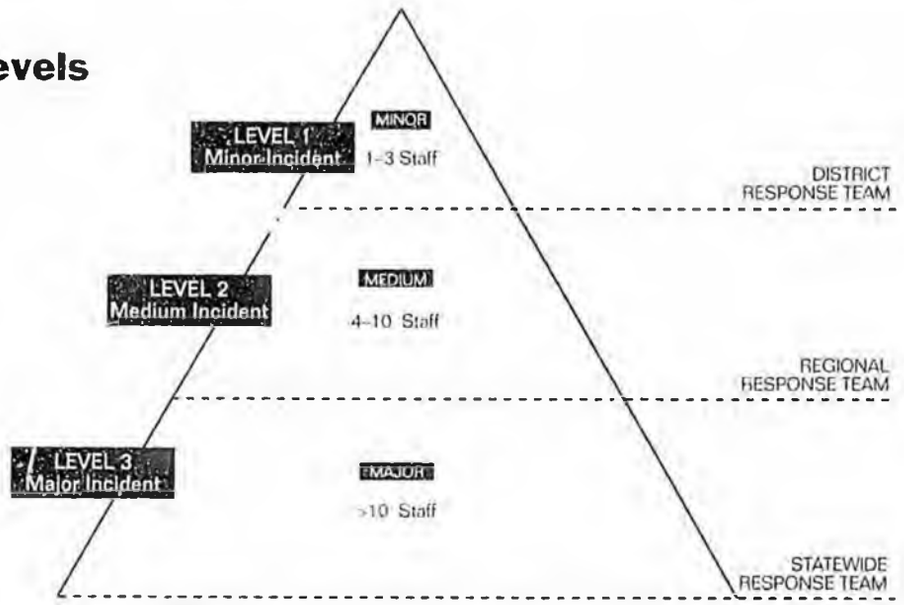




Statewide Team

For catastrophic or the most serious incidents, the Regional Response Teams are backed by a Statewide Response Team made up of the senior, most experienced response staff in the Department from throughout the state. This allows immediate access to statewide resources, specialized expertise, and the mobilization of resources from other regions. This tiered approach allows the Department to efficiently respond to any size spill. The nature of the release dictates the level of response. Guidelines for the level of response are listed on the following chart.

Response Levels



Incident Characterization

Conditions for Characterizing an Incident and Determining the Level of Response

Incident Condition	Level One	Level Two	Level Three
Product Identification	Placard not required, NFPA 0 or 1 all categories, all ORM A, B, C and D	DOT placarded, NFPA 2 for any categories, PCBs without fire, EPA regulated waste.	Poison A (gas), explosives A/B, organic peroxide, flammable, solid, materials, dangerous when wet, chlorine, fluorine anhydrous ammonia, radioactive materials, NFPA 3 and 4 for any categories including special hazards, PCBs and DOT inhalation hazard, EPA extremely hazardous substances, and cryogenics.
Container Size	Small (e.g., pail, drums, cylinders except 1-ton, packages, bags).	Medium (e.g., 1-ton cylinder portable containers, nurse tanks, multiple small packages	Large (e.g., tank cars, tank trucks, stationary tanks, hopper cars/trucks, multiple medium containers
Fire/Explosion Potential	Low	Medium	High
Leak Severity	No release or small release contained or confined with readily available resources	Release may not be controllable without special resources	Release may not be controllable even with special resources
Life Safety	No life-threatening situation from materials involved	Localized area, limited evacuation area.	Large areas, mass evacuation area
Environmental Impact (Potential)	Minimal	Moderate	Severe
Container Integrity	Not damaged	Damaged but able to contain the contents to allow handling or transfer of product	Damaged to such an extent that catastrophic rupture is possible.
Media Interest	Low	Medium	High
Political Interest	Low	Medium	High
Response Resources	Local	Regional	Statewide
Oil Spill Volume	<10,000 gallons	10,000-100,000 gallons	>100,000 gallons
ADEC Response Team	Distnct	Regional	State
ADEC Cleanup	No	Yes/Augment	Yes/Augment
Casualties/Injuries	None	Some/Potential for	Many/Potential for
Agency Cost	<25,000	25,000-100,000	>100,000
Duration of Cleanup	<2 weeks	2-4 weeks	>4 weeks
Required Staff	1-3	4-10	>10
Involvement	Single Jurisdiction Single Organization	Single Jurisdiction Multi Organization	Multi Jurisdiction Multi Organization

PREPAREDNESS

Callout

The majority of spill reports are made during normal working hours to the nearest ADEC office. ADEC also has a Callout System for receiving spill reports, mobilizing and responding to a significant spill at any time.

Training

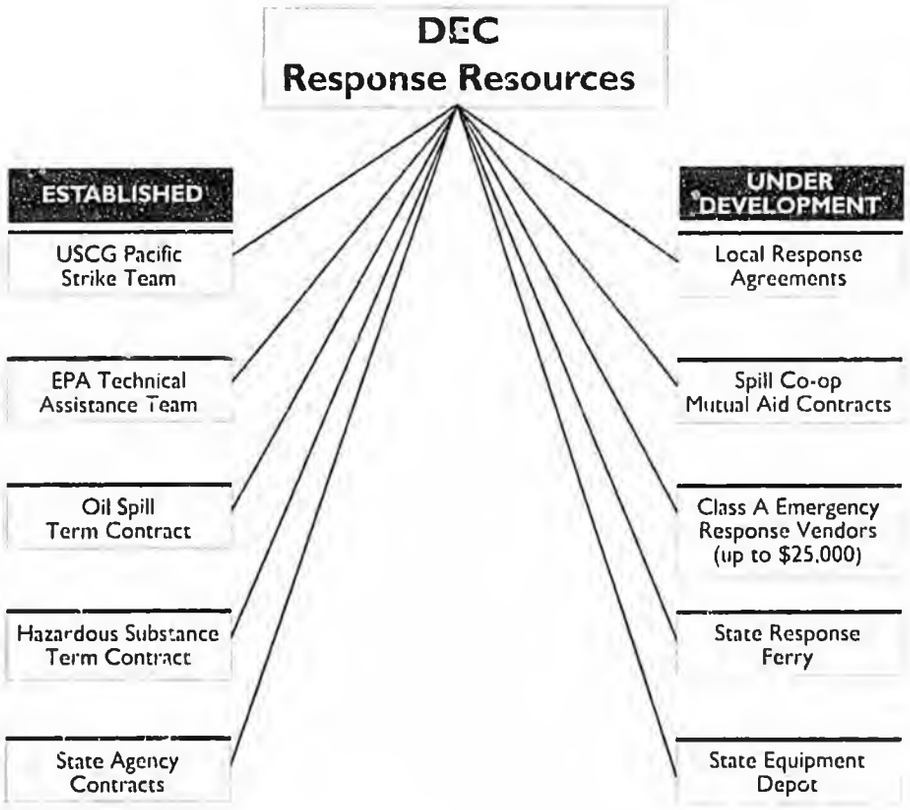
DEC response teams have extensive experience in response and OSHA safety training. They are trained to assess the hazard and determine what actions should be taken for either oil or hazardous substance spills. A safety and training program identifies the minimum baseline level of training and also includes additional proficiency requirements for HAZMAT team participation.

Equipment

The Department maintains an inventory of specialized equipment to carry out its mission. The Department has a database program for management of response equipment. Equipment is standardized statewide and immediately available for transport to the site of a spill.

Communications

A communications plan establishes minimum onsite and offsite communications capabilities for response to a spill anywhere in the state. Expanded communications are also available to keep pace with those spills which may escalate into a major incident. Permanent communication systems are a component for the high risk areas of the state, including Prince William Sound, Cook Inlet, Anchorage and Fairbanks.



Resources

The Department has assembled a wide array of cleanup and support resources that can be rapidly tapped by the State On Scene Coordinator. These include response action contracts, agreements with other state agencies and access to the United States Coast Guard Strike Team or United States Environmental Protection Agency Technical Assistance Team. Additional response agreements with local communities and mutual aid agreements with Alaska's spill cooperatives are under development. The Department is also managing the Nearshore Demonstration Project for three prototype oil spill response depots.

The Department's goal is to expand its "tool box" by being able to access any instate resources that may be available for response using contracts, agreements or other instruments.

Alaska Department of Environmental Conservation

rev 1.94

ALASKA LAW REQUIRES THE REPORTING OF ALL

OIL AND HAZARDOUS SUBSTANCES SPILLS

During normal business hours:

call the nearest office of the ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Southcentral Region	
Anchorage District	349-7755
Kenai District	262-5210
Matanuska Susitna District	376-5038
Valdez Field Office	835-4698
Western District	349-7755
Bethel Field Office	543-3215
Kodiak Field Office	486-6760
Unalaska Field Office	581-1822
Regional Office (Anchorage)	563-6529

Southeast Region	
Juneau District	465-5340
Ketchikan District	225-6200
Sitka District	747-8614
Regional Office (Juneau)	465-5350

Northern Region	
Northern Alaska District	451-2360
Nome District	443-2600
Regional Office (Fairbanks)	451-2360

Pipeline Region	
Prince William Sound District	835-4698
Deadhorse Field Office	659-2215
Regional Office (Anchorage)	278-5400

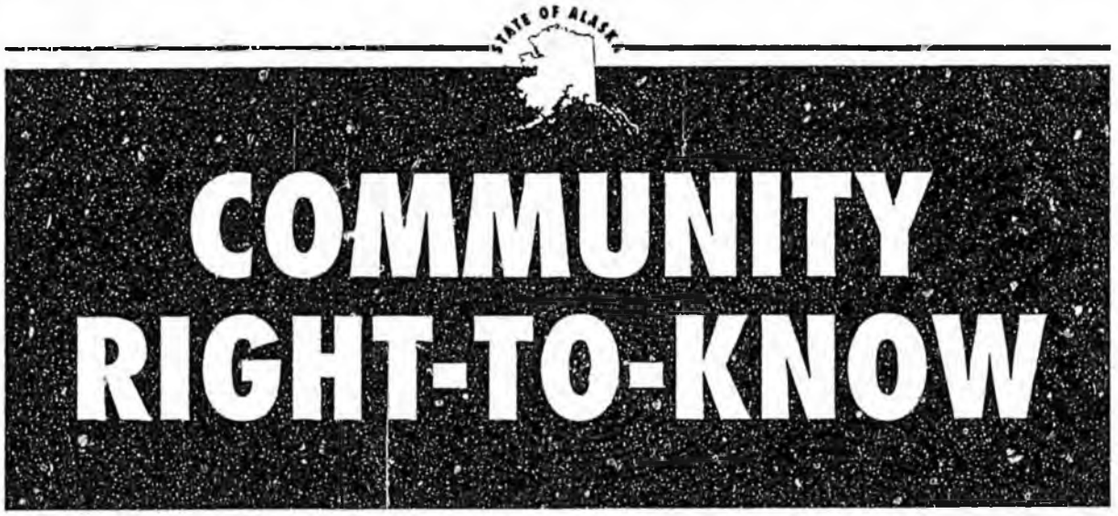
After hours, In State: 1-800-478-9300 Out of State: (907) 269-5711

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Alaska Department of Environmental Conservation

Division of Spill Prevention and Response
Government Preparedness and Response Program
410 Willoughby Ave.
Juneau, Alaska 99801-1795

(907) 465-5220



FY94 Project Status

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE

BRIEFING OUTLINE

ABOUT THE PROJECT...

Project Foundation

Historical Perspective

Project Strategy

WHAT'S BEEN DONE...

Progress by Local Emergency Planning Districts

Hazards Analyses

Response Capability Assessments

Local Emergency Response Plans

WHAT WE'VE LEARNED...

Hazardous Substance Summary

Extremely Hazardous Substances in Alaska

Extremely Hazardous Substances by Planning District

WHAT'S NEXT...

Local Hazardous Substance Response Plans

Community Incident Response

Prevention and Risk Reduction

ABOUT THE PROJECT...

Project Foundation

- **Emergency Planning and Community Right-To-Know Act.** As a result of growing public concern over chemical hazards, Congress in 1986 passed the Emergency Planning and Community Right-To-Know Act to encourage local planning for response to uncontrolled releases, and to provide information to the public about chemicals in the community.
- **AS 46.13.** In 1989, the Alaska Legislature adopted and expanded on the federal law when it enacted Alaska Statute 46.13. The state law established the State Emergency Response Commission and tasked it and DEC with facilitating the development of local emergency plans for hazardous substance response.
- **State Emergency Response Commission.** The State Emergency Response Commission is comprised of 16 members representing state agencies, local governments, industry and the public. Its mission is "to protect public health, safety, and the environment by ensuring effective and efficient use of resources to plan for and respond to incidents involving hazardous and other toxic substances." The commission has acknowledged that prevention and risk reduction are important strategies to manage identified threats.
- **Local Emergency Planning Committees.** LEPCs play a key role in developing local emergency response plans for releases of hazardous substances. More importantly, LEPCs can work with businesses and local governments to effectively PREVENT hazardous substance emergencies in their communities.
- **Project Objectives.** The primary objectives of DEC's project as mandated by the Emergency Planning and Community Right-to-Know Act and AS 46.13 are:
  - **Information:** develop and maintain a database of hazardous substances used, stored, manufactured, released and transported in Alaska.
  - **Preparedness:** determine the potential effects of uncontrolled releases of extremely hazardous substances on local populations and assist with local response planning for potential release.
  - **Prevention and Risk Reduction:** assist with local efforts to prevent uncontrolled releases and reduce their impacts when they do occur.

ABOUT THE PROJECT...

Historical Perspective

- March 1986: Formaldehyde vents from an overheated rail tank car parked on a side rail in Crown Point on the Kenai Peninsula, resulting in the evacuation of 44 persons.
- March 1989: Approximately 11,000,000 gallons of crude oil—the largest spill ever in the U.S.—is released following the grounding of a tanker vessel on Bligh Reef in Prince William Sound.
- December 1989: 9,333 gallons of methanol are released in Fairbanks after vandals open the bottom discharge valves of three rail tank cars.
- September 1990: A foreign cruise vessel disposes of various chemical cleaners along with other trash. Chlorine gas escapes as the garbage truck passes through Ketchikan to the landfill, resulting in twelve people being treated at the town's hospital.
- May 1992: Approximately 2,500 Soldotna and Kenai area residents are evacuated after a plastic pipe fails at a sewage treatment plant and releases a toxic cloud of chlorine gas.
- January 1994: A chlorine gas cloud forms above a swimming pool at a resort east of Fairbanks as a result of a problem with the pool's chlorination system. Ten people are transported to, and treated at the hospital.

ABOUT THE PROJECT...

Project Strategy

1 IDENTIFY THE HAZARDS

- Determine locations of large amounts of hazardous substances
- Determine quantities
- Determine conditions of use, storage and transport

2 CHARACTERIZE THE THREAT

- Determine who is vulnerable to a release
- Determine the degree of risk
- Determine capability to respond

3 REDUCE THE RISK

- Inform the public of the risk
- Prevent releases to the extent possible
- Prepare for response through planning, resources and practice

WHAT'S BEEN DONE...

Progress toward achieving project objectives by the end of Fiscal Year 1994:

- **Information:** the majority of facilities that use, transport, manufacture, or store hazardous substances in Alaska will have been identified and included in a statewide database. These data will be updated annually to maintain current and accurate information about hazardous substances in Alaska.
- **Preparedness:** all facilities with extremely hazardous substances will have had a hazards analysis performed to estimate areas that are vulnerable if a release occurs and response capabilities for most of the state will have been assessed.
- **Prevention and Risk Reduction:** Local Emergency Planning Committees (LEPCs) have been formed and training provided in hazards identification, release prevention, and risk reduction.

WHAT'S BEEN DONE...

Progress by Local Emergency Planning Districts

LOCAL EMERGENCY PLANNING DISTRICT (DISTRICT NO.)	HAZARDS ANALYSIS	RESPONSE CAPABILITY ASSESSED	LOCAL EMERGENCY RESPONSE PLAN
Aleutians East Borough (10)			
Aleutians and Pribolof Islands (11)			
Anchorage (Municipality of) (22)			
Bristol Bay (12)			
Copper River (26)			••
Denali Borough (24)			
Fairbanks North Star Borough (20)			
Interior Alaska (19)*			••
Juneau (City and Borough of) (4)			
Kenai Peninsula Borough (8)			
Ketchikan Gateway Borough (1)			
Kodiak Island Borough (9)			
Matanuska-Susitna Borough (21)			
North Slope Borough (18)*			••
Northern Southeast (5)			
Northwest Arctic Borough (16)			
Northwestern (15)			
Petersburg/Wrangell (25)			
Prince William Sound (7)*			••
Prudhoe Bay (17)			••
Sitka (City and Borough of) (2)			
Southeastern Interior (23)*			••
Southern Southeast (3)			
Southwestern Interior (14)*			••
Yakutat Borough (6)			
Yukon Delta (13)*			••

☐ To be completed in FY 1994 ☐ To be completed in FY 1995

* These districts would be combined into a single LEPD under proposed legislation.

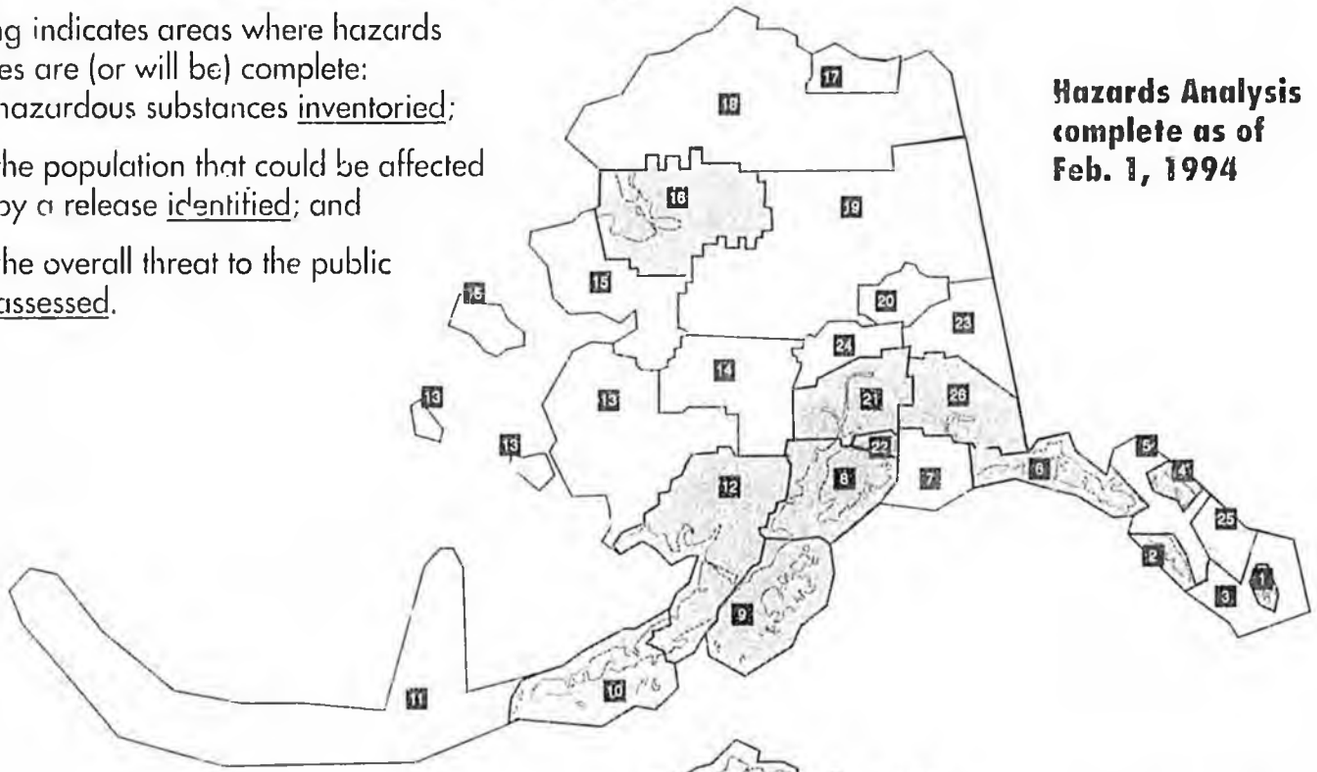
** Plans in these areas may not be completed until FY 1996.

WHAT'S BEEN DONE...

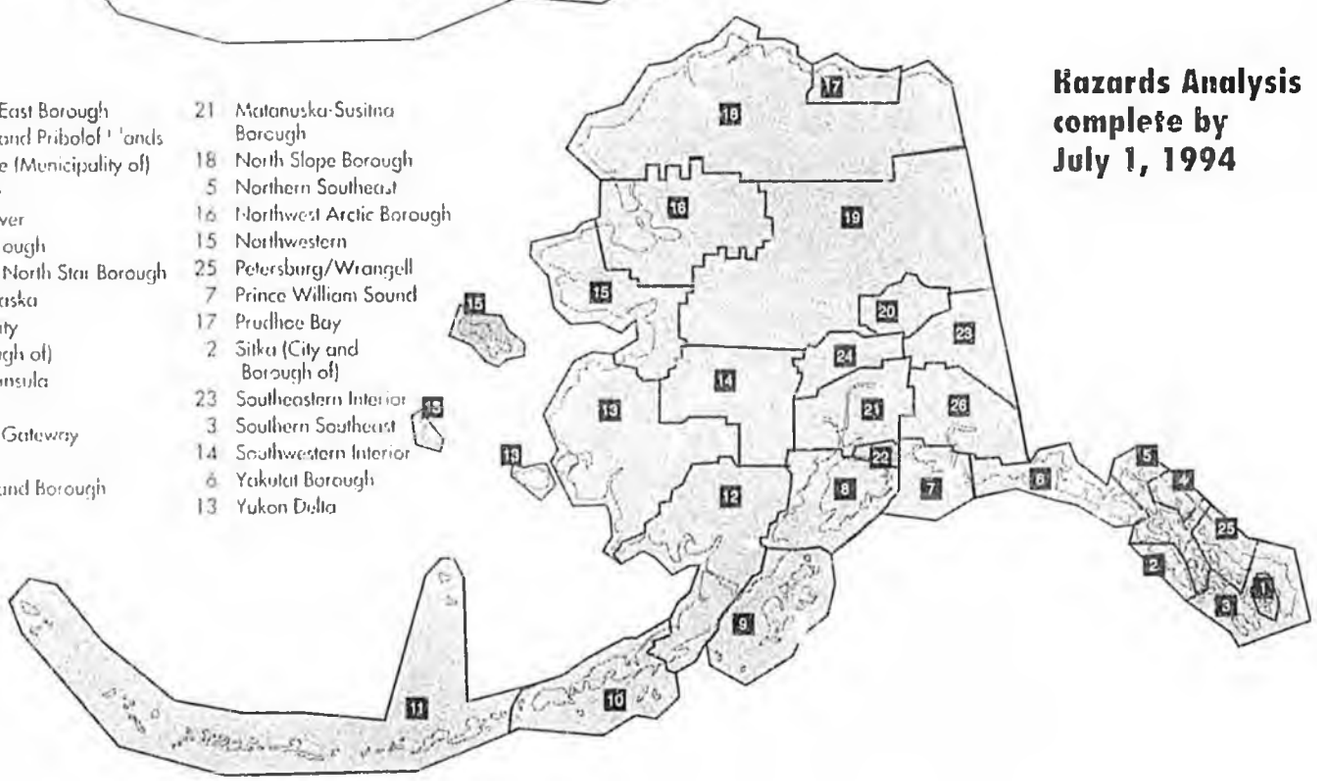
Hazards Analyses

Shading indicates areas where hazards analyses are (or will be) complete:

- hazardous substances inventoried;
- the population that could be affected by a release identified; and
- the overall threat to the public assessed.



Hazards Analysis complete as of Feb. 1, 1994



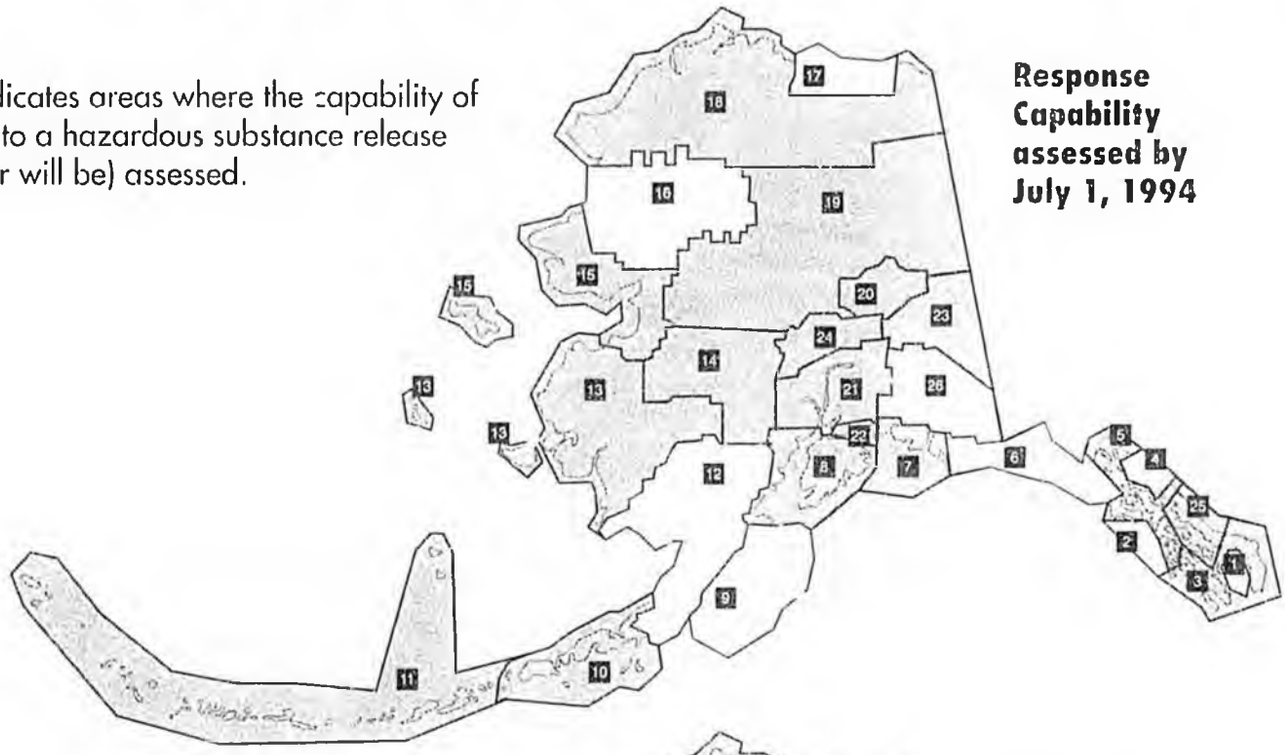
Hazards Analysis complete by July 1, 1994

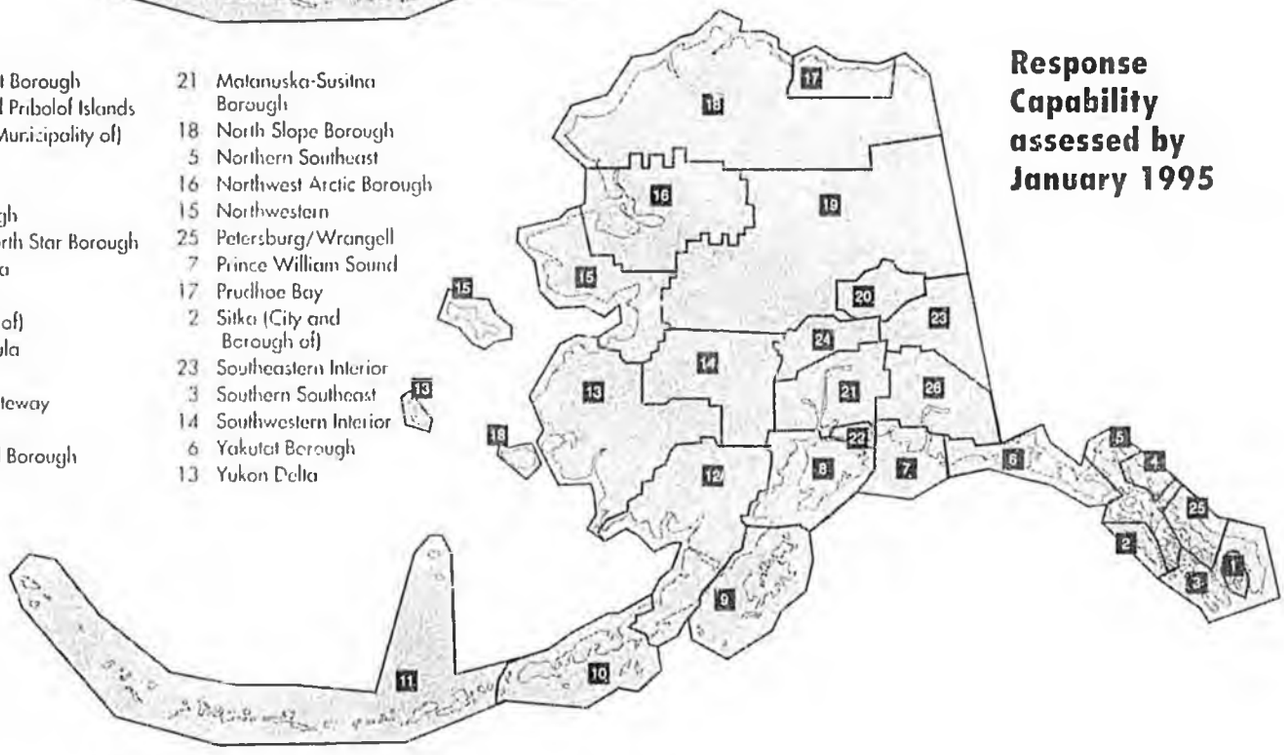
10 Aleutians East Borough
11 Aleutians and Pribolof Islands
22 Anchorage (Municipality of)
12 Bristol Bay
26 Copper River
24 Denali Borough
20 Fairbanks North Star Borough
14 Interior Alaska
4 Juneau (City and Borough of)
8 Kenai Peninsula Borough
1 Ketchikan Gateway Borough
9 Kodiak Island Borough
21 Matanuska-Susitna Borough
18 North Slope Borough
5 Northern Southeast
16 Northwest Arctic Borough
15 Northwestern
25 Petersburg/Wrangell
7 Prince William Sound
17 Prudhoe Bay
2 Sitka (City and Borough of)
23 Southeastern Interior
3 Southern Southeast
14 Southwestern Interior
6 Yakutat Borough
13 Yukon Delta

WHAT'S BEEN DONE...

Response Capability Assessments

Shading indicates areas where the capability of responding to a hazardous substance release has been (or will be) assessed.



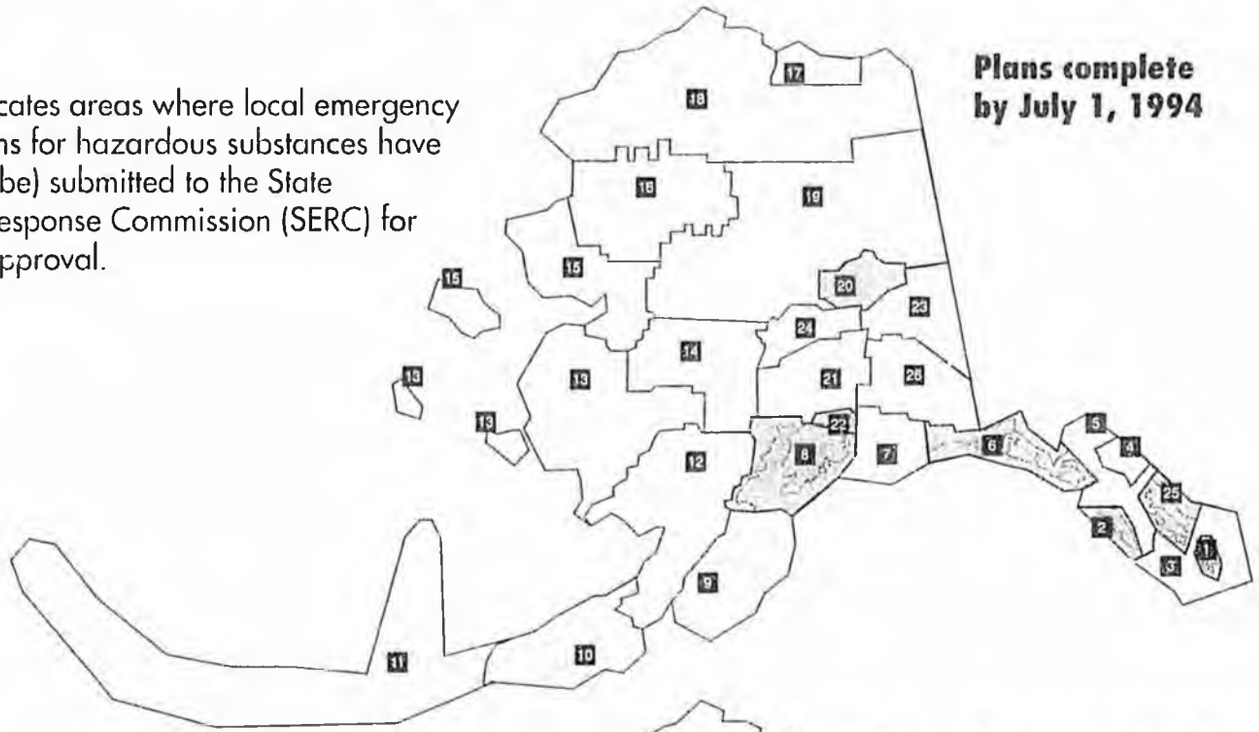


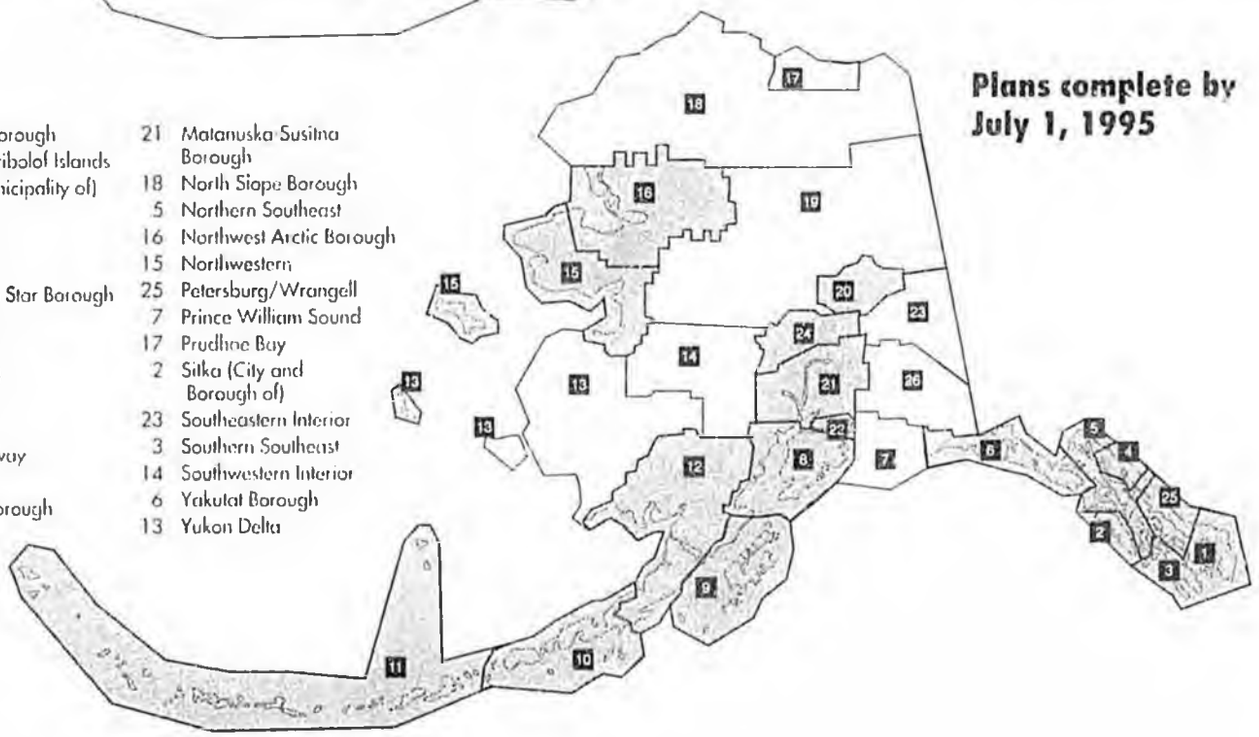
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3 Southern Southeast
14 Southwestern Interior
6 Yakutat Borough
13 Yukon Delta

WHAT'S BEEN DONE...

Local Emergency Response Plans

Shading indicates areas where local emergency response plans for hazardous substances have been (or will be) submitted to the State Emergency Response Commission (SERC) for review and approval.





10 Aleutians East Borough
11 Aleutians and Pribilof Islands
22 Anchorage (Municipality of)
12 Bristol Bay
26 Copper River
24 Denali Borough
20 Fairbanks North Star Borough
19 Interior Alaska
4 Juneau (City and Borough of)
8 Kenai Peninsula Borough
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16 Northwest Arctic Borough
15 Northwestern
25 Petersburg/Wrangell
7 Prince William Sound
17 Prudhoe Bay
2 Sitka (City and Borough of)
23 Southeastern Interior
3 Southern Southeast
14 Southwestern Interior
6 Yakutat Borough
13 Yukon Delta

WHAT WE'VE LEARNED

Information

- Chlorine and ammonia are the hazardous substances that pose the greatest public health threats to communities around the state.

Preparedness

- Response to chlorine and ammonia releases can be effectively managed by a response plan that has simple notification, evacuation and shelter-in-place procedures.
- Local emergency response plans for most communities in the state will be short documents that include notification, evacuation and shelter-in-place procedures.
- Only a handful of communities will need to be able to respond to a release of hazardous substances beyond being able to evacuate and shelter-in-place.
- The Community Right-to-Know database is important in determining how best to invest limited resources.

Prevention and Risk Reduction

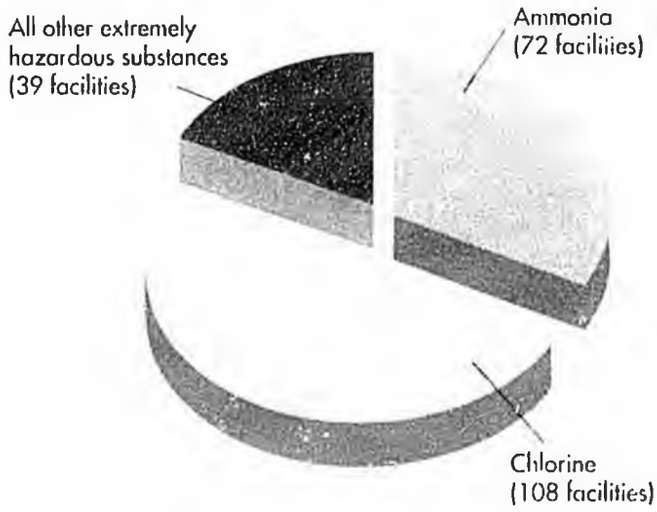
- In many instances throughout the state, prevention and risk reduction will be the cost effective choice in addressing hazardous substances threats.

WHAT WE'VE LEARNED

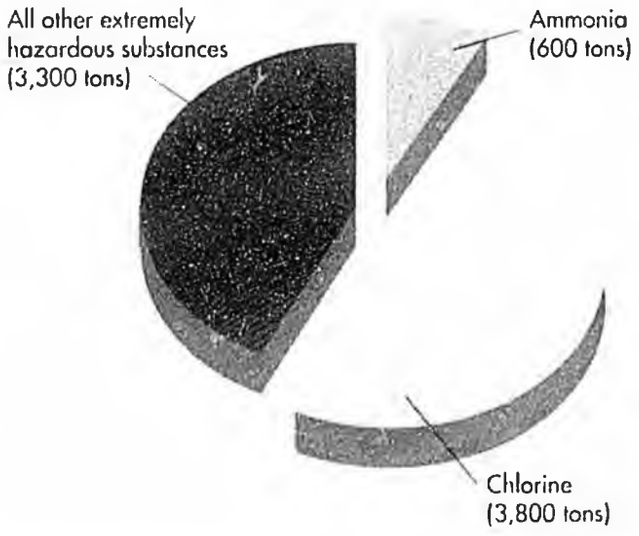
Hazardous Substance Summary

- Chlorine and Ammonia are, by far, the most prevalent extremely hazardous substances in Alaska.
- Both are toxic gasses and are often stored under pressure.
- Chlorine is a disinfectant and often found in large quantities at pools, and wastewater and water treatment facilities.
- Ammonia is a refrigerant and is often found in large quantities at seafood processing and other types of cold storage facilities.

DISTRIBUTION OF EXTREMELY HAZARDOUS SUBSTANCES BY FACILITY



DISTRIBUTION OF EXTREMELY HAZARDOUS SUBSTANCES BY WEIGHT



NOTES:

- These charts only include information for those areas where hazards analysis have been completed.
- Some facilities may have more than one extremely hazardous substance.
- Tons of ammonia does not include the 90,000 tons present at the Unocal facility on the Kenai Peninsula. Including this in the chart so distorts the summary, it was omitted.

WHAT WE'VE LEARNED

Extremely Hazardous Substances in Alaska

MOST COMMON

Substances	Uses	Facilities	Hazards
Chlorine	Water & wastewater disinfection	Pools, treatment facilities	Toxic gas
Ammonia	Refrigerant, industrial uses	Seafood processors	Toxic gas
Sulfuric Acid	Battery electrolyte, industrial uses	Industrial facilities, maintenance shops	Toxic liquid and solution emits toxic gas
Formaldehyde	Biocide	Hatcheries, industrial facilities	Toxic liquid and solution, emits toxic gas
Sulfur Dioxide	Wastewater treatment	Treatment facilities	Toxic gas

LESS COMMON

Arsenic Trioxide
Bromine
Carbon Bisulfide
Chloracetic Acid
Chloroform
Cyclohexylamine
Ethylene Oxide
Hydrazine
Hydrofluoric Acid
Hydrogen Peroxide
Hydrogen Sulfide
Hydroquinone
Mercuric Chloride
Mercuric Oxide
Nitric Acid
Phenol
Phenylmercuric Acetate
Phosphoric Acid, Dimethyl...
Phosphorus
Potassium Cyanide
Sodium Arsenite
Sodium Azide
Sodium Cyanide
Tetraethyl Lead
Thiosemicarbazide
Toluene 2, 4-Diisocyanate
Vinyl Acetate Monomer
Xylylene Dichloride

WHAT WE'VE LEARNED

Extremely Hazardous Substances by Planning District

LOCAL EMERGENCY PLANNING DISTRICT*	CHLORINE (FACILITIES/LBS)	AMMONIA (FACILITIES/LBS)	OTHER (FACILITIES/LBS)
ALEUTIANS EAST	6 / 15,200	4 / 58,250	0 / 0
ANCHORAGE	29 / 167,750	9 / 45,000	9 / 64,300
BRISTOL BAY	5 / 4,000	13 / 130,500	1 / 1,000
COPPER RIVER	0 / 0	0 / 0	0 / 0
FAIRBANKS**	6 / 67,700	3 / 1,250	5 / 297,700
JUNEAU	5 / 55,800	1 / 800	4 / 30,900
KENAI	16 / 45,050	14 / 180,094,000***	6 / 878,500
KETCHIKAN	9 / 5,670,700	5 / 633,050	4 / 1,221,650
KODIAK	6 / 18,150	7 / 116,700	4 / 5,650
MAT-SU	5 / 2,550	0 / 0	0 / 0
NORTHERN SOUTHEAST**	2 / 1,950	1 / 13,000	0 / 0
NORTHWEST ARCTIC	1 / 4,500	1 / 200	2 / 3,105,365
PETERSBURG/WRANGELL**	5 / 26,300	3 / 20,100	0 / 0
PRUDHOE BAY	5 / 11,150	3 / 9,900	3 / 392,900
SITKA	5 / 1,605,850	4 / 179,900	1 / 502,000
VALDEZ	3 / 2,450	2 / 13,200	0 / 0
YAKUTAT	0 / 0	2 / 11,000	0 / 0
TOTAL	**108 / 7,699,100**	**72 / 181,326,850*** **	**39 / 6,699,965**

* LOCAL EMERGENCY PLANNING DISTRICTS WHERE EXTREMELY HAZARDOUS SUBSTANCES HAVE BEEN IDENTIFIED. SOME DATA ARE PRELIMINARY.

** EXTREMELY HAZARDOUS SUBSTANCES HAVE NOT BEEN IDENTIFIED FOR THE ENTIRE DISTRICT.

*** OF THIS AMOUNT, 180,000,000 LBS ARE PRESENT AT A SINGLE FACILITY — THE UNOCAL FACILITY IN NIKISKI.

WHAT'S NEXT...

- **Information**
  - State needs to keep track of changes in threat so that project can adapt and allocate funds and personnel where they are needed most.
- **Preparedness**
  - Establish and maintain a base level response capability statewide by completing basic local response plans. The state does not need to purchase a large amount of specialized local response equipment or provide highly technical response training to most communities.
- **Prevention and Risk Reduction**
  - State needs to emphasize prevention and risk reduction through facility maintenance, industry training, facility planning, and pollution prevention.

WHAT'S NEXT...

Local Hazardous Substance Response Plans

One of the results of the Community Hazardous Substance Planning Process is the development of local hazardous substance response plans. An effective plan need not be lengthy or complex, and should build on a community's basic plan for responding to fires and other emergencies.

THE PLANS INCLUDE THESE BASIC ELEMENTS

THEY IDENTIFY

- Facilities with hazardous substances
- Transportation routes for hazardous substances
- Populations at risk
- Emergency response resources and organization

THEY DESCRIBE

- Procedures for notifying proper authorities and the public of an accident
- Procedures for protecting the public through evacuation or shelter-in-place

WHAT'S NEXT...

Community Incident Response

Through development of local hazardous substance response plans, the project needs to establish in all Alaskan communities A BASE LEVEL RESPONSE CAPABILITY.

In the vast majority of Alaska's communities this means that if a release is detected, the community is able to:

1. Notify proper authorities, and
2. Take immediate measures to protect the public through evacuation or shelter-in-place.

COMMUNITY INCIDENT RESPONSE ELEMENTS

PLANNING

- Simple local emergency response plans that build on community's plan for responding to other emergencies.

RESOURCES

- Readily available local resources: firefighters, police, village public safety officers, local public health officials.

RESPONSE

- Defensive and intended to protect the public through evacuation and shelter-in-place.

WHAT'S NEXT...

Prevention and Risk Reduction

- The focus of the Clean Air Act Amendments on facility efforts combined with the Community Right-To-Know Project's focus on community efforts will yield locally integrated programs to prevent and reduce the risk of uncontrolled releases.
- When implemented, the 1990 Clean Air Act Amendments will require that each facility have a risk management program.

1990 Clean Air Act Amendments

FOCUS ON FACILITIES

- Facility Prevention Programs
- Facility Emergency Response Programs

1986 Emergency Planning and Community Right-To-Know Act

FOCUS ON COMMUNITIES

- Community Awareness
- Community Base-Level Response Programs (Evacuate or Shelter-In-Place)

The Juneau Report is published by the BP Exploration Government and Public Affairs Department to provide an overview of issues and legislation as they relate to the petroleum industry. Opinions of authors expressed here do not necessarily reflect the opinions of the company. Inquiries should be directed to BP Exploration Government and Public Affairs: 564-5403.

JUNEAU REPORT

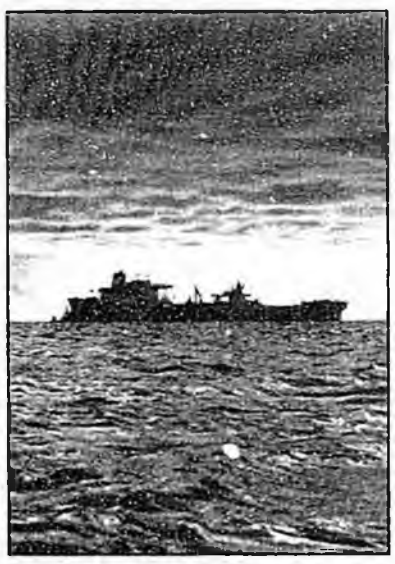
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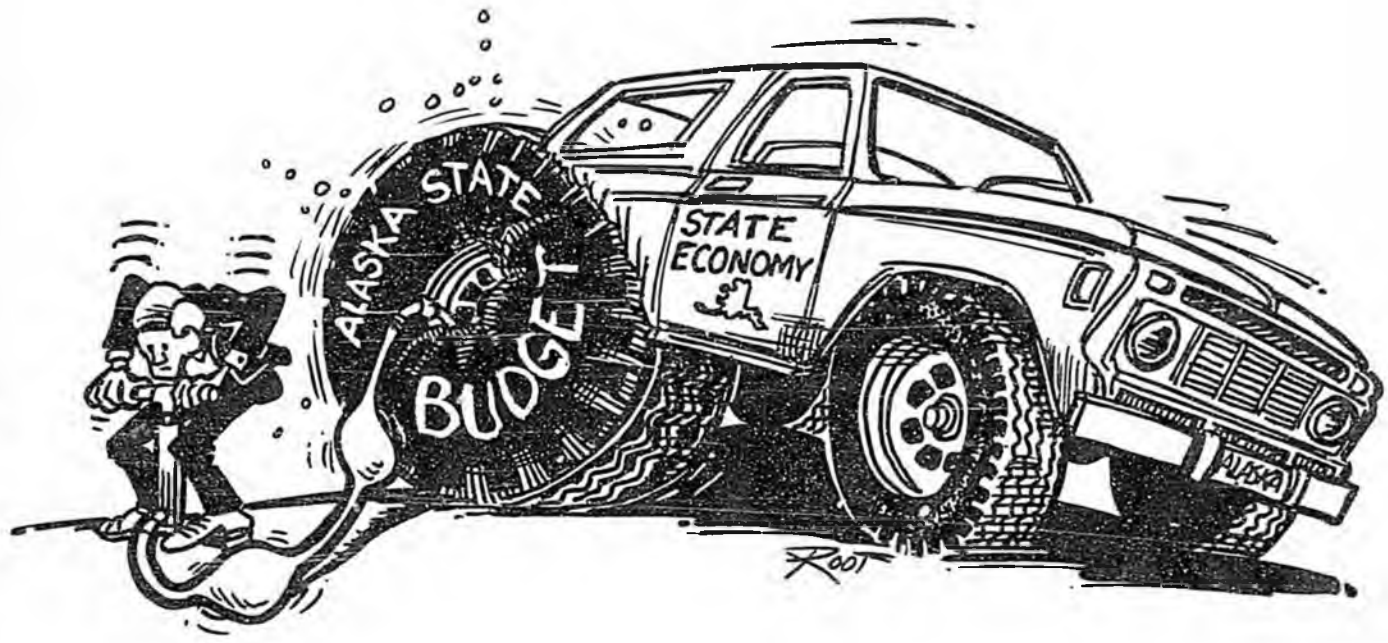
Industry's new investments in Prudhoe Bay
page 2



Health insurance, other issues face state lawmakers
... page 3



Those tough new spill regs — will they work?
... page 4



Governor backs off on cuts

Hickel's Budget: Up 5.7%

In the face of public antipathy, Governor Walter Hickel put aside last year's goal of a series of gradual cuts in state spending, instead embracing a "maintenance" FY 1993 state budget intended to keep state programs at current levels through the budget year beginning next July 1.

"Government is about dollars and bottom lines," the governor said in mid-December. "But government is also about people...Alaska's government is not going to abandon those in need."

With those words, Governor Hickel became the latest among Alaska governors to initially propose cuts in spending in the face of impending revenue declines, and then, facing a legislature hostile to the idea and an apathetic public, prove unable to do it. Former governors Cowper and Sheffield both made similar proposals at the start of their terms.

The $2.24 billion state operating budget introduced by Hickel in December is 5.7 percent over current-year FY '92 operating expenses. The governor blamed much of the growth on required increases in state "formula" programs like medicaid, welfare, the school foundation program and longevity bonuses, for much of the budget increase. These account for about $41 million. But Hickel is also asking for about $35 million for increases to a variety of other programs, although he has held most state agencies at current-year levels.

Formula programs are those where spending is controlled by specific requirements in state law, which can only be changed by the legislature. Some formulas are linked to population growth, while others are tied to inflation. Some, like welfare and medicaid, are influenced by new federal requirements. Overall, formula programs amount to about half the operating budget.

Formula increases next year include aid to families with dependent children, up $9.3 million; adult public assistance, up $3 million; medicaid, up $15.7 million with higher costs of medical care; the school foundation program up $10 million, due to higher enrollments; lon-

Continued on Page 6

In Juneau: Who's in, who's out?

In his first year in office Governor Hickel moved a number of people in key administration positions.

Despite the press attention, the changes are not particularly unusual for the first year of a new administration.

In the governor's office, Joe Holbert is now Deputy Chief of Staff; Paul Fuhs is the governor's liaison with the legislature; among commissioners, Millet Keller and Lee Fisher are out; Nancy Usera switched from Commissioner of Labor, to take Keller's job at Administration.

An incoming governor brings a new team to Juneau, including many inexperienced in government and politics. Adjusting to new roles, some decide the complexities and frustrations of senior government service just don't fit. Former governors Bill Sheffield and Steve Cowper made their share of top personnel changes, as did preceding chief state executives.

But most of Hickel's initial choices for key positions — the administration's heavy hitters — are still in their jobs. These include Chief of Staff Max Hodel; Attorney



General Charl e Cole; Resources Commissioner Harold Heinze; Environment Commissioner John Sandor; Frank Turpin, Commissioner of Transportation and Public Facilities; Glen Olds, who heads Commerce and Economic Develop-

Continued on Page 6

Commentary

Alaska's fiscal gap

By Scott Goldsmith

During the last two years my colleagues and I have attempted to increase public awareness of the problems associated with declining state revenues, in an ISER publication series entitled the Fiscal Policy Papers. In them we projected that the state would face a fiscal gap of $400 million by 1992, increasing to $1 billion by 2000.



Recent events have lulled many Alaskans into the belief that the fiscal gap is the figment of academic imagination. This is primarily due to the oil price spike from the Iraqi war, which generated a substantial state revenue surplus in FY 1991. In addition, the petroleum production decline which began in 1989 has been slower than anticipated. The price of oil continues to cycle, but has averaged $18 over the last 6 years. Litigation settlement dollars from the petroleum industry have augmented revenues on a regular basis. The result has been revenues sufficient to fuel continued growth in the state budget. No change in the direction of spending is being signaled from Juneau. But a closer look reveals the fiscal gap exists in several dimensions.

Projected revenues to fund the current $2.8 billion budget are $2.3 billion. Without the one time windfall from the Iraqi war to balance the budget, we would be faced to face with a fiscal gap today.

The gap is now appearing close to home. Local governments are finding it increasingly difficult to finance basic services like education, road maintenance, and public protection because the state is reducing the aid programs that fund the major portion of local government activities.

The state continues to budget about $1 billion annually in excess of the sustainable spending level, based on the inevitable decline in petroleum revenues as production continues to fall. Potential sources of revenues, be they from the Permanent Fund, diversification of the economy, ANWR, a gas pipeline, or taxation of households, will be insufficient to replace the loss in petroleum revenues.

The fiscal gap should be of concern to all Alaskans for several reasons. First, by ignoring it we are perverting the budget process—cutting spending for needs while increasing spending on wants. Second, our economy, which is overly dependent on state spending, could be derailed by mismanagement of the gap. Third, potential investors will be spooked by a fear that state government will close the fiscal gap by placing the burden on their shoulders.

Restructuring state and local government budgets to live within our means and using our public resources wisely is a major challenge for this decade. If we can make that transition successfully, Alaska could still be the envy of the nation. But it won't happen unless we get started soon.

Scott Goldsmith

Scott Goldsmith
Professor of Economics
Institute of Social and Economic Research
University of Alaska Anchorage

North Slope producers will expand Prudhoe's enhanced oil recovery

Prudhoe Bay producing companies are continuing to make major investments to slow the gradual decline of the big North Slope oil field. The latest projects include the $1.5 billion GHX-2 gas project previously announced, but also a major expansion of the field's enhanced oil recovery (EOR) project.

When it is complete, Prudhoe's EOR program will be one of the largest of its type in the world. The planned expansion is expected to result in an additional 150 to 220 million barrels of oil recovery.

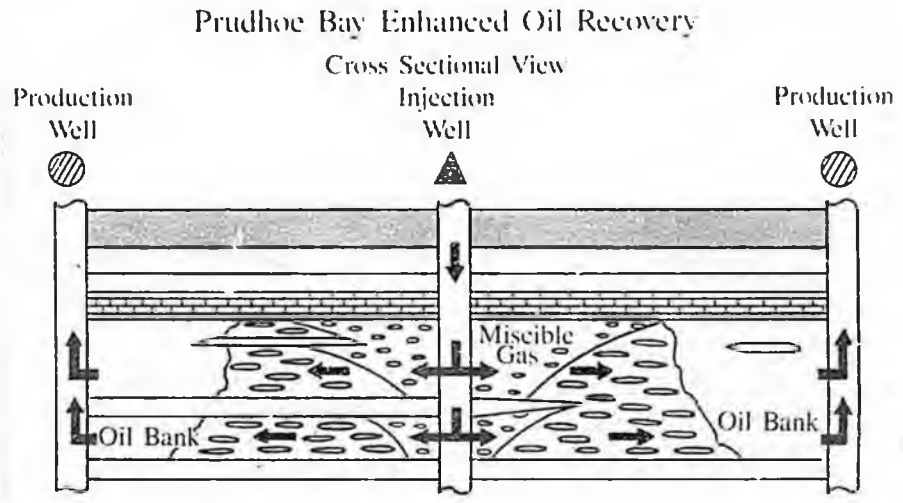
That is the equivalent of discovery of a giant oilfield, explains Dave Szabo, BP Exploration's manager for Prudhoe Bay Reservoir Engineering. BP and ARCO Alaska, Prudhoe field operators, manage the enhanced recovery program.

While 110 to 150 million barrels are expected to be recovered by expanding the area covered by the EOR in the main part of the field, another 40 to 70 million barrels of reserves are expected through "infill expansion." This involves drilling more producing wells and converting others to injection wells in a section of the field known as the "Northwest Fault Block."

Overall, the expanded project is aimed at improving oil recovery from areas not covered by the EOR, and from areas with relatively thin layers of oil-producing rock, which until recently were considered uneconomic. Prudhoe Bay producing companies have had enhanced oil recovery under way in the field since 1982. The program involves pumping a mixture of natural gas liquids into the underground producing formation as a supplement to the waterflood program, which flushes oil from the reservoir rock. The gas liquid mixture and water alternate with each other, pushing oil remaining in the underground rock toward nearby producing wells.

EOR expansion will require the drilling or conversion of about 100 new wells and will expand the area covered from 21,600 acres to 58,600 acres, almost tripling its size. The volume of natural gas injected, in the form of a liquid mixture, will increase from 450 to 700 million cubic feet daily.

The project is linked to the new GHX-2 gas project in that it will depend on the new gas project for a supply of natural gas to use as an injectant. GHX-2 is an expansion of Prudhoe's gas handling facilities from 5.5 billion to 7.5 billion cubic feet a day.

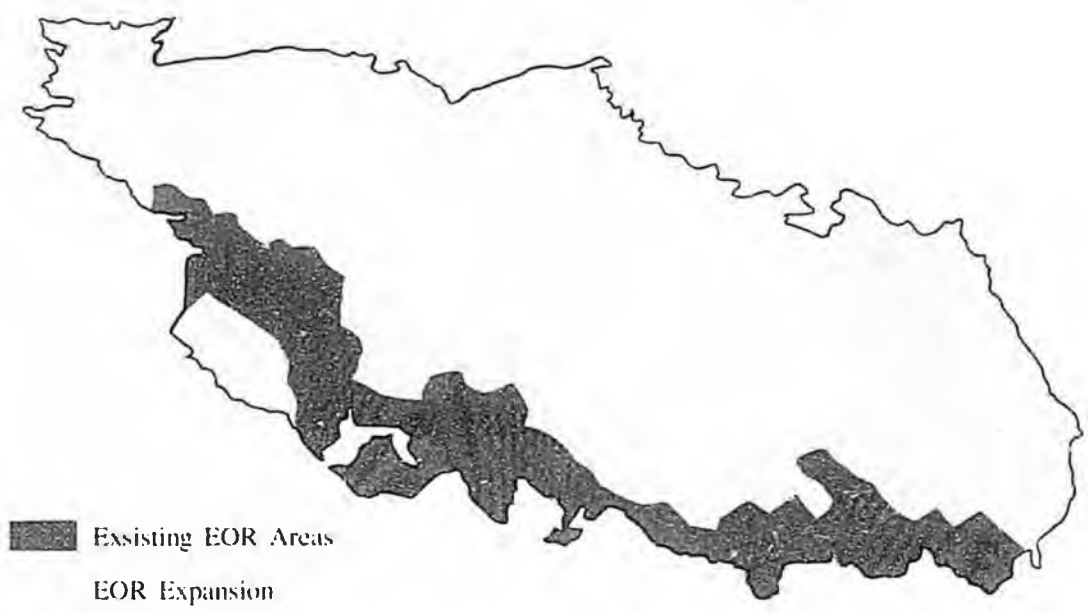


Prudhoe's EOR Project injects a liquid mixture to flush oil from tight rock.

Through the life of Prudhoe Bay, the existing and planned waterflood and EOR projects are estimated to contribute between 1.5 and 2 billion barrels of the 12 billion barrels of oil now estimated "recoverable" from the field.

In a related development, Szabo said the Prudhoe Bay operators will continue an experimental program of "in-fill" production wells, drilled on a 40-acre spacing grid in selected areas of the field. These wells are drilled closer together than wells previously drilled at intervals of 80 acres and 160 acres.

Drilling wells in a tighter grid of is a common industry practice in a maturing oil field. But each new phase of drilling must also justify itself economically, in that the amount of new oil resulting from new wells must justify the expense.



Producers will triple the area of the Prudhoe Bay field covered by an Enhanced Oil Recovery project.

Lawmakers will tackle insurance coverage, soaring medical costs

In the 1992 session, Alaska lawmakers will again tackle health insurance and control of skyrocketing medical costs. It's a national problem that is particularly acute in Alaska, where small populations and high costs drive up medical expenses, and seasonal employment leaves thousands of Alaskans uninsured or underinsured.


Jim Duncan

The legislature has grappled with the problem for several years, with different approaches proposed by Sen. Jim Duncan of Juneau, Sen. Jalmar Kerttula, Palmer, and Sen. Virginia Collins, Anchorage. In the State House, Representatives Johnny Ellis and Mark Boyer have been leaders on the issue.

Duncan has been working on a plan that would pool thousands of state, local and school workers under one state insurance authority, negotiating for better coverage and rates with insurers offering health and medical coverage. Private employers could also join the pool.

Duncan's plan goes one step further, using the pool to bargain with health care providers for ceilings on medical costs, a move that prompted sharp opposition from the state's medical community.

Kerttula has long advocated universal health care, using a state health authority to extend affordable medical coverage to the uninsured Alaskans. This plan has the support of the medical community, because it solves one serious problem hospitals and clinics now face. They must absorb losses of uninsured patients who can't pay, spreading those costs through higher rates to those who are insured, raising costs for everyone.

Collins has a proposal that allows insurers to form a reinsurance association to extend special coverage to high-risk employees or groups in risky occupations, a serious problem for small businesses. This allows insurers to spread coverage for high risk employees among all in the industry. Collins' plan is based on model insurance developed by the insurance industry and adopted in some other states.

A state health cost containment task force, made up of legislators, administration officials, labor and business leaders concerned with the issue, met several times through 1991 to gather information. It was to convene just before the legislature's Jan. 13 start to make recommendations for legislation.


Virginia Collins

Sen. Duncan said he doubted the legislature will be able to pass major health insurance proposals in 1992, including his own proposal for mandatory pooling and medical cost "containment," as well as Kerttula's plan for universal health care. But it is possible that parts of the package could be enacted, he said, such as another proposal by Collins, also put forth by Johnny Ellis in the State House, that would extend health insurance to children enrolled in schools. This is modeled after a University of Alaska program.

Lack of children's coverage creates an Alaskan version of the welfare mother problem, Collins points out. She knows mothers who go on welfare so their children will be covered by medicaid. If they worked, they would lose medicaid. Their employers, if they had employee health insurance at all, would not extend coverage to families. Meanwhile, work on the bigger health issues will continue—employee pooling, cost containment and universal care — will go on, Duncan said. It usually takes several years for the legislature, and the constituent groups that influence lawmakers, to come to agreement on controversial issues. Medical insurance and cost containment are no different.

Transition

Sen. Shirley Craft continues Bettye Fahrenkamp's work


Bettye Fahrenkamp

Shirley Craft, long-time friend of the late Sen. Bettye Fahrenkamp and a fellow educator, was appointed by Gov. Hickel to serve through the remainder of Sen. Fahrenkamp's term. Fahrenkamp, who died of cancer in Fairbanks last year, was a veteran Senate Democrat who took great interest in resource, education and social policy issues, as well as matters of concern to her Interior Alaska constituents. She chaired the Senate Natural Resources Committee for many years and played a key role in legislation affecting the oil and mining industries. Her accomplishments were diversified, including laws dealing with hazardous waste, investment tax credits, land reclamation, creation of Tanana State Forest.

Shirley Craft came to Fairbanks in the mid-1950s, where she met Fahrenkamp, a fellow teacher, the start of a lifelong friendship. Craft went on to become a school principal in the Fairbanks school system. Shirley Craft will serve through the 1992 session, to the end of Bettye Fahrenkamp's term. She expects to continue Fahrenkamp's work, particularly on education and issues that affect the Fairbanks area.


Shirley Craft

Other issues: Workers' compensation, school construction funding, 'in-place' resource taxes

State lawmakers face a variety of important issues this spring, including a proposed new workmen's compensation law, a massive rewrite of state laws covering insurance regulation, a new system for state financing of schoo' construction, whether municipalities should be able to tax the value of undeveloped natural resources, powers of the state coastal policy council, and other legislation.

Governor Hickel is proposing an alternative to a workmen's compensation bill he vetoed last year. His proposal incorporates parts of the 1991 legislation, such as provisions extending employers' health benefits for injured workers, limitations of liability for insurers and others participating in workplace safety inspections and clarification of liability for employer sponsorship of recreation, like softball teams. The governor's bill also tackles other issues, including the presumption requiring acceptance of evidence of injuries, which makes if difficult for employers to contest a claim for compensation. Municipal taxation of undeveloped resources should arouse considerable interest. Currently, local governments are blocked by state law from taxing resources "in place," but that prohibition expires next summer. This issue affects owners of undeveloped timber and sand and gravel deposits. Minerals firms hoping to develop major new mines are concerned that marginally economic or subeconomic ore deposits will be taxed, making it difficult for them to raise investment capital.

> 'Municipal taxes on undeveloped resources should arouse interest. Currently, local governments are blocked by state law from taxing resources like timber, sand and gravel.'

The legislature may also look at powers of the Alaska Coastal Policy Council, made up of local community leaders and state officials. State laws are currently unclear as to whether the council has authority to review and reject permits or other actions taken by state agencies — in effect becoming another regulatory agency — or whether the body should be advisory.



In what is now standard operating procedure, spill response vessels escort each tanker from Port of Valdez.

Alaska's tough new oil spill regulations

Almost two years after the nation's largest oil spill in Prince William Sound, new state regulations implementing a tough new state spill response law are set to go.

They may be Alaska's most substantial response to the spill, an event that prompted the legislature in 1990 to enact a new law — House Bill 567 — mandating the nation's highest standards of spill readiness.

Through much of last year the regulations — the detailed instructions for state officials as to how the law will be carried out — were developed by the Department of Environmental Conservation (DEC) with the help of a citizen working group that involved interest groups at opposite ends of the issue.

These included the oil industry, fuel carriers and distributors, conservation groups, and others, like rural electric co-ops and municipal representatives.

Considering the feelings and polarization that followed the Prince William Sound spill, the level of consensus reached in the working group was a remarkable achievement. Issues on which agreement could not be reached were left to DEC Commissioner John Sandor.

But the process could be considered a model for resolution of other controversial environmental policy issues. In fact, the U.S. Coast Guard will set up a similar working group this spring to develop federal oil spill regulations.

1990's HB 567 went into effect last June. It imposed tough new spill response planning standards on the oil industry, requiring them to show they have equipment in place to clean up an amount of oil that could realistically spill within 72 hours after an accident. After June, 1992, similar standards will apply to Alaska fuel transporters and distributors.

The regulations also establish a unique system of "prevention credits," incentives for the oil industry and fuel carriers to incorporate spill preventive measures into their operations.

"I was surprised at the productivity of the working group (developing the regulations) and how well we worked together," said Patti Saunders, a member of the group and an oil issues specialist for the Alaska Center for the Environment. "I've been involved in these things for years, and for the first time a working group was well balanced and big enough — but not too big — to handle different facets of the issue."

Saunders compared it to one other recent experiment in which differing interest groups — conservation groups, fishermen and the timber industry — worked to develop consensus on a new timber practices law. It was not a good experience, she said, and it caused environmental groups at first to view the spill regulations work group with suspicion.

But the process worked. "People were basically honest and put real concerns on the table. We worked them out. There wasn't much political grandstanding," she said.

Bill Schoephoester, projects and planning manager for Petro-Marine, Inc., a major Alaska fuel distributor, and another a member of the work group, agreed with Saunders: "We resolved a lot of issues. It was slow and painful at times because people came at this thing from completely opposite ends of the spectrum. But DEC ran it well. Considering what we started with, I would rank it as pretty successful."

DEC Commissioner Sandor has asked the working group to continue work, reviewing how the law is administered and to help prepare new phases, such as application to tug and barge firms which move fuel oil, and operators of bulk fuel storage tanks. These will become subject to the planning standards of HB 567 next June.

Another area with ADEC wants help with are uniform statewide guidelines for agency review of spill contingency plans.

"Problems now develop because DEC staff in different regions look at spill contingency plans in different ways," Petro-Marine's Schoephoester says. "We can have our contingency plan approved in one region, but if we move in another region our plan may not meet their criteria. DEC wants to correct that."

Oil industry representatives in the group committed themselves to help the state develop a checklist for inspections and guidelines in training inspectors.

One substantial accomplishment is that the work group reached consensus on a wide range of detailed spill response regulations covering crude oil and fuel storage tanks, secondary containment and piping. Had they been adopted as originally proposed in rough draft, they would have been very difficult to implement.



Spill drill in Prince William Sound

"If we had done nothing else, this was evidence the (working group) process made the effort worthwhile," said Mark Hutton, who was in the group as a consultant to the Alaska Oil and Gas Association.

Another important area of agreement, covering pipelines and oil exploration

Continued next page

Nice on paper, but will they really work?

Alaska has now adopted the toughest oil spill law and regulations in the nation. But will they will really work?

Two central themes of HB 567 and its regulations — tougher response planning standards and "credits" for prevention measures — may not mean much when it comes to dealing with an actual spill. In an emergency, companies and contractors need flexibility to respond quickly to conditions at hand, particularly weather. What is written in a detailed contingency plan may have little relevance to what people will really have to do.

Bill Schoephoester, Manager of Planning and Projects for Petro Marine, Inc., a major Alaska fuel distributor, says what really counts in dealing with a spill is having people, the equipment, and frequent training.

Beyond that, writing a detailed plan as to how his company would clean up 70,000 barrels of spilled fuel product if a large fuel barge goes on the rocks in Western Alaska, or spills fuel in the open ocean, may be just a paper exercise.

"The new planning requirements could just be a tremendous paper exercise, a lot of paperwork that will keep people busy writing it and reviewing it, but which doesn't have much to do with the real work of dealing with or cleaning up a spill.

More fundamentally, the frustration for Alaska fuel companies is that HB 567 was essentially written with Alyeska Pipeline and Prince William Sound in mind. Schoephoester says, "Ninety percent of the thinking in this was on what to do with one kind of petroleum — crude oil — spilled in protected, enclosed body of water near harbors for a standby fleet," of response vessels — Prince William Sound. That has little to do with Schoephoester's problem of how to respond to problems with small barges carrying different kinds of fuel products operating along thousands of miles of Alaska coast.

Meanwhile, Mark Hutton, a consultant who worked on the regulations, is critical of the entire concept of prevention credits. He believes they oversimplify a complex problem. He questions whether the state really has the resources to carry out the prevention regulation program across all of the industries affected, including petroleum companies handling crude oil and shippers and distributors carrying refined product.

The program could lead the public into a false sense of security that all catastrophic spills can be cleaned up in 72 hours, just because the regulations require the operators to be able to do it, Hutton says.

spill regulations

Continued from left

and production sites, was the "realistic maximum oil discharge," the largest amount of oil likely to be released in a spill. Called the "RMOD" in working group jargon, this is the oil volume an operator must demonstrate capability of handling in its spill contingency plan. The working group continued to disagree on the RMOD for tankers, however.

"There were a lot of small issues also agreed on," Hutton said. "For example, the new regulations provide for a preapplication conference between operators and DEC," a procedure not used before. "This allows operators to work out problems with the agency in advance, before the plan is submitted."

But there were also major issues over which the group could not reach agreement, and on which strong differences of opinion remain. DEC Commissioner Sandor made final decisions on these.

The biggest was the RMOD — "realistic maximum discharge" — for tankers. Environmental groups and the regional citizens' advisory committee pushed for the presumption that the total cargo of a ship could be lost in an accident. Thus, the shipowner, in its contingency plan, would have to show capability of having resources — the people and equipment — on site within 72 hours to clean up 100 percent of the cargo. For the largest tank ship operating from Valdez, that would involve about 1.8 million barrels.

Using research from the 50 worst tanker spills from around the world and risk analysis based on sophisticated tanker engineering modelling, industry argued that 33 percent was a more appropriate figure.

No agreement could be reached, so Sandor settled on 60 percent as a compromise. This prompted some criticism from both industry and conservation groups because DEC had decided on the figure without any basis in statistics or facts.

This was linked to another issue, prevention credits. These are incentive measures that allow reductions from the maximum discharge capability by incorporating specific prevention measures, such as double bottoms on tankers, escort vessels, crew training, alcohol and drug testing, with specified percentages for each measure.

Conservationists and the citizen advisory group were concerned that if companies undertook enough prevention measures their planning standard would be reduced, in theory, to zero. They pushed for a minimum of 30 percent of the cargo.

This became another area for disagreement. As this is written, this issue is unresolved. The regulations sent to the Attorney General's office did not have the minimum, although earlier versions did. DEC staff apparently felt the existing prevention credits would not reduce the planning standard below 30 percent.

But some work group members felt DEC staff may have overlooked other sections of the regulations, which allow operators to petition the agency for more credits on the basis of new technological developments. They are pushing DEC to restore the minimum requirement.

The oil industry remained lukewarm on the whole issue of prevention credits. It's industry's belief that responsible operators should incorporate the specified measures anyway, and that having them in a regulatory scheme detracts attention from other measures that help prevent spills, like drills and training. In fact, the industry first proposed a 33 percent response standard with no prevention credits other than those related to the physical structure of tankers like double hulls and bottoms, and hydrostatic testing.

Saunders, from Alaska Center for the Environment, says she doesn't want disagreements over the minimum to delay the regulations. "My fear is that glitches like this might delay approval of the regs, and I really don't want to see that happen," she said. "I'm willing to go forward (without the minimum) if I knew people would work on it and fix it. This apparently happened because people in DEC were in a rush. People make mistakes.

"What I want to make sure is that an inadvertant mistake doesn't turn into something people take advantage of. It's not a short-term problem because this won't affect anyone's current planning standard."

"Let's not hold up the regulations. Industry needs to know what they must do to comply with the law. They are as anxious as we are (to get the regulations in effect)," she said.

The work group did reach consensus, however, that a minimum spill response standard was not needed for pipeline and oil exploration or production sites.

Two other areas of disagreement, in which Commissioner Sandor made decisions, were over relief well capability in offshore drilling and the application of the state Coastal Management Program to spill contingency plans.

ACE's Saunders said she and other public members pushed strongly to have relief wells or other blowout-control measures dealt with in the regulations. Industry argued those are now evaluated on a case-by-case basis under existing state and federal permit requirements, which can put specific requirements on an exploration project through permit stipulations. DEC decided it wasn't appropriate to include it in the regulations.

"We want some assurance that a relief well (to control an offshore blowout) can be drilled or that a blowout can be controlled in some other way in the same (drilling) season, without waiting until the next year. We want it in the regulations, and the contingency plan must be able to do that." Saunders said the issue was kicked up to the cabinet level to be dealt with.

The coastal zone management issue is more muddled. The state coastal management act says major permits in coastal areas come under review of the coastal management program (which includes review by local coastal districts and municipalities) while the state administration argues DEC's review of contingency plans should substitute for coastal management review. But the issue hasn't really been settled.

The problem is serious because of potential for delays of contingency plan approval, which can hold up an operation. "The coastal zone review process has provisions for open-ended delays," says Exxon's Rob Dragnich. "Many different parties (other state agencies or coastal resource districts) can protest through appeals, and stop the review clock."

That conflicts with the law established by HB 567, which guarantees DEC action on spill contingency plans in 65 days.

Another problem is that operators may get in a position where they have approval by DEC for their plan, but opposition from the local coastal resource district. Some Alaska bulk fuel operators now face this problem.

But overall, the regulations do follow the intent of HB 567, says State Sen. Drue Pearce, an Anchorage Republican who played a key role in development of final versions of the bill.

Pearce said she was pleased the issue of prevention credits was dealt with, though she was concerned about the DEC's cost of implementing the program. "From what I've seen of the regulations, they are a lot closer to our (state legislators') intent than many thought they would be," she said.

Rob Dragnich of Exxon, who headed an Alaska Oil and Gas Association task force and was one of industry's representatives in the group, felt the working group process was constructive because in the past, industry's opportunity to talk to ADEC was in a formal rulemaking process in a formal procedure that isn't structured for informal discussion or negotiation between interest groups.

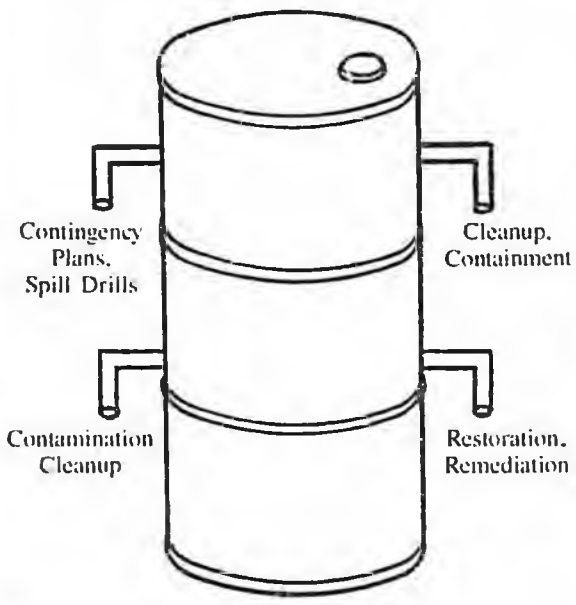
"This gave DEC a forum to listen to different points of view without taking a lot of heat."

470 Spill Fund — State's 'deep pocket'

The state's $50 million emergency oil spill response fund is being increasingly tapped for programs not related to oil spills or environmental problems related to petroleum production. The so-called "470" spill fund is now being drawn down over $30 million yearly to support a variety of environmental programs administered by the State Department of Environmental Conservation (DEC).

Because of that, a special nickel-a-barrel surtax on petroleum production, enacted in 1989 as a temporary measure to bring the emergency fund up to $50 million, may become, in effect, a permanent tax.

Alaska's emergency spill response fund — named the 470 fund for the number of its enabling legislation — was created in 1986, but was given very little money until after the 1989 Prince William Sound oil spill, when state lawmakers appropriated $50 million, financed by the oil production surtax.



In 1989, legislators also added to the activities that could be financed. The fund was always intended to help pay spill containment and cleanup costs. But other expenses, like litigation, restoration and remediation work, and preventative measures like review of contingency plans, exercises, drills and equipment inspections, were added that year to help insure a spill like the *Exxon Valdez* never occurred again.

To pay for this, legislators added the five cents per barrel surtax to the state's oil severance tax. The tax was to remain in effect as long at it took to get $50 million into the fund. After that, it was to cease, then "kick on" again if the fund dipped below $50 million.

It is the amount of the "dip" that troubles some. Spill restoration work was to be paid from the fund, but after that, many thought only one or two million dollars a year would be spent for plan review or stocking regional spill response depots. Annual expenditure of $30 million and more a year, an amount which almost doubles the Dept. of Environmental Conservation budget, was never contemplated. Many now think the "470" fund may become an ongoing source of funding for a variety of environmental projects, many with little or no connection to petroleum producers who pay the tax.

Over the last two years, a growing amount of money was spent from the fund to do restoration work on sites contaminated by hazardous wastes or leaking fuel oil leaks. More such spending is planned for next year. Proposed projects have included auto salvage yards and battery repair shop cleanups.

The DEC, which administers the 470 fund, also supports a bill in the State House that would allow money from the fund to be used for a state program providing grants and loans for repair and rehabilitation of leaking underground fuel storage tanks. This is potentially a $100 million problem in Alaska.

Some critics question whether it is good to have a fund that once had a narrow focus — oil spill cleanup and restoration — being increasing used to fund a wide variety of environmental programs otherwise funded from the general budget, and scrutinized closely by legislative finance committees. While not a dedicated fund, the 470 fund still gives DEC an indirect way of financing some of its programs "off budget."



Senate President Dick Eliason and Rules Chairman Sen. Fred Zharoff.

The governor's 'maintenance' budget

Continued from Page 1

gevity bonuses up $2.9 million, with 1,200 more seniors in the program.

Of Governor Hickel's suggested program additions to current-year spending, the more significant include an additional $13 million for state prisons, $5 million for the University of Alaska, $4.19 million for tourism marketing, $2.3 million added for education reform initiatives, $2.3 million added for state troopers, $1.6 million more in international trade efforts, and $525,000 for rural economic development.

Governor Hickel proposes that municipal assistance and revenue-sharing, which like the school foundation program extend state assistance to local governments, be held at FY '92 levels. He held most other state programs at existing levels.

By requiring most agencies to absorb an estimated $23.2 million in cost-of-living adjustments mandated by negotiated state employee union contracts and another $21.6 million in inflationary increases in costs for travel, contractual services, supplies and equipment, the governor imposed an indirect cut on those departments. To absorb the impact of the increased COLA in state union contracts, state agencies will have to eliminate an estimated 450 positions, the governor says.

To counter criticism that he has abandoned his goal of cutting spending, the governor points out that state employees, which are the largest part of agency costs, are being gradually reduced through attrition. "Today, we have roughly 500 fewer positions on the books in state government than when we came into office," a year ago, Governor Hickel said. "We should achieve approximately 500 fewer positions by mid-1992."

Last year, the governor proposed a series of five percent annual cuts in operating spending that were intended to bring spending within range of reduced oil revenues by the end of his first term. But $100 million in proposed cuts hit heavy opposition from constituent groups and the legislature. By the end of the 1991 session, the governor largely abandoned the effort.

One administration cost-cutting initiative still underway is a state agency efficiency-review intended to spot duplicative and overlapping services. This is being done by consultants to the Office of Management and Budget; final reports and recommendations are due this spring.

As this is written, the governor is still working on a proposed capital budget expected to be in the $300 million range, depending on revenues available. The capital budget is approved separately from the operating budget.

Revenues *(Millions)* FY '93*

$2,374.3	Unrestricted
89.5	Revenue adjustments
$2,463.8	**Total available**

**Assumes oil price average $18.90 barrel*

Expenditures *(Millions)* FY '93

$2,241.3	Operating
76.0	FY '92 supplementals (est.)
198.7	Debt service
7.9	Loan programs
26.7	"470" spill fund
5.0	New legislation (est.)
300.0	Capital budget (est.)
$2,855.6	**Total Expenditures**
(-$391.8 Deficit)	*Drawdown from budget reserve*

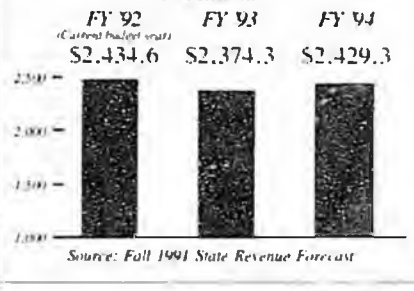
Source: Office of Management and Budget, December 1991

State income, mostly from oil and gas revenues, is expected to cover the operating budget. Administration officials indicate they would favor spending part of several hundred million dollars remaining in the Budget Reserve Fund to finance a capital budget.

While the press often portrays Governor Hickel as a booster of grandiose capital projects, what the governor has actually pushed in his capital budget is more down-to-earth. Last year much of what the governor asked for were relatively less glamorous maintenance projects, like repairs to state and university buildings, state highways, docks, harbors and airports. The governor's FY '93 capital budget is expected to call for more of the same.

This year, the governor is expected to push a revamped version of his community matching program that was rejected in its original form by the legislature. One new initiative may be a change in the way state grants are made for local school construction. The governor may include school construction among local projects for which state capital grants will require a percentage of matching participation by a local community.

General Fund
Unrestricted Revenues
Mid-Case Scenario
In Millions



Source: Fall 1991 State Revenue Forecast

In Juneau: Who's in? Who's out?

Continued from Page 1

ment; and others in the cabinet. In other key administration positions, Shelby Stastny remains in his job at the Office of Management and Budget, and Paul Rusanowski remains in the Division of Governmental Coordination.

In changes at the top, Joe Holbert came in as Deputy Chief of Staff to replace Malcolm Roberts, who moved to run the state's ANWR promotion campaign. Holbert, a Denver advertising executive, worked with Hickel in 1966. He has taken on day-to-day operational matters. This leaves Chief of Staff Max Hodel free to concentrate on policy.

Paul Fuhs, formerly head of Economic Development in the Department of Commerce, was recently named the governor's legislative liaison, a very sensitive position. Bruce Geraghty, named after Bruce Kendall's departure, remains as a deputy legislative liaison.

As legislative assistant, Fuhs is the governor's lobbyist and is responsible for pushing the administration's agenda with the legislature. Two young assistants who received lots of press attention — James Rockwell, a special assistant, and Eric Rehmann, press secretary — both quit recently to start an international trading company. Two other assistants, Don Tanner and Ric Davidge, took positions in other state agencies.

Two more important departures came last fall when Millet Keller, former Commissioner of Administration, and Lee Fisher, Commissioner of Revenue, resigned after questions were raised over technical violations of the state procurement code. Na[illegible] Bear-Usera, formerly Commissioner of Labor, was shifted to take Keller's place as head of Administration. As this is written, the top positions at Revenue and Labor remain vacant, although they may be filled shortly.

Bear-Usera is in a key position. Her job in Department of Administration includes renegotiation of eight state employee union contracts after they expire, in the near future. Bear-Usera will make a substantial long-term contribution in bringing state expenses under control if she can persuade state employees, as union contracts are renegotiated, to be modest in their pay demands.

Former governors Sheffield and Cowper also made first-year changes; Larry Crawford, Sheffield's first chief-of-staff, and Dan Casey, a former oil industry manager who was DOTPF commissioner, left their jobs in the first year. Peter McDowell, a Juneau management consultant, left as Director of OMB. Early on, Governor Cowper lost his legislative assistant, Mike Bradner, as well as DOT commissioner Rocky Gutierrez. At the end of Cowper's first legislative session, Chief of Staff Pete Jeans shifted to another job. In the middle of his term, Judy Brady left her position as Commissioner of Natural Resources, as did Tony Smith, who headed Commerce and Economic Development.

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MAJOR OIL SPILLS AND RESULTING LEGISLATION
1899 to Present

1899 **Rivers and Harbors Act.** Also known as the Refuse Act. Prohibits discharge or deposit of trash or refuse that would cause obstruction to navigable waters.

1924 **Oil Pollution Act of 1924.** Prohibits offshore oil dumping to a perimeter of 3 miles off the U.S shoreline. Gives the Department of Interior access to Department of Defense and U.S. Coast Guard resources to clean up oil spills.

1948 **Federal Water Pollution Control Act.** First broad Federal legislation addressing water pollution, particularly water pollution caused by waste disposal.

1961 **Oil Pollution Act.** Implements the 1954 International Convention for the Prevention of Pollution of the Sea by Oil in the U.S.

1965 **Water Quality Act.** Gives the Federal government power to set water quality standards for certain waters in the absence of State action.

1967 **Tanker *Torrey Canyon* wreck** occurs off the southern coast of England, spilling over 100,000 tons of oil.

1967 **President Johnson calls for assessment of U.S. legal/technical resources for preventing and responding to oil spills.**

1968 **Breakup of the *Ocean Eagle* tanker** in San Juan Harbor, Puerto Rico, releases approximately 3.48 million gallons of crude oil.

1968 **National Multiagency Oil and Hazardous Materials Contingency Plan (National Contingency Plan or NCP).** Assigns responsibilities for emergency responses to signatory agencies. Establishes hierarchical national response system and designates Federal on-scene responders.

1969 **Oil well blowout off the coast of Santa Barbara, California,** releases an estimated 3.15 million gallons of oil.

August 1970 **Federal Water Pollution Control Act (Clean Water Act or CWA).** Repeals OPA of 1924 and revises NCP. Establishes stricter liabilities and penalties for oil discharges and for failure to notify the government of an oil discharge. Gives the President authority to remove spilled oil and to sue the responsible party to recover cleanup costs. Establishes an oil spill cleanup fund and mandates that tanker owners provide evidence of financial responsibility to assume oil spill cleanup costs.

October 1970 **Environmental Protection Agency (EPA)** created from the consolidation of the Federal Water Pollution Control Administration and other Federal offices.

1971 **Collision between the *Arizona Standard* and *Oregon Standard* tankers** in San Francisco Bay, California.

1972 **Ports and Waterways Safety Act.** Increases oil spill prevention by establishing navigational safety measures for tankers and mandating vessel improvements.

1972 **Federal Water Pollution Control Act Amendments of 1972.** Strengthens CWA section 311. Gives U.S. Coast Guard and EPA authority to prevent and respond to accidental oil releases in navigable waters.

1974 **Deepwater Port Act of 1974.** Regulates the construction, operation, and licensing of deepwater ports and establishes strict liabilities for vessels or deepwater port licensees that discharge oil.

1976 **Tanker *Argo Merchant* runs aground** off the coast of Massachusetts, spilling 7.5 million gallons of oil.

1977 **Tanker *Hawaiian Patriot* breaks up** off the coast of the Hawaiian Islands, spilling its total oil cargo.

1977 **Federal Water Pollution Control Act Amendments of 1977.** Extends Federal government's jurisdiction to a boundary 200 miles off the U.S. coastline. NCP jurisdiction expanded to include (1) potential oil discharges and (2) the economic zone defined in 1976 Fishery Conservation and Management Act.

1978 **Tanker *Amoco Cadiz* oil spill** releases approximately 65 million gallons of oil off the coast of France.

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1978 **Tanker *Amoco Cadiz* oil spill** releases approximately 65 million gallons of oil off the coast of France.

1978 **Port and Tanker Safety Act.** Amends Ports and Waterways Safety Act. Gives U.S. Coast Guard authority to establish, maintain, and operate vessel traffic services in ports; allows Captains of the Port to regulate movement in ports; and requires vessels to comply with vessel traffic systems.

1979 **Ixtoc I oil well blowout** off the coast of Mexico releases approximately 1.2 million gallons of oil per day for 60 days. The oil eventually reaches Texas beaches.

1980 **President Reagan issues 2-page declaration against comprehensive oil legislation.**

1988 **Aboveground tank collapse at the Ashland Oil Company** releases 750,000 gallons of diesel fuel into the Monongahela and Ohio Rivers in Pennsylvania.

1988 **Tanker *Arco Anchorage* spill** leaks approximately 189,000 gallons of crude oil into waters off the Washington State coast.

1989 ***Exxon Valdez* oil spill** in Prince William Sound, Alaska, spills over 10.5 million gallons of crude oil.

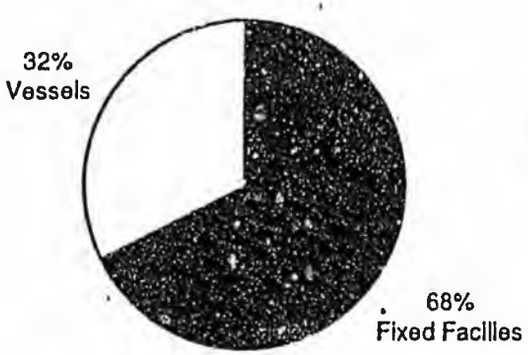
1990 **Tanker *Mega Borg* explodes** off the coast of Texas, releasing an estimated 4 million gallons of crude oil, most of which was burned or recovered.

1990 **Tanker *American Trader* runs aground** off the California coast, releasing approximately 400,000 gallons of crude oil.

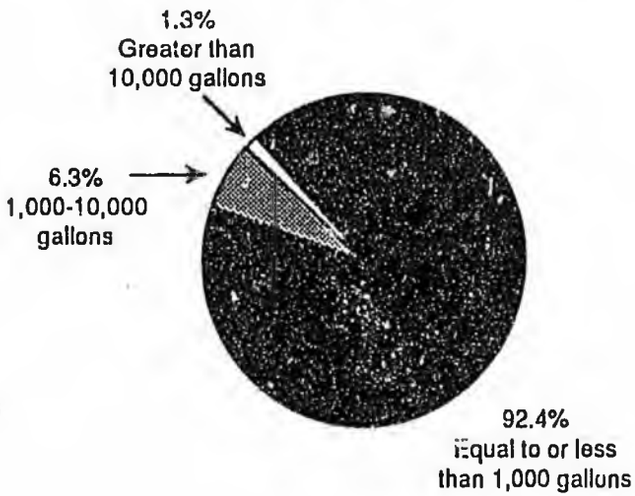
1990 **Oil Pollution Act (OPA).** Amends CWA. Expands contingency planning requirements, enhances response authorities; adds new planning and response structures at the Federal and local levels; establishes drug testing for vessel pilots, manning standards, and double-hull requirement for oil tankers; mandates study on tanker navigation safety standards; and mandates additional vessel construction and marine traffic safety standards.

DISTRIBUTION OF OIL SPILLS
By Source, Size, and Volume

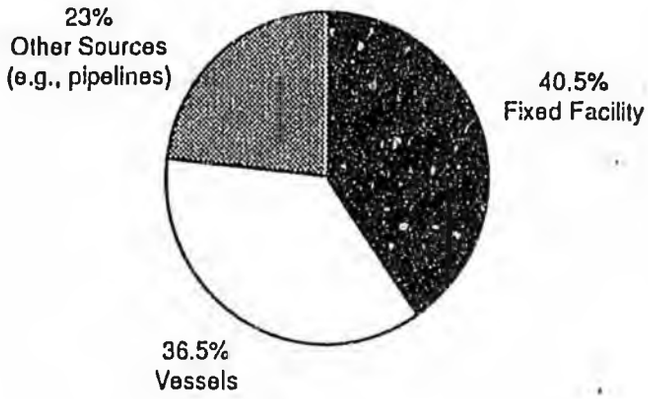
Distribution of Spills by Source



Distribution of Spills by Size



Distribution of Spill Volume by Source



Source: EPA's Emergency Response Notification System (ERNS) Data

Alaska State Legislature

Legislative Research Agency

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March 23, 1993

MEMORANDUM

TO: Representative Kay Brown

FROM: Maria Gladziszewski and Paula d. Scavera
Legislative Analysts

RE: **Other States' Funds Similar to Alaska's Oil and Hazardous Spill Response Fund**
Research Request 93.186 (Preliminary Response)

You asked for information about funds established in other states that are similar to Alaska's Oil and Hazardous Spill Response Fund (the so-called "470 Fund" in Alaska). Within the time allotted for this request, we were able to contact six states (California, Florida, Louisiana, New Jersey, Texas, and Washington) to obtain the information which you requested. Although there may be others, these are a sample of states that tax oil, petroleum products or other pollutants to pay for a cleanup or response fund.

The attached table summarizes key features of oil spill funds in those states. We listed only those funds which are funded primarily by a tax and not by pollution fines or settlements. We have also attached relevant statutes from the six states listed above and a report from Texas, *Oil Spill Prevention and Response Act Progress Report.*

We hope this information is useful for your purposes. Please do not hesitate to contact us if you have additional questions.

Attachments

SELECTED STATE FUNDS SIMILAR TO ALASKA'S OIL & HAZARDOUS SUBSTANCE SPILL RESPONSE FUND

State Fund	Primary Revenue Source	Purpose / Use	Comments	Contact
California Oil Spill Response Trust Fund	25 cents/barrel of crude oil or petroleum products received at a marine terminal or transported by pipeline	for cleanup of oil in marine waters or cleanup of oil that will impact marine waters.	Fund has reached its cap of $50 million	Department of Fish and Game, Oil Spill Prevention and Response Office (916) 445-9338
California Oil Spill Prevention Administrative Fund	4 cents/barrel of crude oil or petroleum products received at a marine terminal or transported by pipeline	administering, operating, managing, staffing, and plan reviewing of oil spills in marine waters or impacting marine waters.	Approximate annual revenue = $20 million Approximate number of personnel funded = 190 Approximate annual expenditures = $18 million	
Florida Inland Protection Trust Fund (Chapter 376, Section 3071)	80 cents/barrel tax on pollutants produced or imported into the state	cleanup of discharges of petroleum or petroleum products from stationary petroleum storage facilities; investigation and assessment of contaminated sites; restoration or replacement of potable water supplies; rehabilitation, maintenance and monitoring of contaminated sites; cost recovery expenses; administrative expenses including costs incurred by the Department of Health in providing field & laboratory services; some activities related to the removal and replacement of petroleum storage systems	Approximate annual revenue = $155 million Approximate number of personnel funded = 50 Approximate annual expenditures = $155 million	Department of Environmental Regulation, Division of Petroleum Cleanup (904) 487-3299
Florida Water Quality Assurance Trust Fund (Chapter 376, Section 307)	varies with type of product and amount in fund; $1 or $2/lead acid battery 2.3 or 5.9 cents/gallon solvents 1 or 2.5 cents/gallon motor oil 2 to 5 cents/barrel petroleum products	to restore or replace potable water supplies; for the investigation, assessment, cleanup, restoration, maintenance, and monitoring of any site contaminated with hazardous wastes, hazardous substances as defined by CERCLA, pollutants, substances suspected to be carcinogenic or toxic to humans, or substances which pose a serious danger to public health or welfare	Approximate annual revenue = $25 million Approximate number of personnel funded = n/a Approximate annual expenditures = $25 million	
Florida Coastal Protection Trust Fund (Chapter 376, Section 11)	2 cents/barrel tax on pollutants produced or imported into the state; tax suspended when fund reaches $50 million, reimposed at $40 million	to provide a mechanism to have financial resources immediately available for prevention of, and cleanup and rehabilitation after, a pollutant discharge, to prevent further damage by the pollutant, and to pay for damages	Approximate annual revenue = n/a Approximate number of personnel funded = n/a Approximate annual expenditures = n/a	
Louisiana Oil Spill Contingency Fund (RS 30: 2451-2496)	2 cents/barrel fee on all crude oil transferred to or from a vessel at a marine terminal within the state; fee suspended when fund reaches $15 million, reimposed at $8 million	administrative expenses of the office of the coordinator (not to exceed $250,000 annually); removal costs and damages related to actual or threatened discharges of oil; removal costs related to abatement & containment of actual or threatened discharges of oil; protection, assessment, restoration, rehabilitation, or replacement of or mitigation of damage to natural resources; operating costs & contracts for response and prevention (not to exceed $500,000 annually); other costs and damages authorized by statute	Approximate annual revenue = $12 million Approximate number of personnel funded = Approximate annual expenditures =	Office of the Louisiana Oil Spill Coordinator (504) 922-3230

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SELECTED STATE FUNDS SIMILAR TO ALASKA'S OIL & HAZARDOUS SUBSTANCE SPILL RESPONSE FUND

State Fund	Primary Revenue Source	Purpose / Use	Comments	Contact
New Jersey Spill Compensation Fund (NJSA 58:10-23.11)	1.5 cents/barrel tax on oil and petroleum products transferred within state; 4 cents/barrel tax on all hazardous substances transferred within state.	all direct/indirect costs for oil and hazardous substance spills.	Approximate annual revenue = n/a Approximate number of personnel funded = 100 Approximate annual expenditures = n/a Approximately $70 million currently in fund Interest from fund pays for research (approximately $500,000 annually)	
Texas Coastal Protection Fund (Texas Natural Resource Code, Section 40.152)	2 cents/barrel tax on all crude oil loaded or off-loaded in Texas ports; tax suspended when fund reaches $25 million, reimposed at $14 million	administrative expenses, personnel & training expenses equipment maintenance, & operating costs related to implementation & enforcement of statute; response costs related to abatement & containment of actual or threatened discharges of oil; damages related to actual or threatened discharges of oil; assessment, restoration, rehabilitation, or replacement of or mitigation of damage to natural resources; interagency contracts (not to exceed $1.25 million annually); purchase of response equipment (not to exceed $4 million) and the purchase of replacement equipment as necessary; other costs and damages authorized by statute	Approximate annual revenue = $12 million Approximate number of personnel funded = 40 Approximate annual expenditures = $6 million	General Land Office, Oil Spill Prevention & Response (512) 463-5329
Washington Oil Spill Response Account (RCW Chapter 90.56)	2 cents/barrel tax on all crude oil & petroleum products delivered to marine terminals in the state	for cleanup costs of oil and petroleum product spills, when the spill costs exceed $50,000	Approximate annual revenue = $3 million Approximate number of personnel funded = 0 Approximate annual expenditures =	Department of Ecol Response to Hazard (206) 459-6658
Washington Oil Spill Administration Account (RCW Chapter 90.56)	3 cents/barrel tax on all crude oil & petroleum products delivered to marine terminals in the state	for routine cleanup response, management, staff, enforcement, plan review, coordination and public outreach.	Approximate annual revenue =$4 million Approximate Number of personnel funded = 35 Approximate annual expenditures =$4 million	

n/a = not available at this time

Sources: Statutes of, and interviews with officials in, states listed.

Prepared by the Legislative Research Agency, March 1993 (93.186).

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Alaska State Legislature

Legislative Research Agency

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December 28, 1992

MEMORANDUM

TO: Senator Rick Halford

FROM: Maria Gladziszewski
Legislative Analyst

RE: **Alaska's Oil and Hazardous Substance Release Response Fund: History, Expenditures and Reimbursements**
Research Request 93.062

You asked for the following information about the Oil and Hazardous Substance Release Response Fund (the "470 Fund"):

1. legislative history of the 470 Fund and a brief summary of all legislation passed since 1989 affecting the 470 Fund;

2. current balance of all accounts associated with the 470 Fund and the amount spent annually from the 470 Fund since 1989;

3. status of all expenditures from the 470 Fund associated with the state's response to the *Exxon Valdez* spill, reimbursement to the state of these funds from Exxon under the settlement, and reimbursement to the 470 Fund of this money as it is received by the state; and

4. procedure for reimbursing the fund for expenditures made from it.

Each question is discussed briefly below. Additional information is included in the attached tables and information. Question one is covered in Legislative Research Agency Memorandum 92.236 (Attachment A). In addition, sections of a draft report prepared by the Alaska Department of Environmental Conservation (DEC) chronicle the 470 Fund history (Attachment B, "*A Strategic Plan for the Oil & Hazardous Substance Release Response Fund*"). Tables One and Two address question two. Question three is addressed in Table Three and accompanying notes. Question four, regarding reimbursement procedures, is addressed at the end of this memorandum.

QUESTION ONE: Response Fund History

The Oil and Hazardous Substance Release Response Fund, dubbed the "470 Fund" after the house bill that established it in 1986, originally was used only for containment, cleanup or monitoring of oil or hazardous substance spills. After the 1989 *Exxon Valdez* oil spill, the legislature expanded the use of the fund to finance such additional functions as spill response training, response exercises, and inspections; preparation and review of spill contingency plans; operation of the spill response office, response corps and response depots; environmental restoration after an oil or hazardous substance release; and refurbishment of one or more vessels that have spill response capability.

The 470 Fund began in 1986 as the balance of the Spill Expense Reserve Account (an account established by the legislature in FY 81 and funded with a $1 million appropriation), the balance in the Oil Spill Mitigation Account (a general fund account established in 1982 to accept deposits from oil discharge penalty payments[1]) and an additional $300,000 appropriation.

Between 1986 and 1989, 470 Fund deposits came from general fund appropriations and appropriations of money recovered from parties responsible for oil and hazardous substance spills. In 1989, new legislation required oil producers to pay a conservation surcharge of $0.05 per barrel of oil produced from each lease of state property (AS 43.55.200). The commissioner of the Department of Administration was directed to account separately for all proceeds of the oil surcharge. Since FY 91, the primary funding source for the 470 Fund has been appropriations of receipts from this conservation surcharge.

See Legislative Research Agency Memorandum 92.236 (Attachment A) for a more detailed response fund history. In addition, sections of a draft report prepared by the Alaska Department of Environmental Conservation (DEC) chronicle 470 Fund history (Attachment B).

QUESTION TWO: Current Balance and Amount Spent from the 470 Fund

The lower portion of table 1A shows that on June 30, 1993, the end of FY 93, if all the appropriated money is spent and no additional deposits are made to the fund, the balance in the 470 Fund will be approximately $100,000. This is based on an available fund balance at the beginning of FY 93 of $52.8 million and FY 93 appropriations of $52.7 million.

---

[1]This account was repealed by the 1986 legislation establishing the 470 Fund and replaced with the Oil and Hazardous Substance Release Mitigation Account.

TABLE 1A:
OIL & HAZARDOUS SUBSTANCE RELEASE RESPONSE FUND
BALANCE SHEET, FY 91 and FY 92

	JUNE 30, 1992	JUNE 30, 1991
Reserve for Encumbrances	$13,911,537.91	$10,910,943.35
Reserve for Prior Year Authorizations	$ 1,822,446.72	$ 117,748.29
Reserve for Restricted Revenue	(5,641,109.99)	0.00
Unreserved	$23,951,883.94	$19,916,033.39
TOTAL FUND BALANCE	**$34,044,758.58**	**$30,944,725.03**

OIL & HAZARDOUS SUBSTANCE RELEASE RESPONSE FUND
BALANCE SHEET, CURRENT and FY 93

Unreserved as of June 30, 1992	$24,000,000 (rounded)
Deposit July 1, 1992 from General Fund (Oil Surcharge Account Revenue)	$27,000,000
Deposit July 1, 1992 from General Fund (Mitigation Account Revenue)	$ 1,800,000
TOTAL UNRESERVED + DEPOSITS (July 1, 1992)	$52,800,000
Fiscal Year 1993 Authorized Expenditures	$52,700,000
Expenditures As of 12/09/92	$13,300,000
BALANCE AS OF 12/09/92	$39,500,000
BALANCE, END OF FY 93*	$ 100,000

*This assumes that all authorized expenditures are made and there are no additional deposits.

SOURCE:

Alaska Department of Environmental Conservation, Division of Administrative Services

Prepared by the Legislative Research Agency, December 1992 (93.062).

TABLE 1B
SOURCES OF REVENUE FOR THE 470 FUND:
MITIGATION ACCOUNT BALANCE AND OIL SURCHARGE REVENUE

Oil & Hazardous Substance Release Mitigation Account
Balance as of 12/18/92

Cash Balance	$2,016,000
Obligations	$1,822,000
Available Balance*	**$ 194,000**

*Exxon made a second settlement payment to the state in December 1992. Assistant Attorney General Craig Tillery expects that approximately $12.3 million of the $29 million payment will be deposited into the mitigation account as payment to the state for unreimbursed response costs.

Unrestricted General Revenue--Oil Surcharge Account
REVENUE COLLECTED

Fiscal Year 1990	$26,932,000
Fiscal Year 1991	$27,965,000
Fiscal Year 1992	$28,669,000
July 1, 1992 - December 18, 1992	$ 8,463,000
TOTAL REVENUE COLLECTED (Inception to 12/18/92)	**$92,029,000**

TOTAL 470 FUND EXPENDITURES
Inception to December 9, 1992

Expenditures FY 87 - 92	**$ 94,894,300**
Expenditures FY 93 as of 12/09/92	**$ 13,300,000**
TOTAL Expenditures*	**$108,194,300**

NOTE:

* This figure is according to the Department of Environmental Conservation. According to Response Fund Annual Reports, 470 Fund actual expenditures for FY 87 to FY 92 total $94.9 million. According to DEC, additional expenditures and obligations of $13.3 million for July 1, 1992 to December 9, 1992 bring the total expenditures (inception to December 9, 1992) to $108.2 million. Total 470 Fund expenditures recorded by the Department of Administration (DOA) vary slightly from DEC records. According to DOA, total expenditures from inception to December 18, 1992 are $107,146,000.

SOURCE:

Department of Administration, Division of Finance (Mitigation and Oil Surcharge accounts); Department of Environmental Conservation (Total 470 Fund expenditures).

Prepared by the Legislative Research Agency, December 1992 (93.062).

TABLE TWO
THE OIL & HAZARDOUS SUBSTANCE RELEASE RESPONSE FUND ("470 Fund"): ACTUAL EXPENDITURES, FISCAL YEARS 1987–1992

	FY 92	FY 91	FY 90	FY 89	FY 88	FY 87	FY 87–92 TOTAL
State & Regional Contingency Plans/Requirements	$307.7	$556.7	$158.4				
Spill Response Office, Depots & Corps	$1,125.1	$967.7	$199.8				
Spill Response Containment, Safety, Cleanup & Cost Recovery	$4,224.7	$690.2	$211.0	$246.8 *	$330.0	$428.8	
State Emergency Response Commission & LEPCs (HB 566)	$832.2	$399.6					
Spill Response Drills	$105.7	$448.5					
Exxon Valdez Project – General	$3,461.1	$11,977.7					
Litigation	$1,576.9	$4,100.0					
Damage Assessment	$8,012.8	$8,834.4					*EXXON*
DEC Response			$24,005.4	$5,456.3			*VALDEZ*
Interagency Response			$4,560.0	$605.7			Subtotal
Local Response			$3,210.2	$205.6			$76,010.1
Contaminated Site Investigation, Safety, Cleanup & Cost Recovery	$1,262.4	$1,671.7	$774.5				
Kenai Cleanup Project (Contaminated Sites)	$555.9	$583.7					
Spill Prevention & Response Preparedness (HB567)		$1,176.0					
Spill Reserve	$71.4	$313.6	$245.5				
Other	$759.5	$124.3	$112.8				
TOTAL FY 87 – FY 92	**$22,295.4**	**$31,844.1**	**$33,477.6**	**$6,518.4 ***	**$330.0**	**$428.8**	**$94,894.3**
FY 93 Expenditures through December 9, 1992							$13,300.0
TOTAL							**$108,194.3**

NOTES:

Response Fund Annual Reports have not consistently reported all the categories listed above for the years 1988–1992.

LEPCs = Local Emergency Planning Committees

* By direction of DEC officials, these figures have been slightly modified from the FY 89 Response Fund Annual Report.

SOURCES:

Alaska Department of Environmental Conservation, Response Fund Annual Reports for the years 1987–1991; and
Alaska Department of Environmental Conservation, Division of Administrative Services, for 1992, 1993 and modified 1989 data.

Prepared by the Legislative Research Agency, December 1992 (93.062).

According to DEC, FY 93 expenditures as of December 9, 1992 were approximately $13.3 million.

Table 1B includes information about the two primary sources of 470 Fund deposits--the oil and hazardous substance release mitigation account and the account containing deposits from the $.05 per barrel conservation surcharge. Table 1B shows that the available balance in the oil and hazardous substance release mitigation account as of December 18, 1992 was $194,000. The table also shows that from July 1, 1992, to December 18, 1992, the revenue collected by the state from the $0.05 per barrel surcharge on oil has been approximately $8.5 million. Total revenue collected from the surcharge (inception to date) is approximately $92 million.

Table Two shows that during the fiscal years 1987 - 1992, 470 Fund expenditures totaled approximately $94.9 million. This with FY 93 expenditures to date of approximately $13.3 million brings the total expenditures from the 470 Fund to $108.2 million. Table Two also shows that *Exxon Valdez* oil spill-related expenditures for the same period totaled approximately $76 million, or 80 percent of total fund expenditures through FY 92.

QUESTION THREE: Status of *Exxon Valuez* Expenditures

Table Three and accompanying notes show that approximately $36.5 million, or 48 percent of the amount spent from the 470 Fund on *Exxon Valdez* oil spill-related expenditures, has been reimbursed to the fund from payments by Exxon. This amount includes the $4 million that was deposited into the 470 Fund as a result of the first settlement payment made to the state from Exxon in December 1991.

Exxon made a second settlement payment of approximately $29 million to the state in December 1992. Additional reimbursements to the fund are expected as a result of this payment. Assistant Attorney General Craig Tillery reports that preliminary calculations indicate that approximately $12.3 million will be deposited into the mitigation account. If all $12.3 million from the mitigation account were appropriated to the 470 Fund, payments from Exxon will have reimbursed the 470 Fund for approximately 64 percent of 470 Fund *Exxon Valdez* oil spill-related expenditures.

QUESTION FOUR: Procedures for Reimbursing the 470 Fund

Alaska Statute 46.04.010 states that DEC shall promptly seek reimbursement for expenses it incurs in cleaning up or containing an oil spill. "Money received by the department under this section shall be deposited in the general fund and credited to a special account called

TABLE THREE:
REIMBURSEMENTS TO THE 470 FUND RELATING TO THE *EXXON VALDEZ* OIL SPILL
(Inception to June 30, 1992)

Actual Expenditures from the 470 Fund	$76.0 million
Revenue Deposited into the 470 Fund from the Mitigation Account (not including settlement payment deposits)	$32.5 million
Deposit from First Settlement Payment, December 1991	$ 4.0 million
TOTAL DEPOSITS TO DATE *	**$36.5 million** (48% of Fund expenditures on Exxon Valdez)
UNREIMBURSED EXPENDITURES	$39.5 million

SOURCE: Alaska Department of Environmental Conservation

* Assistant Attorney General Craig Tillery reports that settlement money to be received by the state from Exxon can be divided into reimbursements for litigation, damage assessment, and response costs. The first two, litigation and assessment costs, were addressed first because it was reasoned that these types of expenses were not likely to be recovered from Alyeska in subsequent litigation. According to a memorandum from Attorney General Charles Cole to OMB Director Shelby Stastny (dated January 21, 1992), approximately $38.2 million was due to the state from Exxon for litigation and assessment costs--86.5 percent for litigation costs and 13.5 percent for 470 Fund expenditures on damage assessment. Approximately $25.3 million (or 86.5 percent) of Exxon's first $29.3 million settlement payment to the state (in December 1991), therefore, was deposited into the general fund as reimbursement for litigation costs (account #64030-Legal Services). The remaining $4 million was deposited into the 470 Fund (see Attachment C, January 21, 1992 memorandum).

According to Assistant Attorney General Craig Tillery, Exxon made a second settlement payment a few weeks ago (December 1, 1992). As is specified in statute, that second payment (approximately $29 million) has been deposited in the general fund until it can be determined into which other accounts deposits should be made. Legislation passed in June 1992 (Section 1 Chapter 1 FSSLA 1992, included as Attachment D) specifies that money received by the state as reimbursement for state expenses related to the *Exxon Valdez* oil spill be deposited into the general fund. The law also specifies how to determine the percentage of a given settlement payment to be deposited into the mitigation account.

Mr. Tillery reports that the state's oil spill accounting firm, the Seattle-based Peterson and Company, is in the process of determining how much of the second settlement payment should be deposited into the 470 Fund as reimbursement for response costs. Mr. Tillery expects that approximately $12.3 million of the $29 million will be deposited into the mitigation account. If all $12.3 million is then deposited into the 470 Fund, reimbursements to the 470 Fund as a result of payments from Exxon would total $48.8 million (64 percent of 470 Fund expenditures on *Exxon Valdez*) and the total 470 Fund unreimbursed expenditures would be reduced to $27.2 million.

the 'oil and hazardous substance release mitigation account'." Christine Underwood, administrative officer with DEC's Division of Administrative Services, reports that all reimbursements received are deposited according to this statute. Deposits may be made to the mitigation account but the legislature must then appropriate that money to the 470 Fund.

The legislature authorized program receipt authority to the 470 Fund in 1989 and 1990. Special appropriations were made to the response fund in March of 1989, $10 million of which were program receipts from Exxon. To date, the state has received $7.7 million in payments on the promised $10 million and the 470 Fund accounts still carry a $2.3 million accounts receivable for these funds.

I hope this information is useful to you. Please do not hesitate to contact this office with additional questions.

Attachments

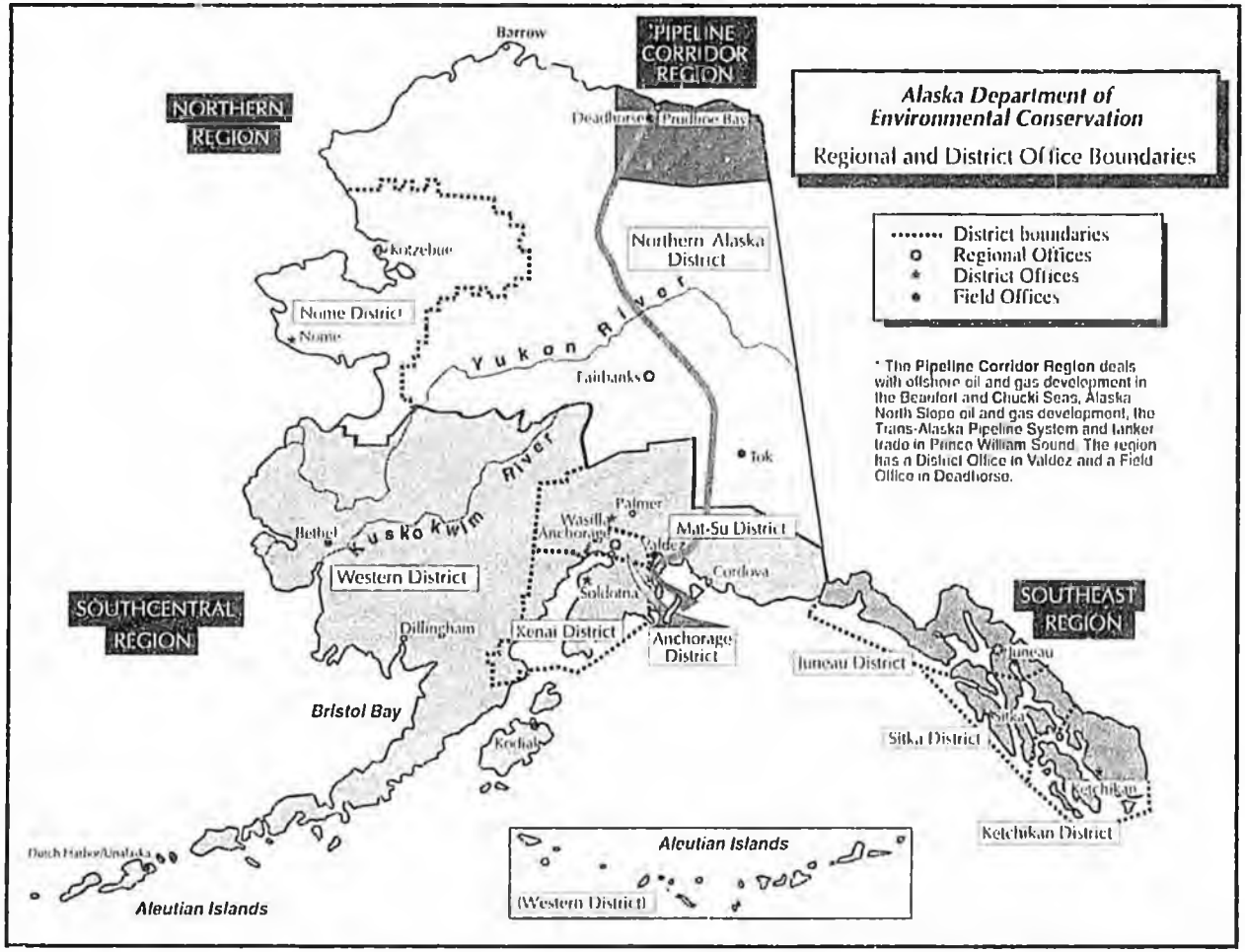
STATE OF ALASKA

Selected Oil and Hazardous Substance Pollution Control Statutes and Regulations



November, 1993

Alaska Department of Environmental Conservation


Alaska Department of Environmental Conservation
Regional and District Office Boundaries
District boundaries
Regional Offices
District Offices
Field Offices
* The Pipeline Corridor Region deals with offshore oil and gas development in the Beaufort and Chucki Seas, Alaska North Slope oil and gas development, the Trans-Alaska Pipeline System and tanker trade in Prince William Sound. The region has a District Office in Valdez and a Field Office in Deadhorse.
PIPELINE CORRIDOR REGION
NORTHERN REGION
SOUTHCENTRAL REGION
SOUTHEAST REGION
Barrow
Deadhorse
Prudhoe Bay
Northern Alaska District
Kotzebue
Nome District
Nome
Yukon River
Fairbanks
Tok
Kuskokwim River
Bethel
Palmer
Wasilla
Anchorage
Valdez
Mat-Su District
Cordova
Western District
Soldotna
Dillingham
Kenai District
Anchorage District
Juneau
Juneau District
Bristol Bay
Kodiak
Sitka
Sitka District
Ketchikan
Ketchikan District
Dutch Harbor/Unalaska
Aleutian Islands
Aleutian Islands
(Western District)

Selected Alaska Oil and Hazardous Substance Pollution Control Statutes and Regulations



Alaska Department of Environmental Conservation
Division of Spill Prevention and Response
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(907) 465-5220

November, 1993

NOTICE TO READERS:

This is a compilation of selected Alaska Statutes and regulations which pertain to or are closely associated with the protection of public health and the environment from oil and hazardous substance pollution. The summary was excerpted from the official codes on file with the Lieutenant Governor. Portions may not be complete nor quoted verbatim from the current state law. There may be errors or omissions that have not been identified and changes that have occurred after printing. This booklet is intended as an informational guide only and has been simplified for your convenience. To be certain of the current laws refer to the official codes.

For further details, contact your local office of the Alaska Department of Environmental Conservation in:

Anchorage - Southcentral Region	563-6529
Anchorage - Pipeline Corridor Region	278-8594
Nome	443-2600
Bethel	543-3215
Fairbanks - Northern Region	451-2360
Juneau - Southeast Region	465-5350
Kenai	262-5210
Ketchikan	225-6200
Kodiak	486-6760
Sitka	747-8614
Tok	883-4381
Unalaska	581-1822
Valdez	835-4698
Wasilla	376-5083

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REPORT ALL SPILLS
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TITLE 24. LEGISLATURE.

CHAPTER 20. AGENCIES OF THE LEGISLATURE.

ARTICLE 1. LEGISLATIVE COUNCIL.

SECTION 24.20.600. CITIZENS' OVERSIGHT COUNCIL ON OIL AND OTHER HAZARDOUS SUBSTANCES.

(a) There is created in the legislature the Citizens' Oversight Council on Oil and Other Hazardous Substances. The oversight council consists of five members appointed by the Alaska Legislative Council. The Alaska Legislative Council shall notify members of the public throughout the state that nominations for membership are being sought. Members of the oversight council serve without compensation but are entitled to per diem and travel expenses authorized for boards and commissions under AS 39.20.180.

(b) The oversight council shall elect a chair and other officers that the oversight council finds necessary to carry out its responsibilities.

(c) Members of the oversight council serve staggered terms of four years and, upon expiration of their terms, continue to serve until their successors qualify and are appointed. A member may serve no more than two consecutive terms.

(d) A member of the oversight council may not work as an independent contractor for or be employed by a federal, state, or municipal agency directly or indirectly involved in the oversight or regulation of industries engaged in the production, transport, or storage of oil or other hazardous substances; be an elected official of the state or of a political subdivision; or work as an independent contractor for or be employed by a person engaged in the production, transport, or storage of oil or other hazardous substances. The Alaska Legislative Council shall appoint as members of the oversight council persons who have an interest in and commitment to preventing oil and hazardous substance releases in the state.

(e) The oversight council shall make a formal request to the Alaska Legislative Council for money it considers necessary for staff, per diem, travel, and contractual expenses. Money distributed to the oversight council is to be disbursed and accounted for under procedures required by the Legislative Affairs Agency. The chair of the oversight council shall approve all expenditure documents.

SECTION 24.20.610 POWERS AND DUTIES OF THE OVERSIGHT COUNCIL.

(a) The oversight council shall

(1) determine whether state and federal agencies responsible for the prevention of the release of oil and other hazardous substances, and for responding to releases, are carrying out their duties in these areas;

(2) recommend to the legislature, the governor, agencies of the federal government, and private entities appropriate policies and actions to prevent releases of oil and other hazardous substances;

(3) assist the legislature and the governor in the development of interstate compacts and policy recommendations to the federal government regarding the prevention of releases of oil and other hazardous substances;

(4) file an annual report with the legislature and the governor assessing the status of major areas of risk, the performance of state and federal regulatory agencies, and changes in the long-term options for improving environmental safety;

5) request the attorney general to bring or request the attorney general to move to intervene in legal actions in order to ensure compliance with state laws and regulations regarding the release of oil and other hazardous substances;

(6) make recommendations to the legislature, the governor, and the federal government on the creation, funding, and composition of regional or local advisory committees and on the relationship between the oversight council, local advisory committees, and other citizens' oversight groups on oil and other hazardous substances; and

(7) schedule regular meetings with local and regional advisory committees as they are created to make sure that they complement each other and avoid overlap in oversight and advisory functions.

(b) The oversight council may

(1) hire an administrator and additional administrative staff, and enter into contracts for personal services that the oversight council finds necessary to carry out its responsibilities under this section; all employees of the oversight council are in the exempt service under AS 39.25.110;

(2) subpoena witnesses, administer oaths, take testimony, and require the production for examination and copying of books or papers relating to matters within the responsibility of the oversight council;

(3) conduct investigations, studies, and analyses necessary to enable the oversight council to carry out its duties under (a) of this section; and

(4) appoint advisory panels in specialized areas to include representatives of appropriate groups such as state and municipal regulatory agencies, oil spill prevention and response authorities, fishing and environmental groups, residents of areas of risk, scientists, and shippers and owners of oil and other hazardous substances produced or transported in the state.

SECTION 24.20.620 COOPERATION BY STATE AGENCIES.

Each agency of the executive branch of state government shall, to the extent permitted by state or federal law, cooperate fully with the oversight council by providing information and assistance, including disclosure of records relating to the agency's enforcement of laws and regulations for the prevention of and response to releases of oil and other hazardous substances.

SECTION 24.20.630 DEFINITIONS.

In AS 24.20.600 - 24.20.630,

(1) "hazardous substance" has the meaning given in AS 46.08.900;

(2) "oil" has the meaning given in AS 46.08.900; and

(3) "oversight council" means the Citizens' Oversight Council on Oil and Other Hazardous Substances.

TITLE 43. REVENUE AND TAXATION.

CHAPTER 55. OIL AND GAS PRODUCTION TAXES AND OIL SURCHARGE.

ARTICLE 1. OIL AND GAS PROPERTIES PRODUCTION TAXES.

SECTION 43.55.200. SURCHARGE LEVIED.

(a) Every producer of oil shall pay a surcharge of $.05 per barrel of oil produced from each lease or property in the state, less any oil the ownership or right to which is exempt from taxation.

(b) The surcharge imposed by (a) of this section is in addition to and shall be paid in the same manner as the tax imposed by AS 43.55.011 - 43.55.150.

(c) A producer of oil shall make reports of production in the same manner and under the same penalties as required under AS 43.55.011 - 43.55.150.

SECTION 43.55.210. DISPOSITION OF PROCEEDS OF SURCHARGE.

(a) The commissioner shall deposit the proceeds of the surcharge levied by AS 43.55.200 into the general fund.

(b) The commissioner of administration shall separately account for all proceeds of the surcharge that are deposited into the general fund.

SECTION 43.55.220. USE OF REVENUE DERIVED FROM SURCHARGE.

The legislature may appropriate the annual estimated balance of the account established under AS 43.55.210 to the oil and hazardous substance release response fund established by AS 46.08.010.

SECTION 43.55.230. SUSPENSION AND REIMPOSITION OF THE SURCHARGE.

(a) Not later than 30 days after the end of each calendar quarter, the commissioner of administration shall determine the cumulative total of money

(1) that has been deposited through that calendar quarter into the general fund under AS 43.55.210;

(2) expended through that calendar quarter from the oil and hazardous substance release response fund established in AS 46.08.010.

(b) Within 15 days after making the determinations required by (a) of this section, the commissioner of administration shall report to the commissioner the difference between the amount determined under (a)(1) of this section and amount determined under (a)(2) of this section.

(c) If the commissioner of administration reports that the difference determined under (b) of this section equals or exceeds $50,000,000, the commissioner of revenue shall suspend imposition and collection of the surcharge levied and collected under AS 43.55.200. Suspension of the imposition and collection of the surcharge begins on the first day of the calendar quarter next following the commissioner's receipt of the commissioner of administration's report under (b) of this section. Before the first day of a suspension authorized by this subsection, the commissioner shall make a reasonable effort to notify all persons who are known to the department to be paying the surcharge under AS 43.55.200 that the surcharge will be suspended.

(d) Except as provided in AS 43.55.240, if the commissioner of administration reports that the difference determined under (b) of this section is less than $50,000,000, the commissioner of revenue shall require imposition and collection of the surcharge authorized under AS 43.55.200. Reimposition of the surcharge begins on the first day of the calendar quarter next following the commissioner's receipt of the commissioner of administration's report under (b) of this section. Before the first day of reimposition of the surcharge authorized by this subsection, the commissioner shall make a reasonable effort to notify all persons who are known to the department to be required to pay the surcharge under AS 43.55.200 that the surcharge will be reimposed.

SECTION 43.55.240 SURCHARGE NOT IMPOSED.

The surcharge authorized by AS 43.55.200 is not levied during any fiscal year for which the estimated revenue from the surcharge would be sufficient to restore the balance of the oil and hazardous substance release response fund on the first day of the fiscal year to at least $50,000,000, and

(1) the legislature does not, during the regular legislative session preceding the first day of the fiscal year, appropriate money from the general fund to the oil and hazardous substance release response fund sufficient to restore the balance of that fund on the first day of the fiscal year to at least $50,000,000; or

(2) the legislature, during the regular legislative session preceding the first day of the fiscal year, appropriates money from the general fund to the oil and hazardous substance release response fund sufficient to restore the balance of that fund on the first day of the fiscal year to at least $50,000,000 and, because of gubernatorial veto or reduction in the amount of the appropriation, restoration of the balance of the fund to at least $50,000,000 does not become law.

TITLE 46. WATER, AIR, ENERGY, AND ENVIRONMENTAL CONSERVATION.

CHAPTER 3. ENVIRONMENTAL CONSERVATION.

ARTICLE 1. DECLARATION OF POLICY.

SECTION 46.03.010. DECLARATION OF POLICY.

(a) It is the policy of the state to conserve, improve, and protect its natural resources and environment and control water, land, and air pollution, in order to enhance the health, safety, and welfare of the people of the state and their overall economic and social well-being.

(b) It is the policy of the state to improve and coordinate the environmental plans, functions, powers, and programs of the state, in cooperation with the federal government, regions, local governments, other public and private organizations, and concerned individuals, and to develop and manage the basic resources of water, land, and air to the end that the state may fulfill its responsibility as trustee of the environment for the present and future generations.

ARTICLE 2. DEPARTMENT OF ENVIRONMENTAL CONSERVATION.

SECTION 46.03.020. POWERS OF THE DEPARTMENT.

The department may

(1) enter into contracts necessary or convenient to carry out the functions, powers, and duties of the department;

(2) review and appraise programs and activities of state departments and agencies in light of the policy set out in AS 46.03.010 for the purpose of determining the extent to which the programs and activities are contributing to the achievement of that policy and to make recommendations to the departments and agencies, including but not limited to, environmental guidelines;

(3) consult with and cooperate with

(A) officials and representatives of any nonprofit corporation or organization in the state;

(B) persons, organizations, and groups, public and private, using, served by, interested in, or concerned with the environment of the state;

(4) appear and participate in proceedings before any state or federal regulatory agency involving or affecting the purposes of the department;

(5) undertake studies, inquiries, surveys, or analyses it may consider essential to the accomplishment of the purposes of the department; these activities may be carried out by the personnel of the department or in cooperation with public or private agencies, including educational, civic, and research organizations, colleges, universities, institutes, and foundations;

(6) at reasonable times enter and inspect with the consent of the owner or occupier any property or premises to investigate either actual or suspected sources of pollution or contamination or to ascertain compliance or noncompliance with a regulation that may be adopted under AS 46.03.020 - 46.03.040; information relating to secret processes or methods of manufacture discovered during investigation is confidential;

(7) conduct investigations and hold hearings and compel the attendance of witnesses and the production of accounts, books, and documents by the issuance of a subpoena;

(8) advise and cooperate with municipal, regional, and other local agencies and officials in the state, to carry out the purposes of this chapter;

(9) act as the official agency of the state in all matters affecting the purposes of the department under federal laws now or hereafter enacted;

(10) adopt regulations necessary to effectuate the purposes of this chapter, including, by way of example and not limitation, regulations providing for

(A) control, prevention, and abatement of air, water, or land or subsurface land pollution;

(B) safeguard standards for petroleum and natural gas pipeline construction, operation, modification, or alteration;

(C) protection of public water supplies by establishing minimum drinking water standards, and standards for the construction, improvement, and maintenance of public water supply systems;

(D) collection and disposal of sewage and industrial waste;

(E) collection and disposal of garbage, refuse, and other discarded solid materials from industrial, commercial, agricultural, and community activities or operations;

(F) *[Repealed, Sec. 12 ch 172 SLA 1978.]*

(G) control of pesticides;

(H) other purposes as may be required for the implementation of the policy declared in AS 46.03.010;

(I) handling, transportation, treatment, storage, and disposal of hazardous wastes;

(11) after consultation with other state agencies and local government officials, identify and propose for addition or deletion, by regulation, other licenses, permits or authorizations for which the provisions of AS 46.35 are applicable, and report annually to the legislature the permits that have been included or deleted;

(12) *[Repealed, Sec. 92 ch 36 SLA 1990.]*

(13) inspect the premises of sellers and suppliers of paint, vessels, and marine and boating supplies, and take other actions necessary to enforce AS 46.03.715.

ARTICLE 3. WATER POLLUTION CONTROL AND WASTE DISPOSAL.

SECTION 46.03.050. AUTHORITY.

The department has jurisdiction to prevent and abate the pollution of the waters of the state.

ARTICLE 8. PROHIBITED ACTS AND PENALTIES

SECTION 46.03.710. POLLUTION PROHIBITED.

A person may not pollute or add to the pollution of the air, land, subsurface land, or water of the state.

SECTION 46.03.740. OIL POLLUTION.

A person may not discharge, cause to be discharged, or permit the discharge of petroleum, acid, coal or oil tar, lampblack, aniline, asphalt, bitumen, or a residuary product of petroleum, into, or upon the waters or land of the state except in quantities, and at times and locations or under circumstances and conditions as the department may

by regulation permit or where permitted under art. IV of the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, as amended.

SECTION 46.03.742. RECKLESS OPERATION OF TANK VESSEL.

(a) A person commits the crime of reckless operation of a tank vessel when, by recklessly operating, navigating, or piloting a tank vessel, the person causes a release of a hazardous substance and the release causes serious physical injury to another person or damage to the property of another.

(b) Reckless operation of a tank vessel is a class C felony.

(c) In this section, "reckless" has the meaning given in AS 11.81.900.

SECTION 46.03.743. NEGLIGENT OPERATION OF TANK VESSEL.

(a) A person commits the crime of negligent operation of a tank vessel when, by operating, navigating, or piloting a tank vessel with criminal negligence, the person creates an unjustifiable risk of a release of a hazardous substance or an unjustifiable risk of harm to a person or property.

(b) Negligent operation of a tank vessel is a class A misdemeanor.

(c) In this section, "criminal negligence" has the meaning given in AS 11.81.900.

SECTION 46.03.744. DEFINITIONS.

In AS 46.03.742 - 46.03.744,

(1) "hazardous substance" has the meaning given in AS 46.03.826;

(2) "tank vessel" means

(A) a vessel that is constructed or adapted to carry, or that carries, as a means of transportation by water, a hazardous substance in bulk as cargo or cargo residue;

(B) the vessel that propels the tank vessel if the tank vessel is a barge or other vessel that is not self-propelled.

SECTION 46.03.745. HAZARDOUS SUBSTANCE RELEASE.

Except for a controlled release, the reporting of which is the subject of an agreement with the commissioner under AS 46.09.010(b), a person may not cause or permit the release of a hazardous substance as defined in AS 46.09.900.

SECTION 46.03.750. BALLAST WATER DISCHARGE.

(a) Except as provided in (b) of this section, a person may not cause or permit the discharge of ballast water from a cargo tank of a tank vessel into the waters of the state. A tank vessel may not take on petroleum or a petroleum product or by-product as cargo unless it arrives in ports in the state without having discharged ballast from cargo tanks into the waters of the state and the master of the vessel certifies that fact on forms provided by the department.

(b) The master of a tank vessel may discharge ballast water from a cargo tank of a tank vessel if it is necessary for the safety of the tank vessel and no alternative action is feasible to ensure the safety of the tank vessel.

SECTION 46.03.755. DISCHARGE REPORTING.

(a) A person in charge of a facility, operation, or vessel, as soon as the person has knowledge of any discharge from the facility, operation, or vessel in violation of AS 46.03.740 or 46.03.750, shall immediately notify the department of the discharge

(b) Notwithstanding (a) of this section, the department may enter into a written agreement with a person for the periodic reporting of minor discharges other than into the waters of the state.

SECTION 46.03.758. CIVIL PENALTIES FOR DISCHARGES OF OIL.

(a) The legislature finds that

(1) recent information discloses that the discharge of oil may cause significant short and long-term damage to the state's environment; even minute quantities of oil released to the environment may cause high mortalities among larval and juvenile forms of important commercial species, may affect salmon migration patterns, and may otherwise degrade and diminish the renewable resources of the state;

(2) the exact nature and extent of oil pollution can be neither documented with certainty nor precisely quantified on a spill-by-spill basis; however, in light of the magnitude of harm which may be caused by oil discharges, and the vital importance of commercial, sport and subsistence fishing, tourism, and the state's natural abundance and beauty to the economic future of the state and its quality of life, it is the judgment of the legislature that substantial civil penalties should be imposed for the discharge of oil in order to provide a meaningful incentive for the safe handling of oil and to insure that the public does not bear substantial losses from oil pollution for which, because of its subtle, long-term or unquantifiable nature, compensation would not otherwise be received; and

(3) the handling of oil in large quantities is a hazardous undertaking that poses a significant threat to the economy and environment of the state, which can be substantially reduced only by the taking of rigorous safety precautions involving considerable expense; conversely, persons handling oil in smaller amounts pose a correspondingly lower risk to the economy and environment of the state, and are capable of safe oil handling practices at correspondingly lower costs; in order to provide an incentive that is effective, but not punitive, it is necessary and appropriate that the assessment of civil penalties for discharges of small quantities of oil be left for case-by-case judicial determination, while ensuring, through the penalty provisions of this section, that the handling of oil in large quantities occurs in a manner that will not impair the renewable resources of the state.

(b) No later than the 10th day after the convening of the Second Session of the Tenth Alaska Legislature, the department shall submit to the legislature regulations establishing the following schedule of fixed penalties for discharges of oil:

(1) subject to (2) of this subsection, the penalties for the following categories of receiving environments may not exceed

(A) $10 per gallon of oil which enters an anadromous stream or other freshwater environment with significant aquatic resources;

(B) $2.50 per gallon of oil which enters an estuarine, intertidal or confined saltwater environment; and

(C) $1 per gallon of oil which enters an unconfined saltwater environment, public land or freshwater environment without significant aquatic resources;

(2) for discharges of oil that are caused by the gross negligence or intentional act of the discharger, or when the court finds that the discharger did not take reasonable measures to contain and clean up the discharged oil, the penalty shall be determined by multiplying the penalty established under (1) of this subsection by a factor of five.

(c) Regulations adopted under (b) of this section shall become effective 60 days after submission to the legislature, unless disapproved by a special concurrent resolution introduced in either house, and concurred in by a majority of the members in joint

session within 60 days of the submission of the regulations. The department may periodically revise regulations adopted under (b) of this section. Revised regulations shall be submitted to the legislature no later than 10 days after the convening of the appropriate regular session of the legislature, and are subject to disapproval as specified in this subsection.

(d) The schedule shall vary according to the toxicity, degradability and dispersal characteristics of the oil. The schedule shall also vary according to the sensitivity and productivity of the receiving environment. Variations under this subsection may be by subcategories of receiving environments, specific receiving environments, or both. The maximum penalties established in (b) of this section shall apply to discharges in the most sensitive and productive of receiving environments within each category of receiving environment, and the penalty shall decrease for less productive or sensitive receiving environments.

(e) If a discharge of oil in excess of 18,000 gallons not permitted under applicable state and federal law occurs within the territorial jurisdiction of the state, or into or upon the adjacent outer continental shelf of the state, the following persons, in addition to the person causing or permitting the discharge, are jointly and severally liable to the state, in a civil action, for the full amount of penalties established in the regulations adopted under this section:

(1) if the discharge occurs from any commercial or industrial facility other than a vessel or offshore platform, the owner, lessee or permittee, and operator of the facility;

(2) if the discharge occurs from a vessel,

(A) the owner and operator of the vessel; and

(B) the owner of the oil carried as cargo on the vessel at the time the vessel was loaded, if the loading occurred within the territorial jurisdiction of the state, or at a deep-water port or other offshore storage facility adjacent to the state; however, if the owner of the oil temporarily transfers ownership of the oil to another person, and the transfer has the purpose or effect of evading the vicarious liability imposed by this section, the transferor will be considered the owner of the oil for the purposes of this subsection; and

(3) if the discharge occurs from an offshore platform, the lessee or permittee of the tract or acreage upon which the platform is situated, and the operator of the platform.

(f) The court shall deduct from the penalties for which the person charged is liable under (e) of this section that amount of oil which was removed from the environment as a result of a cleanup operation undertaken in conformity with applicable state and federal law, unless the oil was removed by an agency of state, local or federal government. The dispersal of oil through the use of chemical agents or other means is not considered removal for the purposes of this subsection. The court may estimate the amount of oil removed.

(g) Except as provided in (f) and (j) of this section, the entire penalty specified in the regulations shall be imposed, except that a person who discharges oil into a receiving environment may demonstrate, by a preponderance of evidence, that mitigating circumstances relating to the effects of the discharge would make imposition of the full penalty inappropriate. In determining whether mitigating circumstances exist, the court shall recognize that scientific knowledge pertaining to oil spills is very limited and if there is insufficient knowledge either to predict a base case or to show mitigating circumstances varying from that base case, the administratively established schedule of penalties shall apply. If mitigating circumstances are proven by a preponderance of the evidence, the court may reduce or totally eliminate the penalty, in accordance with the purposes of this section.

(h) A person otherwise liable for penalties under (e) of this section is not liable if the person demonstrates, by a preponderance of the evidence, that the discharge occurred solely as a result of

(1) an act of God;

(2) an act of a third person with intent to cause a discharge, unless the third person is a person with whom the person charged is made jointly and severally liable under (e)(1) - (3) of this section

(3) a negligent or intentional act of this state or the United States; or

(4) an act of war.

(i) Notwithstanding AS 46.03.875, a person liable under this section is not also liable for the discharge of oil under AS 46.03.760(a). A person causing or permitting a discharge of oil of 18,000 gallons or less not permitted under applicable state or federal law is liable for that discharge under the penalty provisions of AS 46.03.760(a); however, the court may impose a penalty of less than $500 for the discharge.

(j) The court may reduce the penalty imposed under this section if the person charged demonstrates, by a preponderance of the evidence, that the discharge was caused solely by a negligent act of a third person, unless the third person is a person with whom the person charged is made jointly and severally liable under (e)(1) - (3) of this section.

(k) *[Repealed, Sec. 19 ch 59 SLA 1986.]*

(l) In this section

(1) "adjacent outer continental shelf" means that portion of the outer continental shelf that would be within the territorial jurisdiction of the state if its boundaries were extended seaward to the outer margin of the outer continental shelf;

(2) "confined saltwater environment" means a bay, sound or other partially enclosed saltwater body in which flushing through tidal or current action is significantly restricted;

(3) "discharge of oil" means the entry of oil into or upon the water or public land of the state, except oil discharges into an enclosed and impervious oil spill containment area, regardless of causation;

(4) "intertidal" means the ocean area between highest high water and lowest low water of tidal action;

(5) "offshore platform" means an offshore structure, whether floating or temporarily or permanently secured to the floor of the ocean or other water body, which is used primarily for the exploration for or production of oil or natural gas;

(6) "oil" means petroleum and any substance refined from petroleum, except crude oil;

(7) "operator" means the person who, through contract, lease, sublease, or otherwise, exerts general supervision and control of activities at the facility; the term includes, by way of example and not limitation, a prime or general contractor, the master of a vessel and the master's employer, or any other person who, personally or through an agent or contractor, undertakes the general functioning of the facility;

(8) "vessel" means any form or manner of watercraft, whether or not capable of self-propulsion, except offshore platforms.

SECTION 46.03.759. CIVIL PENALTIES FOR DISCHARGES OF CRUDE OIL.

(a) A person who is found to be liable under any other state law for an unpermitted discharge of crude oil in excess of 18,000 gallons is, in addition to liability for any other penalties or for damages or the cost of containment and cleanup, liable to the state in a civil action for a civil penalty, up to a maximum of $500,000,000, in the amount of

(1) $8 per gallon of crude oil discharged for the first 420,000 gallons discharged; and

(2) $12.50 per gallon of crude oil discharged for amounts discharged in excess of 420,000 gallons.

(b) In determining how many gallons of crude oil have been discharged for purposes of assessing a penalty under (a) of this section, the court shall deduct the number of discharged gallons of crude oil that the defendant proves were removed by the defendant from the environment within the first 36 hours after the discharge as a result of a cleanup operation undertaken in conformity with applicable state and federal law. The dispersal of oil through burning, the use of chemical agents, biological additives, or sinking agents, or other means is not considered removal for the purposes of this subsection.

(c) Subject to the $500,000,000 maximum set under (a) of this section the court shall assess four times the penalty set out in (a) of this section if the court finds

(1) the discharge was caused by the gross negligence or intentional act of the defendant;

(2) the defendant did not take reasonable measures to contain and clean up the discharged oil; or

(3) the defendant did not act or respond in accordance with an approved oil discharge prevention and contingency plan.

(d) Notwithstanding AS 46.03.875, a person liable for civil penalties under this section is not also liable for the discharge of the crude oil under AS 46.03.760(a). A person causing or permitting a discharge of crude oil of 18,000 gallons or less not permitted under applicable state or federal law is liable for that discharge under the penalty provisions of AS 46.03.760(a); however, the court may impose a penalty of less than $500 for the discharge.

(e) The court may reduce the penalty imposed under this section if the defendant demonstrates, by a preponderance of the evidence, that the discharge was caused solely by a negligent act of a third person unless the third person is a person with whom the defendant was found jointly and severally liable for the discharge under other state law.

(f) A person otherwise liable for penalties under this section is not liable if the person demonstrates, by a preponderance of the evidence, that the discharge occurred solely as a result of

(1) an act of God;

(2) a negligent or intentional act of the State of Alaska or the United States; or

(3) an act of war.

(g) In this section, "discharge" means entry of crude oil into or upon the water or public land of the state, regardless of causation, except discharges into an enclosed and impervious oil spill containment area.

SECTION 46.03.760. CIVIL ACTION FOR POLLUTION; DAMAGES.

(a) A person who violates or causes or permits to be violated a provision of this chapter other than AS 46.03.250 - 46.03.314, or a provision of AS 46.04 or AS 46.09, or a regulation, a lawful order of the department, or a permit, approval, or acceptance, or term or condition of a permit, approval, or acceptance issued under this chapter or AS 46.04 or AS 46.09 is liable, in a civil action, to the state for a sum to be assessed by the court of not less than $500 nor more than $100,000 for the initial violation, nor more than $5,000 for each day after that on which the violation continues, and that shall reflect, when applicable,

(1) reasonable compensation in the nature of liquidated damages for any adverse environmental effects caused by the violation, which shall be determined by the court according to the toxicity, degradability and dispersal characteristics of the substance discharged, the sensitivity of the receiving environment, and the degree to which the discharge degrades existing environmental quality;

(2) reasonable costs incurred by the state in detection, investigation, and attempted correction of the violation;

(3) the economic savings realized by the person in not complying with the requirement for which a violation is charged.

(b) Except as determined by the court under (f)(4) of this section, actions under this section may not be used for punitive purposes, and sums assessed by the court must be compensatory and remedial in nature.

(c) The court, upon motion of the department or upon its own motion, may defer assessment of all or part of that portion of the sum imposed upon a person under (a)(3) of this section conditioned upon the person complying, within the shortest feasible time, with the requirement for which a violation is shown.

(d) As used in this section, "economic savings" means that sum which a person would be required to expend for the planning, acquisition, siting, construction, installation and operation of facilities necessary to effect compliance with the standard violated.

(e) In addition to liability under (a) - (d) of this section, a person who violates or causes or permits to be violated a provision of AS 46.03.740 - 46.03.750 is liable to the state, in a civil action brought under AS 46.03.822, for the full amount of actual damages caused to the state by the violation, including

(1) direct and indirect costs associated with the abatement, containment, or removal of the pollutant;

(2) restoration of the environment to its former state;

(3) amounts paid as grants under AS 29.60.510 - 29.60.599 and as emergency first response advances and reimbursements under AS 46.08.070(c); and

(4) all incidental administrative costs.

(f) A person who violates or causes or permits to be violated a provision of AS 46.03.250 - 46.03.314, AS 46.14, or a regulation, a lawful order of the department, or a permit, approval, or acceptance, or term or condition of a permit, approval, or acceptance issued under AS 46.03.250 - 46.03.314 or AS 46.14 is liable, in a civil action, to the state for a sum to be assessed by the court of not less than $500 nor more than $100,000 for the initial violation, nor more than $10,000 for each day after that on which the violation continues, and that shall reflect, when applicable,

(1) reasonable compensation in the nature of liquidated damages for any adverse environmental effects caused by the violation, that shall be determined by the court according to the toxicity, degradability and dispersal characteristics of the substance discharged, the sensitivity of the receiving environment, and the degree to which the discharge degrades existing environmental quality; for a violation relating to AS 46.14, the court, in making its determination under this paragraph, shall also consider the degree to which the discharge causes harm to persons or property; this paragraph may not be construed to limit the right of parties other than the state to recover for personal injuries or damage to their property;

(2) reasonable costs incurred by the state in detection, investigation, and attempted correction of the violation;

(3) the economic savings realized by the person in not complying with the requirement for which a violation is charged; and

(4) the need for an enhanced civil penalty to deter future noncompliance.

SECTION 46.03.763. ATTORNEY FEES AND COSTS.
In an action to impose civil penalties under AS 46.03.758, 46.03.759, or 46.03.760 for a discharge of oil, the state may recover full reasonable attorney fees and costs incurred by the state in maintaining the action.

SECTION 46.03.765. INJUNCTIONS.
The superior court has jurisdiction to enjoin a violation of this chapter, AS 46.04, AS 46.09, AS 46.14, or of a regulation, a lawful order of the department, or permit, approval, or acceptance, or term or condition of a permit, approval, or acceptance issued under this chapter, AS 46.04, AS 46.09, or AS 46.14. In actions brought under this section, temporary or preliminary relief may be obtained upon a showing of an imminent threat of continued violation, and probable success on the merits, without the necessity of demonstrating physical irreparable harm. The balance of equities in actions under this section may affect the timing of compliance, but not the necessity of compliance within a reasonable period of time.

SECTION 46.03.770. DETENTION OF VESSEL WITHOUT WARRANT AS SECURITY FOR DAMAGES.
A vessel that is used in or in aid of a violation of AS 46.03.740 - 46.03.750 may be detained after a valid search by the department, an agent of the department, a peace officer of the state, or an authorized protection officer of the Department of Fish and Game. Upon judgment of the court having jurisdiction that the vessel was used in, or was the cause of, a violation of AS 46.03.740 - 46.03.750 with knowledge of its owner or under circumstances indicating that the owner should reasonably have had this knowledge, the vessel may be held as security for payment to the state of the amount of damages assessed by the court under AS 46.03.758, 46.03.759, 46.03.760, 46.03.822, and AS 46.04.030(g). If the damages assessed are not paid within 30 days after judgment or final determination of an appeal, the vessel shall be sold at public auction, or as otherwise directed by the court, and the damages paid from the proceeds. The balance, if any, shall be paid by the court to the owner of the vessel. The court shall permit the release of the vessel upon posting of a bond set by the court in an amount not to exceed the maximum amount of damages available under AS 46.03.758, 46.03.759, 46.03.760, 46.03.822, and AS 46.04.030(g). The damages received under this section shall be transmitted to the proper state officer for deposit in the general fund. A vessel seized under this section shall be returned or the bond exonerated if no damages are assessed under AS 46.03.758, 46.03.759, 46.03.760, 46.03.822, or AS 46.04.030(g).

SECTION 46.03.780. LIABILITY FOR RESTORATION.
(a) A person who violates a provision of this chapter, AS 46.04, AS 46.09, or AS 46.14, or who fails to perform a duty imposed by this chapter, AS 46.04, AS 46.09, or AS 46.14, or violates or disregards an order, permit, or other determination of the department made under the provisions of this chapter, AS 46.04, AS 46.09, or AS 46.14, respectively, and thereby causes the death of fish, animals, or vegetation or otherwise injures or degrades the environment of the state is liable to the state for damages.

(b) Liability for damages under (a) of this section includes an amount equal to the sum of money required to restock injured land or waters, to replenish a damaged or

degraded resource, or to otherwise restore the environment of the state to its condition before the injury

(c) Damages under (a) of this section shall be recovered by the attorney general on behalf of the state.

SECTION 46.03.790. CRIMINAL PENALTIES.

(a) Except as provided in (d) of this section, a person is guilty of a class A misdemeanor if the person with criminal negligence

(1) violates a provision of this chapter, AS 46.04, AS 46.09, or AS 46.14, a regulation or order of the department, or a permit, approval, or acceptance, or a term or condition of a permit, approval, or acceptance issued under this chapter, AS 46.04, AS 46.09, or AS 46.14;

(2) fails to provide information or provides false information required by AS 46.03.755, AS 46.04, or AS 46.09, or by a regulation adopted by the department under AS 46.03.755, AS 46.04, or AS 46.09;

(3) makes a false statement or representation in an application, label, manifest, record, report, permit, or other document filed, maintained, or used for purposes of compliance with AS 46.03.250 - 46.03.314 applicable to hazardous wastes or a regulation adopted by the department under AS 46.03.250 - 46.03.314;

(4) makes a false statement, representation, or certification in an application, notice, record, report, permit, or other document filed, maintained, or used for purposes of compliance with AS 46.14 or a regulation adopted under AS 46.14; or

(5) renders inaccurate a monitoring device or method required to be maintained under AS 46.14, a regulation adopted under AS 46.14, or a permit issued by the department or a local air quality control program under AS 46.14.

(b) *[Repealed, Sec. 5 ch 141 SLA 1990.]*

(c) Each day on which a violation described in this section occurs is considered a separate violation.

(d) Notwithstanding (a) of this section, a person who with criminal negligence discharges oil in violation of AS 46.03.740 or who, when required by an oil discharge to comply with the provisions of an oil discharge contingency plan approved under AS 46.04.030, with criminal negligence fails to comply with the plan is guilty of

(1) a class C felony if the oil discharge is 10,000 barrels or more;

(2) a class A misdemeanor if the oil discharge is less than 10,000 barrels.

(e) *[Repealed, Sec. 5 ch 141 SLA 1990.]*

(f) *[Repealed, Sec. 5 ch 141 SLA 1990.]*

(g) In this section,

(1) "barrel" has the meaning given in AS 46.04.900;

(2) "criminal negligence" has the meaning given in AS 11.81.900;

(3) *[Repealed, Sec. 62 ch 21 SLA 1991.]*

(h) Notwithstanding AS 12.55.035(b), upon conviction of a violation related to AS 46.14 and described in (a) of this section, a defendant who is not an organization may be sentenced to pay a fine of not more than $10,000 for each separate violation.

SECTION 46.03.820. EMERGENCY POWERS.

(a) When the department finds, after investigation, that a person is causing, engaging in, or maintaining a condition or activity that, in the judgment of its commissioner presents an imminent or present danger to the health or welfare of the people of the state or would result in or be likely to result in irreversible or irreparable damage to the natural resources or environment, and it appears to be prejudicial to the interests of the

people of the state to delay action until an opportunity for a hearing can be provided, the department may, without prior hearing, order that person by notice to discontinue, abate, or alleviate the condition or activity. The proscribed condition or activity shall be immediately discontinued, abated, or alleviated.

(b) Upon receipt of an order of the department made under (a) of this section, the person affected has the right to be heard and to present proof to the department that the condition or activity does not constitute an actual or potential source of irreversible or irreparable damage to the natural resources or environment of the state, or that the order may constitute a substantial private hardship.

(c) In the commissioner's discretion or upon application made by the recipient of an order within 15 days of receipt of the order, the department shall schedule a hearing at the earliest possible time. The hearing shall be scheduled within five days of the receipt of the application. The submission of an application or the scheduling of a hearing does not stay the operation of the department's order issued under (a) of this section.

(d) After a hearing the department may affirm, modify, or set aside the order. An order affirmed, modified, or set aside after hearing is subject to judicial review as provided in AS 44.62.560. The order is not stayed pending judicial review unless the commissioner so directs. If an order is not immediately complied with, the attorney general, upon request of the commissioner, shall seek enforcement of the order.

(e) The department may adopt additional regulations prescribing the procedure to be followed in the issuance of emergency orders.

SECTION 46.03.822. STRICT LIABILITY FOR THE RELEASE OF HAZARDOUS SUBSTANCES.

(a) Notwithstanding any other provision or rule of law and subject only to the defenses set out in (b) of this section, the exception set out in (i) of this section, and the limitation on liability provided under AS 46.03.825, the following persons are strictly liable, jointly and severally, for damages, for the costs of response, containment, removal, or remedial action incurred by the state, a municipality, or a village, and for the additional costs of a function or service, including administrative expenses for the incremental costs of providing the function or service, that are incurred by the state, a municipality, or a village, and the costs of projects or activities that are delayed or lost because of the efforts of the state, the municipality, or the village, resulting from an unpermitted release of a hazardous substance or, with respect to response costs, the substantial threat of an unpermitted release of a hazardous substance:

(1) the owner of, and the person having control over, the hazardous substance at the time of the release or threatened release; this paragraph does not apply to a consumer product in consumer use;

(2) the owner and the operator of a vessel or facility, from which there is a release, or a threatened release that causes the incurrence of response costs, of a hazardous substance;

(3) any person who at the time of disposal of any hazardous substance owned or operated any facility or vessel at which the hazardous substances were disposed of, from which there is a release, or a threatened release that causes the incurrence of response costs, of a hazardous substance;

(4) any person who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by the person, other than domestic sewage, or by any other party or entity, at any facility or vessel owned or operated by another party or entity and containing hazardous substances, from which there is a release, or

a threatened release that causes the incurrence of response costs, of a hazardous substance;

(5) any person who accepts or accepted any hazardous substances, other than refined oil, for transport to disposal or treatment facilities, vessels or sites selected by the person, from which there is a release, or a threatened release that causes the incurrence of response costs, of a hazardous substance.

(b) In an action to recover damages or costs, a person otherwise liable under this section is relieved from liability under this section if the person proves

(1) that the release or threatened release of the hazardous substance to which the damages relate occurred solely as a result of

(A) an act of war;

(B) except as provided under AS 46.03.823(c) and 46.03.825(c), an intentional or negligent act or omission of a third party, other than a party or its agents in privity of contract with, or employed by, the person, and that the person

(i) exercised due care with respect to the hazardous substance; and

(ii) took reasonable precautions against the act or omission of the third party and against the consequences of the act or omission; or

(C) an act of God; and

(2) in relation to (1)(B) or (C) of this subsection, that the person, within a reasonable period of time after the act occurred,

(A) discovered the release or threatened release of the hazardous substance; and

(B) began operations to contain and clean up the hazardous substance.

(c) For purposes of (b)(1)(B) of this section, a third party or an agent of a third party is in privity of contract with the person who is otherwise liable, if the third party or its agent and the person are parties to a land contract, deed, or other instrument transferring title or possession of the real property on which the facility in question is located, unless that property was acquired by the person after the disposal or placement of the hazardous substance on, in, or at the facility, and the person establishes that the person has satisfied the requirements of (b)(1)(B) of this section and establishes that

(1) at the time the person acquired the facility the person did not know and had no reason to know that a hazardous substance that is the subject of the release or threatened release was disposed of on, in, or at the facility;

(2) the person is a governmental entity that acquired the facility by escheat, or through another involuntary transfer or acquisition, or through the exercise of eminent domain authority by purchase or condemnation;

(3) the person is a corporation organized under 43 U.S.C. 1601 - 1629e (Alaska Native Claims Settlement Act) that acquired the facility under those sections;

(4) the person acquired the facility by inheritance or bequest; or

(5) the person is a state governmental entity and the state acquired the facility under Public Law 85 - 508 (Alaska Statehood Act).

(d) To establish that a person had no reason to know that the hazardous substance was disposed of on, in, or at the facility, as provided in (c)(1) of this section, the person must have undertaken, at the time of acquisition, all reasonable inquiries into the previous ownership and uses of the property consistent with good commercial or customary practice in an effort to minimize liability. For purposes of this subsection a court shall take into account all relevant facts, including

(1) any specialized knowledge or experience the person has;

(2) the relationship of the purchase price to the value of the property if it were uncontaminated;

(3) commonly known or reasonably ascertainable information about the property;

(4) the obviousness of the presence or likely presence of contamination at the property; and

(5) the ability to detect contamination by appropriate inspection.

(e) This section does not diminish the liability of a person who previously owned or operated a facility or vessel and who would otherwise be liable. If the person obtained actual knowledge of the release or threatened release of a hazardous substance at the facility or vessel and subsequently transferred ownership to another without disclosing that knowledge, the person is liable under (a)(2) of this section, and a defense under (b)(1)(B) of this section is not available to the person.

(f) This section does not diminish the liability of a person who, by an act or omission, caused or contributed to the release or threatened release of a hazardous substance that is the subject of the action relating to the facility or vessel.

(g) An indemnification, hold harmless, or similar agreement, or conveyance of any nature is not effective to transfer liability under this section from the owner or operator of a facility or vessel or from a person who might be liable for a release or substantial threat of a release under this section. This subsection does not bar an agreement to insure, hold harmless, or indemnify a party to the agreement for liability under this section. This subsection does not bar a cause of action that an owner, operator, or other person subject to liability under this section, or a guarantor, has or would have, by reason of subrogation or otherwise against another person.

(h) The state, a municipality, a village, a person who acts as a volunteer and is engaged in a response action under the direction of the federal or state on-scene coordinator, and a vessel of opportunity engaged in a response action under the direction of the federal or state on-scene coordinator are not liable under this section for costs or damages as a result of actions taken in response to an emergency created by a release or threatened release of a hazardous substance generated by or from a facility or vessel owned by another person unless the actions taken by the state, the municipality, the village, the volunteer, or the vessel constitute gross negligence or intentional misconduct.

(i) In an action to recover damages and costs, a person otherwise jointly and severally liable under this section is relieved of joint liability and is liable severally for damages and costs attributable to that person if the person proves that

(1) the harm caused by the release or threatened release is divisible; and

(2) there is a reasonable basis for apportionment of costs and damages to that person.

(j) A person may seek contribution from any other person who is liable under (a) of this section during or after a civil action under (a) of this section. Actions under this subsection shall be brought under the Alaska Rules of Civil Procedure and are governed by state law. In resolving claims for contribution under this section, the court may allocate damages and costs among liable parties using equitable factors determined to be appropriate by the court. This subsection does not diminish the right of a person to bring an action for contribution in the absence of a civil action under (a) of this section.

(k) In this section, "damages" has the meaning given in AS 46.03.824 and includes damage to persons or to public or private property, damage to the natural resources of the state or a municipality, and damage caused by acts or omissions of a response action contractor for which the response action contractor is not liable under AS 46.03.823 or 46.03.825.

SECTION 46.03.823. HAZARDOUS SUBSTANCE RESPONSE ACTION CONTRACTORS.

(a) A person who is a response action contractor with respect to a release or threatened release of a hazardous substance other than oil whose acts or omissions are not contrary to a response plan or order by a state or federal agency having jurisdiction over the release or threatened release is not civilly liable for injuries, costs, damages, expenses, or other liability that results from the release or threatened release unless the release or threatened release is caused by an act or omission of the response action contractor that is negligent or grossly negligent or constitutes intentional misconduct. To show negligence by a response action contractor, a claimant must show that the acts or omissions of the contractor under the response action contract were not in accordance with generally accepted professional standards and practices at the time the response action services were performed.

(b) The liability limitation under (a) of this section

(1) does not apply to a response action contractor who would otherwise be liable for the release or threatened release under state or federal law even if that person had not carried out a response action with respect to the release or threatened release; and

(2) does apply only to releases for which notification to the department was provided and received in the manner prescribed under state law.

(c) The defense provided in AS 46.03.822(b)(1)(B) is not available to a potentially liable person with respect to costs or damages caused by an act or omission of a response action contractor.

(d) Except as provided in (c) of this section, this section does not affect the liability under this chapter or under any other state law of a person other than a response action contractor.

(e) This section does not affect the liability of a response action contractor that may arise from the response action contractor's failure to comply with the terms or conditions of a

(1) response action contract or a remedial action plan if one has been approved by the department; or

(2) contingency plan approved by the department where the response action contractor is the plan holder.

(f) This section does not affect the liability of an employer who is a response action contractor with respect to an employee of the employer under any provision of law, including a law related to workers' compensation.

(g) In this section, "response action" means an action taken in connection with the mitigation or cleanup of a release or threatened release of a hazardous substance other than oil, including investigation, evaluation, plan development, mapping and surveying, engineering, design and construction, removal, and equipment provision.

SECTION 46.03.824. DAMAGES.

Damages include but are not limited to injury to or loss of persons or property, real or personal, loss of income, loss of the means of producing income, or the loss of an economic benefit.

SECTION 46.03.825. OIL SPILL RESPONSE ACTION CONTRACTORS.

(a) A response action contractor who responds to a release or threatened release of oil is not civilly liable for removal costs or damages that result from an act or omission in the course of providing care, assistance, or advice

(1) consistent with a contingency plan

(A) approved under AS 46.04.030 if the response action contractor is listed in the contingency plan; or

(B) prepared under AS 46.04.200, 46.04.210, or 33 U.S.C. 1321(d) if the response action contractor is not listed in the contingency plan; or

(2) as otherwise directed by the federal or state on-scene coordinator.

(b) The limitation on liability contained in (a) of this section does not apply to

(1) an action for personal injury or death or;

(2) a response action contractor who

(A) would otherwise have been liable for the release or threatened release under AS 46.03.822;

(B) acts with gross negligence or intentional misconduct; or

(C) has agreed in writing to be listed as a primary response action contractor, who is listed as a primary response action contractor in a contingency plan approved under AS 46.04.030, and who fails to respond to a release or threatened release of oil that the primary response action contractor was required to respond to under its contract with the applicable contingency plan holder; this subparagraph does not apply to a primary response action contractor if the failure to respond to a release or threatened release of oil results from a prior and ongoing response under another contingency plan approved under AS 46.04.030 in which the primary response action contractor has the primary duty to respond and a significant portion of the response action contractor's oil spill cleanup equipment listed in the contingency plan approved under AS 46.04.030 is in use.

(c) If the liability of an oil spill response action contractor is not limited under (a) of this section or if the provisions of (a) of this section do not apply because of (b) of this section, the oil spill response action contractor is not civilly liable for injuries, costs, damages, expenses, or other liability that results from the response action contractor's act or omission with respect to a release or threatened release of oil unless the act or omission of the oil spill response action contractor is negligent, grossly negligent, or constitutes intentional misconduct. This subsection does not apply to an oil spill response action contractor who would have been liable for the initial release or threatened release of oil under AS 46.03.822 even if that contractor had not carried out a response action.

(d) The defense provided in AS 46.03.822(b)(1)(B) is not available to a potentially liable person with respect to costs or damages caused by an act or omission of a response action contractor.

(e) Except as provided in (d) of this section, this section does not affect the liability under this chapter or under any other state law of a person other than a response action contractor.

(f) Nothing in this section is intended to amend AS 46.04.030(1) or to create a cleanup or performance standard that must be met by a holder of a contingency plan or by a primary response action contractor

(g) In this section,

(1) "consistent" means in substantial compliance with a contingency plan;

(2) "primary response action contractor" has the meaning given in AS 46.04.035;

(3) "registered" means registered under AS 46.04.035;

(4) "response action" means an action taken to respond to a release or threatened release of oil, including mitigation, clean up, marine salvage, or removal of a release or threatened release of oil.

SECTION 46.03.826. DEFINITIONS.

In AS 46.03.822 - 46.03.828

(1) "act of God" means an act of nature which is unforeseeable in kind or degree;

(2) "economic benefit" means a benefit measurable in economic terms, including but not limited to the gathering, catching, or killing of food or other items utilized in a subsistence economy and their replacement cost;

(3) "facility"

(A) includes a

(i) building, structure, installation, equipment, well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, aircraft, or pipe or pipeline, including a pipe into a sewer or publicly-owned treatment works;

(ii) site or area at which a hazardous substance has been deposited, stored, disposed of, placed, or otherwise located;

(B) does not include any consumer product in consumer use;

(4) "having control over a hazardous substance" means producing, handling, storing, transporting, or refining a hazardous substance for commercial purposes immediately before entry of the hazardous substance into the atmosphere or in or upon the water, surface, or subsurface land of the state, and specifically includes bailees and carriers of a hazardous substance;

(5) "hazardous substance" means

(A) an element or compound which, when it enters into the atmosphere or in or upon the water or surface or subsurface land of the state, presents an imminent and substantial danger to the public health or welfare, including but not limited to fish, animals, vegetation, or any part of the natural habitat in which they are found;

(B) oil; or

(C) a substance defined as a hazardous substance under 42 U.S.C. 9601(14);

(6) "natural resources" means land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the state or a municipality;

(7) "oil" means a derivative of a liquid hydrocarbon and includes crude oil, lubricating oil, sludge, oil refuse or another petroleum-related product or by-product;

(8) "owner" and "operator"

(A) mean

(i) in the case of a vessel, any person owning, operating, or chartering by demise, a vessel;

(ii) in the case of facility, any person owning or operating the facility;

(iii) in the case of an abandoned facility or vessel, any person who owned, operated, or otherwise controlled activities at the facility or vessel immediately before the abandonment; and

(iv) in the case of a facility or vessel, title or control of which was conveyed due to bankruptcy, foreclosure, tax delinquency, abandonment, or similar means to a unit of the state or a political subdivision of the state, any person who owned, operated, or otherwise controlled the facility or vessel immediately beforehand;

(B) do not include a person who, without participating in the management of a vessel or facility, holds indicia of ownership primarily to protect that person's security interest in the vessel or facility;

(9) "release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance, but excluding

(A) any release that results in exposure to persons solely within a workplace, with respect to a claim that those persons may assert against the persons' employer; and

(B) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, or vessel;

(10) "response action contract" means a written contract or agreement to provide response action with respect to a release or threatened release of a hazardous substance entered into by a person with

(A) the department;

(B) another person who has entered into an agreement with the department that provides for response action subject to the department's oversight and control;

(C) a federal agency with jurisdiction over the release or threatened release; or

(D) another person potentially liable for the release or threatened release under state or federal law;

(11) "response action contractor" means

(A) a person who enters into a response action contract with respect to a release or threatened release of a hazardous substance and who is carrying out the contract, including a cooperative organization formed to maintain and supply response equipment and materials that enters into a response action contract relating to a release or threatened release;

(B) a person who is retained or hired by and is under the control of a person described in (A) of this paragraph to provide services related to the response action contract; and

(C) a person who acts as a volunteer and is engaged in a response action.

(12) "subsistence economy" means an economy which utilizes on a regular basis an item which is owned in common by the people of the state, or the United States, including but not limited to fish, game, fur bearing animals, birds, timber or any part of the natural habitat for noncommercial purposes;

(13) "transport" means the movement of a hazardous substance by any mode, including pipeline; in the case of a hazardous substance that has been accepted for transportation by a common or contract carrier, "transport" includes any stoppage in transit that is temporary, incidental to the transportation movement, and at the ordinary operating convenience of a common or contract carrier, and any stoppage of this type shall be considered as a continuity of movement and not as the storage of a hazardous substance;

(14) "vessel" means every description of watercraft or other artificial contrivance that is used, or is capable of being used, as a means of transportation on water, or that carries hazardous substances for the purpose of incineration of the hazardous substances;

(15) "water, surface or subsurface land of the state" means all water, surface or subsurface land within the territorial limits of the State of Alaska.

SECTION 46.03.828. OTHER RIGHTS OF ACTION NOT AFFECTED.

The provisions of AS 46.03.822 - 46.03.828 do not abridge or alter a right of action or remedy under another statute, in equity, or at common law. However, an award of damages to a person or the state on a cause of action for an injury under AS 46.03.822 bars recovery in an action by another person or the state on the same cause of action for the same injury.

SECTION 46.03.850. COMPLIANCE ORDER.

(a) When, in the opinion of the department, a person is violating or is about to violate a provision of this chapter, AS 46.04, or AS 46.14, or a regulation or lawful

order of the department, or a permit or certificate, or a term or condition of a permit or certificate issued by the department under this chapter, AS 46.04, or AS 46.14, the department may notify the person of its determination by personal service or certified mail. The determination and notice do not constitute an order under AS 46.03.820.

(b) The recipient of the determination shall file with the department, within the time period specified in the notice, a report stating what measures have been and are being taken, or are proposed to be taken, to correct or control the conditions outlined in the notice.

(c) After the report is filed under (b) of this section or the time period specified for it has elapsed, the department may issue a compliance order in conformity with the authority of the department and the public policy declared in AS 46.03.010. A copy of the compliance order shall be served personally or sent by certified mail to the person affected. A compliance order is effective upon receipt.

(d) Within 30 days after receipt the recipient may request a hearing to review the compliance order. Failure to request a hearing within 30 days after the receipt of a compliance order constitutes a waiver of the recipient's right of review.

(e) The department shall hold a hearing within 20 days after receipt of a request for one under (d) of this section. After the hearing the department may rescind, modify or affirm the compliance order.

(f) The attorney general shall seek enforcement of a compliance order.

ARTICLE 9. GENERAL PROVISIONS.

SECTION 46.03.860. INSPECTION WARRANT.

The department may seek search warrants for the purpose of investigating actual or suspected sources of pollution or contamination or to ascertain compliance or noncompliance with As 46.14 or this chapter or a regulation adopted under AS 46.14 or this chapter.

SECTION 46.03.865. AUTHORITY OF DEPARTMENT IN CASES OF EMERGENCY.

(a) When the department finds that an actual or imminent discharge of oil, a hazardous substance, or low level radioactive materials to the air, water, land, or subsurface land of the state poses an immediate threat to the public health or welfare or the environment of the state, it may issue an order declaring an emergency and directing a person or persons to take action the department believes necessary to meet the emergency, and protect the public health, welfare, or environment. If there is an incident command system established under AS 26.23, AS 46.04.200 - 46.04.210, or AS 46.13 that is applicable to the situation for which the department issues an order under this subsection, the department's exercise of authority under this subsection shall be guided by the relevant provisions of the incident command system.

(b) A person to whom an order is directed shall comply with it immediately, but on application to the department shall be given a hearing under the Administrative Procedure Act (AS 44.62). Thereafter the department may affirm, revoke, or modify the order.

(c) During a period of emergency declared under (a) of this section, each state agency shall take whatever action the department finds necessary to meet the emergency and to protect the public health, welfare, or environment, consistent with the

responsibilities assigned to them under an incident command system established under AS 26.23, AS 46.04.200 - 46.04.210, or AS 46.13 if one is applicable to the situation.

SECTION 46.03.370. ACTIONABLE RIGHTS.

(a) Except as specified in AS 46.03.822 - 46.03.828, the bases for proceedings or actions resulting from violations of this chapter or a regulation adopted under this chapter inure solely to and are for the benefit of the state, and are not intended to in any way create new or enlarge existing rights of persons or groups of persons in the state.

(b) Except as specified in AS 46.03.822 - 46.03.828, a determination or order of the department does not create a presumption of law or finding of fact inuring to or for the benefit of persons other than the state.

(c) This chapter does not estop the state, persons, or political subdivisions of the state in the exercise of their rights to suppress nuisances, to seek damages, or to otherwise abate or recover for the effects of pollution or other environmental degradation.

SECTION 46.03.875. REMEDIES CUMULATIVE.

All remedies provided by this chapter, AS 46.04, or AS 46.14 are cumulative, and the securing of relief, whether injunctive, civil, or criminal, under a section of this chapter, AS 46.04, or AS 46.14 does not stop the state from obtaining relief under any other section of this chapter, AS 46.04, or AS 46.14.

SECTION 46.03.880. APPLICABILITY OF THE ADMINISTRATIVE PROCEDURE ACT.

Except as otherwise specifically provided in this chapter, the Administrative Procedure Act (AS 44.62) governs the activities and the proceedings of the department.

SECTION 46.03.890. ENFORCEMENT AUTHORITY.

(a) The following persons are authorized to enforce this chapter:

(1) a state employee authorized by the commissioner;

(2) a police officer of the state.

(b) Inspection and enforcement employees of the department designated by the commissioner are peace officers in the performance of their duties under this chapter, AS 46.04, AS 46.09, and AS 46.14.

SECTION 46.03.900. DEFINITIONS.

In this chapter

(1) "air contaminant" means dust, fumes, mist, smoke, other particulate matter, vapor, gas, odorous substances or a combination of these;

(2) "air pollution" means the presence in the outdoor atmosphere of one or more air contaminants in quantities and duration that tend to be injurious to human health or welfare, animal or plant life or property or would unreasonably interfere with the enjoyment of life or property;

(3) "atomic radiation" means all ionizing radiation;

(4) "broadcast chemicals" means chemical substances which are released into the air or onto land or water for the purpose of preventing, destroying, repelling, stimulating or retarding plant or animal life, or chemical substances released for meteorological control, oil spill control or fire control;

(5) "commissioner" means the commissioner of environmental conservation;

(6) "department" means the Department of Environmental Conservation;

(7) "dispose" has the meaning given "disposal" in 42 U.S.C. 6903(3);

(8) "facility" means any offshore or onshore structure, improvement, vessel, vehicle, land, enterprise, or endeavor;

(9) "hazardous waste" means a waste or combination of wastes that because of quantity, concentration, or physical, chemical, or infectious characteristics may

(A) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or

(B) pose a substantial present or potential hazard to human health or the environment when improperly managed, treated, stored, transported, or disposed of;

(10) "hazardous waste reduction" means decreasing, avoiding, or eliminating wastes that are hazardous to human health or the environment through source reduction or recycling; the term does not include hazardous waste treatment or hazardous waste disposal;

(11) "industrial waste" means a liquid, gaseous, solid, or other waste substance or a combination of them resulting from process of industry, manufacturing trade or business, or from the development of natural resources; however, gravel, sand, mud, or earth taken from its original situs and put through sluice boxes, dredges, or other devices for the washing and recovery of the precious metal contained in them and redeposited in the same watershed from which it came is not industrial waste;

(12) "low level radioactive materials" means a radioactive waste other than

(A) used nuclear reactor fuel;

(B) waste produced during the reprocessing of used nuclear reactor fuel; and (C) elements having an atomic number greater than 92 and containing 10 or more nanocuries per gram;

(13) "manifest" means the form used for identifying the quantity, composition, origin, routing, and destination of a hazardous waste when the hazardous waste is transported;

(14) "mining waste" means solid wast[illegible]n the extraction, beneficiation and processing of ores and minerals, including coal, and including phosphate rock and overburden from the mining of uranium ore;

(15) "motor vehicle" has the meaning given in AS 28.40.100;

(16) "other wastes" means garbage, refuse, decayed wood, sawdust, shavings, bark, trimmings from logging operations, sand, lime cinders, ashes, offal, oil, tar, dyestuffs, acids, chemicals, heat from cooling or other operations, and other substances not sewage or industrial waste which may cause or tend to cause pollution of the waters of the state;

(17) "person" means any individual, public or private corporation, political subdivision, government agency, municipality, industry, co-partnership, association, firm, trust, estate, or any other entity whatsoever;

(18) "pesticide" means any chemical or biological agent intended for preventing, destroying, repelling, or mitigating plant or animal life and any substance intended for use as a plant regulator, defoliant or desiccant, including but not limited to insecticides, fungicides, rodenticides, herbicides, nematocides, and biocides;

(19) "pollution" means the contamination or altering of waters, land or subsurface land of the state in a manner which creates a nuisance or makes waters, land or subsurface land unclean, or noxious, or impure, or unfit so that they are actually or potentially harmful or detrimental or injurious to public health, safety or welfare, to domestic, commercial, industrial, or recreational use, or to livestock, wild animals, bird, fish, or other aquatic life;

(20) "resource recovery" means the recovery of materials or energy from solid wastes for industrial use, agriculture, heat production, power production, or other

processes or purposes and includes the reuse of materials or products to conserve natural resources;

(21) "restricted-use pesticides" means pesticides that are classified for restricted use under 7 U.S.C. 136a(d)(1)(C) (sec. 3(d)(1)(C), Federal Insecticide, Fungicide, and Rodenticide Act), as amended;

(22) "service" means a function performed or service provided by the state or by a municipality under a duty or power authorized by AS 29 or other provision of law authorizing a municipality to perform functions or provide services, or a comparable function performed or service provided by a village; "service" includes functions not previously performed and services not previously provided;

(23) "sewage" means the water-carried human or animal wastes from residences, buildings, industrial establishments, or other places, together with ground water infiltration and surface water as may be present; the admixture with sewage of industrial wastes or other wastes is "sewage";

(24) "sewer system" or "sewerage system" means pipelines or conduits, pumping stations, and force mains, and all other appurtenant constructions, devices, and appliances used for conducting sewage, industrial waste, or other wastes to a point of ultimate disposal;

(25) "solid waste" means all unwanted, abandoned, or discarded solid or semi-solid material whether or not subject to decomposition, originating from any source;

(26) "solid waste disposal facility" means a facility for the discharge, deposit, injection, consolidation, or placement of solid waste into or onto the land and includes transfer stations and sanitary landfills;

(27) "solid waste processing facility" means a facility for the extraction of materials from solid waste, volume reduction, conversion to energy, or other separation and preparation of solid waste for reuse or disposal and includes incinerators, shredders, balers, and transfer stations;

(28) "standard" means the measure of purity or quality for air, water, and land in relation to their reasonable and necessary use as established by the department;

(29) "storage" means the containment of hazardous waste, either on a temporary basis or for a period of years, in a manner that does not constitute disposal of the hazardous waste;

(30) "treat" has the meaning given "treatment" in 42 U.S.C. 6903(34);

(31) "treatment works" means a plant, disposal field, lagoon, pumping station, constructed drainage ditch or surface water intercepting ditch, incinerator, area devoted to sanitary land fills, or other works installed for the purpose of treating, neutralizing, stabilizing, or disposing of sewage, industrial waste, or other wastes;

(32) "village" means a place within the unorganized borough or within a borough as to a power, function, or service that is not exercised or provided by the borough on an areawide or nonareawide basis that

(A) has irrevocably waived, in a form approved by the Department of Law, any claim of sovereign immunity that might arise under this chapter; and

(B) has

(i) a council organized under 25 U.S.C. 476 (sec. 16 of the Indian Reorganization Act);

(ii) a traditional village council recognized by the United States as eligible for federal aid to Indians; or

(iii) a council recognized by the commissioner of community and regional affairs under regulations adopted by the Department of Community and Regional Affairs to determine and give official recognition of village entities under AS 44.47.150(b);

(33) "waste associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy" means

(A) waste, including drilling muds, cuttings, hydrocarbons, brine, acid, sand, and emulsions or mixtures of fluids produced from and unique to the operation or maintenance of a well, whether naturally occurring or added for the operation or productivity of the well; and (B) waste that is derived intrinsically from primary field operations; "waste associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy" does not include spent solvents and oils from equipment maintenance activities, discarded chemical products, or fuels;

(34) "waste derived intrinsically from primary field operations" means waste produced from a well, and removed

(A) at the drill site; or

(B) at crude oil production facilities by crude oil or wastewater treatment process before custody transfer of the crude oil;

(35) "waters" includes lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, straits, passages, canals, the Pacific Ocean, Gulf of Alaska, Bering Sea, and Arctic Ocean, in the territorial limits of the state, and all other bodies of surface or underground water, natural or artificial, public or private, inland or coastal, fresh or salt, which are wholly or partially in or bordering the state or under the jurisdiction of the state.

CHAPTER 4. OIL AND HAZARDOUS SUBSTANCE POLLUTION CONTROL.

ARTICLE 1. OIL POLLUTION CONTROL.

SECTION 46.04.010. REIMBURSEMENT FOR CLEANUP EXPENSES.
The department shall promptly seek reimbursement under AS 46.03.760(e), AS 46.08.070, or from an applicable federal fund, for the expenses it incurs in cleaning up or containing a discharge of oil. If the department obtains reimbursement for a portion of its expenses from a federal fund, the remainder of the expenses incurred may be recovered under AS 46.03.760(e) or AS 46.08.070. Money received by the department under this section shall be deposited in the general fund and credited to a special account called the "oil and hazardous substance release mitigation account".

SECTION 46.04.020. REMOVAL OF OIL DISCHARGES.
(a) A person causing or permitting the discharge of oil shall immediately contain and clean up the discharge. The department may waive this requirement

(1) if it determines, in consultation with the United States Coast Guard or the United States Environmental Protection Agency, as appropriate, that containment or cleanup is technically not feasible; or

(2) if the cleanup or containment activities would result in greater environmental damage than the discharge itself.

(b) The containment and cleanup of discharged oil shall be carried out in a manner approved by the department. Wastes generated as a result of containment or cleanup activities shall be disposed of in a manner approved by the department. The requirement of this subsection for approval of containment and cleanup activities does not apply to the United States Coast Guard or United States Environmental Protection Agency acting under the authority of Sec. 311(c) or (d) of the Clean Water Act.

(c) If the department determines that containment or cleanup activities are not adequate, it may direct the person engaged in the activities to cease and may undertake the activities itself through contract or its own resources, or both. The department may not direct the cessation of containment or cleanup activities undertaken by the United States Coast Guard or United States Environmental Protection Agency under Sec. 311 of the Clean Water Act. However, the department may undertake, direct, or authorize supplemental cleanup or containment efforts.

(d) The department shall provide for the immediate containment or cleanup of an oil discharge of unexplained origin unless

(1) the department determines, in consultation with the United States Coast Guard or the United States Environmental Protection Agency that containment or cleanup of the oil discharge is technically not feasible; or

(2) the containment or cleanup activities would result in greater environmental damage than the discharge itself.

(e) The department shall enter into negotiations for memoranda of understanding or cooperative agreements with the United States Coast Guard, the United States Environmental Protection Agency, and other persons in order to

(1) facilitate coordinated and effective oil discharge prevention and response in the state, including agreements relating to development and enforcement of vessel traffic

control and monitoring systems for tank vessels and oil barges operating in or near the waters of the state;

(2) provide for cooperative review of oil discharge prevention and contingency plans submitted to the department under AS 46.04.030;

(3) provide for cooperative inspections of oil terminal facilities by the department and the United States Coast Guard or United States Environmental Protection Agency; and

(4) provide for cooperative oil discharge notification procedures.

(f) In fulfilling its responsibilities under (e) of this section, the department shall consult with the governing bodies of municipalities and villages.

(g) In addition to existing obligations under state and federal law, and the provisions of the state and federal Trans Alaska Pipeline System right-of-way agreements, the common operating agent for the holder and lessees of the right-of-way agreement for the trans Alaska pipeline shall

(1) immediately contain and clean up a discharge or threatened discharge of oil transported by or due to the operation of the Trans Alaska Pipeline System or due to related activities, including activities related to a vessel en route to, berthed at, or transiting from the Trans Alaska Pipeline System marine terminal or traveling on waters within Prince William Sound; and

(2) provide services required in a response action under contract terms as provided under AS 46.04.030(r). The obligations imposed under this subsection do not affect the response action duties of another person or the liability of another person for a discharge or threatened discharge. Upon the request of the person required to respond to a discharge or threatened discharge under this subsection, the obligation imposed by this subsection may be transferred to another person required by law to respond to the discharge or threatened discharge if the transfer is approved by the federal and state on-scene coordinators. In this subsection, "Prince William Sound" has the meaning given in AS 46.04.030(r).

(h) A charge, contract term, or financial responsibility requirement imposed by the holders and lessees of the right-of-way agreement for the Trans Alaska Pipeline System, the holders and lessees' common operating agent, or the agent or representative of either the holders and lessees, or their common operating agent, on or for a vessel traveling from a marine terminal and related to containing and cleaning up a discharge or threatened discharge of oil or the obligations imposed under (g) of this section

(1) must be fair, reasonable, and nondiscriminatory; and

(2) with respect to a financial responsibility requirement in excess of $10,000,000, must

(A) not exceed the potential cost of containment and cleanup as provided in the applicable contingency plan under AS 46.04.030 that the agent may reasonably be expected to incur from a discharge or threatened discharge of oil from that vessel before the transfer of cleanup and containment management and control to the responsible party; in establishing the financial responsibility requirement, the common operating agent shall assume that transfer of management and control will occur at the earliest practicable time following the discharge or threat of discharge; and

(B) vary among each vessel in proportion to the volume of oil carried by each vessel per voyage from a marine terminal; for purposes of this subparagraph, the volume of oil carried by the vessel must be reduced by the percentage of spill reduction credits granted that vessel under regulations adopted by the department.

(i) The superior court and, with respect to intrastate voyages, the Alaska Public Utilities Commission, under AS 42.05.361 - 42.05.431, have concurrent jurisdiction to

review and enjoin a charge, contract term, or financial responsibility requirement described under (h) of this section at the request of a vessel owner, operator, or charterer. Except as provided in this subsection, nothing in this section affects the jurisdiction of the Alaska Public Utilities Commission.

SECTION 46.04.025. CONFIDENTIAL INFORMATION.

The department may maintain the confidentiality of a manufacturer's proprietary technical information relating to chemical and biological agents used to control or mitigate the effects of an oil discharge. The department may refuse to release the information unless the manufacturer authorizes its release or unless a court orders its release. The department may provide the information to the Department of Fish and Game and other state and federal agencies if the department or other agency requesting the information agrees to maintain its confidentiality.

SECTION 46.04.030. OIL DISCHARGE PREVENTION AND CONTINGENCY PLANS.

(a) A person may not cause or permit the operation of an oil terminal facility in the state unless an oil discharge prevention and contingency plan for the facility has been approved by the department and the person is in compliance with the plan.

(b) A person may not cause or permit the operation of a pipeline or an exploration or production facility in the state unless an oil discharge prevention and contingency plan for the pipeline or facility has been approved by the department and the person is in compliance with the plan.

(c) Except as provided in (n) of this section, a person may not operate a tank vessel or an oil barge within the waters of the state, or cause or permit the transfer of oil to or from a tank vessel or an oil barge, unless an oil discharge prevention and contingency plan for the tank vessel or oil barge has been approved by the department and the person is in compliance with the plan.

(d) Upon approval of a contingency plan, the department shall issue to the plan holder a certificate stating that the contingency plan has been approved by the department. The certificate must include the name of the facility, pipeline, tank vessel, or oil barge for which it is issued, the effective date of the contingency plan, and the date by which the contingency plan must be submitted for renewal. A contingency plan must be submitted for renewal every three years.

(e) *[Editor's note: oil spill primary response action contractor provisions of this subsection become effective January 1, 1994 -- other provisions are presently in effect. Consult the Department for clarification.]* The department may attach reasonable terms and conditions to its approval or modification of a contingency plan that the department determines are necessary to ensure that the applicant for a contingency plan has access to sufficient resources to protect environmentally sensitive areas and to contain, clean up, and mitigate potential oil discharges from the facility or vessel as provided in (k) of this section, and to ensure that the applicant complies with the contingency plan. If a contingency plan submitted to the department for approval relies on the services of an oil spill primary response action contractor, the department may not approve the contingency plan unless the primary response action contractor is registered and approved under AS 46.04.035. The contingency plan must provide for the use by the applicant of the best technology that was available at the time the contingency plan was submitted or renewed. The department may require an applicant or holder of an approved contingency plan to take steps necessary to demonstrate its ability to carry out the contingency plan, including

(1) periodic training;

(2) response team exercises; and

(3) verifying access to inventories of equipment, supplies, and personnel identified as available in the approved contingency plan.

(f) Upon request of a plan holder or on the department's own initiative, the department, after notice and opportunity for hearing, may modify its approval of a contingency plan if the department determines that a change has occurred in the operation of a facility or vessel necessitating an amended or supplemented plan, or the operator's discharge experience demonstrates a necessity for modification. The department, after notice and opportunity for hearing, may revoke its approval of a contingency plan if the department determines that

(1) approval was obtained by fraud or misrepresentation;

(2) the operator does not have access to the quality or quantity of resources identified in the plan;

(3) a term or condition of approval or modification has been violated; or

(4) the person is not in compliance with the contingency plan and the deficiency materially affects the plan holder's response capability.

(g) Failure of a holder of an approved or modified contingency plan to comply with the plan, or to have access to the quality or quantity of resources identified in the plan or to respond with those resources within the shortest possible time in the event of a spill is a violation of this chapter for purposes of AS 46.03.760(a), 46.03.765, 46.03.790, and any other applicable law. If the holder of an approved or modified contingency plan fails to respond to and conduct cleanup operations of an unpermitted discharge of crude oil with the quality and quantity of resources identified in the plan and in a manner required under the plan, the holder is strictly liable, jointly and severally, for the civil penalty assessed under AS 46.03.758, 46.03.759, or 46.03.760 against any other person for that discharge.

(h) The department is the only state agency that has the power to approve, modify, or revoke a contingency plan for the purposes of this section. The department shall exercise its power under this section in a timely manner. Except as provided in (i) of this section, it is not a defense to an action brought for a violation of (a) - (c) of this section that the person charged believed that a current contingency plan had been approved by the department.

(i) It is a defense to an action brought for a violation of (a) - (c) of this section that the person charged relied on a certificate of approval issued by the department under (d) of this section unless the person knew or had reason to know at the time of the alleged violation that approval of the plan had been revoked or that the holder of the plan was not capable of carrying out the plan.

(j) Before the department approves or modifies a contingency plan under this section, the department shall provide a copy of the contingency plan to the Department of Fish and Game and to the Department of Natural Resources for their review. The department shall by regulation establish the procedures and time limits applicable to agency review of contingency plans.

(k) Except as provided in (m) and (o) of this section, the holder of an approved contingency plan required under this section shall maintain, or have available under contract, in its region of operation or in another region of operation approved by the department, singly or in conjunction with other operators, sufficient oil discharge containment, storage, transfer, and cleanup equipment, personnel, and resources to meet the following response planning standards:

(1) for a discharge from an oil terminal facility, the plan holder shall plan to be able to contain or control, and clean up a discharge equal to the capacity of the largest oil storage tank at the facility within 72 hours, except that if the department determines that the facility is located in an area of high risk because of natural or man-made conditions outside of the facility, it may increase the volume requirement under this paragraph so that the contingency plan must be designed for a response that is greater in amount than the capacity of the largest oil storage tank at the facility;

(2) for a discharge from an exploration or production facility or a pipeline, the plan holder shall plan to be able to contain or control, and clean up the realistic maximum oil discharge within 72 hours;

(3) for a discharge of crude oil from a tank vessel or oil barge, the plan holder shall plan to be able to contain or control, and clean up a realistic maximum oil discharge as provided in (A), (B), and (C) of this paragraph:

(A) for tank vessels and oil barges having a cargo volume of less than 500,000 barrels, the plan holder shall maintain at a minimum in the region of operation, equipment, personnel, and other resources sufficient to contain or control, and clean up a 50,000 barrel discharge within 72 hours;

(B) for tank vessels and oil barges having a cargo volume of 500,000 barrels or more, the plan holder shall maintain at a minimum in its region of operation, equipment, personnel, and other resources sufficient to contain or control, and clean up a 300,000 barrel discharge witl in 72 hours;

(C) in addition to the minimum equipment, personnel, and other resources required to be maintained within the region of operation by (A) or (B) of this paragraph, a plan holder shall maintain, either within or outside of the plan holder's region of operation, additional equipment, personnel, and other resources sufficient to contain or control, and clean up a realistic maximum discharge within the shortest possible time; the plan holder must demonstrate that the equipment, personnel, and other resources maintained outside the plan holder's region of operation are accessible to the plan holder and will be deployed and operating at the discharge site within 72 hours;

(4) for a discharge from a tank vessel or oil barge carrying nonerude oil in bulk as cargo, the plan holder shall plan to be able to contain or control 15 percent of the maximum capacity of the vessel or barge or the realistic maximum oil discharge, whichever is greater, within 48 hours and clean up the discharge within the shortest possible time consistent with minimizing damage to the environment;

(5) for a discharge subject to the provisions of (1) - (3) of this subsection that enters a receiving environment other than open water, the time requirement for clean up of the portion of the discharge that enters the receiving environment may, in the department's discretion, be within the shortest possible time consistent with minimizing damage to the environment.

(l) The provisions of (k) of this section do not constitute cleanup standards that must be met by the holder of a contingency plan. Notwithstanding (k) of this section, failure to remove a discharge within thc time periods set out in (k) of this section does not constitute failure to comply with a contingency plan for purposes of (g) of this section or for the purpose of imposing administrative, civil, or criminal penalties under any other law.

(m) When considering whether to approve or modify a contingency plan, the department may consider evidence that oil discharge prevention measures such as double hulls or double bottoms on vessels or barges, secondary containment systems, hydrostatic testing, enhanced vessel traffic systems, or enhanced crew or staffing levels have been implemented, and, in its discretion, may make exceptions to the requirements

of (k) of this section to reflect the reduced risk of oil discharges from the facility, pipeline, vessel, or barge for which the plan is submitted or being modified.

(n) A tank vessel or oil barge that is conducting, or is available only for conducting, oil discharge response operations is exempt from the requirements of (c) of this section if the tank vessel or oil barge has received prior approval of the department. The department may approve exemptions under this subsection upon application and presentation of information required by the department.

(o) A holder of an approved contingency plan does not violate the terms of the contingency plan by furnishing to another plan holder, with the approval of the department, equipment, materials, or personnel to assist the other plan holder in a response to an oil discharge. The plan holder shall replace or return the transferred equipment, materials, and personnel as soon as feasible. The department shall by regulation determine the maximum amount of equipment, materials, or personnel and the maximum amount of time for which it will approve a transfer.

(p) *[Repealed, Sec. 1 ch 16 SLA 1993.]*

(q) In this section,

(1) "contingency plan" means an oil discharge prevention and contingency plan required under this section;

(2) "in compliance with the plan" means, with respect to a contingency plan, to

(A) establish and carry out procedures identified in the plan as being the responsibility of the holder of the plan;

(B) have access to and have on hand the quantity and quality of equipment, personnel, and other resources identified as being accessible or on hand in the plan;

(C) fulfill the assurances espoused in the plan in the manner described in the plan;

(D) comply with terms and conditions attached to the plan by the department under the authority of (e) of this section; and

(E) successfully demonstrate the ability to carry out the plan when required by the department under (e) of this section;

(3) "realistic maximum oil discharge" means the maximum and most damaging oil discharge that the department estimates could occur during the lifetime of the tank vessel, oil barge, facility, or pipeline based on the size, location, and capacity of the tank vessel, oil barge, facility, or pipeline; on the department's knowledge and experience with the tank vessel, oil barge, facility, or pipeline or with similar tank vessels, oil barges, facilities, or pipelines; and on the department's analysis of possible mishaps to the tank vessel or oil barge or at the facility or pipeline or to similar tank vessels or oil barges or at similar facilities or pipelines;

(4) "region of operation," with respect to the holder of a contingency plan, means the area where the operations of the holder that require a contingency plan are located, the boundaries of which correspond to the regional boundaries established by the commissioner for regional master planning purposes under AS 46.04.210.

(r) Except as provided in (n) of this section and in order to receive approval from the department for an oil discharge prevention and contingency plan submitted under this section, the owner, operator, or charterer of a vessel that intends to carry oil that has been transported by the Trans Alaska Pipeline System shall obtain by contract the services required in a response action from the common operating agent for the holders and lessees of the right-of-way agreement for the Trans Alaska Pipeline System. The contract must contain the following provisions: (1) the common operating agent, as a primary response action contractor shall, unless services required in a response action are transferred as provided in (3) of this subsection, provide services required in a response action for a discharge or a threatened discharge of oil to the owner, operator,

or charterer of the vessel while the vessel is berthed at, en route to, or transiting from the Trans Alaska Pipeline System marine terminal or traveling on waters within Prince William Sound; (2) that its coverage for any particular vessel may not be terminated by the common operating agent while that vessel is within Prince William Sound; this provision may not be interpreted to limit the department's authority to revoke approval under this section for an oil discharge prevention and contingency plan submitted by the owner, operator, or charterer of a vessel; and (3) the owner, operator, or charterer of the vessel shall accept a transfer of the services required in a response action to a discharge or threatened discharge, after receiving not less than 72 hours of advance notice and after the transfer has been approved by the federal and state on-scene coordinators. In addition to the requirements of this subsection, the department may require individual vessels to submit additional contingency plans to cover specific vessel response, prevention equipment, and procedures. Nothing in this subsection is intended to preclude the federal or state government from assuming management and control of an oil spill response to a discharge or threatened discharge from a vessel under appropriate circumstances. In this subsection, "Prince William Sound" means all marine waters within the boundary line established at Cape Puget, southeasterly to Cape Cleare, along Montigue Island to Zaikof Point, easterly to Cape Hinchinbrook, along Hinchinbrook Island to Point Bintinck, and easterly to Point Whitshed.

SECTION 46.04.035. REGISTRATION OF OIL SPILL RESPONSE ACTION CONTRACTORS.

(a) A person may apply to the department for registration as an oil spill primary response action contractor. The department shall adopt regulations governing the registration and approval of oil spill primary response action contractors. Regulations adopted by the department under this section must include

(1) minimum training standards for personnel;

(2) verification requirements that ensure the existence of resources, including personnel, equipment, services, and an adequate deployment plan necessary to a response action or as required by a contingency plan in which the contractor has agreed in writing to be listed and is listed;

(3) minimum professional response action standards and practices; and

(4) minimum planning standards for oil spill primary response action contractors listed in an oil spill contingency plan approved under AS 46.04.030.

(b) Notwithstanding (a) of this section, the department may substitute a primary response action contractor approval program, and a subsequent process to approve primary response action contractors who agree to be listed in a contingency plan approved under AS 46.04.030, for regulations required under (a)(1) - (3) of this section if the approval program and subsequent process are developed by the United States Coast Guard.

(c) The department shall establish fees applicable to registration under this section in an amount necessary to cover the costs of the registration program. The fees shall be collected by the department.

(d) The Administrative Procedure Act (AS 44.62) applies to regulations and registrations under this section.

(e) The department shall develop and maintain a list of oil spill primary response action contractors registered under this section. The department shall provide the list on request to interested persons.

(f) A primary response action contractor registered under this section shall annually provide to the department a list of all contingency plans approved under AS 46.04.030

in which the primary response action contractor has agreed in writing to be listed as a responder.

(g) Nothing in this section is intended to amend AS 46.04.030(l) or to create a cleanup or performance standard that must be met by a holder of a contingency plan or a response action contractor.

(h) In this section,

(1) "oil" has the meaning given in AS 46.03.826;

(2) "primary response action contractor" means a person who enters into a response action contract with respect to a release or threatened release of oil and who is carrying out the contract, including a cooperative organization formed to maintain and supply response equipment and materials that enters into a response action contract relating to a release or threatened release of oil.

SECTION 46.04.040. PROOF OF FINANCIAL RESPONSIBILITY.

(a) A person may not cause or permit the operation of an oil terminal facility in the state unless the person has furnished to the department, and the department has approved, proof of financial ability to respond in damages. Proof of financial responsibility required for a crude oil terminal is $50,000,000 per incident. Proof of financial responsibility required for a nonerude oil terminal is $25, per incident, for each barrel of total nonerude oil storage capacity at the terminal or $1,000,000, whichever is greater, subject to a maximum of $50,000,000. For purposes of this subsection, an oil terminal facility that stores both crude oil and nonerude oil is subject to the financial responsibility requirements applicable to the type of facility that corresponds to the type of oil storage that predominates at the facility. However, if the facility stores more nonerude oil than crude oil, the $25 per incident, per barrel requirement of this subsection applies to each barrel of oil storage capacity at the facility.

(b) A person may not cause or permit the operation of a pipeline or an exploration or production facility in the state unless the person has furnished to the department, and the department has approved, proof of financial ability to respond in damages. Proof of financial responsibility required for a pipeline or an offshore exploration or production facility is $50,000,000 per incident. Proof of financial responsibility required for an onshore production facility is $20,000,000 per incident. Proof of financial responsibility required for an onshore exploration facility is $5,000,000 per incident.

(c) Except as provided in (m) of this section, a person may not operate a tank vessel or an oil barge within the waters of the state, or cause or permit the transfer of oil to or from a tank vessel or an oil barge, unless the person operating the tank vessel or oil barge has furnished to the department, and the department has approved, proof of financial ability to respond in damages. Proof of financial responsibility required under this subsection is

(1) $300, per incident, for each barrel of storage capacity or $100,000,000, whichever is greater, for a tank vessel or barge carrying crude oil;

(2) $100, per incident, for each barrel of storage capacity or $1,000,000, whichever is greater, subject to a maximum of $35,000,000, for a tank vessel or barge carrying nonerude oil.

(d) Except as provided in (k) of this section, it is not a defense to an action brought for violation of (a) - (c) of this section that the person charged believed in good faith that proof of financial ability to respond in damages had been furnished to, and approved by, the department.

(e) Financial responsibility may be demonstrated by (1) self-insurance, (2) insurance, (3) surety, (4) guarantee, (5) letter of credit approved by the department, or (6) other

proof of financial responsibility approved by the department, including proof of financial responsibility provided by a group of insureds who have agreed to cover pollution risks of members of the group under terms the department may prescribe. An action brought under AS 46.03.758, 46.03.759, 46.03.760(a) or (e), 46.03.822, or AS 46.04.030(g) may be brought in a state court directly against the insurer, the group, or another person providing evidence of financial responsibility; however, the liability under this section of a third-party insurer is limited to the type of risk assumed and the amount of coverage specified in the proof of financial responsibility furnished to and approved by the department. The applicant, and an insurer, surety, guarantor, person furnishing an approved letter of credit, or other group or person providing proof of financial responsibility approved by the department shall appoint an agent for service of process in the state. For purposes of this subsection, an insurer, other than a group of insureds whose agreement has been approved by the department, must either be authorized by the Department of Commerce and Economic Development to sell insurance in the state or be an unauthorized insurer listed by the Department of Commerce and Economic Development as not disapproved for use in the state. In this subsection, "third-party insurer" means a third-party insurer, surety, guarantor, person furnishing a letter of credit, or other group or person providing proof of financial responsibility on behalf of an applicant under this section; "third-party insurer" does not include the applicant.

(f) Acceptance of proof of financial responsibility expires

(1) one year from its issuance for self-insurance;

(2) on the effective date of a change in the surety bond, guarantee, insurance agreement, letter of credit, or other proof of financial responsibility; or

(3) on the expiration or cancellation of the surety bond, guarantee, insurance agreement, letter of credit, or other proof of financial responsibility.

(g) The person whose proof of financial responsibility is accepted by the department under this section shall notify the department at least 30 days before the effective date of a change, expiration or cancellation in the surety bond, guarantee, insurance agreement, letter of credit, or other proof of financial responsibility. Application for renewal of acceptance of proof of financial responsibility under this section must be filed at least 30 days before the date of expiration.

(h) The department, after notice and hearing, may revoke acceptance of proof of financial responsibility if it determines that

(1) acceptance was procured by fraud or misrepresentation; or

(2) a change of circumstance has occurred other than a change specified in (f)(1) - (3) of this section, which would have warranted denial of the application.

(i) Financial responsibility under this section extends to a loss compensable under AS 46.03.760(e) or 46.03.822 and an assessment under AS 46.03.758, 46.03.759, 46.03.760(a), or AS 46.04.030(g).

(j) Upon acceptance and approval of proof of financial responsibility under this section, the department shall issue to the applicant a certificate stating that the state's financial responsibility requirements have been satisfied. The certificate must include the name of the facility, pipeline, tank vessel, or oil barge for which it is issued and the expiration date of the certificate.

(k) It is a defense to an action brought for violation of (a) - (c) of this section that the person charged relied on a certificate of approval issued under (j) of this section unless the person knew or had reason to know at the time of the alleged violation that the approval had been revoked or was expired.

(l) Notwithstanding the requirements of (e) of this section, the applicant may provide evidence of financial responsibility provided by an insurer or other person who does not

agree to be subject to direct action in state courts or to appoint an agent for service of process if

(1) the department is satisfied that the insurance or other form of financial responsibility covers judgments under the statutes listed in (e) of this section;

(2) the applicant provides proof of $50,000,000, or the amount required by (a) - (c) of this section, whichever is less, in insurance or other form of financial responsibility that meets the requirements of (e) of this section; and

(3) the applicant provides a sworn statement or affidavit that insurance or other form of financial responsibility that meets the requirements of (e) of this section is not available in greater amounts.

(m) A tank vessel or oil barge that is conducting, or is available only for conducting, oil discharge response operations is exempt from the requirements of (c) of this section if the tank vessel or oil barge has received prior approval of the department. The department may approve an exemption under this subsection upon application and presentation of information required by the department.

[Editor's note: For provisions effective from June 1, 1992, to June 1, 1994, relating to proof of financial responsibility by certain noncrude oil operations, see Sec. 2, ch. 102, SLA 1992 in the Temporary and Special Acts.]

[Chapter 102, SLA 1992. Source: CSSB405 (O&G). APPROVED DATE: June 20, 1992.

** Sec. 2. TEMPORARY LAW APPLICABLE TO NONCRUDE OIL OPERATIONS. Notwithstanding AS 46.04.040, the Department of Environmental Conservation may, with respect to noncrude oil operations, approve proof of financial responsibility by a person, other than the applicant, who does not agree to be subject to a direct action in the state or to appoint an agent for service of process if the applicant*

(1) provides proof of financial responsibility in the form and amounts otherwise required under AS 46.04.040;

(2) provides a sworn statement that

(A) is acceptable to the department;

(B) attests that the applicant has diligently attempted to obtain a form of proof of financial responsibility that would provide for a direct action and appointment of an agent for service of process;

(C) describes the steps the applicant has taken to obtain a form of proof of financial responsibility that would provide for a direct action and appointment of an agent for service of process;

(D) states that a form of proof of financial responsibility that would provide for a direct action and appointment of an agent for service of process is unavailable to the applicant;

(3) continues diligent efforts to obtain a form of proof of financial responsibility that would provide for a direct action and appointment of an agent for service of process and provides a sworn statement every six months that is acceptable to the department, containing the information required in (2) of this section.

** Sec. 5. If this Act takes effect after June 1, 1992, sec. 2 of this Act is retroactive to June 1, 1992.*

** Sec. 6. Section 2 of this Act is repealed June 1, 1994.*

** Sec. 7. This Act takes effect immediately under AS 01.10.070(c).]*

SECTION 46.04.045. ADJUSTMENT OF DOLLAR AMOUNTS.

(a) The dollar amounts in AS 46.04.040 change, as provided in this section, according to and to the extent of changes in the Consumer Price Index for all urban consumers for the Anchorage metropolitan area compiled by the Bureau of Labor Statistics, United States Department of Labor (the index). The index for January 1990 is the reference base index.

(b) The dollar amounts change on October 1 of each third year according to the percentage change between the index for January of that year and the most recent index used to determine whether to change the dollar amounts. After calculation of the new amounts, the resulting amounts shall be rounded to the nearest cent.

(c) If the index is revised, the percentage of change is calculated on the basis of the revised index. If a revision of the index changes the reference base index, a revised reference base index is determined by multiplying the reference base index applicable by the rebasing factor furnished by the United States Bureau of Labor Statistics. If the index is superseded, the index referred to in this section is the one represented by the Bureau of Labor Statistics as reflecting most accurately changes in the purchasing power of the dollar for Alaskan consumers.

(d) The department shall adopt a regulation announcing

(1) on or before June 30 of each third year, the changes in dollar amounts required by (b) of this section; and

(2) promptly after the changes occur, changes in the index required by (c) of this section, including, if applicable, the numerical equivalent of the reference base index under a revised reference base index and the designation or title of any index superseding the index.

(e) The department shall also provide notification of a change in dollar amounts required under (b) of this section to the clerks of court in each judicial district of the state.

SECTION 46.04.050. EXEMPTIONS.

(a) The provisions of AS 46.04.030, 46.04.040, and 46.04.060 do not apply to an oil terminal facility that has an effective storage capacity of less than 5,000 barrels of crude oil or less than 10,000 barrels of noncrude oil.

(b) The provisions of AS 46.04.030 and 46.04.040 do not apply to a natural gas production facility and a natural gas terminal facility; for purposes of this subsection the terms "natural gas production facility" and "natural gas terminal facility"

(1) mean a platform, facility, or structure that is used solely for the production, compression, storage, or transport of natural gas;

(2) do not include a platform, facility, or structure that produces, stores, or transports natural gas in combination with oil.

SECTION 46.04.060. INSPECTIONS.

(a) In addition to other rights of access or inspection conferred upon the department by law or otherwise, the department may at reasonable times and in a safe manner enter and inspect oil terminal facilities, pipelines, exploration and production facilities, tank vessels, and oil barges in order to

(1) ensure compliance with the provisions of this chapter; or

(2) participate in an examination of the structural integrity and the operating and mechanical systems of those vessels, barges, pipelines, and facilities by federal and state agencies with jurisdiction.

(b) When the department determines that no federal or state agencies with jurisdiction are performing timely and adequate inspections of an oil terminal facility, pipeline, exploration or production facility, tank vessel, or oil barge, it may perform its own inspection of the structural integrity and operating and mechanical systems of a facility, pipeline, tank vessel, or oil barge by using personnel with qualifications in the areas being inspected.

SECTION 46.04.070. SCOPE OF REGULATIONS.
The department shall adopt regulations that are necessary to carry out the purposes of this chapter and that do not conflict with and are not preempted by federal law or regulations.

SECTION 46.04.080. CATASTROPHIC OIL DISCHARGES.
(a) The commissioner of environmental conservation or the commissioner of military and veterans' affairs may request the governor to determine that an actual or imminent occurrence of a catastrophic oil discharge constitutes a disaster emergency under AS 26.23. The commissioner of environmental conservation and the commissioner of military and veterans' affairs shall respond appropriately in the relief of the actual or imminent discharge under the relevant provisions of the applicable incident command system.

(b) The department shall promptly, under AS 46.04.010, seek reimbursement of oil discharge cleanup or containment expenses incurred as a result of an actual or imminent catastrophic oil discharge under AS 26.23.050.

SECTION 46.04.090. OIL DISCHARGE CLEANUP PERSONNEL, EQUIPMENT, EXPENSES.
The department, when feasible, shall enter into contracts with persons or private organizations to provide the personnel, equipment, or other services or supplies that may be required to carry out this chapter. Contracts under this section are governed by AS 36.30 (State Procurement Code). When private contracting is not feasible, the department may establish and maintain at ports, harbors, or other locations in the state, the cleanup personnel, equipment, and supplies that, in its judgment, are necessary to carry out this chapter. When exercising its authority under this subsection, the department shall coordinate with the Department of Military and Veterans' Affairs to avoid duplication of efforts.

SECTION 46.04.100. COMPACTS AUTHORIZED.
The governor may execute supplementary agreements, reciprocal arrangements, or compacts with any other state or country, subject to the approval, if required by the United States Constitution, of the Congress of the United States, for the purpose of implementing this chapter.

SECTION 46.04.110. MUNICIPAL POWERS LIMITED.
If a conflict occurs between a provision of this chapter, or a regulation, order, decision, or other determination of the department under this chapter, and a charter, ordinance, permit, regulation, franchise, decision, or other determination of a municipality, the provisions of this chapter or the regulation, order, decision, or other determination of the department prevail. However, nothing in this chapter precludes a municipality, by ordinance or regulation, from exercising its police powers in the area regulated by this chapter.

ARTICLE 2. OIL AND HAZARDOUS SUBSTANCE DISCHARGE AND PREVENTION CONTINGENCY PLANS.

SECTION 46.04.200. STATE MASTER PLAN.

(a) The department shall prepare and annually review and revise a statewide master oil and hazardous substance discharge prevention and contingency plan.

(b) The state master plan prepared under this section must

(1) take into consideration the elements of an oil discharge prevention and contingency plan approved or submitted for approval under AS 46.04.030;

(2) include incident command systems that clarify and specify the respective responsibilities of each of the following in the assessment, containment, and cleanup of various types and sizes of discharges of oil or a hazardous substance into the environment of the state:

(A) the Department of Environmental Conservation, the division of emergency services in the Department of Military and Veterans' Affairs, and other agencies of the state; responsibilities assigned to each agency must be consistent with its statutory authority;

(B) municipalities of the state;

(C) appropriate federal agencies;

(D) operators of facilities;

(E) private parties whose land and other property may be affected by the oil or hazardous substance discharge; and

(F) other parties identified by the commission as having an interest in or the resources to assist in the containment and cleanup of an oil or hazardous substance discharge;

(3) include incident command systems that specify the respective responsibilities of parties identified in (2) of this subsection in an emergency response under AS 26.23, AS 46.03.865, or AS 46.04.080; responsibilities assigned to each state agency must be consistent with its statutory authority;

(4) identify actions necessary to reduce the likelihood of catastrophic oil discharges and significant discharges of hazardous substances; and

(5) designate the locations where oil and hazardous substance emergency response depots should be established in the state and where emergency response corps personnel should be available.

(c) In preparing and annually reviewing the state master plan, the commissioner shall

(1) consult with municipal and community officials, and with representatives of affected regional organizations;

(2) submit the draft plan to the public for review and comment;

(3) submit to the legislature for review, not later than the 10th day following the convening of each regular session, the plan and any annual revision of the plan;

(4) require or schedule unannounced oil spill drills to test the sufficiency of an oil discharge prevention and contingency plan approved under AS 46.04.030 or of the cleanup plans of a party identified under (b)(2) of this section; and

(5) submit the plan and any annual revision to the Alaska State Emergency Response Commission for its review and approval under AS 46.13.045.

SECTION 46.04.210. REGIONAL MASTER PLAN.

(a) For any region of the state, the boundaries of which are determined by the commissioner by regulation, in which the department is required to review and approve

an oil discharge prevention and contingency plan submitted by a person under AS 46.04.030, the department shall prepare and annually review and revise a regional master oil and hazardous substance discharge prevention and contingency plan.

(b) The provisions of AS 46.04.200(b) and (c) apply to preparation and review of a regional master plan under this section.

ARTICLE 3. GENERAL PROVISIONS.

SECTION 46.04.900. DEFINITIONS.

In this chapter, unless the context requires otherwise,

(1) "barrel" is a measure of capacity equal to the space occupied by 42 U.S. gallons at 60 degrees Fahrenheit;

(2) "catastrophic oil discharge" means an oil discharge in excess of 100,000 barrels, or any other discharge which the governor determines presents a grave and substantial threat to the economy or environment of the state;

(3) "Clean Water Act" means the Federal Water Pollution Control Act of 1972 (P.L. 92-500), as amended by the Clean Water Act of 1977 (P.L. 95-217), as amended (33 U.S.C. 1251 - 1376);

(4) "commissioner" means the commissioner of environmental conservation;

(5) "containment and cleanup" includes all direct and indirect efforts associated with the prevention, abatement, containment, or removal of a pollutant, and the restoration of the environment to its former state; when applied to expenses, the term includes the additional costs of providing a reasonable and appropriate function or service incurred in response to the discharge of a pollutant, including administrative expenses for the incremental costs of providing the function or service;

(6) "department" means the Department of Environmental Conservation;

(7) "discharge" means spilling, leaking, pumping, pouring, emitting, emptying, or dumping;

(8) "exploration facility" means a platform, vessel, or other facility used to explore for hydrocarbons in or on the waters of the state or in or on land in the state; the term does not include platforms or vessels used for stratigraphic drilling or other operations that are not authorized or intended to drill to a producing formation;

(9) "natural gas"

(A) means a hydrocarbon that at 70 degrees Fahrenheit and atmospheric pressure is in a gaseous state;

(B) includes liquefied natural gas or other form of natural gas that has been converted to a liquid state by pressure or cooling that at 70 degrees Fahrenheit and atmospheric pressure reverts to a gaseous state.

(10) "oil" means oil of any kind and in any form, whether crude, refined, or a petroleum by-product, including but not limited to petroleum, fuel oil, gasoline, lubricating oils, oily sludge, oil refuse, oil mixed with other wastes, crude oils, liquefied natural gas, propane, butane, or other liquid hydrocarbons regardless of specific gravity;

(11) "oil barge" means a vessel which is not self-propelled and which is constructed or converted to carry oil as cargo in bulk;

(12) "oil terminal facility" means an onshore or offshore facility of any kind, and related appurtenances, including but not limited to a deepwater port, bulk storage facility or marina, located in, on, or under the surface of the land or waters of the state, including tide and submerged land, which is used for the purpose of transferring, processing, refining, or storing oil a vessel is considered an oil terminal facility only

when it is used to make a ship-to-ship transfer of oil, and when it is traveling between the place of the ship-to-ship transfer of oil and an oil terminal facility;

(13) "operator" means the person who, through contract, lease, sublease, or otherwise, exerts general supervision and control of activities at the facility; the term includes, by way of example and not limitation, a prime or general contractor, the master of a vessel and the master's employer, or any other person who, personally or through an agent or contractor, undertakes the general functioning of the facility;

(14) "person" means an individual, public or private corporation, political subdivision, government agency, municipality, industry, partnership, association, firm, trust, estate, or any other entity;

(15) "pipeline" means the facilities, including piping, compressors, pump stations, and storage tanks, used to transport crude oil and associated hydrocarbons between production facilities or from one or more production facilities to marine vessels;

(16) "production facility" means a drilling rig, drill site, flow station, gathering center, pump station, storage tank, well, and related appurtenances on other facilities to produce, gather, clean, dehydrate, condition, or store crude oil and associated hydrocarbons in or on the water of the state or on land in the state, and gathering and flow lines used to transport crude oil and associated hydrocarbons to the inlet of a pipeline system for delivery to a marine facility, refinery, or other production facility;

(17) "response action" means an action taken to respond to a release or threatened release of oil, including mitigation, cleanup, or removal.

(18) "self-propelled" means propelled either by machinery aboard the vessel, or by a tug or other vessel secured into the cargo-carrying vessel through special hull design;

(19) "service" means a function performed or service provided by the state, including functions not previously performed and services not previously provided by the state;

(20) "tank vessel" means a self-propelled waterborne vessel that is constructed or converted to carry liquid bulk cargo in tanks and includes tankers, tankships, and combination carriers when carrying oil; the term does not include vessels carrying oil in drums, barrels, or other packages, or vessels carrying oil as fuel or stores for that vessel;

(21) "vessel" includes tank vessels and oil barges;

(22) "village" means a place within the unorganized borough or within a borough as to a power, function, or service that is not exercised or provided by the borough on an areawide or nonareawide basis that

(A) has irrevocably waived, in a form approved by the Department of Law, any claim of sovereign immunity that might arise under this chapter; and

(B) has

(i) a council organized under 25 U.S.C. 476 (sec. 16 of the Indian Reorganization Act);

(ii) a traditional village council recognized by the United States as eligible for federal aid to Indians; or

(iii) a council recognized by the commissioner of community and regional affairs under regulations adopted by the Department of Community and Regional Affairs to determined and give official recognition of village entities under AS 44.47.150(b);

(23) "waters of the state" includes lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, straits, passages, canals, the Pacific Ocean, Gulf of Alaska, Bering Sea and Arctic Ocean, in the territorial limits of the state, and all other bodies of surface or underground water, natural or artificial, public or private, inland or coastal, fresh or salt, which are wholly or partially in or bordering the state or under the jurisdiction of the state.

CHAPTER 8. OIL AND HAZARDOUS SUBSTANCE RELEASES.

ARTICLE 1. RELEASE RESPONSE FUND.

SECTION 46.08.005. PURPOSE.
The legislature finds and declares that the release of oil or hazardous substances into the environment presents a real and substantial threat to the public health and welfare, to the environment, and to the economy of the state. The legislature therefore concludes that it is in the best interest of the state and its citizens to provide a readily available fund for the payment of the expenses incurred by the Department of Environmental Conservation and the Department of Transportation and Public Facilities in the protection of the environment of the state from the release of oil or hazardous substances.

SECTION 46.08.010. FUND ESTABLISHED.
(a) There is established in the state general fund the oil and hazardous substance release response fund. The fund shall be administered by the commissioner.

(b) Money from an appropriation made to the fund remaining in the fund at the end of a fiscal year remains available for expenditure in successive fiscal years.

(c) The fund shall be used for actual expenses incurred under AS 46.08.040. Except as provided in AS 46.08.040(d)(2), the fund may not be used for capital improvements.

SECTION 46.08.020. FINANCING OF THE FUND.
(a) The legislature may appropriate from the following sources to the fund:

(1) money received from federal, state, or other sources or from a private donor;

(2) money recovered or otherwise received from parties responsible for the containment and cleanup of oil or a hazardous substance at a specific site, but excluding funds from performance bonds and other forms of financial responsibility held in escrow pending satisfactory performance of a privately financed response action;

(3) fines, penalties, or damages recovered under AS 46.08.005 - 46.08.080 or other law for costs incurred by the state as a result of the release or threatened release of oil or a hazardous substance

(b) Money received by the state under (a)(2) and (a)(3) of this section shall be deposited in the general fund and credited to a special account called the "oil and hazardous substance release mitigation account." The legislature may annually appropriate to the fund from this account a sum equal to the amount received under (a)(2) and (a)(3) of this section during the calendar year preceding the legislative session in which the appropriations are to be made.

SECTION 46.03.030. FINANCING THE ABATEMENT OF OIL OR HAZARDOUS SUBSTANCE RELEASES.
It is the intent of the legislature and declared to be the public policy of the state that funds for the abatement of a release of oil or a hazardous substance will always be available.

SECTION 46.08.040. PURPOSES OF THE FUND.

(a) In addition to money in the fund that is transferred to the commissioner of community and regional affairs to make grants under AS 29.60.510 and to pay for impact assessments under AS 29.60.560, the commissioner of environmental conservation may use money from the fund to

(1) investigate and evaluate the release or threatened release of oil or a hazardous substance, and contain, clean up, and take other necessary action, such as monitoring and assessing, to address a release or threatened release of oil or a hazardous substance that poses an imminent and substantial threat to the public health or welfare, or to the environment;

(2) pay all costs incurred to

(A) establish and maintain the oil and hazardous substance response office;

(B) review oil discharge prevention and contingency plans submitted under AS 46.04.030;

(C) conduct training, response exercises, inspections, and tests, in order to verify equipment inventories and ability to prevent and respond to oil and hazardous substance release emergencies, and to undertake other activities intended to verify or establish the preparedness of the state, a municipality, or a party required by AS 46.04.030 to have an approved contingency plan to act in accordance with that plan; and

(D) verify or establish proof of financial responsibility required by AS 46.04.040;

(3) pay the expenses incurred by the Alaska division of emergency services for the oil and hazardous substance response corps and the oil and hazardous substance response depots when presented with appropriate documentation by the division;

(4) provide matching funds for participation in federal oil discharge cleanup activities and under 42 U.S.C. 9601 - 9657 (Comprehensive Environmental Response, Compensation, and Liability Act of 1980);

(5) recover the costs to the state, a municipality, or a village of a containment and cleanup resulting from the release or the threatened release of oil or a hazardous substance;

(6) prepare, review, and revise

(A) the state's master oil and hazardous substance discharge prevention and contingency plan required by AS 46.04.200; and

(B) a regional master oil and hazardous substance discharge prevention and contingency plan required by AS 46.04.210; and

(7) restore the environment by addressing the effects of an oil or hazardous substance release.

(b) When the governor declares a disaster related to an oil or hazardous substance discharge emergency under AS 26.23.020(c), the governor may, during the effective period of the disaster emergency, use money from the fund to respond to the disaster emergency.

(c) Notwithstanding other provisions of this section, money from the fund may not be used for a purpose specified in (a)(2) - (7) and (d)(2) of this section unless money is available from an appropriation made specifically for that purpose.

(d) Upon a request from

(1) the Alaska Legislative Council, the commissioner shall use money from the fund to reimburse the Alaska Legislative Council for expenditures that it makes for the operation of the Citizens' Oversight Council on Oil and Other Hazardous Substances, established under AS 24.20.600; and

(2) the commissioner of transportation and public facilities, the commissioner shall transfer money from the fund to the Department of Transportation and Public Facilities

to pay for the construction or refurbishment of one or more vessels of the Alaska marine highway system that have the capability to assist in responding to spills of oil and hazardous substances; in expending money in the fund whose use for vessels of the marine highway system is authorized by AS 19.65.025 and this paragraph, the commissioner shall give priority to construction of one or more new vessels that have the characteristics required by this paragraph.

SECTION 46.08.050. RECORDS OF THE FUND.

(a) The department shall maintain accounting records showing the income and expenses of the fund.

(b) The department shall develop procedures governing the expenditure of, and accounting for, money expended from the fund, and may not delay implementation of this chapter pending the effective date of the procedures.

SECTION 46.08.060. REPORT TO THE LEGISLATURE.

(a) The commissioner shall submit a report to the legislature not later than the 10th day following the convening of each regular session of the legislature. The report may include information considered significant by the commissioner but must include:

(1) the amount of money expended by the department under AS 46.08.040(a) during the preceding fiscal year;

(2) the amount and source of money received and money recovered by or on behalf of the department during the preceding fiscal year as specified in AS 46.08.020;

(3) a summary of municipal participation in the department's responses that were funded by the fund;

(4) a detailed summary of department activities in responses funded by the fund during the preceding fiscal year, including response descriptions and statements outlining the nature of the threat; in this paragraph, "detailed" includes information describing each personal services position and total compensation for that position, each contract in excess of $20,000, and each purchase in excess of $10,000; and

(5) the projected cost to the department for the next fiscal year of monitoring, operating, and maintaining sites where response has been completed or is expected to be continued during the fiscal year

(b) As part of the department's on-going identification efforts associated with oil spill or hazardous waste sites, the commissioner shall include in the report under this section

(1) a summary of the sites identified by the department;

(2) the immediate and long-term threats to the public health or welfare or to the environment posed by these sites; and

(3) the appropriate actions needed to abate these threats, and their estimated cost.

(c) In addition to the department's report required under (a) of this section, the governor shall submit a report about use of the fund during the previous fiscal year to the legislature not later than the 10th day following the convening of each regular session of the legislature. In the report, the governor shall describe in detail the governor's use of money from the fund, with separate explanations, by agency, of the activities that were funded under the authority of AS 46.08.040(b).

SECTION 46.08.070. REIMBURSEMENT FOR CONTAINMENT AND CLEANUP.

(a) The commissioner shall seek reimbursement promptly under this section, AS 46.03.760(e), or federal law for the cost incurred in the cleanup or containment of oil or a hazardous substance that has been released.

(b) The attorney general, at the request of the commissioner, shall immediately seek to recover money expended by the department under AS 46.08.005 - 46.08.080 or other law to contain and clean up oil or a hazardous substance that has been released or to control the threatened release of oil or a hazardous substance.

(c) The department shall reimburse a municipality or village for actual expenses, other than normal operating expenses, incurred in the abatement of a release or threatened release and may advance money to a municipality or village to carry out an emergency first response to a release or threatened release of oil or a hazardous substance if

(1) the municipality or village has entered into an agreement with the commissioner under AS 46.04.020(e) or AS 46.09.020(e); and

(2) the commissioner determines that

(A) the expenses to be reimbursed were for a necessary emergency first response to a release or threatened release that, at the time of the release or threatened release, posed an imminent and substantial threat to the public health or welfare, or to the environment;

(B) the municipality or village has demonstrated a need for financial assistance, and the money to be advanced is necessary to enable the municipality or village to carry out an emergency first response to a release or threatened release that, at the time of the release or threatened release, poses an imminent and substantial threat to the public health or welfare, or to the environment; and

(C) containment and cleanup efforts paid for in whole or in part by a reimbursement or an advance made under this section were consistent with the regional master plan for the region in which the municipality or village is located if a plan has been prepared by the department under AS 46.04.210.

SECTION 46.08.075. LIENS AGAINST PROPERTY AS SECURITY FOR STATE EXPENDITURES.

(a) The state has a lien for expenditures by the state from the oil and hazardous substance release response fund or from any other state fund, for the costs of response, containment, removal, or remedial action resulting from an oil or hazardous substance spill, or, with respect to response costs, the substantial threat of a release of oil or a hazardous substance against all property owned by a person who is determined by the commissioner to be liable for the expenditures under this chapter, AS 46.03, AS 46.04, 42 U.S.C. 9607, or other state or federal law. The lien includes interest, at the maximum rate allowable under AS 45.45.010(a), from the date of the expenditures. The state may file an action in a court of competent jurisdiction in order to foreclose on the lien.

(b) A lien established under this section against real property is not effective until

(1) a certificate of lien is recorded in the district recorder's office for the district in which the property is located, describing the property and stating the amount of the lien, the name of the owner as grantor, and, if known, the name of the person causing the oil or hazardous substance release; and

(2) the commissioner sends a copy of the certificate of lien by certified mail return receipt requested, or actually delivers a copy of the certificate of lien, to the persons described in (1) of this subsection and to all other persons of record holding an interest in the property.

(c) When any amount with respect to which a lien has been recorded under this section has been paid or reduced, the commissioner shall, upon request of the property owner, issue a certificate discharging or partially releasing the lien. That certificate may be recorded in the office in which the certificate of lien was recorded.

(d) The commissioner may, in the commissioner's discretion, reduce, discharge or partially release a lien under this section if a bond, or other security, in a form and an amount satisfactory to the commissioner is posted. The bond or other security must include an amount sufficient to cover the cost of execution, collection, or foreclosure, including attorney fees. A reduction, discharge, or partial release may not be granted under this subsection if it would be contrary to the public interest. When a lien is reduced, discharged, or partially released under this subsection, the commissioner shall, at the request of the property owner, issue a certificate to that effect.

(e) A person with an ownership interest in property against which a lien is recorded may bring an action in a court of competent jurisdiction to require that the lien be released. The lien may be released to the extent of that person's ownership interest if the court finds that the person is not liable for the expenses incurred by the state in connection with the costs of response, containment, removal, or remedial action resulting from the oil or hazardous substance release or threat of release of oil or a hazardous substance.

SECTION 46.08.080. REGULATIONS.
The commissioner shall periodically review the minimum quantities of hazardous substances established under federal law and may adopt regulations establishing minimum quantities of substances for all of any portion of the substances to which AS 46.08.005 - 46.08.080 otherwise apply. The commissioner may otherwise adopt only those regulations that are expressly required to implement the specific purposes of AS 46.08.005 - 46.08.080.

ARTICLE 2. OIL AND HAZARDOUS SUBSTANCE RESPONSE OFFICE.

SECTION 46.08.100. OFFICE ESTABLISHED.
There is established in the department the oil and hazardous substance response office. The office shall include a director and employees who are specially trained in programs and technologies related to the containment and cleanup of releases or threatened releases of oil and hazardous substances.

SECTION 46.08.110. RESPONSE CORPS.
(a) The division of emergency services, Department of Military and Veterans' Affairs, shall establish an oil and hazardous substance response corps.

(b) The corps consists of volunteers who register with the division and agree to be trained by the division in techniques for containment and cleanup and to be available on short notice to assist in containment and cleanup consistent with the responsibilities assigned to the corps under an applicable incident command system.

(c) Members of the corps are entitled to per diem and expenses as determined by the division for training and for days spent in service to the state in containment and cleanup actions.

SECTION 46.08.120. RESPONSE DEPOTS.
The division shall maintain emergency response depots in areas of the state determined in the plans prepared under AS 46.04.200 - 46.04.210 to be potential sites of releases or threatened releases of oil or hazardous substances. The depots shall be equipped and staffed in a manner that ensures prompt response when containment and cleanup actions are necessary.

SECTION 46.08.130. DUTIES OF THE OFFICE.

(a) The office shall be prepared to respond promptly to a discharge of oil or a hazardous substance.

(b) The office may respond under (a) of this section to an oil or hazardous substance discharge only if:

(1) the oil discharge is a catastrophic oil discharge that constitutes an emergency under AS 46.04.080(a);

(2) the discharge of oil or a hazardous substance is declared to be an emergency under AS 46.03.865;

(3) the governor declares the discharge an emergency under AS 26.23;

(4) the commissioner reasonably believes that there has been a discharge of oil or a hazardous substance, or that there is a potential discharge of oil or a hazardous substance, and the discharge may qualify under (1) - (3) of this subsection; or

(5) the commissioner reasonably believes that the discharge or potential discharge poses an imminent and substantial threat to public health or welfare or to the environment.

(c) When the office or corps responds to an oil or hazardous substance discharge under this section, its activities shall be guided by the relevant provisions of the incident command system applicable to the type of discharge to which it is responding.

SECTION 46.08.140. EMERGENCY POWERS.

(a) When the office has reasonable grounds to believe that a release of oil or a hazardous substance has occurred or is threatened to occur which, in the judgment of its director, presents an imminent or present danger to the health or welfare of the people of the state or would result in or is likely to result in irreversible or irreparable damage to the natural resources or environment, and it appears to be prejudicial to the interest of the people of the state to delay action until an opportunity for a hearing can be provided, state employees or members of the corps may, with permission of the director and without prior hearing, enter private property for the purpose of containment or cleanup.

(b) The property owner affected by a response action taken under (a) of this section has the right to be heard as soon as practicable and to present proof to the office that the containment or cleanup action is unnecessary or that it is not necessary to enter the person's property for the containment or cleanup action.

SECTION 46.08.150. CONTRACTS.

The office or the division, as applicable, may enter into agreements with agencies of the state and federal government, political subdivisions, the University of Alaska, or private persons or entities to

(1) provide the personnel, equipment, or other services or supplies necessary to establish and maintain regional oil and hazardous substances depots and as necessary for response readiness;

(2) train members of response corps; and

(3) conduct research into oil and hazardous substances spill technology; the office shall include in the research topics for which it conducts or contracts for research, the research topics recommended to it by the Hazardous Substance Spill Technology Review Council under AS 46.13.120.

SECTION 46.08.160. LIMITATION OF LIABILITY.
The state, an employee of the state, and a member of the corps are not liable for costs or damages as a result of actions taken under AS 46.08.100 - 46.08.190 in response to a release or threatened release unless the actions taken by the state, the employee, or the member of the corps constitute gross negligence or intentional misconduct.

SECTION 46.08.190. DEFINITIONS.
In AS 46.08.100 - 46.08.190

(1) "corps" means the oil and hazardous substance response corps;

(2) "depots" means the oil and hazardous substance supply and equipment storage depots;

(3) "division" means the division of emergency services, Department of Military and Veterans' Affairs;

(4) "office" means the oil and hazardous substance response office.

ARTICLE 3. GENERAL PROVISIONS.

SECTION 46.08.900. DEFINITIONS.
In this chapter

(1) "capital improvement" includes construction, renovation, repair of, and improvement to, a building, but does not include other improvements to real property, such as construction of a dike or retaining wall;

(2) "commissioner" means the commissioner of environmental conservation;

(3) "containment and cleanup" includes the direct and indirect efforts associated with the prevention, abatement, containment, or removal of oil or a hazardous substance, and the restoration of the environment; when applied to expenses, the term includes the additional costs of providing a reasonable and appropriate function or service incurred in response to the release of the oil or hazardous substance, including administrative expenses for the incremental costs of providing the function or service;

(4) "department" means the Department of Environmental Conservation;

(5) "fund" means the oil and hazardous substance release response fund;

(6) "hazardous substance" means (A) an element or compound that, when it enters into or on the surface or subsurface land or water of the state, presents an imminent and substantial danger to the public health or welfare, or to fish, animals, vegetation, or any part of the natural habitat in which fish, animals, or wildlife may be found; or (B) a substance defined as a hazardous substance under 42 U.S.C. 9601 - 9657 (Comprehensive Environmental Response, Compensation, and Liability Act of 1980); "hazardous substance" does not include uncontaminated crude oil or uncontaminated refined oil in an amount of 10 gallons or less;

(7) "oil" means petroleum products of any kind and in any form, whether crude, refined, or a petroleum by-product, including petroleum, fuel oil, gasoline, lubricating oils, oily sludge, oily refuse, oil mixed with other wastes, liquified natural gas, propane, butane, and other liquid hydrocarbons regardless of specific gravity

(8) "permitted release" means a release occurring under the authority of a valid permit issued by the department or by the Environmental Protection Agency;

(9) "release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, except that "release" does not include a permitted release or an act of nature;

(10) "service"

(A) means a function performed or service provided by a municipality under a duty or power authorized by AS 29 or by another provision of law authorizing a municipality to perform functions or provide services, or a comparable function performed or service provided by a village;

(B) includes functions not previously performed and services not previously provided by the municipality or village;

(11) "threatened release" means an imminent danger that a release will occur;

(12) "village" means a place within the unorganized borough or within a borough if the power, function, or service for which a grant application under AS 29.60.510 is submitted is not exercised or provided by the borough on an areawide or nonareawide basis at the time the grant application is submitted that

(A) has irrevocably waived, in a form approved by the Department of Law, any claim of sovereign immunity that might arise in connection with the use of grant money under this chapter; and

(B) has

(i) a council organized under 25 U.S.C. 476 (sec. 16 of the Indian Reorganization Act);

(ii) a traditional village council recognized by the United States as eligible for federal aid to Indians; or

(iii) a council recognized by the commissioner of community and regional affairs under regulations adopted by the Department of Community and Regional Affairs to determine and give official recognition of village entities under AS 44.47.150(b).

CHAPTER 9. HAZARDOUS SUBSTANCE RELEASE CONTROL.

SECTION 46.09.010. REPORT OF HAZARDOUS SUBSTANCE RELEASES.

(a) Except as provided in (b) of this section, a person in charge of a vehicle, vessel, or container from which, or a place at which, a hazardous substance is released shall report the release to the department and appropriate public safety agencies promptly after learning of the release.

(b) The commissioner may enter into an agreement with a person for the periodic reporting of a controlled release of a hazardous substance if the release is not into water.

SECTION 46.09.020. CONTAINMENT AND CLEANUP OF A RELEASED HAZARDOUS SUBSTANCE.

(a) A person who causes a release of a hazardous substance shall make reasonable efforts to contain and clean up the hazardous substance promptly after learning of the release, unless the commissioner determines

(1) after consulting the Environmental Protection Agency or appropriate public safety agencies, that containment or cleanup is technically infeasible;

(2) that containment or cleanup would cause greater environmental damage than if the release were not contained or cleaned up; or

(3) that containment or cleanup would pose a greater threat to human life or health than if the release were not contained or cleaned up.

(b) The commissioner shall develop guidelines prescribing general procedures and methods to be used in the containment and cleanup of a hazardous substance. The guidelines shall be consistent with the national contingency plan revised and republished under 42 U.S.C. 9605.

(c) If the commissioner determines that the containment or cleanup of a hazardous substance undertaken is inadequate, the commissioner may direct the person undertaking the containment or cleanup to cease and may undertake the containment or cleanup directly or by contract.

(d) If it appears to the commissioner that the cause or responsibility for the release of a hazardous substance is unclear or unexplained, the commissioner may immediately undertake the containment and cleanup of the release unless the commissioner determines

(1) after consulting the Environmental Protection Agency or appropriate public safety agencies, that containment or cleanup is technically infeasible;

(2) that containment or cleanup would cause greater environmental damage than if the release were not contained or cleaned up; or

(3) that containment or cleanup would pose a greater threat to human life or health than if the release were not contained or cleaned up.

(e) The commissioner shall enter into agreement with the Environmental Protection Agency, and may enter into agreements with other persons and municipalities, in order to

(1) facilitate a coordinated and effective hazardous substance release response in the state;

(2) provide for cooperative hazardous substance release notification procedures; or

(3) provide for cooperative review of hazardous substance release response contingency plans submitted to the department.

SECTION 46.09.030. DISASTER EMERGENCIES.
The commissioner of environmental conservation or the commissioner of military and veterans' affairs may request the governor to determine that an actual or imminent release of a hazardous substance constitutes a disaster emergency under AS 26.23. If the governor declares a disaster emergency under AS 26.23. The commissioner of environmental conservation and the commissioner of military and veterans' affairs shall respond appropriately in the relief of the actual or imminent release under the relevant provisions of the applicable incident command system.

SECTION 46.09.040. HAZARDOUS SUBSTANCES CONTAINMENT AND CLEANUP.
The commissioner may contract with a person or a municipality for personnel, equipment, or services that may be useful to carry out the requirements of this chapter. If the commissioner determines that it is infeasible to contract with a person or a municipality, the commissioner may establish and maintain containment and cleanup personnel, equipment, and supplies necessary to carry out the requirements of this chapter.

SECTION 46.09.050. COMPACTS AUTHORIZED.
The governor may enter into supplementary agreements, reciprocal arrangements, and compacts with another state or country for the implementation of this chapter subject to the approval of the Congress of the United States, if required, under the Constitution of the United States.

SECTION 46.09.060. MUNICIPALITIES.
(a) If a provision of this chapter or of a regulation adopted by the commissioner under this chapter conflicts with the charter, ordinance, or regulation of a municipality, the provisions of this chapter or of the regulation adopted by the commissioner under this chapter prevails.

(b) Authority to contain, clean up, or prevent a release or threatened release of oil or of a hazardous substance, and to exercise other powers necessary to implement this chapter, AS 46.04, and AS 46.08, are granted to municipalities that do not otherwise have that authority. Except as provided in (a) of this section, a municipality may exercise its police power within the area of the municipality.

SECTION 46.09.070. REGULATIONS.
The commissioner shall periodically review the minimum quantities of hazardous substances established under federal law and may adopt regulations establishing minimum quantities of substances for all or any portion of the substances to which this chapter otherwise applies. The commissioner shall adopt only those regulations that are expressly required to implement the specific purposes of this chapter.

SECTION 46.09.900. DEFINITIONS.
In this chapter

(1) "commissioner" means the commissioner of environmental conservation;

(2) "containment and cleanup" includes the direct and indirect efforts associated with the prevention, abatement, containment, or removal of a hazardous substance, and the restoration of the environment; when applied to expenses, the term includes the additional costs of providing a reasonable and appropriate function or service incurred

in response to the release of the hazardous substance, including administrative expenses for the incremental costs of providing the function or service;

(3) "department" means the Department of Environmental Conservation;

(4) "hazardous substance" means (A) an element or compound that, when it enters into or on the surface or subsurface land or water of the state, presents an imminent and substantial danger to the public health or welfare, or to fish, animals, vegetation, or any part of the natural habitat in which fish, animals, or wildlife may be found or (B) a substance defined as a hazardous substance under 42 U.S.C. 9601 - 9657 (Comprehensive Environmental Response, Compensation, and Liability Act of 1980); "hazardous substance" does not include uncontaminated crude oil or uncontaminated refined oil;

(5) "permitted release" means a release occurring under the authority of a valid permit issued by the department or by the Environmental Protection Agency;

(6) "release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, except that "release" does not include a permitted release or an act of nature;

(7) "service" means a function performed or service provided by the state, including functions not previously performed and services not previously provided by the state;

(8) "threatened release" means an imminent danger that a release will occur.

CHAPTER 13. ALASKA STATE EMERGENCY RESPONSE COMMISSION.

SECTION 46.13.010. ALASKA STATE EMERGENCY RESPONSE COMMISSION ESTABLISHED.

(a) There is established in the Department of Environmental Conservation the Alaska State Emergency Response Commission.

(b) The oil and hazardous substance response office established under AS 46.08.100 shall serve as staff for the commission.

SECTION 46.13.020. COMPOSITION OF THE COMMISSION.

The commission consists of the commissioners of community and regional affairs, environmental conservation, fish and game, health and social services, labor, natural resources, public safety, and transportation and public facilities, or the designees of the commissioners, the adjutant general of the Department of Military and Veterans' Affairs or a designee, and seven public members to be appointed by the governor. To the extent practicable, the commission must include members with expertise in the emergency response field.

SECTION 46.13.030. OFFICERS, TERMS, AND COMPENSATION.

The commissioner of environmental conservation, or the commissioner's designee, shall chair the commission. The adjutant general of the Department of Military and Veterans' Affairs, or the adjutant general's designee, shall serve as vice-chair. Members of the commission other than those from the designated state departments serve at the pleasure of the governor for staggered terms of three years. Members of the commission serve without compensation but are entitled to per diem and travel expenses authorized for members of boards and commissions under AS 39.20.180.

SECTION 46.13.040. POWERS AND DUTIES OF COMMISSION.

The commission shall

(1) serve as the state emergency response commission required under 42 U.S.C. 11001 - 11005;

(2) designate, and revise as necessary, the boundaries of emergency planning districts, using the boundaries of regions established under AS 46.04.200 - 46.04.210 and of political subdivisions where appropriate;

(3) facilitate the preparation and implementation of emergency plans for hazardous substance response, including the statewide, interjurisdictional, and local plans prepared under AS 26.23, state and regional plans prepared under AS 46.04.200 - 46.04.210, and plans prepared under this chapter;

(4) review and approve or disapprove the plans described in (3) of this section according to the criteria established in AS 46.13.045;

(5) establish a local emergency planning committee for each emergency planning district, and appoint, and revise as necessary, the membership of each committee;

(6) supervise and coordinate the activities of local emergency planning committees;

(7) establish procedures for receiving and processing requests from the public for information under 42 U.S.C. 11044, including tier II information under 42 U.S.C. 11022;

(8) perform other coordinating, advisory, or planning tasks related to hazardous

substance emergency planning and preparedness, community right-to-know reporting, toxic chemical release reporting, or management of hazardous substances;

(9) recommend procedures to integrate, as appropriate, hazardous substance response planning under 42 U.S.C. 11001 - 11005, federal contingency planning under 33 U.S.C. 1321 and other federal laws applicable to hazardous substance discharges, and state, regional, and local hazardous substance contingency planning under AS 26.23 and AS 46.04.200 - 46.04.210;

(10) to the extent consistent with the constitution and law of the state, perform all other functions prescribed for state emergency response commissions under 42 U.S.C. 11001 - 11005; and

(11) adopt regulations necessary to carry out the purposes of this chapter and 42 U.S.C. 11001 - 11005.

SECTION 46.13.045. PLAN APPROVAL; INCIDENT COMMAND SYSTEMS.

(a) The commission shall review and exercise approval authority over local, interjurisdictional, regional, and state plans for hazardous substance discharge response, including plans prepared under AS 26.23, AS 46.04.200 - 46.04.210, and this chapter.

(b) Before approving a plan, the commission shall ensure that the plan includes an incident command system that describes the respective roles of affected persons and agencies in a clear and specific manner and that the respective roles of state agencies are consistent with their statutory duties. The commission shall also ensure that the plans are well-integrated with related plans.

(c) To the extent consistent with other law, an incident command system approved under this section must provide that the Alaska division of emergency services has a major role in mobilization of personnel and resources, communications, transportation planning, and other logistics involved in a state response to an imminent or actual hazardous substance discharge.

SECTION 46.13.050. AGENCY COOPERATION.

The commission may request data, reports, or other information from a state agency. To the extent feasible and not otherwise prohibited by laws making specific information confidential and nondisclosable, a state agency shall cooperate with the commission and furnish the commission with the information and assistance necessary to accomplish the purposes of 42 U.S.C. 11001 - 11005 and this chapter.

SECTION 46.13.060. EMERGENCY PLANNING DISTRICT BOUNDARIES.

Boundaries for emergency planning districts are the regions designated by the Department of Environmental Conservation under AS 46.04.210, unless otherwise designated by the commission.

SECTION 46.13.070. LOCAL EMERGENCY PLANNING COMMITTEES.

The commission shall establish and appoint the members of a local emergency planning committee for each emergency planning district. Each committee must include, at a minimum, representatives from each of the following groups or organizations: elected state and local officials; law enforcement; civil defense; fire fighting; first aid; health; local environmental, hospital, and transportation personnel; broadcast and print media; community groups; and owners and operators of facilities subject to the requirements of 42 U.S.C. 11001 - 11005.

SECTION 46.13.080. DUTIES OF LOCAL EMERGENCY PLANNING COMMITTEES.

Each local emergency planning committee shall

(1) establish procedures for receiving and processing requests from the public for information under 42 U.S.C. 11044, including tier II information under 42 U.S.C. 11022;

(2) appoint a chair and establish rules by which the committee shall function, including provisions for public notification of committee activities, public meetings to discuss the emergency plan, public comments, response to the comments by the committee, distribution of the emergency plan, and designation of an official to serve as coordinator for information;

(3) prepare and periodically review an emergency plan in accordance with 42 U.S.C. 11003(a);

(4) evaluate the need for resources necessary to develop, implement, and exercise the emergency plan, and make recommendations with respect to additional resources that may be required and the means for providing the additional resources;

(5) to the extent consistent with the constitution and law of the state, perform all other functions prescribed for emergency planning committees in 42 U.S.C. 11001 - 11005; and

(6) participate as a local advisory committee in the preparation of statewide regional contingency plans.

SECTION 46.13.090. EMERGENCY PLANS.

(a) An emergency plan prepared under AS 46.13.080 must include

(1) identification of facilities subject to the requirements of 42 U.S.C. 11001 - 11005 that are within the emergency planning district, identification of routes likely to be used for the transportation of substances on the list of extremely hazardous substances referred to in 42 U.S.C. 302(a), and identification of additional facilities contributing or subjected to additional risk due to their proximity to facilities subject to the requirements of 42 U.S.C. 11001 - 11005 such as hospitals or natural gas facilities;

(2) methods and procedures to be followed by facility owners and operators and local emergency and medical personnel to respond to a release of hazardous substances, and to a release of substances on the list of extremely hazardous substances referred to in 42 U.S.C. 302(a);

(3) designation of a community emergency coordinator and facility emergency coordinators, who shall make determinations necessary to implement the emergency plan;

(4) procedures providing reliable, effective, and timely notification by the facility emergency coordinators to persons designated in the emergency plan, and to the public, that a release has occurred, consistent with the emergency notification requirements of 42 U.S.C. 11004;

(5) methods for determining the occurrence of a release, and the area or population likely to be affected by that release;

(6) a description of emergency equipment and facilities in the community and at each facility in the community subject to the requirements of 42 U.S.C. 11001 - 11005, and an identification of the persons responsible for the equipment and facilities;

(7) evacuation plans, including provisions for a precautionary evacuation and alternative traffic routes;

(8) training programs, including schedules for training of local emergency response and medical personnel; and

(9) methods and schedules for exercising the emergency plan.

(b) Each emergency plan prepared under AS 46.13.080 must incorporate within it an incident command system. The incident command system must be substantially equivalent in relevant respects to the incident command systems established under AS 46.04.200 - 46.04.210 and meet the requirements of AS 46.13.045.

SECTION 46.13.100. FINDINGS AND PURPOSE.
The legislature

(1) finds and declares that there exists a lack of scientific knowledge concerning the availability, properties, and effectiveness of various hazardous substance containment and cleanup technologies; and

(2) concludes that it is in the best interest of the state and its citizens to establish a Hazardous Substance Spill Technology Review Council in the Alaska State Emergency Response Commission to assist in the identification of containment and cleanup products and procedures for arctic and sub-arctic hazardous substance releases and make recommendations to the departments and agencies of the state regarding their use and deployment.

SECTION 46.13.110. HAZARDOUS SUBSTANCE SPILL TECHNOLOGY REVIEW COUNCIL.

(a) There is established in the Alaska State Emergency Response Commission the Hazardous Substance Spill Technology Review Council.

(b) The council consists of the commissioner of environmental conservation, the adjutant general of the Department of Military and Veterans' Affairs, a representative of the University of Alaska appointed by the governor, the governor's senior science advisor, a representative of the Prince William Sound Science Center in Cordova appointed by the governor, and four other members, one from each judicial district of the state, appointed by the governor, with broad experience or expertise in one or more of the following areas: physical or biological science; oil technology, transportation, or management; fisheries; economics; environmental engineering; or law. The U.S. Coast Guard and the Environmental Protection Agency may each appoint a federal employee to the council to represent their agencies as nonvoting members. Appointed state members of the council serve overlapping three-year terms.

(c) The council members shall elect from among themselves a chair and vice-chair.

(d) The oil and hazardous substance response office established under AS 46.08.100 shall serve as staff for the council.

(e) State and federal members of the council serve without compensation, but are entitled to per diem and travel expenses authorized for boards and commissions under AS 39.20.180.

(f) The council shall meet regularly at the call of the commission or the chair of the council.

(g) State members of the council are subject to AS 39.50.

SECTION 46.13.120. DUTIES OF THE COUNCIL.
The council shall

(1) review and recommend to the Department of Environmental Conservation research topics for it to pursue;

(2) establish testing protocols to be used by the Department of Environmental Conservation to evaluate the effectiveness of hazardous substance spill technologies for use in the state;

(3) identify sources of money that may be available for discharge-related research;

(4) make proposals to the governor, commission, and other entities to encourage and fund prevention, response, cleanup, and mitigation of future discharges of hazardous substances;

(5) compile and maintain information relating to

(A) containment and cleanup technology that is available in the event of a hazardous substance discharge, the extent to which current containment and cleanup technology is available and may be applied in the state, and ways to improve hazardous substance spill response technology and procedures;

(B) steps that should be taken by government and industry to ensure proper management, handling, and transportation of hazardous substances and to improve the statewide ability of industry and governmental agencies to respond to discharges of hazardous substances;

(C) the extent to which industry practices and governmental practices or laws should be changed to reduce or minimize the potential for hazardous substance discharges;

(D) hazardous substances spill technology research conducted by the Department of Environmental Conservation; and

(6) perform other functions as may be requested by the commission.

SECTION 46.13.130. INVESTIGATIONS; HEARINGS.

(a) The council may issue subpoenas, administer oaths, and conduct investigations related to its duties.

(b) The council may compel the attendance of witnesses and production of papers, books, records, accounts, documents, and testimony, and may have the deposition of witnesses taken in a manner prescribed by court rule or law for the taking of depositions in civil actions when consistent with the duties assigned to the council.

(c) On a majority vote of the council, subpoenas and subpoenas duces tecum may be issued and served in the manner prescribed by AS 44.62.430(b) and (c) and court rule. The failure, refusal, or neglect to obey a subpoena is punishable as contempt in the manner prescribed by law or court rule. The superior court may compel obedience to the council's subpoena in the same manner as prescribed for obedience to a subpoena issued by the court.

(d) State agencies shall, to the extent permitted by law, cooperate with the council and provide it with information it requests for carrying out its duties.

SECTION 46.13.900. DEFINITIONS.

In this chapter,

(1) "commission" means the Alaska State Emergency Response Commission;

(2) "council" means the Hazardous Substance Spill Technology Review Council;

(3) "hazardous substance" has the meaning given in AS 46.03.826.

ALASKA ADMINISTRATIVE CODE

TITLE 18. ENVIRONMENTAL CONSERVATION.

CHAPTER 75. OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTROL.

ARTICLE 1. Oil Pollution Prevention Requirements.

18 AAC 75.005. RESPONSIBILITY.
The owner or operator of an oil tank vessel, oil barge, pipeline, oil terminal, exploration facility, or production facility subject to the requirements of AS 46.04.030 is responsible for meeting the applicable requirements of this chapter and for preventing the discharge of oil into waters or onto land of the state. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.04.050
AS 46.03.740 AS 46.04.070
AS 46.04.030

18 AAC 75.007. GENERAL OIL POLLUTION PREVENTION REQUIREMENTS.

(a) The oil pollution prevention requirements of 18 AAC 75.005 -- 18 AAC 75.090 apply to each facility or operation for which an approved oil discharge prevention and contingency plan is required under AS 46.04.030.

(b) A vessel, barge, pipeline, or other facility subject to the applicable requirements of this chapter must be equipped and operated in accordance with this chapter and other state and federal law applicable to the prevention of an oil discharge.

(c) Unless preempted by federal law, if a conflict exists between a requirement of 18 AAC 75.005 -- 18 AAC 75.090 and a requirement of federal law, the more stringent requirement applies.

(d) The owner or operator shall ensure that all personnel are appropriately and regularly trained regarding company and state pollution prevention measures that are applicable to each person's duties. After completing a training course or program, each participant shall sign and date a statement that lists the course content.

(e) The owner or operator shall institute programs designed to ensure that each drill operator, each person who has navigational, towline, security, or maintenance duties, and any other person responsible for an activity that might result in a violation of this chapter is free of substance-abuse or medical problems that would impair that person's ability to do that person's job.

(f) The owner or operator shall provide security measures and surveillance appropriate to each component of the operation to minimize the risk of vandalism, sabotage, and unauthorized entry.

(g) The owner or operator shall maintain for the life of the facility or operation, a history of spills over 55 gallons, including the source, cause, amount, and corrective action taken.

(h) The owner or operator shall prepare and maintain records to document training, inspections, tests, maintenance, and repairs required by 18 AAC 75.005 -- 18 AAC

75.090. Unless specified otherwise, records must be kept for at least three years and must be available for inspection and copying by the department upon request. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.015. COMPLIANCE SCHEDULE.

(a) The owner or operator shall provide a compliance schedule for meeting the requirements of 18 AAC 75.005 -- 18 AAC 75.090 as part of the plan required by 18 AAC 75.400. Requirements that cannot be implemented immediately must be implemented as soon as feasible, but no later than January 1, 1997.

(b) If compliance with one or more of the requirements of 18 AAC 75.005 -- 18 AAC 75.090 is not practical within the time stated, the owner or operator may propose an alternate compliance schedule, citing substantial cause for delay. The department will, in its discretion, approve an alternate compliance schedule if other measures acceptable to the department have been taken in the interim to minimize the risk of a discharge.

(c) The department will, in its discretion, waive a requirement of 18 AAC 75.005 -- 18 AAC 75.090 if the owner or operator demonstrates to the department's satisfaction that an equivalent level of protection will be achieved by using a technology or procedure other than that required. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.04.050
AS 46.04.030 AS 46.04.070

18 AAC 75.025. TRANSFER REQUIREMENTS.

(a) The owner or operator of an oil terminal facility, oil tank vessel, or oil barge shall take all appropriate measures to prevent spills or overfilling during a transfer of oil, including reduced loading rates at the beginning and end of a transfer.

(b) Unless it is technically unfeasible to do so, an oil containment boom appropriate for local conditions must be deployed in an effective manner around an oil tank vessel or barge during the transfer of crude oil and persistent products.

(c) Except for crude oil washing, tank cleaning operations may not be conducted during cargo offloading.

(d) The owner or operator shall ensure that each person involved in a transfer is capable of clearly communicating orders to stop a transfer at any time during the transfer.

(e) A positive means must be provided to stop a transfer in the shortest possible time consistent with the best commercially available technology.

(f) Before beginning a transfer to or from an area not protected by secondary containment, the owner or operator shall ensure that all valves in the transfer system have been checked to ensure that they are in the correct position, and that all manifolds not in use are blank flanged or capped. Where feasible, the owner or operator shall also inspect for damage or defects all piping and hoses used in the transfer before and at least once during each transfer.

(g) The lowermost drain and all outlets of any tank car or tank truck must be examined for leakage before filling and before departure. All tank car or tank truck manifolds must be blank flanged or capped, and valves must be secured before leaving the transfer area. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.027. REQUIREMENTS FOR LADEN OIL TANK VESSELS.

(a) In addition to the applicable requirements of 18 AAC 75.007 -- 18 AAC 75.025, a laden oil tank vessel must carry or have ready access to sufficient oil transfer equipment to facilitate lightering to and from other vessels.

(b) The owner or operator shall ensure that each laden tank vessel has on board a person who is designated as an oil spill prevention and response officer and is responsible for training and drilling the crew on state and federal oil pollution prevention and response requirements.

(c) If the master is not fluent in English, a person fluent in English and in the master's language must be immediately available to the bridge of any laden tank vessel when underway in state waters.

(d) The owner or operator shall ensure that measures are in place that allow the prompt detection of an oil discharge, including measures such as visual lookouts, the sounding of all cargo tanks to check cargo and water levels in the tanks after an intentional or unintentional grounding, and, where technically feasible, electronic leak detection systems.

(e) A tank vessel under escort by another vessel must, at all times, be operated in a manner that permits the escort vessel to be available immediately to provide the intended assistance to the tank vessel.

(f) While in state waters, towing line must be made up and prepared for rapid deployment to a towing vessel. The tow line must be fitted to allow tow vessels commonly available in the area of operation to take the vessel in tow rapidly. For a vessel operating at the oil loading terminal at Valdez, the Prince William Sound towing package may be used instead of having lines made up, if the package permits rapid deployment to a towing vessel. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.037. REQUIREMENTS FOR LADEN OIL BARGES.

(a) In addition to the applicable requirements of 18 AAC 75.007 -- 18 AAC 75.025, a laden oil barge must carry or have ready access to sufficient oil transfer equipment to facilitate lightering to and from other vessels.

(b) The owner or operator of a laden oil barge shall ensure that each barge or vessel towing a barge has on board a person who is designated as an oil spill prevention and response officer and is responsible for training and drilling the crew on state and federal oil pollution prevention and response requirements.

(c) If the master is not fluent in English, a person fluent in English and in the master's language must be immediately available to any vessel towing an oil laden barge.

(d) The owner or operator shall ensure that measures are in place that allow the prompt detection of an oil discharge, including visual inspections of the barge and the area around the barge, and the sounding of all cargo tanks to check cargo and water levels in the tanks after an intentional or unintentional grounding.

(e) The owner or operator shall inspect towing equipment every two months and shall record the results of each inspection and any actions taken to resolve problems discovered during an inspection.

(f) The owner or operator shall provide an adequate means of recovering a barge that breaks free of its towing vessel. The recovery means must be capable of being used by other vessels if the towing vessel is lost or incapacitated. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.045. OPERATING REQUIREMENTS FOR EXPLORATION AND PRODUCTION FACILITIES.

(a) In addition to the applicable requirements of 18 AAC 75.007 -- 18 AAC 75.025, the owner or operator of an exploration or production facility shall collect and store oil produced during a formation flow test or other drilling operation in a manner that prevents the oil from entering the land or waters of the state.

(b) In state waters, a prefabricated offshore platform that is towed into place and begins operations after the effective date of this section must be inspected for fatigue and structural integrity as required by 30 C.F.R. 250, Subpart I, as amended through July 1, 1991, the provisions of which are adopted by reference. The inspection must be conducted after platform installation and before drilling or production operations begin. The owner or operator shall submit to the supervisor of the appropriate regional office of the department a report of the inspection results and any corrective actions taken.

(c) Closure valves for pipelines leaving the platform must be located at a protected location that isolates the pipeline from the platform if a discharge or other emergency occurs and must function both manually and remotely as part of an emergency shutdown system.

(d) The owner or operator of an exploration or production facility shall provide, at a minimum, containment and collection devices such as drip pans and curbs for offshore drilling and wellhead sumps for onshore drilling.

(e) An offshore production platform, including a mobile offshore drilling unit, must have a sufficiently impermeable deck with catch tanks or other devices adequate to contain, collect, and divert spilled oil. The catch tank must have adequate storage capacity to contain anticipated and accidental discharges of oil and high-liquid-level alarms that will immediately notify the operator if a high liquid level develops.

(f) Oil storage tanks, including bulk fuel tanks, must meet the applicable requirements of 18 AAC 75.065 and 18 AAC 75.075.

(g) Piping associated with an exploration or production facility must meet the applicable requirements of 18 AAC 75.080. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.055. LEAK DETECTION, MONITORING, AND OPERATING REQUIREMENTS FOR CRUDE OIL TRANSMISSION PIPELINES.

(a) A crude oil transmission pipeline must be equipped with a leak detection system capable of promptly detecting a leak, including

(1) if technically feasible, the continuous capability to detect a daily discharge equal to not more than one percent of daily throughput;

(2) flow verification through an accounting method, at least once every 24 hours; and

(3) for a remote pipeline not otherwise directly accessible, weekly aerial surveillance, unless precluded by safety or weather conditions.

(b) The owner or operator of a crude oil transmission pipeline shall ensure that the incoming flow of oil can be completely stopped within one hour after detection of a discharge.

(c) If oil storage tanks are present at the crude oil transmission pipeline facility, the owner or operator shall meet the requirements of 18 AAC 75.065 and 18 AAC 75.075.

(d) For piping connected to or associated with the main crude oil transmission pipeline the owner or operator shall meet the requirements of 18 AAC 75.080. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.065. OIL STORAGE TANK REQUIREMENTS.

(a) The owner or operator of an oil terminal, crude oil pipeline, exploration, or production facility shall maintain and inspect oil storage and surge tanks consistent with the requirements of API Standard 653, First Edition, 1991, and Supplement 1, January 1992, or API Recommended Practice 12R1, Fourth Edition, 1991, as appropriate, unless a more stringent requirement is set out in this section.

(b) The owner or operator shall inspect oil storage tanks for structural integrity at least every ten years unless a shorter or longer inspection interval is prescribed by API Standard 653, First Edition, 1991, and Supplement 1, January 1992, or API RP 12R1, Fourth Edition, 1991. The department will, in its discretion, require a more frequent schedule

(1) for tanks older than 30 years;

(2) for riveted or bolted tanks;

(3) for tanks with demonstrated corrosion or foundation problems or

(4) after a significant seismic event.

(c) An elevated or a portable tank is not required to undergo an internal inspection if an external integrity inspection, performed in accordance with API Standard 653, First Edition, 1991, and Supplement 1, January 1992, or API RP 12R1, Fourth Edition, 1991, is substituted and that inspection includes a thorough inspection and a nondestructive integrity test of the tank, including the tank bottom.

(d) A record of inspection results and corrective actions taken after May 14, 1992 must be kept for the service life of the tank and must be available to the department for inspection and copying upon request.

(e) The owner or operator shall notify the department if an oil storage tank undergoes major repair or major alteration, as defined in API Standard 653, First Edition, 1991, and Supplement 1, January 1992, section 10.3.1.2.

(f) Oil storage tanks served by internal steam heating systems must be designed to control leakage through defective heating coils. Condensate lines must be monitored, passed through an oil separating device, or passed through a retention system.

(g) If an internal lining system is used to control corrosion or to meet the requirements of

(i) of this section, it must be installed in accordance with API Standard 652, First Edition, 1991.

(h) A new installation must meet the following requirements:

(1) tanks must be constructed and installed in compliance with API Standard 650, 1988 edition, API Standard 12, D (Ninth Edition, 1989), F (Tenth Edition, 1989) and P (First Edition, 1986), or another standard approved by the department;

(2) oil storage tanks may not be of riveted or bolted construction;

(3) cathodic protection or another approved corrosion control system must be installed to protect the tank bottom from external corrosion where local soil conditions warrant; and

(4) each tank must be equipped with a leak detection system that an observer from outside the tank can use to detect leaks in the bottom of the tank, such as secondary catchment under the tank bottom with a leak detection sump, a sensitive gauging system, or other leak detection system approved by the department.

(i) An existing installation is subject to the following:

(1) each tank must be equipped with

(A) a leak detection system that an observer from outside the tank can use to detect leaks in the bottom of the tank, such as secondary catchment under the tank bottom with a leak detection sump, a sensitive gauging system, or another leak detection system approved by the department;

(B) cathodic protection in accordance with API Standard 651, First Edition, 1991;

(C) a thick film liner in accordance with API Standard 652, First Edition, 1991; or

(D) another leak detection or spill prevention system approved by the department; and

(2) notwithstanding the provisions of 18 AAC 75.015(a), each tank must undergo an initial inspection in accordance with API Standard 653, First Edition, 1991, and Supplement 1, January 1992, or API 12R1, Fourth Edition, 1991, as appropriate, on the following schedule, with tank age determined as of 5/14/92:

(A) tanks 30 years old or older: by January 1, 1994;

(B) tanks 25 -- 29 years old: by January 1, 1995;

(C) tanks 20 -- 24 years old: by January 1, 1996;

(D) tanks 10 -- 19 years old: by January 1, 1997; and

(E) tanks less than 10 years old: in accordance with API Standard 653, First Edition, 1991, and Supplement 1, January 1992.

(j) In addition to the applicable requirements of 18 AAC 75.025, the owner or operator shall ensure that one or more of the following means of preventing overfilling is provided:

(1) high liquid level alarms with signals that sound and display in a manner immediately recognizable by personnel conducting a transfer;

(2) high liquid level automatic pump shutoff devices set to stop flow at a predetermined tank content level;

(3) a means of immediately determining the liquid level of each bulk storage tank, provided that the liquid level is closely monitored during a transfer; or

(4) a system approved by the department which will immediately notice the operator of high liquid levels.

(k) Overfill protection devices must be tested before each transfer operation or monthly, whichever is less frequent. If monthly testing would necessitate interrupting the operation of a system subject to continuous flow, the owner or operator may substitute monthly inspection and annual testing for the monthly testing of overfill protection devices. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

[Editor's Note: The API standards set out in this section may be reviewed at any regional office of the department or may be obtained from the American Petroleum Institute, 1220 L Street NW, Washington, D.C. 20005.]

18 AAC 75.075. SECONDARY CONTAINMENT REQUIREMENTS FOR ABOVEGROUND OIL STORAGE AND SURGE TANKS.

(a) Onshore oil storage tanks must be located within a secondary containment area that has the capacity to hold the volume of the largest tank within the containment area, plus enough additional capacity to allow for local precipitation. Minimum secondary containment system requirements include

(1) berms, dikes, or retaining walls that are constructed to prevent the release of spilled oil from within the containment area;

(2) with the exception of the area under a tank, components constructed of, or lined with, materials that are

(A) adequately resistant to damage by the products stored to maintain sufficient impermeability;

(B) resistant to damage from prevailing weather conditions;

(C) sufficiently impermeable; and

(3) checking for the presence of oil leaks or spills

(A) daily at a manned facility; or

(B) each time the facility is visited, but at least monthly, at an unmanned facility.

(b) In locations where physically feasible, offshore production platform oil storage tank areas must incorporate a secondary containment method to prevent oil spills from entering the water.

(c) Secondary containment systems must be maintained free of debris or other materials or conditions that might interfere with the effectiveness of the system, including excessive accumulated rainwater.

(d) Drainage of water accumulations from secondary containment areas that discharge directly to the land or waters of the state must be controlled by locally operated, positive close failsafe valves or other positive means to prevent a discharge. Valves must be kept closed and locked when not in use. The owner or operator shall inspect accumulated water before discharging it from a secondary containment area to ensure that no oil will be discharged and shall keep a written record of each drainage operation. If no sheen is present, water accumulated may be discharged without a state wastewater permit under 18 AAC 72. Oil-contaminated water accumulations may be discharged from secondary containment without a state wastewater permit under 18 AAC 72 if the receiving environment is not a sensitive receiving environment and if it is treated through an oil/water separating device that reduces the total concentration of hydrocarbons to below 15 ppm. The oil separating device must be equipped with effluent monitors and alarms that notice the operator if the device fails.

(e) A new installation is subject to the following:

(1) impermeable liners or double bottoms that are chemically resistant to damage by the product being stored in the tank must be installed under all tanks, except for tanks containing viscous products exceeding 400 SUS (Saybolt Universal System) at storage temperatures; and

(2) drains and other penetrations through secondary containment areas must be minimized consistent with facility operational requirements.

(f) At an existing installation, in the event of a known or suspected discharge, the department will, in its discretion, require installation of monitoring wells to detect oil or other hazardous substances in the groundwater if the local geology and groundwater conditions allow installation of monitoring wells, and if monitoring wells will not substantially increase the risk of contaminating groundwater.

(g) Rail tank car and tank truck loading areas and permanent unloading areas must

(1) have a secondary containment system designed to contain the maximum capacity of any single compartment of the tank car or tank truck, including containment curbing and a trenching system or drains with drainage to a collection tank or device designed to handle a discharge;

(2) be paved, surfaced, or lined with sufficiently impermeable materials;

(3) be maintained free of debris or other materials or conditions that might interfere with the effectiveness of the system, including excessive accumulated rainwater; and

(4) have warning lights, warning signs, or a physical barrier system to prevent premature vehicular movement. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.080. FACILITY PIPING REQUIREMENTS FOR OIL TERMINAL, CRUDE OIL TRANSMISSION PIPELINE, EXPLORATION, AND PRODUCTION FACILITIES.

(a) All facility oil piping associated with an oil terminal, crude oil transmission pipeline, exploration, or production facility must meet the requirements of this section.

(b) Buried steel piping containing oil must be maintained in accordance with a corrosion control program, approved by the department and,

(1) for a new installation, must be

(A) protected from corrosion by installing protective wrapping or coating and cathodic protection appropriate for local soil conditions; and

(B) of all welded construction with no clamped, threaded, or similar connections for lines larger than a one inch nominal pipe size; and

(2) for an existing installation, must

(A) undergo a corrosion survey;

(B) be carefully examined for deterioration any time a section of buried line is exposed for any reason;

(C) undergo an additional examination and corrective action to repair the damaged pipe and control future corrosion if corrosion damage is found; and

(D) be replaced with piping that meets the requirements of (1) of this subsection, if feasible, when significant repairs or replacements are made.

(c) Buried or insulated transfer piping and hoses that are located outside of secondary containment areas and that are used to transfer oil to or from docks or vessels must be leak tested at least annually, at or above the normal operating pressures, or must be subjected to another verification method approved by the department. The testing medium used must be in accordance with API RP 1110, Second Edition, 1981, or another applicable published safety standard. The owner or operator shall keep records of the results of these tests. Piping and hoses must be stenciled or tagged with the date

of the last test and the allowable operating pressure. An oil discharge resulting from testing is not exempted from legal action under applicable state law.

(d) All aboveground transfer piping that is used to transfer oil to or from docks or vessels must be visually checked before and during each transfer or monthly, whichever is less frequent.

(e) Pipes removed from service for more than one year must be drained, identified as to origin, marked with the words "Out of Service", and capped or blank flanged.

(f) Aboveground piping and valves must be visually checked for leaks or damage during routine operations or at least monthly.

(g) Piping supports must be designed to be seismically stable and composed of materials to minimize corrosion and prevent chafing.

(h) Appropriate measures must be taken to protect aboveground piping from damage by vehicles. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.090. RECOMMENDED PRACTICES.

To meet the requirements of 18 AAC 75.005 -- 18 AAC 75.080, the owner or operator is encouraged to follow applicable recommended practices and operating guidelines, including the following:

(1) American Petroleum Institute (API) Chapter 6.6, Manual of Petroleum Measurement Standards, Metering Assemblies, Pipeline Metering Systems, First Edition, 1981, Reaffirmed August 1987 (ANSI/API MPMS 5.6-1981);

(2) API Publication 1615, Installation of Underground Petroleum Storage Systems, Fourth Edition, Cautionary Statement, March, 1989;

(3) API Publication 2008, Safe Operation of Inland Bulk Plants (1984);

(4) API Publication 2200-83, Repairing Crude Oil, Liquified Natural Gas, and Product Pipelines (1983);

(5) API Recommended Practice 2A, Recommended Practice for Planning, Designing and Constructing Fixed Offshore Platforms;

(6) API Recommended Practice 2A-LFRD, Draft Recommended Practice for Planning, Designing and Construction Fixed Offshore Platforms -- Load and Resistance Factor Design, First Edition, December 15, 1989;

(7) API Recommended Practice 2K, Recommended Practice for Care and Use of Marine Drilling Risers, Second Edition, January 1982;

(8) API Recommended Practice 2Q, Recommended Practice for Design and Operation of Marine Drilling Riser Systems, Second Edition, April 1984;

(9) API Recommended Practice 2R, Recommended Practice for Design, Rating and Testing of Marine Drilling Riser Couplings, First Edition, May 1984;

(10) API Recommended Practice T-2, Recommended Practice for Qualification Programs for Offshore Production Personnel Who Work with Anti-Pollution Safety Devices, Revised Edition, October 1975;

(11) API Recommended Practice T-3, Recommended Practice for Training and Qualification of Personnel in Well Control Equipment and Techniques for Drilling on Offshore Locations, July 1976;

(12) API Recommended Practice T-6, Recommended Practice for Training and Qualification of Personnel in Well Control Equipment and Techniques for Completion and Workover Operations on Offshore Locations, First Edition, October 1986;

(13) API Recommended Practice 6G, Recommended Practice on Through Flowline (TFL) Pump Down Systems, Third Edition, January 1982;

(14) API Recommended Practice 12R1 (RP12R1), Recommended Practice for Setting, Maintenance, Inspection, Operation and Repair of Tanks in Production Service, Fourth Edition, 1991;

(15) API Recommended Practice 14B, Recommended Practice for Design, Installation, Repair and Operation of Subsurface Safety Valve Systems, Third Edition, January 1, 1990;

(16) API Recommended Practice 14C, Recommended Practice for Analysis, Design, Installation and Testing of Basic Surface Safety Systems on Offshore Production Platforms, Fourth Edition, September 1986, Errata November 1986;

(17) API Recommended Practice 14E, Recommended Practice for Design and Installation of Offshore Production Platform Piping Systems, Fourth Edition, April 1984;

(18) API Recommended Practice 14G, Recommended Practice for Fire Prevention and Control on Open Type Offshore Production Platforms, Second Edition, 1986;

(19) API Recommended Practice 14H, Recommended Practice for Use of Surface Safety Valves and Underwater Safety Valves Offshore, Second Edition, April 1984 and Supplement 1 to the Second Edition for RP 14H, June 1986;

(20) API Recommended Practice 16E, Recommended Practice for Design of Control Systems for Drilling Well Control Equipment, First Edition, October 1, 1990;

(21) API Recommended Practice 17A-87, Recommended Practice for Design and Operation of Subsea Production Systems, First Edition, September 1, 1987;

(22) API Recommended Practice 53, Recommended Practices for Blowout Prevention Equipment Systems for Drilling Wells, Second Edition, May 1984;

(23) API Recommended Practice 521, Guide for Pressure-Relieving and Depressuring Systems, Second Edition, September 1982;

(24) API Recommended Practice 652, Lining of Aboveground Petroleum Storage Tank Bottoms, First Edition, 1991;

(25) API Recommended Practice 750-90, Management of Process Hazards, First Erratum, February 1990;

(26) API Recommended Practice 1102, Recommended Practice for Liquid Petroleum Pipelines Crossing Railroads and Highways, Fifth Edition, November 1981 and Errata;

(27) API Recommended Practice 1110, Recommended Practice for the Pressure Testing of Liquid Petroleum Pipelines, Second Edition, December 1981;

(28) API Recommended Practice 1111, Recommended Practice for Design, Construction, Operation and Maintenance of Offshore Hydrocarbon Pipelines, First Edition, 1976;

(29) API Recommended Practice 2003, Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents, Fourth Edition, March 1982;

(30) API Recommended Practice for Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems, Second Edition (1987) and Supplement 2, March 1989;

(31) API Specification 5L, Specification for Line Pipe, Thirty-Eighth Edition, May 1, 1990;

(32) API Specification 6A, Specification for Wellhead and Christmas Tree Equipment, Sixteenth Edition, October 1, 1989;

(33) API Specification 6D, Specification for Pipeline Valves (Gate, Plug, Ball, and Check Valves), Twentieth Edition, 1991;

(34) API Specification 10, Specification for Materials and Testing for Well Cements, Fifth Edition, 1990;

(35) API Specification 12B, Specification for Bolted Tanks for Storage of Production Liquids, Thirteenth Edition, 1990;

(36) API Specification 12D, Specification for Field Welded Tanks for Storage of Product Liquids, Ninth Edition, January 1982, Supplement 1, March 1983, Supplement 2, May 1985;

(37) API Specification 12F, Specification for Shop Welded Tanks for Storage of Production Liquids, Tenth Edition, June 1, 1989;

(38) API Specification 12P, Specification for Fiberglass Reinforced Tanks, First Edition, 1986;

(39) API Specification 14D, Specification for Wellhead Surface Safety Valves and Underwater Safety Valves for Offshore Service, Seventh Edition, January 1988 and Supplement, August 1989;

(40) API Standard 510, Pressure Vessel Inspection Code: Maintenance, Inspection, Rating, Repair and Alteration, Sixth Edition, June 1989, Erratum September 1989;

(41) API Standard 526, Flanged Steel Safety Relief-Valves, Third Edition, February 1984;

(42) API Standard 620, Design and Construction of Large Welded, Low Pressure Storage Tanks, Eighth Edition, June 1990;

(43) API Standard 650, Welded Steel Tanks for Oil Storage, Eighth Edition, November 1988, Revised 1990;

(44) API Standard 653, Tank Inspection, Repair, Alteration, and Reconstruction, First Edition, 1991, and Supplement 1, January 1992;

(45) API Standard 1104, Welding of Pipelines and Related Facilities, Seventeenth Edition, September 1988 and Errata, June 1989;

(46) API Standard 2000, Venting Atmospheric and Low Pressure Storage Tanks, Third Edition, Revised 1987;

(47) American Society of Mechanical Engineers (ASME), ASME SPPE 1-88, Quality Assurance and Certification of Safety and Pollution Prevention Equipment Used in Offshore Oil and Gas Operations, Addenda SPPE 1A-1988, Addenda SPPE 1B-1989, Addenda SPPE 1D-1990, Special Notice, October 1990;

(48) ASME Boiler and Pressure Vessel Code, Section VIII, "Pressure Vessels Division 1" (1989);

(49) ASME Boiler and Pressure Vessel Code, Section IX, "Qualification Standard for Welding and Brazing Procedures Welders, Brazers and Welding and Brazing Operators" (1989);

(50) American National Standards Institute/American Society of Mechanical Engineers (ANSI/ASME), ANSI/ASME Boiler and Pressure Vessel Code, Section I, Power Boilers including Appendices (1989);

(51) ANSI/ASME Boiler and Pressure Vessel Code, Section Heating Boilers including non-mandatory Appendices A, B, C, D, E, F, H, I, and J and the Guide to Manufacturers Data Report Forms (1989);

(52) ANSI/ASME Boiler and Pressure Vessel Code Section VIII, Pressure Vessel Divisions 1 and 2, including Nonmandatory Appendices (1989);

(53) ANSI B31.1, Pressure Piping Code, Power Piping, and Addenda B31.1a (1989);

(54) ANSI B31.3, Chemical Plant and Petroleum Refinery Piping (1990);

(55) ANSI B31.4, "Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia and Alcohols" (ASME) (1989);

(56) ANSI B36.10M, Welded and Seamless Wrought Steel Pipe (1985);

(57) American Concrete Institute (ACI), ACI Standard 201.2R- 77(82), Guide to Durable Concrete, Sixth Printing (1982);

(58) ACI Standard 222R-89, Corrosion of Metals in Concrete (1989);

(59) ACI Standard 224R-89, Control of Cracking in Concrete Structures (1989);

(60) ACI Standard 318-89/318R-89, Building Code Requirements for Reinforced Concrete and Commentary (1989);

(61) ACI Standard 350R-89, Environmental Engineering Concrete Structures ACI 515R.1R Guide to the Use of Waterproofing, Dampproofing, Protective and Decorative Barrier Systems for Concrete (1989);

(62) ACI Standard 357-R-84, Guide for the Design and Construction of Fixed Offshore Concrete Structures (1989);

(63) ACI Standard 357.1R-85, State-of-the Art Report on Offshore Concrete Structures for the Arctic (1985);

(64) ASTM Specification A333/A333M, "Standard Specification for Seamless and Welded Steel Pipe for Low-Temperature Service" (1988), Revised A-88;

(65) ASTM Specification A381, "Standard Specification for Metal-Arc-Welded Steel Pipe for Use with High Pressure Transmission Systems" (1989);

(66) ASTM Specification A671, "Standard Specification for Electric-Fusion-Welded Steel Pipe for Atmospheric and Lower Temperatures" (1989), Revision A, 1989;

(67) ASTM Specification A672, "Standard Specification for Electric-Fusion-Welded Steel Pipe for High Pressure Service at Moderate Temperatures" (1989), Revision B, 1989;

(68) ASTM Specification A69 1 Rev A, Standard Specification for Carbon and Alloy Steel Pipe, Electric-Fusion Welded for High Pressure Service at High Temperatures (1989);

(69) Manufacturers Standardization Society of the Valve and Fitting Industry (MSS) MSS SP-75, Specification for High-Test Wrought Welding Fittings (1988);

(70) MMS OCS Order No. 2, Drilling Operations, Section 5, Blowout-Preventer (BOP) Equipment Requirements (1988);

(71) National Association of Corrosion Engineers (NACE), NACE RP0175-75, Control of Internal Corrosion in Steel Pipelines and Piping Systems (1975);

(72) NACE RP 0275-75, Application of Organic Coatings to the External Surface of Steel Pipe for Underground Service;

(73) NACE RP 0276-76, Extruded Asphalt Mastic Type Protective Coatings for Underground Pipelines (1976);

(74) NACE RP 0286-86, The Electrical Isolation of Cathodically Protected Pipelines (1986);

(75) NACE RP 06-75 Control of External Corrosion on Offshore Steel Pipelines (1988);

(76) NACE RP 01-69 Recommended Practice for Control of External Corrosion on Underground or Submerged Metallic Piping Systems, Revised 1983;

(77) NACE RP 02-85, Control of External Corrosion on Metallic Buried, Partially Buried or Submerged Liquid Storage Systems (1985);

(78) National Association of Pipe Coating Applicators (NAPCA), NAPCA 3-67-87, External Application Procedures of Hot Applied Coal Tar and Asphalt Enamel Coatings to Steel Pipe (Specifications and Plant Coating Guide, 1983);

(79) National Fire Protection Association (NFPA), NFPA 30-90, Flammable and Combustible Liquids Code (1990);

(80) NFPA 77-88, Recommended Practice on Static Electricity (1988);

(81) NFPA 78-89, Lightening Protection Code (1989);

(82) NFPA Chapter 6, Bulk Plants and Terminals (Flammable and Combustible Liquids Code Handbook, Third Edition, 1990;

(83) Petroleum Equipment Institute (PEI) RP-100-90, Recommended Practice for Installation of Underground Liquid Storage Systems (1990);

(84) Steel Structural Painting Council (SSPC), SSPC Chapter 16.1-82, Coatings for Pipelines and Other Underground Structures (Good Painting Practice), Volume 1, Second Edition, 1982;

(85) Steel Tank Institute, STI-P3 Specification System and Manual for External Corrosion Protection of Underground Steel Storage Tanks (1987);

(86) Underwriters Laboratories Standard 58, Steel Underground Tanks for Flammable and Combustible Liquids, Eighth Edition, August 3, 1990;

(87) Underwriters Laboratories Standard 174689, External Corrosion Protection Systems for Underground Storage Tanks, First Edition, November 7, 1990. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

ARTICLE 2. Financial Responsibility for Oil Discharges.

18 AAC 75.205. APPLICATION FOR APPROVAL.

(a) Subject to the exemptions provided under AS 46.04.050 and (d) of this section,an application for approval of proof of financial responsibility under AS 46.04.040, including an application for renewal of approval under 18 AAC 75.225 must be submitted to the department by the following responsible party:

(1) for an oil terminal facility, by the owner or operator of the facility;

(2) for a vessel transporting liquid bulk oil cargo, by

(A) the charterer, if the vessel is chartered by demise

(leased);

(B) the owner of the vessel, if the agents or employees of the owner retain control and responsibility for the operation of the vessel or barge; or

(C) in any other case, the person with primary operational control;

(3) for an exploration or production facility, whether mobile or fixed, by the operator or one or more lease holders;

(4) for a pipeline facility, by the operator or one or more lease holders; or

(5) for a group of vessel or facility owners or operators who have agreed to pool their resources to provide proof of financial responsibility for each other, by a designated person in the group.

(b) Applications under this section and renewal applications under 18 AAC 75.225 must be made on a form supplied by the department. The following conditions apply, as appropriate, to an application:

(1) an applicant must furnish the department with the appropriate documents listed in the "financial responsibility application and checklist" supplied by the department;

(2) the completed and signed application must be submitted to the department at least 30 days, but no earlier than 90 days before operations are proposed to begin; the department will, in its discretion, expedite its review of an application if circumstances warrant;

(3) if the applicant is an agency of the United States or the State of Alaska, proof of financial responsibility is not required, but the "financial responsibility application

and checklist" must be submitted to the department in accordance with the time frames established under (2) of this subsection;

(4) an applicant may submit a combined application for more than one vessel or facility;

(5) an approval may not be assigned to another person, nor may it be transferred from one vessel or facility to another; an attempted assignment or transfer of an approval voids the approval; and

(6) all forms of proof of financial responsibility must be in effect before operations begin; an approval will not be given on pending coverage.

(c) Applications submitted under this section and renewal applications submitted under 18 AAC 75.225 must be signed upon oath or affirmation as follows:

(1) in the case of a corporation, by an authorized representative responsible for the overall management of the facility or operation, or that person's designee;

(2) in the case of a partnership, by a general partner;

(3) in the case of a sole proprietorship, by the proprietor;

(4) in the case of a municipal, state, federal, or other public facility, by an authorized public official or employee;

(5) in the case of a combined application, by an appropriate representative of each party to the application; and

(6) in the case of a joint venture, by the operator.

(d) The department will, in its discretion, approve an application for an exemption from the proof of financial responsibility requirements of AS 46.04.040(c) if the owner or operator of a vessel that is conducting, or is available only for conducting, an oil discharge response operation submits to the department

(1) a written explanation requesting the exemption, giving details of the time period during which the exemption is requested for each vessel for the oil discharge response operation; and

(2) a completed "financial responsibility application and checklist" form. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.040
AS 46.04.070

18 AAC 75.215. APPLICATIONS SUBMITTED BY FACSIMILE.

The department will, in its discretion, accept an application by facsimile transmission if an unforeseen event prevents submission of the original application within the time frames stated under 18 AAC 75.205(b)(2) or 18 AAC 75.225(b). The completed original of the application must be submitted to the department by registered or certified mail or by courier and must be postmarked or dated by courier within two working days after it was sent by facsimile. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.040
AS 46.04.070

18 AAC 75.225. RENEWALS.

(a) Application for renewal of department approval of proof of financial responsibility must be submitted to the department at least 30 days, but no earlier than 90 days, before the current approval of proof of financial responsibility expires.

(b) An application for renewal must include the information required by 18 AAC 75.205(b)(1). (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.040
AS 46.04.070

18 AAC 75.235. AMOUNT AND EVIDENCE OF FINANCIAL RESPONSIBILITY.

(a) Each vessel or facility must be specifically covered by an approved form of financial responsibility. An applicant under 18 AAC 75.205 or 18 AAC 75.225 must demonstrate financial responsibility to respond in damages for claims covered by AS 46.04.040(1) in the amount required by AS 46.04.040(a) -- (e).

(b) The required amount of financial responsibility does not increase with increasing numbers of vessels or facilities operated by the same applicant. An application covering multiple vessels or facilities must show proof of financial responsibility in an amount equal to the greatest applicable amount prescribed by AS 46.04.040(a) -- (e). The department will, in its discretion, approve the proof of financial responsibility as being applicable to all combined operations if each separate operation is named as being specifically covered by the proof submitted.

(c) The applicant may add an owned, operated, leased, or chartered vessel or facility to its proof of financial responsibility by submitting a letter to the department requesting an amendment to the application and including documents that verify to the department's satisfaction that the additional operation is covered by the current approved proof of financial responsibility.

(d) The applicant may delete an owned, operated, leased, or chartered vessel or facility from its proof of financial responsibility by submitting a letter to the department requesting an amendment to the application and including documents that verify to the department's satisfaction that the vessel or facility is no longer covered by the current approved proof of financial responsibility.

(e) In satisfying proof of financial responsibility requirements for a combined application, a guarantor or insurer is responsible only for the amount applicable to the vessel or facility that discharges oil and not the amount applicable to another vessel or facility listed on the application.

(f) If a vessel or facility subject to AS 46.04.040 discharges oil and the department determines that a claim has been or is likely to be presented as a result of the discharge and that payment of the claim will reduce the owner's or operator's demonstrated financial responsibility below that required by AS 46.04.040(a) -- (e), the department will, in its discretion, require the owner or operator to demonstrate an additional amount of financial responsibility equal to the amount the department determines might be paid as a result of the claim.

(g) If the applicant fails to comply with the requirement imposed under (f) of this section to demonstrate an additional amount of financial responsibility, the department will, in its discretion, provide the owner or operator with 10 days' notice of the department's intent to revoke its approval of the proof of financial responsibility.

(h) An applicant may request a review of the department's decision under (g) of this section to revoke its approval, using the procedures set out at 18 AAC 75.490(e) -- (g). For the purposes of judicial review, the department's decision following a review under this subsection is final. The requirement of (f) of this section is not stayed during the pendency of a review.

(i) Proof of financial responsibility may be demonstrated by one or any combination of the mechanisms listed in AS 46.04.040(e), as approved by the department.

(j) An insurer or surety shall respond to damages covered by AS 46.04.040(i), but only with respect to the stated limit of liability contained in an insurance policy or surety submitted as proof of financial responsibility and approved under this chapter. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.040
AS 46.04.070

18 AAC 75.240. CERTIFICATE OF PROOF OF FINANCIAL RESPONSIBILITY.

(a) If the department approves a proof of financial responsibility, it will issue a certificate to the applicant stating that the proof of financial responsibility requirements have been met for each vessel or facility identified in the application.

(b) The original certificate, or a copy of the original certificate that is certified by the applicant to be a true copy of the original certificate, must be readily available for inspection

(1) at each covered facility or pipeline; or

(2) on each covered vessel while it is in state waters; the certificate must be shown to the owner or operator of an oil terminal facility before loading or unloading liquid bulk oil cargo.

(c) The effective date and the expiration date, as determined under AS 46.04.040(f), will be clearly marked on the certificate. For certificates that are effective for more than one year when issued, the continuing effectiveness of the form of financial responsibility that was approved by the department must be verified annually by submitting to the department, not more than 90 days and not less than 30 days before the anniversary of the certificate's effective date, the affidavit of a responsible party, as specified under 18 AAC 75.205(a), stating that the form of financial responsibility remains in effect and stating the date on which it will expire.

(d) If the owner or operator to whom the certificate was issued ceases to be the responsible party under 18 AAC 75.205(a), that person shall immediately return the original certificate to the department with written information regarding the new owner or operator's name and address and the date of the change in ownership or operational control so that a new certificate can be issued.

(e) A certificate is void and subject to immediate revocation by the department, without prior notice, if

(1) it contains erasures or is altered in any way, except for erasures, errors, or alterations made by the department in issuing the certificate;

(2) the person to whom the certificate was issued

(A) is no longer the responsible party under 18 AAC 75.205(a) for the facility or vessel identified on the certificate;

(B) fails to furnish acceptable proof of the continuing effectiveness of a form of financial responsibility as required under (c) of this section or in support of an application for renewal; or

(C) permits the cancellation or termination of the form of financial responsibility upon which issuance of the certificate was based.

(f) The department will give a certificate holder 10 days' written notice of the department's intent to revoke a certificate under AS 46.04.040(h). The notice will include an effective date for and an explanation of the revocation.

(g) The applicant may request a review of the department's action or decision issued under (e) or (f) of this section, using the procedures set out at 18 AAC 75.490(c) -- (g). For the purposes of judicial review, the department's decision following a review under this subsection is final. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.040
AS 46.04.070

18 AAC 75.245. SELF-INSURANCE.

(a) In order to demonstrate financial responsibility through self-insurance, an applicant shall maintain in the United States, working capital and net worth, each in an amount at least equal to the applicable amount required under AS 46.04.040(a) -- (c), or a lesser amount necessary to supplement other forms of proof which, when combined, are at least equal to the applicable amount required under AS 46.04.040(a) -- (c). In determining working capital or net worth, the department will consider all current contractual requirements to which the applicant is bound. For the purposes of this subsection,

(1) "working capital" means the amount of current assets located in the United States, less all worldwide current liabilities; and

(2) "net worth" means the amount of all assets located in the United States, less all worldwide liabilities.

(b) The proof of financial responsibility required under (a) of this section must be supported by the following, which must be submitted with the application for approval, and which must be later supplemented as described:

(1) annual audited financial statements for consolidated holdings in the United States for the fiscal year ending immediately before each initial or renewal application, certified by an independent certified public accountant;

(2) subsequent quarterly affidavits attesting that the amounts of working capital and net worth are each equal to the applicable amount required by AS 46.04.040(a) -- (c); and

(3) any additional information the department considers necessary.

(c) Instead of the information required under (b) of this section, a self-insuring applicant may provide the department with a copy of the applicant's Form 10K as filed with the United States Securities and Exchange Commission for the fiscal year preceding application or renewal, and each Form 10Q subsequently filed with that commission, subject to the following conditions:

(1) if the applicant's fiscal year ended six months or more before initial application, the applicant's Form 10Q for the first quarter of the current fiscal year must also be submitted with the initial application; and

(2) if the applicant's United States Securities and Exchange Commission forms do not specify what portion of its working capital and net worth are located in the United States, each form must be supplemented by an affidavit from the applicant's chief financial officer or treasurer, or a sworn statement by the certified public accountant who prepared the form, certifying that the working capital and net worth located in the United States are each in an amount equal to the applicable amount required under AS 46.04.040(a) -- (c).

(d) Instead of the affidavit or sworn statement required under (b)(2) and (c)(2) of this section, the applicant may file a quarterly affidavit showing that sufficient liquid assets and cash flow, other than those assets with a high exposure to damage in a

pollution incident, are immediately available to respond to claims in the required self-insured amount without placing the applicant in an insolvent position.

(e) Instead of the information required under (b) and (c) of this section, the applicant may submit annually to the department a copy of its Form No. 6 as filed with the Federal Energy Regulatory Commission for each fiscal year, starting with the fiscal year that ended immediately preceding application.

(f) The affidavits required under (b)(2), (c)(2), and (d) of this section must be signed as follows:

(1) in the case of a corporation, by the treasurer or chief financial officer;

(2) in the case of a partnership, by a general partner;

(3) in the case of a sole proprietorship, by the proprietor;

(4) in the case of a municipal, state, federal, or other public facility, by an authorized public official or employee; and

(5) in the case of a combined application, by a representative of each party to the application.

(g) A self-insurer shall notify the department within 10 days after the self-insurer knows, or has reason to believe, that the amount of the self-insurer's working capital or net worth has fallen below the applicable amount required under AS 46.04.040(a) -- (c) or the lesser amount necessary to supplement other forms of proof.

(h) Unless it is earlier replaced by another form of financial responsibility approved by the department, termination or cancellation of self-insurance that serves as proof of financial responsibility under AS 46.04.040 may not become effective until 60 days after the self-insurer notifies the department in writing, by certified mail, at its office in Juneau, Alaska. The self-insurer remains liable for any discharge occurring before the effective date of termination or cancellation.

(i) The department will, in its discretion, revoke a certificate issued under 18 AAC 75.240 approving self-insurance as proof of financial responsibility if any document required under this section is not submitted on or before the following due date:

(1) a Form 10K is due within three calendar months after the end of the applicant's fiscal year;

(2) a Form 10Q is due 45 days after the quarter ends;

(3) a Form No. 6 is due at the same time it is required to be filed with the Federal Energy Regulatory Commission, but no later than three calendar months after the end of the applicant's fiscal year;

(4) an annual audited financial statement is due within three calendar months after the end of the applicant's fiscal year; and

(5) a quarterly affidavit is due 30 days after the quarter ends.

(j) Upon written request, the department will, in its discretion, grant a reasonable extension of a time limit set in (i) of this section if the request is received at least 15 days before the document is due. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.040
AS 46.04.070

18 AAC 75.250. INSURANCE.

(a) An applicant may demonstrate financial responsibility with insurance for the applicable amount required under AS 46.04.040(a) -- (c), in full or in part. The applicant shall provide proof of insurance issued by an insurer who is either authorized to sell insurance in Alaska under a certificate of authority issued by the director of the division

of insurance of the Department of Commerce and Economic Development or who is an unauthorized insurer listed by the division of insurance as meeting the minimum trust or capital and surplus requirements of AS 21.34.040(c). Proof of insurance may be provided by a binder, by a certificate of insurance acceptable in form to the department, or by a copy of the policy. If a binder or certificate of insurance is submitted to meet the requirements of this subsection, a copy of the underlying insurance policy must also be provided to the department within 90 days.

(b) If a policy of insurance, certificate, or binder is submitted, it must include an endorsement with the following, or substantially similar language:

> "Any other provision of this policy notwithstanding: (1) this policy insures against any liability the insured may incur under Alaska Statute 46.04.040(i) or any provision cited in it as a result of an unlawful discharge of oil within or affecting land or waters within the territorial jurisdiction of the State of Alaska; however, the insurer's liability does not exceed the limits of coverage set out in Section (Article or Clause) of this policy, subject to any deductible as specifically set out in Section (Article or Clause) of this policy (binder, certificate); (2) the insurer agrees that any final judgment against the insured for damages under AS 46.04.040(i) or any provision cited in it resulting from an unlawful discharge of oil from or by any vessel or facility named in this policy may be enforced or executed in Alaska state courts, directly against the insurer, subject to the limits of coverage in this policy; the insurer will be bound by such a judgment as if the judgment were against the insurer; any person obtaining such a judgment against the insured is expressly made a third-party beneficiary of this provision; and (3) termination or cancellation of this policy, insofar as it serves as proof of the insured's financial responsibility under AS 46.04.040, shall not become effective until 60 days after notice with the exception for nonpayment of premium which will require 30 days notice, in writing has been mailed, prepaid and certified, by the insurer to the insured and to the Alaska Department of Environmental Conservation at its office in Juneau, Alaska; however, this policy shall apply to all claims arising from a discharge occurring during the period covered by the policy and before the effective date of the termination or cancellation."

(c) An applicant may submit a claims made policy if it contains

(1) an extended reporting period of at least six months; and

(2) the endorsement language required by (b) of this section, with the following added to the end of the endorsement: "and made to the insurer during the policy period or the extended reporting period."

(d) A deductible provision in any policy of insurance, binder, or certificate is acceptable if

(1) the applicant demonstrates supplemental coverage for the amount of the deductible by means of other acceptable insurance, surety, guaranty, self-insurance, letter of credit, or other proof of financial responsibility approved by the department; or

(2) the deductible provision provides for a loss reimbursement plan that contains language guaranteeing that the insurer will be responsible for the payment of all claims on a first dollar basis, without waiting for the insured to pay the deductible.

(e) For purposes of this section "claims made policy" means a policy of liability insurance that covers claims arising out of a discharge occurring after a specified

retroactive date but before the end of the policy period and first made to the insurer during the policy period or extended reporting period. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.040
AS 46.04.070

18 AAC 75.255. SURETY.

(a) An applicant may demonstrate financial responsibility with a contract of surety, in full or in part, for the applicable amount required under AS 46.04.040(a) -- (c). The applicant shall submit the contract of surety to the department on forms supplied by the department.

(b) The issuer of the contract of surety must

(1) be registered to do business in Alaska;

(2) possess a current certificate of authority to do business in the United States under 31 C.F.R. 223; and

(3) possess an underwriting limitation of risk at least equal to the amount of the bond, or in a lesser amount necessary to supplement other forms of proof of financial responsibility.

(c) An applicant may demonstrate financial responsibility by a contract of surety for an amount equal to the deductible of an insurance policy submitted under 18 AAC 75.250 or in combination with another means of proof.

(d) Termination or cancellation of a contract of surety that serves as proof of financial responsibility under AS 46.04.040 may not become effective until 60 days after the surety notifies the department in writing, by certified mail, at its office in Juneau, Alaska. The surety remains liable for any discharge occurring before the effective date of termination or cancellation. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.040
AS 46.04.070

18 AAC 75.260. GUARANTY.

(a) An applicant may demonstrate financial responsibility with a contract of guaranty, in full or in part, for the applicable amount required under AS 46.04.040(a) -- (c). The applicant shall submit the contract of guaranty to the department, using a form supplied by the department.

(b) The issuer of the guaranty contract must meet the financial and reporting requirements of 18 AAC 75.245.

(c) Termination or cancellation of a guaranty that serves as proof of financial responsibility under AS 46.04.040 may not become effective until 60 days after the guarantor notifies the department in writing, by certified mail, at its office in Juneau, Alaska. The guarantor remains liable for any discharge occurring before the effective date of termination or cancellation. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.040
AS 46.04.070

18 AAC 75.265. LETTERS OF CREDIT.

(a) An applicant may demonstrate financial responsibility with a letter of credit, in favor of the State of Alaska, for the applicable amount required under AS 46.04.040(a) -- (c), in full or in part. The letter of credit

(1) must be irrevocable for a period of not less than one year on the part of the issuer; in addition, the letter must provide that it will be automatically extended for one year unless the department and the applicant are notified in writing at least 90 days before expiration of its stated term that the letter will not be renewed; however, if a vessel is to be used in state waters for less than one year, the letter of credit must cover the period that the vessel is to be used in state waters plus 30 days;

(2) must be irrevocable until satisfaction of a judgment or of a claim against the applicant under AS 46.04.040(i) or the provisions cited in it which results from a discharge occurring during its term, subject to the limit of credit;

(3) must be a standby letter of credit to respond specifically to a claim under AS 46.04.040(i) or the provisions cited in it, subject to the limit of credit;

(4) may not be used as collateral nor be drawn upon by the applicant except to respond to a claim under AS 46.04.040(i) or the provisions cited in it for as long as the letter of credit is used by the applicant as proof of financial responsibility under AS 46.04.040;

(5) must be issued by a financial institution that has authority to issue letters of credit, and that is regulated and examined by state and federal banking agencies; and

(6) must state an effective date and an expiration date, and must be effective on or before the approval date of proof of financial responsibility.

(b) The issuing bank shall pay upon presentation by the State of Alaska of a draft or other document as specified in the letter of credit and may not make determinations of fact or law that might be at issue between the responsible party and the department. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.040
AS 46.04.070

18 AAC 75.270. OTHER PROOF OF FINANCIAL RESPONSIBILITY.

(a) An applicant may demonstrate financial responsibility for the applicable amount required under AS 46.04.040(a) -- (c), in full or in part, with a contract of indemnity or with insurance issued by a group of insureds who have agreed to cover the pollution risks of the group's members, if approved by the department.

(b) Subject to AS 46.04.040(e), the department will, in its discretion, approve a Protection and Indemnity (P&I) club or an insurance syndicate contract of indemnification as demonstrating financial responsibility if

(1) a statement of indemnification issued by the P&I club or insurance syndicate contains an endorsement that meets the requirements of 18 AAC 75.250(b);

(2) the P&I club or insurance syndicate has the financial solvency and a favorable history of claim handling to meet the obligations contained in the contract of indemnity; and

(3) the P&I club or insurance syndicate appoints an agent for service of process in the state as required under AS 46.04.040(e).

(c) The department will, in its discretion, approve a P&I club or insurance syndicate that does not agree to be subject to direct court action in Alaska or that does not agree

to appoint an agent for service of process in the state if the requirements of AS 46.04.040(l) are met. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.040
AS 46.04.070

18 AAC 75.275. SERVICE OF PROCESS.

An agent designated for service of process under AS 46.04.040(e) must be a resident of the state or a corporation authorized to do business in the state. If no designation is made and filed, or if process cannot be served in Alaska upon the designated agent, process may be served upon the commissioner. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.040
AS 46.04.070

18 AAC 75.280. CLASSIFICATION AS AN OIL TERMINAL FACILITY.

(a) If a vessel is to operate as an oil terminal facility as defined at AS 46.04.900, the owner or operator shall submit a written request for classification of the vessel as an oil terminal facility to the department. The request for classification must include the

(1) name of the owner or operator;

(2) vessel name and official number;

(3) oil storage capacity of the vessel;

(4) type of product carried as cargo; and

(5) period of time during which the classification will apply.

(b) Upon receipt of a request under (a) of this section, the department will issue a certificate to the vessel, classifying the vessel as an oil terminal facility for the prescribed period.

(c) If the capacity of the vessel for which classification is requested is more than 10,000 barrels of noncrude oil, the owner or operator must meet the financial responsibility requirements of AS 46.04.040(a) and the oil discharge prevention and contingency plan requirements of AS 46.04.030. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.04.070
AS 46.04.040 AS 46.04.900
AS 46.04.050

18 AAC 75.285. OIL TERMINAL FACILITIES.

(a) An oil terminal facility may not load or transfer a liquid bulk oil product to a vessel if the oil product is declared as liquid bulk cargo, unless the vessel provides proof to the terminal operator that the vessel has a current, valid certificate of proof of financial responsibility issued under 18 AAC 75.205 -- 18 AAC 75.290, an exemption under 18 AAC 75.205(d), or has a capacity of less than 10,000 barrels and has a certificate of classification as an oil terminal facility issued under 18 AAC 75.280.

(b) For a vessel that has frequent transactions at an oil terminal facility and is known by the facility operator, the owner or operator of that oil terminal facility may accept verbal confirmation from the vessel's master that the vessel has the required certificate of financial responsibility on board.

(c) If a vessel operator fails or refuses to provide proof of a current, valid certificate of proof of financial responsibility issued under 18 AAC 75.205 -- 18 AAC 75.290, an exemption under 18 AAC 75.205(d), or a certificate of classification as an oil terminal facility issued under 18 AAC 75.280 as required under (a) of this section, the owner or operator of an oil terminal facility shall notify the department's appropriate regional or district office of that failure or refusal by telephone or facsimile on the first working day. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.040
AS 46.04.070

18 AAC 75.290. ENFORCEMENT.

If a person required to provide proof of financial responsibility under AS 46.04.040 and 18 AAC 75.205 -- 18 AAC 75.290 fails or refuses to do so, the department will, in its discretion,

(1) seek civil assessments and costs under AS 46.03.760 or other appropriate statutes for each separate violation of AS 46.04.040 or of 18 AAC 75.205 -- 18 AAC 75.290;

(2) take action to halt the operation of a vessel or facility that is not in compliance with AS 46.04.040 or 18 AAC 75.205 -- 18 AAC 75.290;

(3) take action to deny entry to a vessel to the navigable waters of the state;

(4) take action to detain a vessel that does not produce, upon the department's request, a current, valid certificate of proof of financial responsibility issued under 18 AAC 75.205 -- 18 AAC 75.290; or

(5) take such other and further action as may be warranted by the circumstances. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.04.050
AS 46.03.760 AS 46.04.070
AS 46.03.850 AS 46.04.900
AS 46.04.040

ARTICLE 3. Discharge Reporting, Cleanup, and Disposal.

18 AAC 75.300. DISCHARGE NOTIFICATION REQUIRED.

(a) Subject to (b) of this section, a person in charge of a facility or operation shall notify the department of a discharge of any hazardous substance at or from the facility or operation as follows:

(1) as soon as the person has knowledge of

(A) any discharge of a hazardous substance other than oil;

(B) any discharge of oil to water; or

(C) any discharge, including a cumulative discharge, of oil in excess of 55 gallons solely to land outside an impermeable secondary containment area or structure; and

(2) within 48 hours after the person has knowledge of any discharge, including a cumulative discharge, of oil solely to land

(A) in excess of 10 gallons, but 55 gallons or less; or

(B) in excess of 55 gallons, if it is the result of the escape or release of oil from its original storage tank, pipeline, or other immediate container into an impermeable secondary containment area or structure.

(b) A person in charge of a facility or operation shall maintain, and shall provide to the department on a monthly basis, a written record of any discharge, including a cumulative discharge, of oil solely to land from one gallon to 10 gallons.

(c) The information required by (a) and (b) of this section must include, to the extent known, the information required by 18 AAC 75.307(c).

(d) If a person is a person in charge solely by operation of 18 AAC 75.990(47)(C), the requirements of this section are met if notice of the discharge is in fact given by another person in charge. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.04.070
AS 46.03.740 AS 46.09.010
AS 46.03.755

18 AAC 75.307. REPORTS REQUIRED.

(a) After receiving notice of a discharge, the department will, in its discretion, require interim reports until cleanup is completed.

(b) For a discharge covered under 18 AAC 75.300(a), a written final report must be submitted within 15 days after cleanup is completed or, if no cleanup occurs, within 15 days after the discharge. The report must be submitted to the appropriate district or regional office of the department.

(c) Written reports required by this section and written notifications required under 18 AAC 75.300 must contain, as applicable

(1) the date and time of the discharge;

(2) the location of the discharge;

(3) the name of the facility or vessel;

(4) the name, mailing address, and telephone number of

(A) the person or persons causing or responsible for the discharge; and

(B) the owner and the operator of the facility or vessel;

(5) the type and amount of each hazardous substance discharged;

(6) the cause of the discharge;

(7) a description of any environmental damage caused by the discharge or containment, to the extent the damage can be identified;

(8) a description of cleanup actions taken;

(9) the estimated amount of

(A) hazardous substance cleaned up; and

(B) hazardous waste generated;

(10) the date, location, and method of ultimate disposal of the hazardous substance and any contaminated materials;

(11) a description of actions being taken to prevent recurrence of the discharge; and

(12) other information the department requires to fully assess the cause and impact of the discharge. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.04.070
AS 46.03.740 AS 46.09.010
AS 46.03.755

18 AAC 75.317. POSTING OF INFORMATION REQUIRED.

(a) A discharge notification placard provided or approved by the department, which includes telephone numbers of department offices, must be displayed in conspicuous locations on

(1) a tank truck containing more than 500 gallons of a hazardous substance, in addition to that required to operate the vehicle;

(2) a tugboat, tank vessel, oil barge, tow boat, or any other vessel transporting a hazardous substance as cargo in state waters;

(3) a vehicle carrying or towing a hazardous substance other than oil, or more than 500 gallons of oil, as cargo off-road over frozen or unfrozen ground; and

(4) a facility that has a total above-ground or underground storage capacity in excess of 1,000 gallons of a hazardous substance.

(b) A person who wants to post a substitute for a placard provided by the department shall submit the proposed placard for department approval. A placard approved under this subsection must contain the words: "form approved by the Alaska Department of Environmental Conservation." (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.03.755
AS 46.03.740 AS 46.09.010

18 AAC 75.319. DISPOSAL OF HAZARDOUS SUBSTANCES.

Prior department approval is required for the ultimate disposal of a hazardous substance and of soil, cleanup materials, or other substances contaminated with a hazardous substance. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.04.070
AS 46.03.745 AS 46.09.020
AS 46.04.020

18 AAC 75.327. CLEANUP.

(a) Immediately upon becoming aware of a discharge of a hazardous substance to land or waters of the state, any person responsible for that discharge shall contain, clean up, and dispose of the material collected, using methods for which approval has been given by the department. The discharge must be cleaned up to the department's satisfaction.

(b) Upon request the department, in consultation with federal officials, as appropriate, will waive the requirements of (a) of this section if the department determines that it is technically not feasible to contain or clean up the discharge or that the containment or cleanup effort would result in greater environmental damage than the discharge itself. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.04.020
AS 46.03.740 AS 46.04.070
AS 46.03.745 AS 46.09.020

18 AAC 75.337. ADEQUACY OF CLEANUP.

(a) Subject to the provisions of AS 46.04.020 and AS 46.09.020, if the department finds that cleanup efforts are inadequate, the department will, in its discretion,

(1) order the person engaged in cleanup operations to use additional measures or to cease cleanup activities;

(2) authorize other agents to begin cleanup activities; or

(3) adopt a combination of these actions.

(b) Cleanup efforts will be considered inadequate if

(1) containment equipment is not deployed and used to intercept and concentrate the discharge in its pattern of movement, unless environmental conditions exceed the operational limitations of the equipment;

(2) exclusion equipment is not deployed and used to protect sensitive environmental zones, unless environmental conditions exceed the limitations of the equipment;

(3) the area affected by the discharge is increasing at an avoidable rate despite containment and removal activities, unless environmental conditions exceed the limitations of the equipment, or unless immediate containment would pose greater environmental risks than to allow the discharge to temporarily spread;

(4) the containment and exclusion equipment being used is not functioning effectively because of existing weather or oceanographic conditions, and other containment and exclusion equipment is reasonably available which can function effectively in existing weather and oceanographic conditions;

(5) containment, exclusion, and lightering equipment is not deployed and operational in accordance with the procedures specified in an applicable oil discharge prevention and contingency plan;

(6) major items of cleanup equipment, including booms, skimmers, lightering pumps, sorbent, and storage containers, are not operational, or are not operating adequately; or

(7) available personnel, equipment, sorbent, or supplies are inappropriate or are being unused or mismanaged, or additional personnel, equipment, sorbent, or supplies are required, but not being provided. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.04.020
AS 46.03.740 AS 46.04.070
AS 46.03.745 AS 46.09.020

18 AAC 75.347. INTERFERENCE WITH CLEANUP PROHIBITED.

No person may interfere with, hinder, or obstruct oil or hazardous substance discharge cleanup operations conducted under this chapter. This prohibition does not apply to the U.S. Coast Guard or to the U.S. Environmental Protection Agency. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.020
AS 46.09.020

18 AAC 75.357. LOCAL CONTROL.

Subject to the provisions of AS 29.35.020, AS 46.04.110, and AS 46.09.060, nothing in this chapter preempts local control as stringent as, or more stringent than the requirements of 18 AAC 75.300 -- 18 AAC 75.347, consistent with a regional master plan prepared by the department under AS 46.04.210. (Eff. 5/14/92, Register 122)

Authority: AS 29.35.020 AS 46.04.210
AS 46.03.020 AS 46.09.060
AS 46.04.110

18 AAC 75.370. USE IMMUNITY.

In any criminal action for the discharge, information given under 18 AAC 75.300 -- 18 AAC 75.307, or information directly obtained through the exploitation of a notification

or report regarding the discharge will not be used against any natural person who provides the notification or report. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.755

ARTICLE 4. Oil Discharge Prevention and Contingency Plans.

18 AAC 75.400. APPLICABILITY.

(a) A person who is subject to AS 46.04.030 must file an application for approval of an oil discharge prevention and contingency plan as required under 18 AAC 75.400 -- 18 AAC 75.420 and meet the applicable requirements of 18 AAC 75.425 -- 18 AAC 75.495. The application must be made

(1) for an oil terminal facility, by the owner or operator of the facility;

(2) for a tank vessel, oil barge, or any other vessel transporting liquid bulk oil cargo, by

(A) the charterer, if the vessel or barge is chartered by demise (leased);

(B) the operator of the vessel, as defined at AS 46.04.900;

(C) the owner of the vessel or barge, if the agents or employees of the owner retain control and responsibility for the operation of the vessel or barge; or

(D) in any other case, the person with primary operational control;

(3) for an exploration or production facility, whether mobile or fixed, by the lease holder or the operator; or

(4) for a pipeline, by the lease holder or the operator.

(b) The department will, in its discretion, exempt from the requirements of AS 46.04.030(c), a vessel that is conducting, or is available only for conducting, an oil discharge response operation. A person seeking an exemption under this subsection must apply on a form supplied by the department. The department will approve or deny the request for exemption within 10 days after it receives an application. In an emergency response to an actual discharge, a person seeking an exemption may make a verbal request, and the department will, in its discretion, issue a verbal approval. The department will confirm a verbal approval in writing, stating the period during which the approval is valid.

(c) The owner or operator of an oil terminal facility that is subject to the requirements of AS 46.04.030 and 18 AAC 75.400 -- 18 AAC 75.495 may apply for an exemption to those requirements upon proof to the department that the effective storage capacity of the facility has been reduced below the amounts set out in AS 46.04.050. For purposes of reducing effective storage capacity, tanks and associated piping must be emptied and rendered unusable to the department's satisfaction. Tanks taken out of service must be clearly posted with a placard prohibiting refilling of the tank without department approval. Before reactivation of a tank that has been disabled for the purposes of an exemption under this subsection, the owner or operator must notify the department and, if necessary, must file a new application for approval of an oil discharge prevention and contingency plan. The department will conduct inspections as necessary to ensure compliance with this subsection. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.04.050
AS 46.04.030 AS 46.04.070

18 AAC 75.405. PRE-APPLICATION NOTIFICATION AND CONSULTATION.

(a) At least 60 days before submitting an application for approval of a new oil discharge prevention and contingency plan under 18 AAC 75.410 or for renewal of approval under 18 AAC 75.420, the applicant must notify the appropriate regional office of the department of its intent to submit. The department will determine the number of copies of the plan that the applicant will be required to submit to the department.

(b) The applicant may consult with the department to ensure that the application meets the requirements of 18 AAC 75.410 and to discuss the contents of the proposed plans. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.04.050
AS 46.04.030 AS 46.04.070

18 AAC 75.410. APPLICATION FOR APPROVAL.

(a) An application for approval must be delivered to the department's regional office in the primary region of operation for which the plan was prepared. The application for approval must include a completed application for approval, on a form supplied by the department and the number of copies of the plan determined under 18 AAC 75.405(a). The department will, in its discretion, require the submission to it of additional copies of the plan and will notify the applicant of the need for additional copies within 10 days after the plan is submitted to it. In addition, the applicant is responsible for providing copies of the plan, upon request, to resource agencies, coastal districts, regional citizens' advisory councils, and other persons as directed by the department under 18 AAC 75.455.

(b) The application for approval must include

(1) the applicant's name, address, and telephone number;

(2) the name, location, and type of facility or operation covered by the plan;

(3) for a vessel, the vessel's name, official number, country of registry, the name and address of the owner, and the name and address of the operator;

(4) the scheduled date for the operations covered by the plan to begin; and

(5) any other information required on the application form that is applicable to the facility or operation.

(c) The department will review an application submitted under this section using the procedures set out at 18 AAC 75.455 and will issue its decision under 18 AAC 75.460. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.412. TRANSITIONAL PROVISIONS FOR REVIEW OF PLANS APPROVED BEFORE MAY 14, 1992.

(a) In order to comply with the requirements of 18 AAC 75.400 -- 18 AAC 75.495, an owner or operator of a facility or vessel operating under an oil discharge prevention and contingency plan approved by the department before May 14, 1992 must amend that plan, as necessary, and submit it, along with an application for approval on a form supplied by the department, to the appropriate regional office on or before August 12, 1992.

(b) If an owner or operator submits an application for approval of an amended plan in accordance with (a) of this section and agrees immediately to begin operating the

facility or vessel or conducting a spill response under those provisions of the amended plan that would result in increased spill prevention or spill response capability, a plan that was approved before May 14, 1992 will continue to be considered approved for the purposes of AS 46.04.020 pending the department's review of and decision on the application and amended plan, unless the department determines otherwise with respect to a particular plan.

(c) If approval for a plan that was approved before May 14, 1992 will expire before the department's decision on the application and amended plan will be issued, the applicant may request an extension of the plan's expiration date. The department will, in its discretion, grant an extension of a plan's expiration date upon the applicant's agreement to operate the facility or vessel under the provisions of the amended plan submitted for approval under (a) of this section that would result in increased spill prevention or spill response capability.

(d) The department will use the procedures set out at 18 AAC 75.455 to review an application for approval of an amended plan under (a) of this section. However, notwithstanding any provision of 18 AAC 75.455(a) to the contrary, the timing by a regional office of the determination of whether an application and amended plan are sufficient for public review will be scheduled, based upon the relative priority of review of a particular plan as compared to the priorities assigned to all amended plans submitted to that regional office.

(e) The department's decision on an application for approval of an amended plan submitted under (a) of this section will be made under 18 AAC 75.460. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.415. APPLICATION FOR AMENDMENT.

(a) Subject to (b) of this section, before a change to an oil discharge prevention and contingency plan that has been approved under 18 AAC 75.400 -- 18 AAC 75.495 may take effect, the plan holder must obtain approval from the department for an amendment to the plan. An application for approval of an amendment must be submitted to the appropriate regional office on a form supplied by the department, accompanied by the number of amended plans or plan amendments determined under 18 AAC 75.405(a). The department will use the procedures set out at 18 AAC 75.455 to review a plan amendment, unless it is a routine plan update under (b) of this section, adds a vessel under (c) of this section, or otherwise that does not diminish the plan holder's ability to respond to an oil discharge.

(b) A routine plan update must be submitted to the department and to the applicable resource agencies within five days after the date of the proposed change. Routine plan updates include

(1) deletions to the list of vessels operating under the approved plan;

(2) revisions to the list of names, addresses, or telephone numbers of spill command and response personnel; and

(3) revisions to training procedures or course work requirements that do not reduce the amount or quality of training required by this chapter.

(c) An application for approval of a plan amendment to allow the addition of a vessel to operate under an approved plan must include the information required by 18 AAC 75.425(e)(1)(H) and 18 AAC 75.425(e)(3)(A)(iii), (iv), (v), (vii), and (viii). Plan

amendments for the addition of vessels must be submitted at least five days before operation in state waters. The department will review the application and issue a written decision within five days after receiving a proposed plan amendment under this subsection if the department determines that the addition of vessels will not diminish the plan holder's ability to respond to an oil discharge. A plan amendment under this subsection that might diminish the plan holder's ability to respond to an oil discharge will be reviewed under 18 AAC 75.455.

(d) If the department determines that a proposed plan amendment submitted under (b) of this section will diminish the plan holder's ability to respond to an oil discharge, the department will notify the plan holder within 10 days after receipt of the amendment that it will be reviewed under 18 AAC 75.455. If the department determines that a proposed plan amendment will not diminish the plan holder's ability to respond to an oil discharge, the department will review the plan amendment and issue a written decision within 30 days after receiving it.

(e) The plan holder shall notify and, upon request, send a copy of any proposed plan amendment or update submitted under this section to the Department of Fish and Game, the Department of Natural Resources, affected coastal districts and regional citizens advisory councils, and other persons as directed by the department. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.420. APPLICATION FOR RENEWAL.

(a) A plan holder must apply to the appropriate regional office for renewal of the department's plan approval, using a form supplied by the department, sufficiently in advance of expiration of the plan to permit department review before the plan approval expires.

(b) A change in ownership of a facility or operation requires an application for renewal of the department's approval of the plan.

(c) If no change will be made in the plan when it is renewed, a copy of the original plan need not accompany the application and may be incorporated by reference on the renewal application form. In all other cases, the number of amended plans or plan amendments determined under 18 AAC 75.405(a) must accompany the application for renewal.

(d) If the department determines that the change in ownership of a facility or operation will not diminish the plan holder's ability to respond to an oil discharge, the department will review and issue a written decision within 30 days after receiving an application for renewal.

(e) Except as provided in (d) of this section, an application for renewal will be reviewed under the provisions of 18 AAC 75.455. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.425. OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN CONTENTS.

(a) An oil discharge prevention and contingency plan submitted for approval under 18 AAC 75.400 -- 18 AAC 75.495 must be in a form that is usable as a working plan for oil discharge prevention, control, containment, cleanup, and disposal. A plan must contain enough information, analyses, supporting data, and documentation to demonstrate the plan holder's ability to meet the requirements of AS 46.04.030 and 18 AAC 75.400 -- 18 AAC 75.495.

(b) The plan for a facility comprised of multiple operations as described at 18 AAC 75.442 must describe, for each category of operation at the facility, the appropriate response measures to meet the applicable portion of the response planning standard.

(c) The submitted plan must be accompanied by a cover page or promulgation letter that includes

(1) the name of the plan holder, and the covered vessel, barge, facility, or operation, followed by the words "Oil Discharge Prevention and Contingency Plan";

(2) the date of the plan; and

(3) a statement, signed by a person with appropriate authority, committing the resources necessary to implement the plan.

(d) The plan must

(1) include the official plan title;

(2) consist of three parts and contain the information described in (e)(1) -- (3) of this section;

(3) contain a complete table of contents and lists of any tables or figures, with corresponding page numbers; and

(4) be presented in the order shown in (e) of this section, or include a cross-reference table that directs the reader to the appropriate information.

(e) The information in the plan must include

(1) part 1 -- response action plan: The response action plan must provide, in sufficient detail to clearly guide responders in an emergency event, all information necessary to guide response to a discharge of any size, up to and including a discharge that is equal to the applicable response planning standard set out at 18 AAC 75.430 -- 18 AAC 75.442. The response action plan must include the following information:

(A) emergency action checklist -- a short checklist of the immediate response and notification steps to be taken if an oil discharge occurs; it is recommended that this summary be duplicated on a wallet-size card, to be carried by the appropriate response personnel while on duty;

(B) reporting and notification -- a description of the immediate spill reporting actions to be taken at any hour of the day, including

(i) the title and telephone number of facility personnel responsible for making the notification; and

(ii) the telephone number of each appropriate government agency to be notified if a discharge occurs;

(C) safety -- based on applicable safety standards, a description of the steps necessary to develop an incident-specific safety plan for conducting a response;

(D) communications -- a description of field communications procedures, including, if applicable, assigned radio channels or frequencies and their intended use by response personnel;

(E) deployment strategies -- a description of proposed initial response actions that may be taken, including

(i) procedures for the transport of equipment, personnel, and other resources to the spill site, including plans for alternative methods in adverse weather conditions, and

(ii) if the operator is not the primary spill responder, procedures to notify and mobilize the response action contractor or other responder identified in the plan, including a description of the interim actions that the operator will perform until the responder identified in the plan initiates a full response to the discharge;

(F) response strategies -- a description of the discharge containment, control, and cleanup actions to be taken, which clearly demonstrate the strategies and procedures adopted to conduct and maintain an effective response; this information must be presented in the form of a response scenario to a discharge of the applicable response planning standard volume and must be usable as a general guide for a discharge of any size; response strategies must include

(i) procedures to stop the discharge at its source and prevent its further spread;

(ii) a description of methods to prevent or control a potential fire hazard;

(iii) for an exploration or production facility, a plan and time frame for drilling a relief well or otherwise controlling an exploration or production well blowout;

(iv) procedures and methods for real-time surveillance and tracking of the discharged oil on open water and forecasting of its expected points of shoreline contact; (v) for a stationary facility or operation, and, if requested by the department, for a vessel, procedures and methods to exclude oil from environmentally sensitive areas and areas of public concern identified under (3)(J) of this subsection, including, for a land-based facility, protection of groundwater and public water supplies;

(vi) a description of the actions to be taken to contain and control the spilled oil, including, as applicable, boom deployment strategies, construction of temporary berms, and other methods;

(vii) a description of the actions to be taken to recover the contained or controlled oil using mechanical methods, including plans and provisions for skimming, absorbing, or otherwise recovering the contained or controlled product from water or land;

(viii) procedures for lightering, transfer, and storage of oil from damaged tanks or from undamaged tanks that might be at risk of discharging additional oil;

(ix) procedures and plans for transfer and storage of recovered oil and oily water, including methods for estimating the amount of recovered oil;

(x) plans, procedures, and locations for temporary storage and ultimate disposal of oil contaminated materials, oily wastes, and sanitary and solid wastes, including plans for obtaining any required permits or authorizations for temporary storage or ultimate disposal;

(xi) plans for the protection, recovery, disposal, rehabilitation, and release of potentially affected wildlife, including: minimizing wildlife contamination through hazing or other means, when appropriate; the recovery of oiled carcasses to preclude secondary contamination of scavengers; and the capture, cleaning, rehabilitation, and release of oiled wildlife, when appropriate; and

(xii) if applicable, plans for the deployment of shoreline cleanup equipment and personnel, including cleanup and restoration methods and techniques to be used if the shoreline is impacted by the discharge;

(G) nonmechanical response options -- if applicable, a description of actions to be taken to obtain the necessary permits and approvals to initiate dispersant application, in situ burning, or other nonmechanical response methods, the basis for determining the conditions or circumstances under which these options will be used, and how the nonmechanical response techniques will be implemented, including a description of all required equipment and personnel; and

(H) facility or vessel diagram -- a p[illegible]iagram[illegible] of the facility, vessel, or operation for reference in conducting emergency response operations, with locations of response equipment and other features pertinent to the response plan clearly marked, including surrounding topography, roads, air transportation and other transportation access, location and bathymetry of adjacent water bodies, mooring areas, oil transfer locations, pipelines, control stations, drip pans and drainage of drip pans, and a representation of the distance and gradients to surface water for an operation located on land, by topographic map, aerial photographs, or other means;

(2) part 2 -- prevention plan -- Under the provisions of 18 AAC 75.005 -- 18 AAC 75.090, the prevention plan must include a detailed description of all oil discharge prevention measures and policies employed at the facility, vessel, or operation, with reference to the risks involved. The prevention plan may be submitted as a separate volume, and must include, at a minimum, the following information:

(A) a description and schedule of regular pollution prevention, inspection, and maintenance programs in place at the facility or operation;

(B) a history of all known discharges greater than 55 gallons that have occurred at the facility, with an analysis of the relationship, if any, between their frequency, cause, and size, and a description of actions to be taken to prevent or mitigate similar discharges in the future;

(C) an analysis of potential oil discharges, including size, frequency, cause, duration, and location, and a description of actions taken to prevent a potential discharge;

(D) a description of any conditions specific to the facility or operation that might increase the risk of a discharge, including physical or navigation hazards, traffic patterns, or other site-specific factors, and any measures that have been taken to reduce the risk of a discharge attributable to these conditions;

(E) a description of the existing and proposed means of discharge detection, including surveillance schedules, leak detection, observation wells, monitoring systems, and spill-detection instrumentation; if electronic or mechanical instrumentation is employed, detailed specifications, including threshold detection, sensitivities, and limitations of equipment must be provided;

(F) a detailed basis for the calculation of exceptions, if any, to be applied to the response planning standards set out in 18 AAC 75.430 -- 18 AAC 75.438; and

(G) for an operation in existence or substantially completed before the effective date of this section, a compliance schedule as described at 18 AAC 75.015; and

(3) part 3 -- supplemental information: The supplemental information section must provide background and verification information, including

(A) facility description and operational overview -- a general description of the oil storage, transfer, exploration, or production activities of the operation, including

(i) the number, type, and oil storage capacity of each container covered under the plan and its installation date, design, construction, and general condition;

(ii) the type and amount of oil stored in each container;

(iii) for vessels, a general chart showing routes normally used for the transportation of oil products within state waters, and the frequency of use for each route;

(iv) for vessels, plans or diagrams that identify cargo, bunker, and ballast tanks, all tank capacities, cargo piping, ballast piping, winches, emergency towing equipment, power plants, manifold pipe size, containment structures and equipment, and a description of the method of containing a discharge from fuel oil tank vent overflow and fill pipes;

(v) a description of the normal procedures for the loading or transfer of oil from or to a pipeline, facility, tank vessel, oil barge, or storage tank;

(vi) for a production facility, a description of the flow and gathering lines and processing facilities;

(vii) for vessels, a description of the methods for retention and disposal of oily wastes and bilge slops; and

(viii) any other information required by the department to evaluate the response capability of a vessel, including an approved loading manual that meets the requirements of 46 C.F.R. 45.105, amended through October 1, 1990;

(B) receiving environment -- for a land-based facility or operation:

(i) the potential routes of travel of oil discharged from the facility or operation to open water in the form of a drainage diagram or map, showing gradients and potential containment sites and features, including identification and explanation of all measures that will be taken to prevent a discharge from entering open water; and

(ii) based on the information in (i) of this subparagraph, an estimate of what percentage of the applicable response planning standard volume set out at 18 AAC 75.430 -- 18 AAC 75.436, or 18 AAC 75.442 for the facility or operation will reach open water;

(C) command system -- a description of the command system to be used in response to a discharge, including the title, address, telephone number, and affiliation by company, agency, or local government of each person, including a person identified in (1)(B) of this subsection, who by law or through employment, contract, or cooperative agreement, is responsible for responding to a discharge, and each person's functional role in the command system; this list must include command, fiscal, operations, planning, and logistics lead personnel; the command system must be compatible with the state's response structure outlined in the state master plan prepared under AS 46.04.200;

(D) realistic maximum response operating limitations -- a description of the realistic maximum response operating limitations that might be encountered at the facility or operation and, based on environmental and safety considerations, an analysis of the frequency and duration, expressed as a percentage of time, of limitations that would render mechanical and other response methods ineffective; the realistic maximum operating limitations for a response must be defined, with a description of any measures that will be taken to compensate for those periods when environmental conditions exceed this maximum; environmental conditions to be considered in this analysis must include

(i) weather, including wind, visibility, precipitation and temperature;

(ii) sea states, tides, and currents;

(iii) ice and debris presence;

(iv) hours of daylight; and

(v) other known environmental conditions that might influence the efficiency of the response equipment or the overall effectiveness of a response effort;

(E) logistical support -- identification of aircraft, vessels, and other means that may be used to transport equipment and personnel during a discharge response, including information on ownership and availability of identified means of transportation;

(F) response equipment -- a complete list of contracted or other oil discharge containment, control, cleanup, storage, transfer, lightering, and related response equipment, including

(i) the location, inventory, and ownership of the equipment;

(ii) the time frame for delivery and startup of response equipment and trained personnel located outside the facility's primary region of operation;

(iii) the manufacturer's rated capacities, limitations, and operational characteristics for each item of oil recovery equipment, including any nonmechanical response techniques;

(iv) each vessel designated for oil recovery operations, including skimming vessels and platforms and vessels designated to tow and deploy boom;

(v) information on additional vessels available from other sources for oil recovery operations, including, if applicable, procedures for inventorying, training personnel, and equipping vessels;

(vi) pumping, transfer and temporary storage, and lightering equipment for transferring oil from damaged or undamaged tanks; and

(vii) the procedures for storage, maintenance, and inspection of spill response equipment under the immediate control of the operator when not in use, including procedures for periodic testing and maintenance of response equipment;

(G) nonmechanical response information -- if a nonmechanical technique such as dispersant use or in situ burning is proposed as a response option, the plan must include

(i) a description of the specific mechanisms in place to assess the environmental consequences of the nonmechanical response option and to provide continuous monitoring of its environmental effects;

(ii) a complete inventory of nonmechanical response equipment and supplies, including the type and toxicity of each dispersant, with procedures for storage, maintenance, and deployment;

(iii) identification of all necessary approvals, and a completed application for department approval for open burning if in situ burning is a proposed response technique;

(iv) identification of all permits, approvals, or authorizations for use of nonmechanical response techniques and the timeline for obtaining them; and

(v) a plan for protecting environmentally sensitive areas, areas of public concern, and the public from any adverse effects of the nonmechanical response action;

(H) oil spill primary response action contractor information -- if a plan holder proposes to use the services of an oil spill primary response action contractor to meet a requirement of AS 46.04.030 or 18 AAC 75.400 -- 18 AAC 75.495, the contractor must be registered under 18 AAC 75.500 -- 18 AAC 75.570; the plan holder shall include a correct and complete list of each primary response action contractor, with name, address, telephone number, and affiliation by company, the response contractor information described in 18 AAC 75.445(i), and a description of the response equipment and services provided; the use of an oil spill primary response action contractor does not relieve the plan holder of its responsibility to provide the information required by this subsection and to meet all other applicable requirements of 18 AAC 75.400 -- 18 AAC 75.495;

(I) training -- a detailed description of the training programs for discharge response personnel;

(J) protection of environmentally sensitive areas and areas of public concern -- for a stationary facility or operation, and, if required by the department, for a vessel, mapped predictions of discharge movement, spreading, and probable points of contact, based on expected local, seasonal, meteorologic, and oceanographic or topographic conditions; and, for each probable point of contact, a description of each environmentally sensitive area and each area of public concern, including

(i) the effect of seasonal conditions on the sensitivity of each area;

(ii) a discussion of the toxicity effects and persistence of the discharge, based on type of product; and

(iii) an identification of which areas will be given priority attention if a discharge occurs;

(K) additional information -- other information necessary to provide background for or verification of the plan contents, and

(L) bibliography -- a list of data and information sources used to determine the information contained in the plan. (Eff. 5/14/92, Register 122; am 9/25/93, Register 127)

Authority: AS 46.03.020 AS 46.04.035
AS 46.04.030 AS 46.04.070

18 AAC 75.430. RESPONSE PLANNING STANDARDS.

(a) Notwithstanding the response planning standards set out in 18 AAC 75.430 -- 18 AAC 75.442, the plan must demonstrate the general procedures to clean up a discharge of any size, including the greatest possible discharge that could occur, subject to the provisions of AS 46.04.020 and AS 46.09.020.

(b) Except for the requirements of 18 AAC 75.438(b)(1) and (2) and 18 AAC 75.440, the department will, in its discretion, consider and provide modifications to the response planning standards set out in 18 AAC 75.430 -- 18 AAC 75.442 for a prevention measure that is in addition to those listed in 18 AAC 75.432 -- 18 AAC 75.438, if the plan holder demonstrates to the department's satisfaction that the proposed measure reduces the potential size or risk of a discharge.

(c) If more than one prevention measure is used to modify the response planning standard, each subsequent reduction will be applied separately to the response planning standard value that results from application of the previous modification. However, in no case will the department reduce the response planning standard below an amount equal to

(1) 15 percent of the response planning standard applicable to a crude or noncrude oil terminal facility, an exploration or production facility, or a crude oil pipeline as determined under 18 AAC 75.432(b) or (c), 18 AAC 75.434(b), or 18 AAC 75.486(b), respectively, or

(2) 30 percent of the response planning standard for a crude oil tank vessel or barge as determined by 18 AAC 75.438(c).

(d) The department will, in its discretion, revoke or reduce a prevention credit set out in 18 AAC 75.432 -- 18 AAC 75.438 if the department finds that the plan holder has failed to execute or has not effectively implemented the prevention measure used to determine that credit.

(e) Liquefied petroleum gas is exempt from the requirements of 18 AAC 75.430 -- 18 AAC 75.442. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.432. RESPONSE PLANNING STANDARDS FOR OIL TERMINAL FACILITIES.

(a) For a crude or noncrude oil terminal facility, the plan holder shall maintain or have available under contract within the plan holder's region of operation or another approved location, sufficient oil discharge containment, storage, transfer, and cleanup equipment, personnel, and other resources to

(1) contain or control and clean up within 72 hours that portion of the response planning standard volume that enters open water; and

(2) contain or control within 72 hours, and clean up within the shortest possible time consistent with minimizing damage to the environment, that portion of the response planning standard volume that enters a receiving environment other than open water.

(b) The response planning standard volume for a crude or noncrude oil terminal facility is equal to the capacity of the largest oil storage tank at the facility covered by the plan, unless there are specific natural or manmade conditions outside the facility which could place the facility at an increased risk of an oil discharge affecting one or more storage tanks.

(c) For an increased risk described in (b) of this section, the response planning standard volume is equal to the capacity of all of the potentially affected oil storage tanks at the facility. The plan must set out the basis for selecting the storage tanks and the volume of oil planned for in the response.

(d) The department will, in its discretion, reduce the requirements of (b) of this section, by a percentage up to that shown, for each of the following prevention measures in place at the facility:

(1) alcohol and drug testing of key personnel: 5 percent;

(2) an operations training program with a professional organization or federal certification or licensing of program participants: 5 percent;

(3) on-line leak detection systems for tanks and piping: 5 percent;

(4) a sufficiently impermeable secondary containment area with a dike capable of holding the contents of the largest tank, or all potentially affected tanks in the case of increased risk, and precipitation: 60 percent;

(5) for secondary containment as described in (4) of this subsection, designed with the following enhancements, an additional allowance for

(A) cathodic protection: 10 percent;

(B) fail-safe valve piping systems: 15 percent; or

(C) impervious containment area extending under the full area of each storage tank or double bottoms with leak detection: 25 percent; and

(6) containment outside the secondary containment area: 10 percent. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.434. RESPONSE PLANNING STANDARDS FOR EXPLORATION OR PRODUCTION FACILITIES.

(a) For an exploration or production facility, the plan holder shall maintain or have available under contract within the plan holder's region of operation or another approved location, sufficient oil discharge containment, storage, transfer, and cleanup equipment, personnel, and other resources to

(1) contain or control and clean up within 72 hours that portion of the response planning standard volume that enters open water; and

(2) contain or control within 72 hours, and clean up within the shortest possible time consistent with minimizing damage to the environment, that portion of the response planning standard volume that enters a receiving environment other than open water.

(b) The response planning standard volume for an exploration or production facility is 16,500 barrels, plus an additional 5,500 barrels for each day beyond 72 hours

necessary to stop the discharge, unless the plan demonstrates, based on adequate well data, analyses, and supporting documentation, that a higher or lower discharge rate is appropriate.

(c) The department will, in its discretion, reduce the requirements of (b) of this section, by a percentage up to that shown, for each of the following prevention measures in place at the facility:

(1) alcohol and drug testing of key personnel: 5 percent;

(2) an operations training program with a professional organization or federal certification or licensing of program participants: 5 percent;

(3) on-line leak detection systems: 5 percent;

(4) measurement of on-line bottom hole pressure while drilling, with computer-aided circulation control of drilling fluids, using a professional organization standard or recommended practice: 5 percent;

(5) a computer-aided management system of inspection, maintenance, and repair such as Bureau Veritas "IRM-Expert": 5 percent;

(6) a formal safety analysis, using reliability-management methods such as the United Kingdom's Formal Safety Assessment or Norway's Concept Safety Evaluation: 5 percent; and

(7) emergency pipeline-shutdown valves with remote, local, and fail-safe operation, capable of closing against full differential pipeline pressure and not used for any purpose other than emergency shutdown: 5 percent. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.436. RESPONSE PLANNING STANDARDS FOR CRUDE OIL PIPELINES.

(a) For a crude oil pipeline facility, the plan holder shall maintain or have available under contract within the plan holder's region of operation or another approved location, sufficient oil discharge containment, storage, transfer, and cleanup equipment, personnel, and other resources to

(1) contain or control and clean up within 72 hours that portion of the response planning standard volume that enters open water; and

(2) contain or control within 72 hours, and clean up within the shortest possible time consistent with minimizing damage to the environment, that portion of the response planning standard volume that enters a receiving environment other than open water.

(b) The response planning standard volume for a crude oil pipeline facility is the amount of oil which equals the length of the pipeline between pumping or receiving stations or valves (L_{pl}), minus the hydraulic characteristics of the pipeline due to terrain profile (H_{pl}), times the capacity of the pipeline in barrels per lineal measure (C_{pl}), plus the flow rate of the pipeline in barrels per time period (FR_{pl}), multiplied by the estimated time to detect a spill event (TD_{pl}), plus the time to shut down the pipeline pump or system (TSD_{pl}). Written as a formula, the response planning standard is $(L_{pl} - H_{pl}) \cdot C_{pl} + FR_{pl} \cdot (TD_{pl} + TSD_{pl})$.

(c) The department will, in its discretion, reduce the requirements of (b) of this section, by a percentage up to that shown, for each of the following prevention measures in place at the facility:

(1) alcohol and drug testing of key personnel: 5 percent;

(2) an operations training program with a professional organization or federal certification or licensing of program participants: 5 percent;

(3) on-line leak detection systems: 5 percent;

(4) corrosion control using

(A) ultrasonic thickness meters: 15 percent;

(B) instrumented in-line cleaning and diagnostic equipment ("smart pigs"): 15 percent; or

(C) a method described in (A) or (B) of this paragraph, coupled with cathodic-profile inspection at least triennially: 30 percent; and

(5) underwater pipeline cathodic- and burial-profile inspection: 5 percent.

(Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.438. RESPONSE PLANNING STANDARDS FOR CRUDE OIL TANK VESSELS AND BARGES.

(a) For a crude oil tank vessel or barge, the plan holder shall maintain or have available under contract within its region of operation, sufficient discharge containment, storage, transfer, and cleanup equipment, personnel, and other resources to

(1) contain or control and clean up within 72 hours that portion of the response planning standard volume set out in (b) of this section that enters open water; and

(2) contain or control within 72 hours, and clean up within the shortest possible time consistent with minimizing damage to the environment, that portion of the response planning standard volume set out in (b) of this section that enters a receiving environment other than open water.

(b) For purposes of the requirements of (a) of this section, the response planning standard volume for a crude oil tank vessel or barge is

(1) 50,000 barrels, if the tank vessel or barge has a cargo volume of less than 500,000 barrels; and

(2) 300,000 barrels, if the tank vessel or barge has a cargo volume of 500,000 barrels or more.

(c) In addition to the requirements of (a) of this section, for all crude oil tank vessels and barges, the plan holder shall plan to have deployed and operating within 72 hours, from within or outside its region of operation, sufficient oil discharge containment, storage, transfer, and cleanup equipment, personnel, and other resources to contain and control, and clean up at least 60 percent of the total cargo capacity of the tank vessel or barge.

(d) The department will, in its discretion, reduce the requirements of (c) of this section, by a percentage up to that shown, for each of the following prevention measures in place for the vessel or barge:

(1) hydrostatic loading: 20 percent;

(2) double hulls and bottoms: 30 percent;

(3) double bottoms: 25 percent; and

(4) emergency-response vessels and procedures described as follows:

(A) vessel escort during entire vessel transit in port area;

(B) escort vessels capable of

(i) providing steering and propulsion assistance with the ability to attach towing cables in a timely fashion under the weather conditions of transit; and

(ii) exerting sufficient force to change or maintain the escorted vessel's course;

(C) limits on the escorted vessel's speed in order to match escort vessel's ability to render assistance; and

(D) escort vessels have on-board oil discharge response equipment: 11 percent.

(e) A crude oil tank vessel or barge that has been exempted under 18 AAC 75.400(b) is exempt from the requirements of this section. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.440. RESPONSE PLANNING STANDARDS FOR NONCRUDE OIL TANK VESSELS AND BARGES.

(a) For a noncrude oil tank vessel or barge, the plan holder shall maintain or have available under contract within the plan holder's region of operation or another approved location, sufficient oil discharge containment, storage, transfer, and cleanup equipment, personnel, and other resources to

(1) contain or control within 48 hours, and to clean up within the shortest possible time, that portion of the response planning standard volume that enters open water; and

(2) contain or control, and clean up within the shortest possible time consistent with minimizing damage to the environment, that portion of the response planning standard volume that enters a receiving environment other than open water.

(b) The response planning standard volume for a noncrude oil tank vessel or barge is equal to 15 percent of the total cargo capacity of the oil tank vessel or barge. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.442. RESPONSE PLANNING STANDARDS FOR MULTIPLE OPERATIONS.

For a facility having more than one category of operation that requires an approved oil discharge prevention and contingency plan, the plan holder must plan to respond to a discharge of the applicable response planning standard volume for each separate category of operation at the facility as established under 18 AAC 75.430 -- 18 AAC 75.440. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.445. APPROVAL CRITERIA.

(a) The department will use the criteria set out in this section to review an oil discharge prevention and contingency plan submitted under 18 AAC 75.425.

(b) General Response Procedures. The plan must identity the maximum possible discharge that could occur at the facility or operation, and the general procedures to be followed in responding to a discharge of that magnitude, including the identification of resources in addition to those maintained by the plan holder or available under contract to meet the applicable response planning standard for that facility or operation.

(c) Deployment Strategies. The plan must demonstrate that the identified personnel and equipment are sufficient to meet the applicable response planning standard and can be deployed and operating within the time specified under 18 AAC 75.430 -- 18 AAC 75.442. The plan must state what conditions were assumed and must take into account the realistic maximum operating conditions and their effects on response capability and the deployment of resources. Plans using contractual resources must demonstrate that the transition and substitution of equipment and resources will occur without interruption of response or cleanup.

(d) Response Strategies. The response strategies must take into account the type of product discharged and must demonstrate that

(1) procedures are in place to stop the discharge at its source within the shortest possible time;

(2) for an exploration or production facility, plans and time frames are in place for controlling a well blowout, including provisions for drilling a relief well, and taking into account any seasonal environmental conditions that might reasonably be expected to preclude emergency operations from regaining control of well pressure;

(3) plans, procedures, and equipment are sufficient to monitor and track the discharge in order to ensure proper allocation and deployment of response personnel and equipment;

(4) sufficient oil discharge response equipment, personnel, and other resources are maintained and available for the specific purpose of preventing discharged oil from entering an environmentally sensitive area or an area of public concern that would likely be impacted if a discharge occurs, and that this equipment and personnel will be deployed and maintained on a time schedule that will protect those areas before oil reaches them according to the predicted oil trajectories for an oil discharge of the volumes established under 18 AAC 75.430 -- 18 AAC 75.442; areas identified in the plan must include areas added by the department as a condition of plan approval;

(5) plan strategies are sufficient to meet the applicable response planning standard established under 18 AAC 75.430 -- 18 AAC 75.442 for containment, control, recovery, transfer, storage, and cleanup within the specified time and under environmental conditions that might reasonably be expected to occur at the discharge site;

(6) there is access to sufficient lightering equipment and personnel to transfer all oil from damaged tanks and from undamaged tanks if the risk of an additional discharge is present; the plan must provide for commencement and completion of lightering within the shortest possible time, consistent with ensuring the safety of personnel; and

(7) adequate temporary storage and removal capacity for recovered oil and oily wastes will be available at or near the site of the spill to keep up with the skimming and recovery operations and to meet the applicable planning standard established under 18 AAC 75.430 -- 18 AAC 75.442 for control, containment, and cleanup; plans for temporary storage and ultimate disposal must include the specific actions to be taken to obtain all necessary permits and approvals.

(e) Receiving Environment. For an onshore facility or operation, the applicant must determine and clearly demonstrate that, based on an analysis of the facility or operation, resources identified in the plan are sufficient to clean up that portion of a discharge of the applicable planning standard volume that might realistically be expected to reach open water within the applicable time limit set out in 18 AAC 75.430 -- 18 AAC 75.442.

(f) Realistic Maximum Response Limitations. In designing a spill response, severe weather and environmental limitations that might be reasonably expected to occur during a discharge event must be identified. The plan must use realistic efficiency rates for the

specified response methods to account for the reduction of control or removal rates under those severe weather or other environmental limitations that might reasonably be expected to occur. The department will, in its discretion, require the plan holder to take specific temporary prevention measures until environmental conditions improve to reduce the risk or magnitude of an oil discharge during periods when planned spill response methods are rendered ineffective by environmental limitations.

(g) Response Equipment. Response equipment identified in the plan must meet the following conditions:

(1) the applicant must have ready access to enough equipment to meet the applicable response planning standards established under 18 AAC 75.430 -- 18 AAC 75.442 using mechanical methods of oil control, containment, and cleanup;

(2) identified equipment must reflect the best available technology at the time the plan is submitted or renewed;

(3) types and amounts of boom, boom connectors, and anchorage devices must be of the appropriate design for the particular oil product, type of environment, and environmental conditions experienced at the facility or operation; the boom must be of sufficient length to mount an effective response to the volume of discharged oil established under 18 AAC 75.430 -- 18 AAC 75.442 for each type of facility or operation;

(4) vessels used to deploy and tow boom must be of a number, size, and power adequate to deploy the types and amounts of boom addressed in

(3) of this subsection and must be capable of operating in the manner and at the speeds necessary for the effective use of boom; and

(5) the number and size of skimmers and pumps to be used must be appropriate and adequate for recovery of the planning standard volume of the type of oil discharged within the planning standard time limit for cleanup established under 18 AAC 75.430 -- 18 AAC 75.442; equipment types must be compatible with each other as necessary to ensure an efficient response.

(h) Nonmechanical Response Information. Plans which propose the use of dispersants, in situ burning, or other nonmechanical response techniques during periods when environmental conditions or other factors limit the use of mechanical spill response methods must demonstrate their efficiency and effectiveness and must include a full assessment of potential environmental consequences, provisions for continuous monitoring and real-time assessment of environmental effects, and full compliance with all applicable approval requirements. If in situ burning is proposed as a response technique, a completed application for approval by the department must be included.

(i) Oil Spill Primary Response Action Contractor Information. If a plan holder proposes to use the services of an oil spill primary response action contractor to meet a requirement of AS 46.04.030 or 18 AAC 75.400 -- 18 AAC 75.495, the contractor must be registered under 18 AAC 75.500 -- 18 AAC 75.570. The plan holder shall include a correct and complete list of each primary response action contractor, with name, address, telephone number, and affiliation by company, and, for each response action contract, a statement signed by the plan holder and the primary response action contractor attesting to the department that the contract

(1) clearly specifies that the contractor is obligated to

(A) provide the response services and equipment listed for that contractor in the contingency plan;

(B) respond if a discharge occurs;

(C) notify the plan holder immediately if the contractor cannot carry out the response actions specified in the contract or the contingency plan;

(D) give written notice at least 30 days before terminating its contract with the plan holder;

(E) respond to a department-conducted discharge exercise required of the plan holder; and

(F) continuously maintain in a state of readiness, in accordance with industry standards, the equipment and other spill response resources to be provided by the contractor under the contingency plan; and

(2) contains the provisions required under AS 46.04.030(r), if the contract is between the plan holder for a tank vessel or oil barge carrying crude oil that has been transported by the Trans Alaska Pipeline System and a primary response action contractor who is the common operating agent for the holders and lessees of the right-of-way agreement for the Trans Alaska Pipeline System.

(j) Training. In addition to maintaining continuous compliance with other applicable state and federal training requirements, the plan holder shall demonstrate that designated oil spill response personnel are trained and kept current in the specifics of plan implementation, including deployment of containment boom, operation of skimmers and lightering equipment, and organization and mobilization of personnel and resources. The plan holder shall ensure that proof of training is maintained for three years and is made available to the department upon request. (Eff. 5/14/92,Register 122; am 9/25/93, Register 127)

Authority: AS 46.03.020 AS 46.04.035
AS 46.04.020 AS 46.04.070
AS 46.04.030

18 AAC 75.455. DEPARTMENT REVIEW PROCEDURES.

(a) Within seven days after receipt of an application and plan, the department will determine if the application and plan are sufficient for public review. If the application or plan is not sufficient for public review, the department will request the necessary additional information from the applicant.

(b) When the department determines that an application and plan are sufficient for public review, the department will

(1) send a notice setting a 30-day comment period to the Department of Natural Resources, the Department of Fish and Game, affected coastal districts and regional citizens advisory councils, and persons who have made a written request for information regarding submission subject to review under this section;

(2) direct the applicant to provide a copy of the application and the plan to the Department of Natural Resources, the Department of Fish and Game, affected coastal districts and regional citizens advisory councils, and other persons designated by the department;

(3) set a date, within the 18th to 25th day of the 30-day comment period, by which the department will convey to the applicant any request from the department or a person reviewing the application that the department finds necessary to make a determination that the application or plan is complete; and

(4) publish one 30-day notice of the application, in the manner described in 18 AAC 15.050(b), stating the deadline for comments established under (1) of this subsection and the date established under (3) of this subsection for conveying requests for additional information; the applicant is responsible for paying the cost of the notice under this paragraph.

(c) The notice published under (b) of this section will state that a copy of the application and plan are available for review at the district and regional offices of the department nearest to the affected area of the state. It is the applicant's responsibility to provide a copy of the application and plan if the department receives a request for a copy.

(d) If, by the date set under (b)(3) of this section, the department determines that additional information is necessary to evaluate the application or plan, the department will

(1) notify the applicant of the information needed; and

(2) extend the 30-day comment period established under (b)(1) of this section until the information is received, plus 10 days.

(e) If the department determines that additional information is necessary under (d) of this section and requests the information from the applicant, the applicant shall send a copy of any additional information requested to the department and to the Department of Natural Resources, the Department of Fish and Game, affected coastal districts and regional citizens advisory councils, and other persons designated by the department.

(f) Upon receipt by the department of the additional information requested under (d) of this section, the department will provide to the parties described in (e) of this section notice of

(1) receipt of the information and

(2) the final comment deadline, as extended.

(g) The department will make a determination as to whether an application and plan are complete within seven days after the receipt of any additional information under (e) of this section or, if no additional information was requested under (d) of this section, within two days after the end of the 30-day comment period established under (b)(1) of this section.

(h) Notwithstanding the review procedures set out in this section, if, at any time after receipt of an application and plan, and after consultation with the Department of Natural Resources, the Department of Fish and Game, and affected coastal districts and regional citizens advisory councils, the department determines that all information necessary to evaluate the application and plan has been received, the department will, in its discretion, find the application and plan complete. However, no decision will be made under (i) of this section until after the comment deadline established under (b)(1) of this section.

(i) Following the comment deadline established under (b)(1) of this section, including any extension under (d)(2) of this section, and within 65 days after the department determines that an application and plan are complete, the department will approve, approve with conditions, or disapprove a plan.

(j) The department will, if it determines good cause exists, hold a public hearing on an application and plan in the manner provided under 18 AAC 15.060.

(k) To assist the department in its review of contingency plans under this chapter, the department will enter into an annual agreement with the Department of Natural Resources and the Department of Fish and Game to provide expertise regarding protection of fish and game, state land, areas of public concern, and environmentally sensitive areas. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.457. EMERGENCY MODIFICATION OF REVIEW PROCESS.
If, due to an emergency as described in AS 26.23 or AS 46.04.080 or other applicable law, an applicant needs an expedited review, or if the commissioner or the commissioner's designee finds that an expedited review is necessary for the preservation of the public peace, health, safety, or general welfare, the commissioner or the commissioner's designee will, in that person's discretion, and consistent with the requirements of AS 46.04.030(j) that a copy of the applicant's plan be provided to the Department of Fish and Game and the Department of Natural Resources, modify the review process established in 18 AAC 75.455 as necessary to meet the emergency. Any modifications in the review process made under this section will be made in writing by the commissioner or the commissioner's designee based upon clear and convincing evidence of a need for the modification. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.459. PREISSUANCE CONFERENCE.
(a) At any time before the department's decision under 18 AAC 75.460, the applicant may request a preissuance conference from the appropriate regional office of the department. The request may be make orally, and will be granted if the applicant demonstrates that holding a conference will materially aid the department in reaching its decision.

(b) A preissuance conference under this section will be conducted in the manner provided under 18 AAC 15.070. However, the time period for the department's review will not be held in abeyance pending completion of the conference. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.460. DEPARTMENT DECISION.
(a) After considering the information, analyses, and commitments contained in a complete application for an oil discharge prevention and contingency plan approval and timely comments submitted under 18 AAC 75.455, the department will approve, approve with conditions, or disapprove a plan.

(b) A decision issued under (a) of this section will include

(1) the written approval, if it is the department's determination that an oil discharge prevention and contingency plan approval should be issued; the department will provide a summary of the basis for its decision to approve a plan in a case in which public comment adverse to the application has been received;

(2) a brief summary of the basis for the department's decision if the decision is to disapprove a plan, or to subject a plan to conditions specific to the activity; and

(3) a statement that, if aggrieved by the department's decision, the applicant or any person who submitted timely comments on the application under 18 AAC 75.455 may request an adjudicatory hearing by submitting the information required under 18 AAC 15.200(a)(1) -- (5), and that any hearing requested under this subsection will be subject to the procedures set out at 18 AAC 15.210 -- 18 AAC 15.310.

(c) The department's decision will be served on the applicant and each person who submitted timely comments on the application under 18 AAC 75.455. The applicant and any person who submitted timely comments on the application under 18 AAC 75.455 may request an adjudicatory hearing with 30 days after service of the department's decision. The hearing will be conducted in accordance with procedures set out in 18 AAC 75.200 -- 18 AAC 75.310.

(d) An approval under this section is effective for three years after the date it is issued, or for a shorter time specified in the approval letter and certificate.
(Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

[Editor's note: Department of Environmental Conservation approval under 18 AAC 75.460 does not negate any other requirement for approval to operate under other statutes or regulations, such as Alaska Coastal Management Program approval under 6 AAC 50.]

18 AAC 75.465. PROOF OF APPROVED PLAN.

(a) The owner or operator of an oil terminal facility may not cause or permit the transfer of oil to or from a vessel or barge unless

(1) the operator of the vessel or barge has produced for inspection by the facility owner or operator the original certificate or a true photocopy of the original, approving the oil discharge prevention and contingency plan for that operation; and

(2) the operator of the vessel or barge has certified, on a certification log form supplied by the department and maintained by the owner or operator of the oil terminal facility, that a copy of the response action plan section of the current approved oil discharge prevention and contingency plan for that vessel or barge is on board the vessel or barge.

(b) The owner or operator of an oil terminal facility shall certify on the certification log form that the operator of the vessel or barge has complied with (a)(1) and (a)(2) of this section. The facility owner or operator shall maintain the log on a monthly basis and shall submit the log for the previous month to the appropriate regional office within the first five days of the following month. Service is effective upon personal delivery or transmittal by facsimile or on the date of mailing by certified mail to the appropriate regional office. The department will retain copies of all log forms received under this subsection for three years after receipt.

(c) On the first working day after the operator of a vessel fails to comply with the requirements of (a)(1) or (a)(2) of this section, the oil terminal facility owner or operator shall report that failure to the appropriate regional or district office by telephone or facsimile.

(d) Verification and entry on the certification log form referred to under (b) of this section is required for each separate loading or unloading operation of a vessel at an oil terminal facility. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.050
AS 46.04.070
AS 46.04.070

18 AAC 75.470. TRANSFERS BETWEEN PLAN HOLDERS.

(a) If approved under this section, a plan holder, or an oil spill response contractor or cooperative upon which one or more plan holders rely, may furnish to another plan holder or to another person, equipment, materials, or personnel to assist in response to an oil discharge. A description of the proposed transfer that addresses each of the considerations set out in (b) of this section must be provided with the request for approval of a transfer.

(b) The department will, in its discretion, approve a transfer under this section after considering

(1) for a provider of oil spill response equipment, materials, or personnel:

(A) the amount and types of equipment, personnel, or other resources to be transferred in response to a discharge and where it will be transferred;

(B) the number and types of other plan holders who rely upon the provider's response equipment, personnel, and other resources;

(C) the percentage by which the provider's response capability will be reduced by the transfer;

(D) the ability of the provider to acquire and deploy alternate response equipment if an emergency discharge occurs while equipment, materials, or personnel are transferred; and

(E) any compensating measures that will be taken by the provider to prevent or reduce the size of potential discharges during the period of reduced response capability; and

(2) for a plan holder receiving the equipment, the time estimated for the response equipment to reach the discharge.

(c) The department will, in its discretion, attach terms and conditions to an approval issued under (b) of this section.

(d) The provider shall reorder and replace equipment or materials that are

(1) exhausted, lost, destroyed, or rendered inoperable as soon as the condition is known by the provider; and

(2) not expected to be returned, such as sorbent boom, sorbent pads, and dispersant, as soon as they are transferred.

(e) If equipment, materials, or personnel are not replaced or returned to the provider within 30 days after the transfer, the plan holder may request an extension from the department. If the extension is denied, the provider must apply for approval of an amendment to its approved prevention and contingency plan under 18 AAC 75.415.

(f) Except in response to a major or catastrophic discharge, the department will not approve a transfer of equipment, materials, or personnel to another plan holder if the provider's spill response capability would be reduced to less than 40 percent of the response capability identified in its plan. If a major or catastrophic oil discharge occurs, the department will, in its discretion, approve an immediate transfer of up to 100 percent of the provider's response equipment, personnel, and other resources.

(g) The department will issue a verbal approval for a transfer if a discharge poses an imminent threat to life, property, the environment, or other significant public concern. The verbal approval will be verified in writing by the department.

(Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.475. NOTIFICATION OF NONREADINESS.

(a) All spill response and other equipment identified in the approved oil discharge prevention and contingency plan to meet the response planning standards set out at 18 AAC 75.430 -- 18 AAC 75.442 must be maintained in operational condition. Any equipment found not to be operating properly must be repaired or replaced immediately.

(b) Except for a transfer approved under 18 AAC 75.470, if a significant change occurs in, or is made to, any component of a plan that would diminish the plan holder's response capability, the plan holder shall, within 24 hours, notify the department in writing and provide a schedule for a prompt return to operational status. A facsimile delivered to the appropriate regional office will be considered written notice for purposes of this subsection. If the department finds that, as a result of the change, the plan holder is no longer able to execute the plan, it will take appropriate action under 18 AAC 75.490.

(c) Notwithstanding (a) and (b) of this section, removal or inactivation of any major response item for maintenance or repair must be approved by the department before removal or inactivation. A request under this subsection must be submitted at least 10 days before the scheduled action or as soon as possible for an unanticipated repair. The request must state what substitute or temporary measures will be taken to provide equivalent response capability, reduce the time out of service, or otherwise ensure that equivalent response capability is maintained. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.480. INSPECTIONS.

(a) To verify compliance with the oil discharge prevention and contingency plan provisions of AS 46.04.030 and 18 AAC 75.400 -- 18 AAC 75.495, the department will, in its discretion, conduct announced and unannounced inspections of a vessel, barge, pipeline, or other operation that is subject to the requirements of AS 46.04.030 and 18 AAC 75.400 -- 18 AAC 75.495. If practicable, an inspection under this section will be coordinated with other regulatory agencies.

(b) Based on the results of an inspection made under this section, the department will, in its discretion, take appropriate action under 18 AAC 75.490. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.04.060
AS 46.04.030 AS 46.04.070

18 AAC 75.485. DISCHARGE EXERCISES.

(a) The department will, in its discretion, conduct announced and unannounced discharge exercises to assure that an oil discharge prevention and contingency plan is adequate in content and execution. No more than two exercises will be required in each 12-month period, unless an exercise demonstrates, in the department's judgment, a plan holder's failure to effectively implement the plan.

(b) Execution of a plan during a discharge exercise will be considered inadequate if the readiness for response and response performance stated in the plan are significantly deficient due to inadequate mobilization or performance of personnel, equipment, other resources, or other factors, including the mobilization or performance of a response action contractor identified under 18 AAC 75.445(i).

(c) If a plan holder cannot adequately execute the plan during a discharge exercise, the department will, in its discretion,

(1) require additional exercises until it is satisfied that the prevention and contingency plan and its execution are adequate; or

(2) take other appropriate action as described at 18 AAC 75.490.

(d) The department will consider a regularly scheduled training exercise initiated by a plan holder as a discharge exercise if the department monitors, evaluates, or participates in the exercise and concurs that it is equivalent to a discharge exercise conducted by the department. A plan holder shall notify the department in advance of the exercise and shall provide an opportunity for a department representative to be present and participate.

(e) The department will conduct announced or unannounced discharge exercises appropriate to the plan holder's current status of operations. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.030
AS 46.04.070

18 AAC 75.490. FAILURE TO COMPLY.

(a) If a plan holder fails to comply with an approved oil discharge prevention and contingency plan, demonstrates an inability to maintain continuous access to the quality or quantity of resources identified in the plan, fails to respond with those resources in the shortest possible time if a discharge occurs, or is in any other way subject to the terms of AS 46.04.030(f)(1) -- (4), the department will, in its discretion,

(1) revoke its approval of the plan after notice and opportunity for hearing under (c) of this section;

(2) suspend its approval of the plan after notice and opportunity for hearing under (c) of this section, stating the conditions under which the department will reinstate its approval and allow operations to resume;

(3) order the plan holder to file an application to amend the plan within a specified time under 18 AAC 75.415; or

(4) take other necessary action to correct the failure to comply.

(b) If a plan holder fails to apply for an amendment as required under (a)(3) of this section, the department will, in its discretion, revoke its approval of the plan after notice and opportunity for hearing under (c) of this section.

(c) If the department issues a notice of intent to revoke an approval under this chapter, the plan holder may either request a hearing to review the department's proposed action under (d) -- (g) of this section or it may request an adjudicatory hearing. An adjudicatory hearing will be conducted in accordance with procedures set out in 18 AAC 15.200 -- 18 AAC 15.310. The request for review must be submitted in writing to the supervisor of the appropriate regional office within 10 days after the plan holder receives the department's notice and must include

(1) the name, mailing address, and telephone number of the plan holder; and

(2) a brief, clear summary of the reasons for requesting the review.

(d) A hearing under (d) -- (g) of this section will be held within 10 working days after the department receives a request for hearing, unless the department and the plan holder agree that the hearing will be held at another time. Immediately after receiving a request for review under (c) of this section, the department will notify the plan holder, by telephone, facsimile, or personal delivery, of the time and place of the hearing.

(e) If the plan holder fails to appear for the hearing at the time and place stated in the notice issued under (d) of this section, and if a delay has not been granted by the department, the failure to appear will be considered a waiver of the plan holder's right to a hearing under this section.

(f) A hearing under this section will be recorded, will be heard by the regional supervisor or a designee, and will be informal. The plan holder may

(1) present witnesses and evidence in its own behalf; and

(2) question witnesses and seek to disprove evidence presented by the department.

(g) Within 10 working days after a hearing under this section, the department will issue a final decision, stating the reasons for the decision, and indicating the evidence relied upon in reaching that decision.

(h) Nothing in (d) -- (g) of this section affects a plan holder's right under (c) of this section to an adjudicatory hearing. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.03.750 AS 46.35.090(e)
AS 46.03.740 AS 46.04.030
AS 46.03.745 AS 46.04.070

18 AAC 75.495. REGIONAL MASTER DISCHARGE PREVENTION AND CONTINGENCY PLAN BOUNDARIES.

(a) The regions described in this subsection and depicted on the map at Figure 1 are established for the purpose of preparing a regional master oil and hazardous substance discharge prevention and contingency plan as required by AS 46.04.210:

(1) Southeast Alaska Region: that area of the state east of 142°W. longitude and south of a line just west of Icy Bay that connects the U.S. - Canadian border with the Gulf of Alaska, including adjacent shorelines and state waters, and having as its seaward boundary a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured;

(2) Prince William Sound Region: that area south of 63°30' N. latitude, west of the region described in (1) of this subsection, and east of the region described in (3) of this subsection, including adjacent shorelines and state waters, and having as its seaward boundary a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured;

(3) Cook Inlet Region: that area encompassed by the boundaries of the Kenai Peninsula Borough, the Municipality of Anchorage, and the Matanuska-Susitna Borough, including adjacent shorelines and state waters, and having as its seaward boundary a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured;

(4) Kodiak Island Region: that area encompassed by the boundaries of the Kodiak Island Borough, including adjacent shorelines and state waters, and having as its seaward boundary a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured;

(5) Aleutian Region: that area encompassed by the boundaries of the Aleutians East Borough and the Aleutians West Coastal Resource Service Area, including adjacent shorelines and state waters, and having as its seaward boundary a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured;

(6) Bristol Bay Region: that area encompassed by the boundaries of the Bristol Bay Coastal Resource Service Area, the Bristol Bay Borough, and the Lake and Peninsula

Borough, including adjacent shorelines and state waters, and having as its seaward boundary a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured;

(7) Western Alaska Region: that area north of the area described in (6) of this subsection, encompassed by the boundaries of the southernmost boundary of the Bering Straits Regional Corporation, and Regional Educational Attendance Areas 11 and 5, including adjacent shorelines and state waters, and having as its seaward boundary a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured;

(8) Northwest Arctic Region: that area encompassed by the Northwest Arctic Borough and the Bering Straits Regional Corporation, including adjacent shorelines and state waters, and having as its seaward boundary a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured;

(9) North Slope Region: that area encompassed by the boundaries of the North Slope Borough, including adjacent shorelines and state waters, and having as its seaward boundary a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured; and

(10) Interior Alaska Region: that area of the state not included in (1) -- (9) of this subsection.

(b) If the department finds that a discharge that could occur in an area beyond the territorial sea would not have a significant adverse impact on the resources of the state or on other interests of the state, the department will, in its discretion, adjust the seaward boundary of a region established in (a) of this section to exclude that area. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.04.070
AS 46.04.210

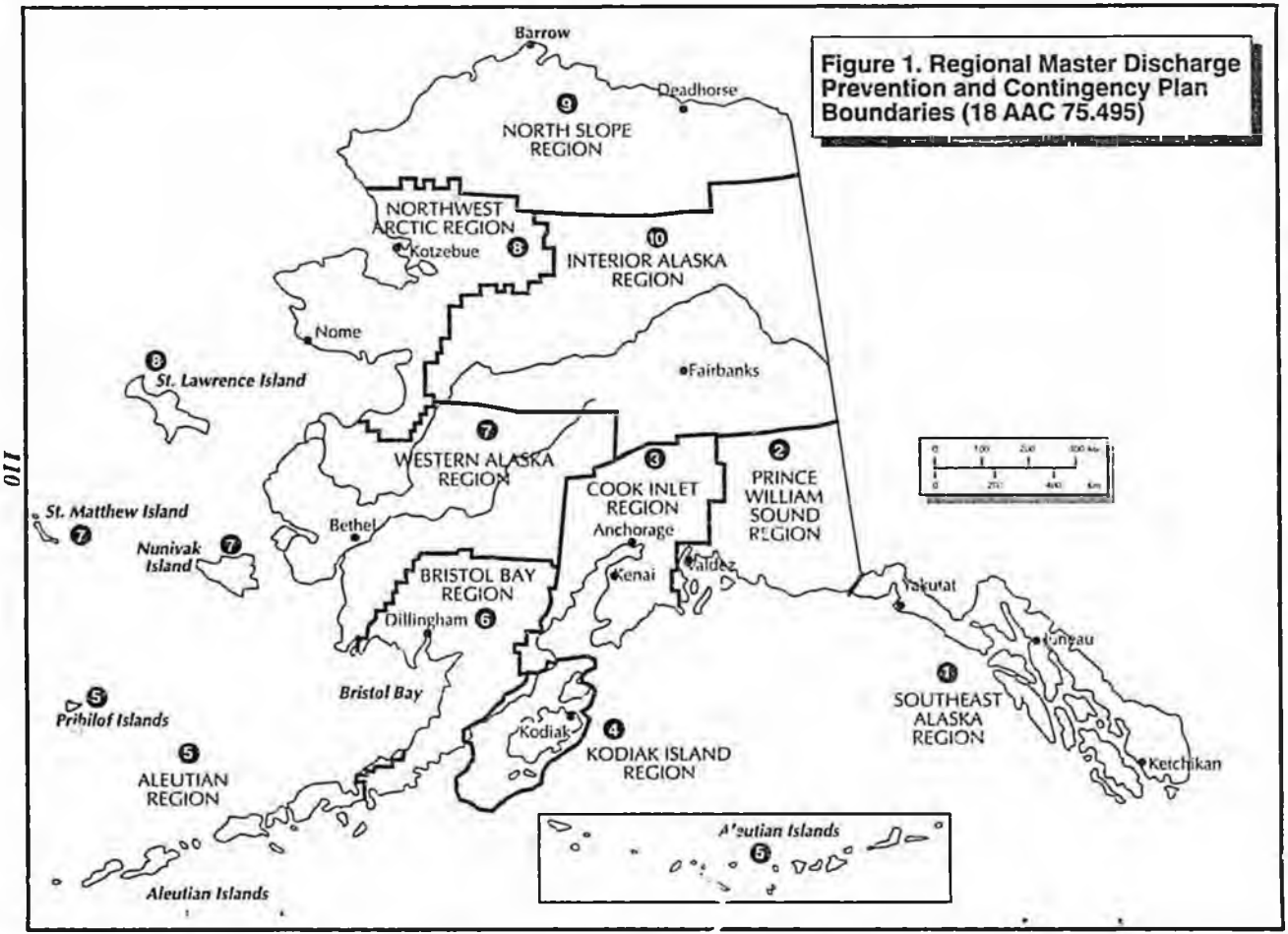


Figure 1. Regional Master Discharge Prevention and Contingency Plan Boundaries (18 AAC 75.495)

ARTICLE 5. Oil Spill Primary Response Action Contractors.

18 AAC 75.500. DEFINITION OF OIL SPILL PRIMARY RESPONSE ACTION CONTRACTOR; APPLICABILITY.

(a) As used in AS 46.04.035 and 18 AAC 75.500 -- 18 AAC 75.570, "oil spill primary response action contractor" means a person who is or intends to be obligated under contract to the holder of an approved oil discharge prevention and contingency plan issued under AS 46.04.030 to provide resources or equipment to contain, control, or clean up an oil discharge. "Oil spill primary response action contractor" does not include

(1) a person who provides only ancillary services or equipment not for the specific purpose of containing, controlling, or cleaning up an oil discharge; or

(2) an approved oil discharge prevention and contingency plan holder who provides to another plan holder resources or equipment to contain, control, or clean up an oil discharge.

(b) An oil spill primary response action contractor is not required to register under 18 AAC 75.500 -- 18 AAC 75.570 unless the contractor is directly obligated to a plan holder by contract to provide spill response resources to meet the requirements of AS 46.04.030 and 18 AAC 75.400 -- 18 AAC 75.495 and is listed in that plan holder's oil discharge prevention and contingency plan as providing those resources.

(c) The holder of an approved oil discharge prevention and contingency plan whose resources are listed in the plan of another plan holder for purposes of meeting the requirements of AS 46.04.030 and 18 AAC 75.400 -- 18 AAC 75.495 is not required to register as an oil spill primary response action contractor, but is subject to all other requirements of 18 AAC 75.425(e)(3)(H) and 18 AAC 75.445(i)(1) and (2).

(d) Any person may apply to the department for registration under 18 AAC 75.500 -- 18 AAC 75.570 as an oil spill primary response action contractor. (Eff. 9/25/93, Register 127)

Authority: AS 46.03.020 AS 46.04.035
AS 46.04.030(k) AS 46.04.070

18 AAC 75.510. GENERAL PROVISIONS.

(a) Beginning January 1, 1994, the resources of an oil spill primary response action contractor listed in an oil discharge prevention and contingency plan submitted under this chapter will not be considered by the department in its review of the plan unless that person is registered in accordance with 18 AAC 75.500 -- 18 AAC 75.570 and all other requirements of 18 AAC 75.425(e)(3)(H) and 18 AAC 75.445(i) are met.

(b) Registration of an oil spill primary response action contractor by the department does not

(1) constitute an assurance by the department of the qualifications or abilities of that contractor;

(2) constitute an assurance by the department that the contractor will adequately respond to a release or threatened release of oil; or

(3) provide a defense to liability under state law. (Eff. 9/25/93, Register 127)

Authority: AS 46.03.020 AS 46.04.035
AS 46.03.825 AS 46.04.070
AS 46.04.030

18 AAC 75.520. APPLICATION FOR REGISTRATION OR RENEWAL.

(a) Oil spill primary response action contractor registration under 18 AAC 75.500 -- 18 AAC 75.570 is effective for three years from the date of issuance under 18 AAC 75.550.

(b) A person seeking registration or renewal of registration as a primary response action contractor shall submit three copies of the application to the department's contractor registration and approval coordinator, division of spill prevention and response.

(c) An applicant for renewal of registration shall submit an application no less than 60 days before the registration expires. If there are no changes in the conditions of registration since the previous application, an application for renewal may incorporate the previous application by reference.

(d) An applicant for registration as a primary response action contractor whose resources will be used to meet all or part of an in-region response planning standard shall submit a separate application for each geographic region of operation as described in 18 AAC 75.495 for which the contractor's resources will be used.

(e) An applicant for registration as a primary response action contractor whose resources will be used to meet all or part of an out-of-region response planning standard shall submit an application for registration as an out-of-region oil spill primary response action contractor. Only one application is required for statewide out-of-region registration.

(f) Nothing in this section precludes a person from submitting applications for in-region and for out-of-region registration.

(g) A separate registration fee under 18 AAC 75.540 must accompany each application for registration or renewal of registration as an oil spill primary response action contractor. (Eff. 9/25/93, Register 127)

Authority: AS 46.03.020 AS 46.04.035
AS 46.04.030 AS 46.04.070

Editor's note: An application for registration or renewal of registration as an oil spill primary response action contractor should be sent to:

Contractor Registration and Approval Coordinator
Alaska Department of Environmental Conservation
Division of Spill Prevention and Response
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801 - 1795

Telephone (907) 465-5275
FAX (907) 465-5245

18 AAC 75.530. REGISTRATION APPLICATION CONTENTS.

(a) An applicant for registration as an oil spill primary response action contractor shall submit a written application to the department that includes

(1) the applicant's name, address, telephone number, and facsimile machine number;

(2) a call-out list of appropriate response personnel;

(3) a statement that the applicant is seeking registration as an out-of-region oil spill primary response action contractor or, if applying for in-region contractor registration, identification of the geographic region of operation described in 18 AAC 75.495 for which application is being made;

(4) the types of oil (such as persistent or nonpersistent) and receiving environments (such as marine, fresh water, open ocean, shallow water, ice, or land) for which the applicant is trained and equipped to respond;

(5) a complete description and most recent inventory of the applicant's oil spill response resources, including

(A) the number and location of trained personnel;

(B) a description of the applicant's minimum training requirements for response personnel and procedures for training additional personnel if needed; and

(C) the amount and location of

(i) oil containment equipment;

(ii) oil recovery equipment, including equipment nameplate ratings in barrels per hour;

(iii) transfer, storage, and disposal equipment;

(iv) dispersant or burning equipment; and

(v) significant ancillary resources and equipment; and

(6) a description of the applicant's previous oil spill activities and compliance history.

(b) Instead of submitting the information required under (a)(4) and (5) of this section, an applicant may submit a complete copy of an application for and a certified copy of the applicant's current Interim or Final Letter of Classification as an Oil Spill Removal Organization issued by the United States Coast Guard. If a letter of classification has not been issued at the time of application, the applicant shall submit a certified copy of the letter of classification upon its receipt.
(Eff. 9/25/93, Register 127)

Authority: AS 46.03.020 AS 46.04.035
AS 46.04.030 AS 46.04.070

18 AAC 75.540. REGISTRATION AND RENEWAL FEES.
The following fees are established for registration of oil spill primary response action contractors and must be submitted with the appropriate application:

(1) for initial application, $500; or

(2) for renewal, $100. (Eff. 9/25/93, Register 127)

Authority: AS 46.03.020
AS 46.04.035
AS 46.04.070

18 AAC 75.550. APPLICATION REVIEW PROCEDURES.

(a) After receipt of an application for registration or renewal as an oil spill primary response action contractor, the department will determine whether the application is complete. If the department finds that an application is incomplete, the applicant will be notified of the need for additional information. The department will review each complete application and issue a decision.

(b) The department will approve an application for oil spill primary response action contractor registration or renewal of registration if the applicant meets the application requirements of 18 AAC 75.510 -- 18 AAC 75.540 and the minimum registration standards of 18 AAC 75.560.

(c) After completing the review, the department will notify the applicant that the application for registration or renewal of registration has been approved or denied. If the application for registration or renewal has been approved, the department will include a registration certificate describing the conditions of approval, the date registration will expire, and, for an in-region primary response action contractor, the region of operation for which that contractor is registered. If the application is denied, the department will explain the basis for the denial and include a list of corrective actions that would be required for the applicant to obtain approval of registration or renewal.

(d) Within 10 days after receiving a notice of denial under (c) of this section, the applicant may request an informal review of the decision. The request for review must be submitted in writing to the director of the division of spill prevention and response and must include

(1) the applicant's name, mailing address, and telephone number; and

(2) a brief, clear summary of the reasons for requesting the review.

(e) A review requested under (d) of this section will be held within 10 days after the director receives a request for review, unless the director and the applicant agree to another time. After receiving a request for review under (d) of this section, the director will notify the applicant by telephone, facsimile, or personal delivery, of the time and place of the review.

(f) If the applicant fails to appear at the time and place stated in the notice issued under (e) of this section, and if a delay has not been granted by the director, the failure to appear will be considered a waiver of the applicant's right to an informal review under this section.

(g) A review under this section will be recorded, will be heard by the director or a designee, and will be informal. The applicant may

(1) present witnesses and evidence in the applicant's own behalf; and

(2) question witnesses and seek to disprove evidence presented by the department.

(h) Within 10 days after a review under this section, the director will issue a final decision, stating the reasons for the decision, and indicating the evidence relied upon in reaching that decision.

(i) Nothing in this section affects an applicant's right to appeal the department's decision under the Administrative Procedure Act. (Eff. 9/25/93, Register 127)

Authority: AS 46.03.020 AS 46.04.035
AS 46.04.030 AS 46.04.070

18 AAC 75.560. MINIMUM REGISTRATION STANDARDS.

(a) In addition to the requirements of (b) of this section, the minimum registration standards and verification requirements for an oil spill primary response action contractor required under AS 46.04.035(a)(1) -- (4) are the oil discharge prevention and contingency plan requirements and the response planning standards set out in AS 46.04.030 and 18 AAC 75.425 -- 18 AAC 75.495 that are applicable to a contractor listed in an approved oil discharge prevention and contingency plan.

(b) In addition to the requirements of (a) of this section, an oil spill primary response action contractor must be in compliance with the following minimum registration standards:

(1) all response resources that the contractor has agreed in writing to provide to the oil discharge prevention and contingency plan holder to meet all or part of the in-region response planning standards applicable to that plan holder must be located within the plan holder's region of operation unless the department has approved another location;

(2) the contractor shall maintain sufficient response preparedness to immediately initiate response efforts as described in the applicable contingency plan upon direction by the plan holder; response preparedness is subject to verification by the department through inspections and plan holder discharge exercises;

(3) training of contractor personnel must comply with 18 AAC 75.445(j) and must include appropriate Occupational Safety and Health Administration Hazardous Operations training;

(4) professional response action standards and practices must be continuously maintained, and must include

(A) responding immediately upon direction by the plan holder;

(B) remaining in substantial compliance with applicable contracts;

(C) abiding by applicable permits and authorizations unless directed to proceed otherwise by the federal or state on-scene coordinator;

(D) maintaining a working knowledge of all applicable oil pollution statutes and regulations and pertinent provisions of each contingency plan in which that contractor is listed; and

(E) maintaining a safe working environment and an acceptable safety history.

(c) No later than January 31 of each year, an oil spill primary response action contractor registered under this chapter shall provide to the department a complete list of oil discharge prevention and contingency plans in which that contractor has agreed in writing to be listed as a primary response action contractor. (Eff. 9/25/93, Register 127)

Authority: AS 46.03.020 AS 46.04.035
AS 46.04.030 AS 46.04.070

18 AAC 75.570. FAILURE TO COMPLY.

(a) If the department determines that an oil spill primary response action contractor has failed to meet or maintain a minimum registration standard identified in 18 AAC 75.560, the department will, in its discretion, revoke, suspend, or modify

(1) the contractor's registration; and

(2) its approval of the oil discharge prevention and contingency plan in which that contractor is listed as an oil spill primary response action contractor.

(b) A person who is aggrieved by a department decision under (a) of this section may request an informal review of that decision, using the procedures described in 18 AAC 75.550(d) -- (h). Nothing in this subsection affects that person's right to appeal the department's decision under the Administrative Procedure Act.
(Eff. 9/25/93, Register 127)

Authority: AS 46.03.020 AS 46.04.035
AS 46.04.030 AS 46.04.070

ARTICLE 6. Civil Penalties for Discharge of Petroleum and Petroleum Products.

18 AAC 75.605. APPLICABILITY.
18 AAC 75.605 -- 18 AAC 75.670 establish a schedule of civil penalties under AS 46.03.758 for the discharge of petroleum and petroleum products and byproducts, other than crude oil. The schedule of civil penalties does not apply to a discharge that is specifically made subject to the provisions of AS 46.03.760(a). (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.758

18 AAC 75.610. FRESHWATER ENVIRONMENTS.
(a) For the purposes of AS 46.03.758(b)(1)(A), freshwater environments with significant aquatic resources are classified as follows:
(1) Critical freshwater environments include
(A) surface and subsurface water supplies for which the commissioner of natural resources has issued a water use permit under AS 46.15.040 -- 46.15.185, or which are in fact being used for a purpose that would qualify for a water use permit;
(B) rivers, lakes, and streams designated under AS 16.05.870(a) as important for the spawning, rearing, or migration of anadromous fish, and the water of lakes, streams, and rivers that flows or empties into those designated waters;
(C) lakes, streams, rivers, and freshwater wetlands within the boundaries of land administered under the National Wildlife Refuge System, and the water of lakes, streams, and rivers that flows or empties into those waters;
(D) lakes, streams, rivers, and freshwater wetlands within the boundaries of game reserve areas, refuges, critical habitat areas, and sanctuaries established under AS 16.05.255(1) or AS 16.20, and the water of lakes, streams, and rivers that flows or empties into those waters; and
(E) lakes, streams, rivers, and freshwater wetlands within the boundaries of fish reserve areas, refuges, critical habitat areas, and sanctuaries established under AS 16.05.251(1) or AS 16.20, and the water of lakes, streams, and rivers that flows or empties into those waters; and
(2) Sensitive freshwater environments include
(A) lakes other than those classified in (1) of this subsection;
(B) freshwater wetlands other than those classified in (1) of this subsection; and
(C) subsurface freshwaters other than those classified in (1)(A) of this subsection.
(b) For purposes of AS 46.03.758(b)(1)(C), all freshwater of the state that is not classified in (a) of this section is classified as "without significant aquatic resources." (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.758

18 AAC 75.620. MARINE ENVIRONMENTS.
(a) For the purposes of AS 46.03.758(b)(1)(B), estuarine, intertidal, and saltwater environments are classified as follows:
(1) Critical marine environments include

(A) marine water within the boundaries of state game refuges established under AS 16.05.255(1) or AS 16.20;

(B) marine water within the boundaries of fish and game critical habitats established under AS 16.20;

(C) marine water within the boundaries of marine sanctuaries established under 16 U.S.C. 1431 -- 16 U.S.C. 1445, as amended through July 1, 1991;

(D) marine water within the boundaries of areas administered under the National Wildlife Refuge System;

(E) marine water within one statute mile of the mouth of waters designated under AS 16.05.870(a) as important for the spawning, rearing, or migration of anadromous fish;

(F) marine water within one statute mile of a seabird colony or marine mammal rookery or hauling ground identified by the Alaska Department of Fish and Game under AS 16.20;

(G) high density sea otter habitat identified by the Alaska Department of Fish and Game under AS 16.20; and

(H) marine water within the barrier island-lagoon ecosystems extending from the Colville River to Canning River, and seaward of the Copper River delta; and

(2) Sensitive marine environments include

(A) the inside waters of Southeast Alaska not otherwise classified in (1) of this subsection;

(B) saltwater wetlands and other intertidal and estuarine areas not otherwise classified in (1) of this subsection;

(C) Prince William Sound, and the bays, arms, fjords, ports, and other inside marine waters of Prince William Sound not otherwise classified in (1) of this subsection; and

(D) all marine water within 10 statute miles of any point of those waters designated in (1) of this subsection.

(b) For the purposes of AS 46.03.758(b)(1)(C), marine water that is not classified in (a) of this section is classified as "without significant aquatic resources." (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.758

[Editor's note: Seabird colonies, marine mammal rookeries or hauling grounds, and high density sea otter habitats, referred to in 18 AAC 75.620(a)(1)(F) and (G) are described in the current edition of "Alaska Habitat Management Guides", published by, and available for review at the Alaska Department of Fish and Game.]

18 AAC 75.630. PUBLIC LAND ENVIRONMENTS.

(a) For the purposes of AS 46.03.758(b)(1)(C), public land is classified as follows:

(1) Critical terrestrial environments include

(A) state game reserve areas, refuges, and sanctuaries established under AS 16.05.255(1) or AS 16.020;

(B) state parks, campgrounds, and waysides;

(C) municipal parks and park reserves;

(D) national parks, preserves, wilderness areas, monuments, recreation areas or other National Park System units, and lands administered under the National Wildlife Refuge System;

(E) established campgrounds, scenic waysides, and picnic areas; and

(F) national historical landmarks;

(2) Very sensitive terrestrial environments include

(A) land administered under the National Forest System not otherwise classified in (1) of this subsection;

(B) land underlain with continuous permafrost not otherwise classified in (1) of this subsection; and

(C) land in state forests and research areas not otherwise classified in (1) of this subsection; and

(3) Sensitive terrestrial environments include land other than that classified in (1) or (2) of this subsection upon which continuous natural terrestrial vegetation cover is present.

(b) For the purposes of AS 46.03.758(b)(1)(C), all public land not classified in (a) of this section is classified as "without significant terrestrial environmental resources." (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.758

18 AAC 75.640. TOXICITY OF PETROLEUM AND PETROLEUM PRODUCTS AND BYPRODUCTS.

For the purposes of AS 46.03.758(d), the toxicity of petroleum and petroleum products and byproducts is as follows:

(1) highly toxic:

(A) numbers 1, 2, and Arctic diesel fuel and heating oil;

(B) jet aviation fuels A and B;

(C) motor gasoline, including aviation gasoline;

(D) kerosene; and

(E) stationary turbine fuels;

(2) moderately toxic:

(A) waste oil and waste oil mixtures;

(B) lubricating oil; and

(C) jet fuels other than those specified in (1)(B) of this section;

(3) less toxic:

(A) bunker and residual fuel oils; and

(B) hydraulic fluids; and

(4) relatively nontoxic:

(A) asphalts;

(B) tars; and

(C) other petroleum and petroleum products and byproducts not listed in (1) -- (3) of this section. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.758

18 AAC 75.650. DEGRADABILITY OF PETROLEUM AND PETROLEUM PRODUCTS AND BYPRODUCTS.

For the purposes of AS 46.03.758(d), the degradability of petroleum and petroleum products and byproducts is as follows:

(1) low degradability:

(A) asphalt;

(B) tar;
(C) bunker and residual fuel oils; and
(D) other petroleum and petroleum products and byproducts not otherwise listed in (2) or (3) of this section;
(2) moderate degradability:
(A) hydraulic fluids;
(B) lubricating oil; and
(C) waste oils and waste oil mixtures; and
(3) high degradability:
(A) motor gasoline, including aviation gasoline;
(B) numbers 1, 2, and Arctic diesel fuel and heating oil;
(C) jet and stationary turbine fuels; and
(D) kerosene. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.758

18 AAC 75.660. DISPERSIBILITY OF PETROLEUM AND PETROLEUM PRODUCTS AND BYPRODUCTS.
For the purposes of AS 46.03.758(d), the dispersibility of petroleum and petroleum products and byproducts is as follows:
(1) highly dispersible:
(A) motor gasoline, including aviation gasoline;
(B) all jet fuels;
(C) kerosene;
(D) numbers 1, 2, and Arctic diesel fuel and heating oil;
(E) hydraulic fluids; and
(F) stationary turbine fuels;
(2) moderately dispersible:
(A) emulsified oil mixtures;
(B) lubricating oils; and
(C) waste oil and waste oil mixtures; and
(3) low dispersibility:
(A) bunker and residual fuel oils;
(B) asphalts;
(C) tars; and
(D) other petroleum and petroleum products and byproducts not otherwise listed in (1) or (2) of this section. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.758

18 AAC 75.670. SCHEDULE OF CIVIL PENALTIES.

The schedule of civil penalties for which a person may be held liable under AS 46.03.758(c) is established as follows:

(1) The base civil penalty for a discharge into a receiving environment is as follows:

Receiving Environment	Freshwater	Marine	Public Land
Critical environments	$10.00	$2.00	$1.00
Very sensitive environments	N/A	N/A	$0.75
Sensitive environments	$ 5.00	$2.00	$0.50
Environments without significant resources	$ 1.00	$1.00	$0.25

(2) Toxicity, degradability, and dispersibility factors are as follows:

	Factor
(A) toxicity*	
(i) highly toxic	1.0
(ii) moderately toxic	0.75
(iii) less toxic	0.50
(iv) relatively nontoxic	0.25
(B) degradability	
(i) low degradability	1.0
(ii) moderate degradability	0.50
(iii) high degradability	0.25
(C) dispersibility	
(i) high dispersibility	0.15
(ii) moderate dispersibility	0.50
(iii) low dispersibility	1.0

(3) The net civil penalty that will be assessed per gallon of petroleum or petroleum product or byproduct discharged is calculated by multiplying the base penalty established in (1) of this section by the arithmetic mean of the factors established in (2) of this section. If a portion of the petroleum or petroleum product or byproduct enters more than one receiving environment, the civil penalty will be based upon the most sensitive receiving environment which that portion enters.

(Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.03.758

**[Editor's note: To determine the toxicity factor for a particular oil, the factor from the table is multiplied by a fraction whose numerator is the percent concentration of aromatics in the oil and whose denominator is 45. In no case may the toxicity factor exceed 1.0.]*

ARTICLE 7. Surface Oiling.

18 AAC 75.700. SURFACE OILING PERMIT.

(a) No person may discharge, cause to be discharged, or permit the discharge of oil, asphalt, bitumen, or a residuary product of petroleum onto the land of the state unless that person has been issued a surface oiling permit under 18 AAC 75.730.

(b) An application for a surface oiling permit

(1) is subject to the requirements of 18 AAC 15;

(2) must be made on forms supplied by the department; and

(3) must contain information considered necessary by the department.

(c) A person who proposes to stabilize soil with the application of asphalt emulsions, tars, asphaltic oils, cutback asphalts, oils, or other residuary petroleum product, without immediately applying a blotter or cover coat of aggregate, is not exempt from the surface oiling permit requirements of this chapter. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.740

18 AAC 75.710. EXEMPTION FROM SURFACE OILING PERMIT.

A person who proposes to construct one or more of the following types of surfaces is not required to obtain a surface oiling permit under this chapter, but shall ensure that construction of the surface does not result in pollution of land or waters of the state:

(1) a bituminous treatment surface that includes a surface constructed by sweeping the surface, applying a priming material, applying a bituminous body coat, and spreading a blotter or cover of mineral aggregate;

(2) a road-mix bituminous surface for which the mineral aggregate and the bituminous material are mixed directly in the surface;

(3) a plant-mixed bituminous surface for which the mineral aggregate and the bituminous material are thoroughly mixed at a suitable plant and then deposited on the surface;

(4) a bituminous macadam surface with a wearing course composed of broken stone aggregate of relatively coarse size and a bituminous material that is forced by penetration into the interstices of the stone after the stone has been compacted on the base; and

(5) a bituminous concrete or sheet asphalt surface with a wearing course composed of a bituminous mixture prepared in a stationary plant under close control of temperature, moisture content, and mixture composition. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.740

18 AAC 75.720. PROHIBITIONS.

(a) The use of oil for surface oiling or as a dust suppressant is prohibited if the oil contains any of the following components in the concentrations indicated:

(1) polychlorinated biphenyls (PCBs) in any detectable concentration;

(2) total volatile aromatics in 5000 parts per million by weight or greater;

(3) total halogenated volatile organics in 100 parts per million by weight or greater; or

(4) lead in 300 parts per million by weight or greater.

(b) The department will, in its discretion, require analysis of oil for a component listed in (a) of this section, using methods prescribed on the surface oiling permit application form. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020 AS 46.03.299
AS 46.03.296 AS 46.03.740

18 AAC 75.730. DECISION ON APPLICATION FOR SURFACE OILING PERMIT; PERMIT TERM AND CONDITIONS.

(a) The department will, in its discretion, grant or deny an application submitted under 18 AAC 75.700. The department will consider the following criteria before issuing a decision under this section:

(1) the potential for pollution of adjacent waters, including groundwater;

(2) the potential for pollution of vegetation;

(3) the need for the oiling, including local public opinion, and considerations of air quality as addressed by 18 AAC 50;

(4) the predicted weather conditions for the time of the oiling; and

(5) effects on the environment.

(b) In addition to the specific terms and conditions set out in the permit, a surface oiling permit is subject to the following terms and conditions:

(1) oil or other petroleum-derived dust retardants may not be applied to wet surfaces, frozen surfaces, or snow-covered surfaces; however, oil or other petroleum-derived dust retardants may be applied to a damp surface if deliberate dampening of the surface is part of the normal oiling procedure;

(2) oil or other petroleum-derived dust retardants may be applied only in the minimum amounts necessary and may not be allowed to stand in ponds on the surface;

(3) there may be no runoff of oil or other petroleum-derived dust retardants from the surface receiving the application;

(4) oil or other petroleum-derived dust retardants may not be applied to any surface during precipitation or when precipitation is imminent;

(5) there must be equipment such as brooms and mops on the job to prevent oily runoff and to spread any ponded oil or other petroleum derived dust retardants;

(6) unless specifically allowed in the permit, in order to avoid drifting of droplets to adjacent vegetation and property, oil or other petroleum-derived dust retardants may not be applied if local wind speed is 15 miles per hour or greater;

(7) the permittee shall inspect immediately the freshly-treated surface for oily runoff and ponding of oil or other petroleum-derived dust retardants;

(8) to avoid offensive odors, only nonodorous oils and other petroleum-derived dust retardants may be used on surfaces near residential areas or on surfaces that receive considerable pedestrian traffic; odorous oils may be used only on rural surfaces where the odor is less likely to be noticeable and pedestrian traffic is minimal; and

(9) no oil or other petroleum-derived dust retardants may be allowed to enter state waters or to enter upon private property. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.740

ARTICLE 8. Oil Discharge for Scientific Purposes

18 AAC 75.800. PERMIT FOR OIL DISCHARGE FOR SCIENTIFIC PURPOSES. Notwithstanding 18 AAC 70.020, 18 AAC 72.010, and 18 AAC 75.700 -- 18 AAC 75.730, the department will, in its discretion, issue a permit for the discharge of oil, asphalt, bitumen, or a residuary product of petroleum onto the land or into state waters for research and scientific purposes. The department will issue a permit under this section only after it has evaluated the proposed project and found that

(1) the benefits from the information that will be developed outweigh the potential environmental damage that might result;

(2) the project has the written approval of all potentially affected landowners and persons with appropriated water rights for the water to be affected;

(3) the person proposing the project will, upon completion of the project, restore the environment affected by the project to a condition as near to the original condition as feasible;

(4) the person proposing the project has sufficient expertise and resources to conduct the project in a responsible manner; and

(5) the proposed project is otherwise in the public interest. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.740

18 AAC 75.810. PERMIT PROCEDURES.

(a) An application for a permit under 18 AAC 75.800 must be made on forms supplied by the department. The application must be sent to the department at least 60 days before the proposed discharge is to begin. The application must include

(1) the name, address, and telephone number of the applicant;

(2) a detailed description of the proposed project, including plans for restoration;

(3) a description of the geographical area involved; and

(4) a description of the expected flow pattern of any water to be affected by the project.

(b) The department will

(1) send a copy of a completed application received under this section to the departments of fish and game, natural resources, commerce and economic development, and health and social services; and

(2) publish notice of the application as provided in 18 AAC 15.050.

(c) The department will attach terms and conditions to the permit which it finds are necessary to protect the environment and potentially affected property owners. A permit is further subject to the permittee's stipulation and agreement to

(1) modify activities if served with a notice under 18 AAC 75.820; or

(2) immediately cease all permitted activities if served with a notice to terminate under 18 AAC 75.830. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.740

18 AAC 75.820. MODIFICATION OF PERMIT.
The department will, in its discretion, and after giving notice to the permittee, modify the terms and conditions of a permit issued under 18 AAC 75.810 if the department finds that modification is necessary to protect the environment.
(Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.740

18 AAC 75.830. TERMINATION OF PERMIT.
The department will, in its discretion, and after giving notice to the permittee, terminate a permit issued under 18 AAC 75.810 if the department finds that

(1) the permit was obtained by misrepresentation of a material fact or by failure of the applicant to fully disclose the facts;

(2) there has been noncompliance with a term or condition of the permit; or

(3) based on information received after issuance of the permit, the permit should not have been granted. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.740

ARTICLE 9. General Provisions.

18 AAC 75.905. FALSIFICATION PROHIBITED.
No person may falsely state information submitted under AS 46.03, AS 46.04, AS 46.09, or this chapter. (Eff. 5/14/92, Register 122)

Authority: AS 46.03.020
AS 46.03.790
AS 46.04.070

18 AAC 75.990. DEFINITIONS.
Unless the context indicates otherwise, in this chapter

(1) "approved" means approved by the department;

(2) "area of public concern" means a geographic area that, in the department's judgment, deserves special protection from an oil discharge, including

(A) an area of unique cultural value, historical significance, or scenic importance;

(B) an area of substantial residential or public recreational value or opportunity;

(C) an area where fish hatcheries or other facilities primarily dependent upon the use of potentially affected water are located;

(D) an area significantly used for commercial, sport, or subsistence hunting, fishing, and gathering; and

(E) an area where concentrations of terrestrial or marine mammals or bird populations primarily dependent on the marine environment are located;

(3) "barge" means oil barge;

(4) "barrel" has the meaning given that term at AS 46.04.900;

(5) "best available technology" means equipment, supplies, and other resources which, in the department's judgment, meet or exceed the current level of demonstrated available technology;

(6) "capacity" means storage capacity;

(7) "cargo volume" means storage capacity;

(8) "catastrophic oil discharge" has the meaning given that term at AS 46.04.900;

(9) "catch tank" means the container that collects well fluids, muds, and oil from drilling;

(10) "cleanup" means removal of oil or another hazardous substance from the environment, restoration, and other measures that the department considers necessary to mitigate or avoid further threat to the land, waters, or air of the state;

(11) "contain" means to surround a discharge with booms, berms, dikes, or other barriers to prevent the further spread of the discharge;

(12) "control" means to stop, restrict, or deflect the movement of a discharge;

(13) "department" means the Alaska Department of Environmental Conservation;

(14) "discharge" has the meaning given that term at AS 46.04.900; for purposes of this chapter, the term applies to an unpermitted discharge into the environment;

(15) "dispersant" means a chemical agent used to enhance the breakup of concentrations of discharged oil into droplets, thereby promoting mixing of oil into the water column and accelerating dilution and degradation rates;

(16) "environmentally sensitive area" means a geographic area that, in the department's judgment, is especially sensitive to change or alteration, including

(A) an area of unique, scarce, fragile, or vulnerable natural habitat;

(B) an area of high natural productivity or essential habitat for living resources;

(C) an area of unique geologic or topographic significance which is susceptible to a discharge;

(D) an area needed to protect, maintain, or replenish land or resources, including floodplains, aquifer recharge areas, beaches, and offshore sand deposits;

(E) a state or federal critical habitat, refuge, park, or other designated refuge or preserve; and

(F) an area that merits special attention as defined at 6 AAC 80.170;

(17) "estuarine" or "estuary" means a semi-enclosed, coastal body of water which has a free connection with the sea and within which seawater is measurably diluted with freshwater derived from land drainage;

(18) "existing installation" means storage and surge tanks, secondary containment, piping and any other operational appurtenances constructed and installed before the effective date of this section; existing storage and surge tanks that have been reconstructed, as defined in API Standard 653, First Edition, 1991, and Supplement 1, January 1992, are considered a new installation for the purposes of this chapter;

(19) "exploration facility" has the meaning given that term at AS 46.04.900;

(20) "facility" or "facility or operation" means any offshore or onshore structure, improvement, vessel, vehicle, land, enterprise, endeavor, or act, and includes an oil terminal facility, tank vessel, oil barge, pipeline, and an exploration or production facility;

(21) "freshwater wetlands" means those environments characterized by rooted vegetation that is partially submerged either continuously or periodically by surface freshwater with less than .5 parts per thousand salt content and not exceeding three meters in depth;

(22) "groundwater" means water in the zone of saturation, which is the zone below the water table, where all interstices are filled with water;

(23) "hazardous substance" has the meaning given that term at AS 46.03.826;

(24) "hazardous waste" means wastes within the scope of 18 AAC 62.010 -- 18 AAC 62.020;

(25) "impermeable" means using a layer of manufactured material of sufficient thickness, density, and composition to produce a maximum permeability for the substance being contained of 1×10^{-7} centimeters per second at the maximum anticipated hydrostatic pressure, sufficient to contain a discharge until it is detected and cleaned up;

(26) "inside waters of Southeast Alaska" includes all those marine waters lying inside the boundary line established in 42 Federal Register 35791 (July 11, 1977);

(27) "lightering" means the pumping or transferring of oil from the cargo compartment of one vessel, barge, storage tank, or container to another vessel, barge, storage tank, or container;

(28) "liquefied petroleum gas" means natural gas converted to a liquid state by pressure and cooling, butane, propane, and other light ends which at 70 degrees Fahrenheit and atmospheric pressure revert to the gaseous state;

(29) "local government" means any borough, city, town, village, or other political subdivision of the state, any Indian tribe or authorized tribal organization, and includes any rural community or unincorporated town or village;

(30) "major discharge" means a discharge of oil

(A) over 10,000 gallons on inland waters;

(B) over 100,000 gallons on coastal waters; or

(C) in any amount that results in a release that

(i) might require evacuation or sheltering of nearby residents or businesses; or

(ii) causes a serious environmental threat;

(31) "marine waters" means all saltwater environments, including saltwater wetlands, estuaries, and the intertidal zone;

(32) "mechanical response method" means the use of containment booms, skimmers, and other apparatus and equipment required for mechanical containment and removal of a discharge;

(33) "new installation" means storage and surge tanks, secondary containment, piping and any other operational appurtenances constructed, installed, or placed into service after the effective date of this section, including reconstructed storage and surge tanks, as defined in API Standard 653, First Edition, 1991, and Supplement 1, January 1992;

(34) "noncrude oil" means any refined petroleum product derived from crude oil;

(35) "oil" has the meaning given that term at AS 46.04.900;

(36) "oil barge" has the meaning given that term at AS 46.04.900;

(37) "oil storage tank", for the purposes of 18 AAC 75.065 and 18 AAC 75.075 means all containers, including storage and surge tanks, used to store bulk quantities of oil which have a capacity greater than 10,000 gallons, but does not include process pressure vessels or underground storage tanks;

(38) "oil terminal facility" has the meaning given that term at AS 46.04.900 and includes vessels classified as oil terminal facilities under 18 AAC 75.280;

(39) "oily waste" means any material, including water, that has been contaminated by or mixed with oil in other than naturally occurring circumstances;

(40) "open burning" means the burning of any material so that the products of combustion are emitted directly into the ambient air without passing through a stack or flare;

(41) "open water" means marine waters below mean low low water and freshwaters of the state, excluding wetlands and the wetland or shoreline perimeter of lakes, rivers, and streams;

(42) "operator" has the meaning given that term at AS 46.04.900;

(43) "owner or operator" means the owner or operator of a facility or operation that is subject to the requirements of AS 46.04.030, 46.04.040, or this chapter;

(44) "permafrost" means soil or other earth material supporting vegetation with a temperature that remains below 32 degrees Fahrenheit for two or more years;

(45) "persistent product" means a refined oil product with a common name such as bunker C, Number 6, Chevron Residual, lube oil, or any other product with similar viscosity, degradability, and dispersibility;

(46) "person" has the meaning given that term at AS 46.04.900;

(47) "person in charge," in addition to the person causing or permitting a discharge, includes

(A) for a vessel, the master;

(B) for a vehicle, the operator; and

(C) the person exercising a possessory interest in the facility or operation at the time of the discharge, unless the possessory interest is being exercised solely for the purpose of providing a place of residence for the person;

(48) "pipeline" has the meaning given that term at AS 46.04.900;

(49) "plan" means an oil discharge prevention and contingency plan approved under this chapter;

(50) "plan holder" means an applicant who has received department approval for an oil discharge prevention and contingency plan and who is responsible for compliance with the plan as approved;

(51) "ppm" means parts per million;

(52) "Prince William Sound" includes all marine waters lying inside the boundary line established in 42 Federal Register 35791 (July 11, 1977);

(53) "Prince William Sound towing package" means a towing gear assembly that consists of

(A) 400 feet of $2^1/_4$ inch tow reaching wire;

(B) 720 feet of six-inch polypropylene floating pickup line;

(C) one floating pickup buoy; and

(D) a "D" shackle, $2^1/_4$ inches in diameter, with a $4^1/_8$ inch jaw opening, and a breaking strain of 55 tons, to connect the floating line to the tow reaching wire;

(54) "production facility" has the meaning given that term at AS 46.04.900;

(55) "realistic maximum operating limitation" means the upper limit of a combination of environmental factors that might occur at a facility or operation beyond which an operator would be unable to mount a mechanical response to a discharge event;

(56) "response planning standard" means a planning standard against which the adequacy of an oil discharge prevention and contingency plan will be judged by the department and does not constitute a cleanup standard that must be met by the holder of a contingency plan;

(57) "resource agencies" means, in addition to the Alaska Department of Environmental Conservation, the Alaska Department of Natural Resources and the Alaska Department of Fish and Game;

(58) "saltwater wetlands" means those coastal areas along sheltered shorelines characterized by halophytic hydrophytes and macroalgae extending from extreme low tide to an area above extreme high tide which is influenced by sea spray or tidally induced water table changes;

(59) "sensitive gauging system" means the best demonstrated available gauging technology at the time of tank construction or substantial reconstruction, or initial gauging system installation;

(60) "sensitive receiving environment," for the purposes of 18 AAC 75.075(d), means fresh or marine waters supporting anadromous fish or used for drinking or food processing, waters susceptible to eutrophication, a stream with low or intermittent flow, tundra, or lands which permit exposure of wastewater to the public;

(61) "significant change" means

(A) a change in operational readiness or removal from designated storage of significant equipment or materials;

(B) a management or ownership change resulting in new chain-of-command or lead response personnel;

(C) a change in response contractors;

(D) a change in spill control or cleanup strategies; or

(E) any factor that significantly alters or reduces the ability of the plan holder to respond according to the provisions of the approved contingency plan;

(62) "state waters" means waters of the state;

(63) "storage capacity," means, for a vessel, the maximum amount of oil that the vessel can legally carry as cargo while in state waters, or as certified by the American Bureau of Shipping, Certificate of Inspection by United States Coast Guard, or an equivalent classification by a society or agency in a foreign country or a lesser amount upon proof and verification to the department's satisfaction; for a tank, "storage capacity" means the full physical volume of the tank; the storage capacity of pipes at a facility is considered part of the storage capacity of that facility;

(64) "sufficiently impermeable" means, for a secondary containment system, that the design and construction of the system is such that it has the impermeability necessary to protect groundwater from contamination and to contain a discharge until it can be detected and cleaned up; for design purposes for a new installation, this means using a layer of natural or manufactured material of sufficient thickness, density, and composition to produce a maximum permeability for the substance being contained of 1×10^{-6} cm per second at a maximum anticipated hydrostatic pressure, unless an alternate design standard is approved by the department;

(65) "surety" includes a surety bond;

(66) "tank vessel" has the meaning given that term at AS 46.04.900;

(67) "transmission pipeline" means a pipeline, whether interstate or intrastate subject to regulation by the United States Department of Transportation under 49 C.F.R. 195, as amended through October 1, 1990, through which crude oil moves in transportation, including line pipe, valves, and other appurtenances connected to line pipe, pumping units, and fabricated assemblies associated with pumping units; "transmission pipeline" does not include gathering lines, flow lines, or facility piping;

(68) "ultimate disposal" includes disposal into or upon the waters or the surface or subsurface land of the state;

(69) "vessel" has the meaning given that term at AS 46.04.900; and

(70) "waters of the state" has the meaning given that term at AS 46.04.900.

(71) "oil spill primary response action contractor," for the purposes of 18 AAC 75.425 and 18 AAC 75.445, has the meaning given at 18 AAC 75.500(a). (Eff. 5/14/92, Register 122; am 9/25/93, Register 127)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.710 AS 46.03.740 AS 46.04.030 AS 46.04.035 AS 46.04.070

Alaska Department of Environmental Conservation

Discharge Notification and Reporting Requirements

AS 46.03.755 and 18 AAC 75.300-.307

Notification of a discharge must be made to the nearest DEC office during working hours
or
24-Hour Emergency Reporting Number during non-working hours
1-800-478-9300 In-state
907-269-5711 Out-of-state

Notification Requirements

DISCHARGE TO WATER

Any discharge of Hazardous Substance	—As soon as the person has knowledge of any discharge
Any discharge of Oil	—As soon as the person has knowledge of any discharge

DISCHARGE TO LAND

Any discharge of Hazardous Substance	—As soon as the person has knowledge of any discharge
Any discharge of Oil in excess of 55 gallons	—As soon as the person has knowledge of any discharge
Any discharge of Oil in excess of 10 gallons but 55 gallons or less	—Within 48 hours after the person has knowledge of any discharge
Any discharge of Oil from 1 to 10 gallons	—A person in charge of a facility or operation shall maintain, and provide to the department on a monthly basis, a written record of any discharge including a cumulative discharge.

DISCHARGE TO IMPERMEABLE SECONDARY CONTAINMENT AREAS

Any discharge of oil in excess of 55 gallons	—Within 48 hours after the person has knowledge of any discharge

Reporting Requirements

A written final report must be submitted to the Department for any discharge within 15 days after cleanup is completed or, if no cleanup occurs, within 15 days after the discharge. The Department may require interim reports until cleanup is completed.

rev. 8/92

ALASKA LAW REQUIRES THE REPORTING OF ALL

OIL AND HAZARDOUS SUBSTANCES SPILLS

During normal working hours call the nearest office of the

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION:

Southeast Region	
Juneau District	465-5340
Ketchikan District	225-6200
Sitka District	747-8614

Northern Region	
Interior District	451-2360
Nome District	443-2600
Tok District	883-4381

Pipeline Region	
Coordinator's Office	278-8595
Prince William Sound District	835-4698

Southcentral Region	
Anchorage District	349-7755
Kenai District	262-5210
Matanuska Susitna District	376-5038
Valdez Field Office	835-4698
Cordova Field Office	424-4385
Western District	349-7755
Bethel Field Office	543-3215
Kodiak Field Office	486-6760
Unalaska Field Office	581-1822

Or Call: 1-800-478-9300 In State
(907) 269-5711 Out of State

24 hours/day

Alaska Department of Environmental Conservation
410 Willoughby Ave., Suite 105
Juneau, AK 99801-1795

Alaska Statute 46.03.755

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPILL PREVENTION AND RESPONSE DIVISION

UNDERGROUND PETROLEUM STORAGE TANK PROGRAM

STORAGE TANK ASSISTANCE FUND ANNUAL REPORT

FISCAL YEAR
1992

Presented to the **First Session of the Eighteenth Alaska Legislature**

January 21, 1993 • Walter J. Hickel, Governor • John A. Sandor, Commissioner

STATE OF ALASKA

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March 19, 1993

The Honorable Ramona Barnes
Speaker of the House
State House of Representatives
Alaska State Capitol, Rm. 208
Juneau, AK 99801

MAR 25 1993

Dear Representative Barnes:

I am pleased to submit to you the Department of Environmental Conservation's Storage Tank Assistance Fund Annual Report for the fiscal year 1992 as required under AS 46.03.363. Copies of this report have been sent to each legislator.

The report summarizes the status of the Storage Tank Assistance Fund during the second year of the program which was enacted on September 5, 1990.

The intent of the program is to provide technical and financial assistance to owners and operators of underground storage tanks and thereby ease the burden of compliance with federal and state Underground Storage Tank requirements. These requirements are designed to prevent and correct releases from underground storage tanks which pose a threat to the drinking water supplies of the state or otherwise harm the environment.

Over 1100 requests for financial assistance have been received as of December 31, 1992. Appropriations of 10.8 million through FY93 will cover about one-fourth of those requests. Grants have been awarded on a priority basis to close or replace old tanks and cleanup contaminated soil and groundwater.

Alaska is one of more than forty states that have adopted financial assistance programs aimed at upgrading underground petroleum storage tank systems. We look forward to responding to any questions or comments you may have regarding this report.

Sincerely,

Janice Adair
Assistant Commissioner

JH/jvs (G:\SPAR\UST\Barnes1.ltr)

cc: J.C. Shine, Chief Clerk (2)

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STATEMENT OF PURPOSE

The Underground Storage Tank (UST) Statute, an amendment to a portion of AS 46.03, became effective on September 5, 1990. This legislation provided for (1) the establishment of technical and financial assistance mechanisms to assist the owners and operators of underground storage tank systems to comply with federal and state requirements; and (2) the cleanup of existing leaks and prevention of future leaks associated with underground storage tank systems in order to protect the public from contamination of drinking water, and to protect the environment.

The UST Statute established the Storage Tank Assistance Fund and requires the Department of Environmental Conservation (Department) to submit an annual report to the legislature on its status.

This report summarizes:

(1) the amount and source of money received by the fund during the preceding fiscal year;

(2) the amount of money expended during the preceding fiscal year for each type of expense authorized under AS 46.03.410 (b) including tank tightness testing or site assessments, costs of risk assessment, containment, corrective action, cleanup, tank system upgrading, and closure;

(3) a detailed summary of department activities paid for from the fund during the preceding fiscal year, including how many requests for assistance have been made to the department to use the fund for grants or loans for testing, site assessment, risk assessment, upgrading, closure, containment, corrective action, and cleanup costs, and the number of requests funded in each activity area;

(4) the projected cost for the next fiscal year of monitoring, operating, and maintaining sites where department activities have been completed or are expected to start or be continued during the fiscal year;

(5) the priority list of tank system sites for which the department expects to provide financial assistance in the next fiscal year.

The time period covered by this report includes FY 92 in its entirety and the first half of FY 93.

ABSTRACT

From the inception of the Underground Storage Tank Financial Assistance Program on September 5, 1990, until December 31, 1992, $5,609,573 of the allocated amount of $10,798,989 has been expended or encumbered for 524 grants to pay a portion of the costs of tank tightness testing, site assessment, cleanup, upgrade or closure. The largest amount of funds dispersed to date has been $3,465,396 for tank cleanups, while the largest number of grants encumbered has been for tank tightness testing at 323 facilities.

Fund sources for the period ending June 30, 1992, totaled $7,044,184 and included initial FY 91 capitalization of $6.0 million, the FY 91 and FY 92 tank registration receipts and a payroll supplement. At the conclusion of FY 92, total funds expended, including operational costs, were $2,419,069 and the reserve amount for all encumbrances was $1,576,485.

The FY 92 appropriation balance was extended into FY 93 and funds continued to be expended or encumbered for the grant programs. On December 31, 1992, $2,813,258 had been expended and $1,402,918 had been encumbered for grants from the FY 92 appropriation. One loan in the amount of $25,000 was processed during this period.

Requests exceeded available funds in FY 92. Funding was adequate to assist all eligible and complete applications in the following programs; Tank Tightness Testing and Site Assessment Incentive Program, Tank Cleanup Grant and Loan Program, and Tank Upgrade and Closure Program. Funding was not adequate to address requests in the Tank Reimbursement Program, which by statute, can only be funded after requests from other categories have been met and a balance remains in the fund.

In FY 93, a $5.0 million fund transfer from the Mitigation Account Fund to the Storage Tank Assistance Fund and FY 93 tank registration receipts brought the fund sources to $5,372,504. Total appropriations for FY 93 were $8,488,610.

As of December 31, 1992, all FY 93 appropriations from the Storage Tank Assistance Fund had been expended, encumbered, obligated, or held in required contingency reserves. Obligations comprise loans pending, grants offered but not encumbered, loan portions of grants and anticipated grants and loans for the highest ranking projects on the priority ranking list. The required reserve for contingencies is set in regulations and is 15% of the cleanup program allocation and 10% of the upgrade and closure allocation. The anticipated grants and associated loans will be encumbered in the second half of FY 93.

The estimated number of unfunded requests to the Storage Tank Assistance Fund after FY 93 is 772 for a total dollar amount of $33,673,874. Unfunded requests exist in the following three categories; requests from the FY 94 application period, requests from prior years which were not funded due to inadequate funding, and projected costs to continue cleanup projects already funded by the program.

Without funding levels to meet this demand, the Department will continue to fund the higher priority ranked projects while keeping unfunded requests on file until such time that funding may become available. The Department is currently exploring methods to provide longterm financial assistance to owners and operators by extending the program to FY 99 to coincide with the federal deadline for upgrade and cleanup of December, 1998.

Figure 1 (Storage Tank Assistance Program Requests, Allocations and Uses) summarizes the current status of the Underground Storage Tank Financial Assistance Program. The program has received requests for $43,815,387 in assistance. Since the inception of the program, $10,790,426 has been allocated for grants and loans. On December 31, 1992, $5,609,573 had been encumbered or expended and the balance of $5,160,401 had been obligated for contingencies and specific projects.

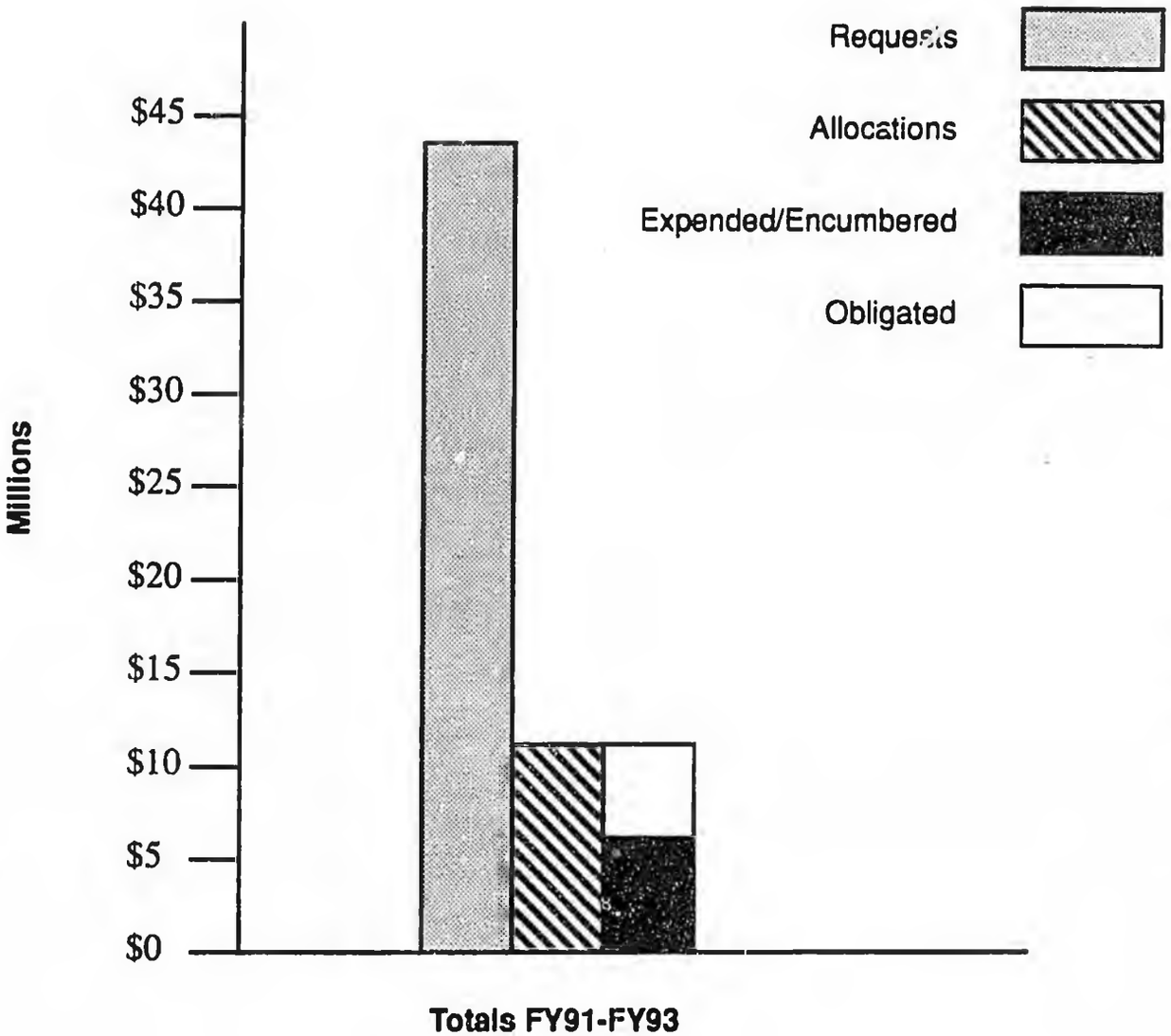


Figure 1 **STORAGE TANK ASSISTANCE PROGRAM REQUESTS, ALLOCATIONS, USES AS OF DECEMBER 31,1992.**

INTRODUCTION

A portion of AS 46.03 was amended to include underground storage tanks effective September 5, 1990. The Alaska Underground Storage Tank (UST) Statute required the development of an UST program through the adoption of regulations which set performance standards for both new and existing tank systems, provided for corrective action activities and cleanup standards for leaking underground tanks, mandated that the Department of Environmental Conservation (Department) provide educational assistance to UST owners and operators, required the certification of UST workers, required the registration of tanks and tank systems, established a Board of Storage Tank Assistance, and set guidelines for the administration of the Storage Tank Assistance Fund.

The Storage Tank Assistance Fund provides financial assistance to the owners and operators of regulated underground motor fuel tanks to meet the stringent and expensive tank upgrade, cleanup, and insurance requirements contained in the federal rules. To accomplish this, the fund makes assistance available to administer four financial assistance programs in the following sections: reimbursement incentives for tank tightness tests or site assessments under AS 46.03.415; grants and loans under AS 46.03.420 for risk assessment, containment, corrective action, and cleanup costs; and grants under AS 46.03.430 for tank system upgrading and closure. Table 1 (Summary of UST Financial Assistance Programs) briefly describes the current status of these programs, the eligible costs payable, and the amount of assistance provided.

The financial assistance program got off to a slow start during the first six months of FY 91 since priority had to be given to staff hiring, training, regulation and policy development, development of tank worker certification program, and the initiation of an annual tank registration program before the issuance of any awards could take place.

TABLE 1

SUMMARY OF UST FINANCIAL ASSISTANCE PROGRAMS

PROGRAM	ELIGIBLE COSTS	ASSISTANCE PROVIDED
Tank Tightness Testing and Site Assessment Incentive Program Applications/Intents had to be submitted by March 5, 1992. Funds encumbered for this program through FY 92 only.	Provides funds directly to the owner/operator specifically to reimburse costs for tank tightness tests or site assessments to determine if there had been a release of petroleum.	50% of the actual costs, not to exceed $300 per tank for tank tightness tests up to a maximum of $1200 per facility and $800 per tank for site assessments up to $3200 per facility.
Tank Cleanup Grant and Loan Program Applications must be submitted to the Department before July 1, 1994. Funds currently allocated to the program through FY 93. Applications for FY 94 have been received.	Provides funds directly to the owner/operator specifically to cover costs of risk assessment, containment, corrective action, and cleanup.	Up to 1 million dollars per occurrence, and owner/operator is responsible for 10% of the total cleanup costs (not to exceed $25,000), which is excluded from the grant.
Tank Upgrade and Closure Grant Program Funds currently allocated to this program through FY 93. Applications for FY 94 have been received.	Provides funds directly to the owner/operator specifically to cover costs of removal, upgrade, or replacement of an UST system.	Grants for upgrade, replacement or closure of an UST comprising up to sixty percent of the total eligible costs up to $60,000.
Reimbursement Program Applications had to be submitted by March 5, 1991, to date, no funds have been allocated for program.	Provides reimbursement for the costs of risk assessment, containment, cleanup, corrective action, upgrading or closure activities on or after December 22, 1988 and before September 5, 1990.	Total costs for reimbursement to an owner/operator under this program not to exceed $200,000. The owner/operator must have applied for this program before March 5, 1991.

STORAGE TANK ASSISTANCE FUND SUMMARY FOR FY 92

Funding

Table 2 (Storage Tank Assistance Financial Summary for Period Ending June 30, 1992) lists the amount and source of money received by the Fund during FY 92 which included the initial FY 91 capitalization of $6.0 million, a payroll supplement of $9,200 and FY 91 and FY 92 tank registration receipts in the amounts of $525,578 and $509,406, respectively. Total fund sources for the period ending June 30, 1992, were $7,044,184.

Expenditures

Table 2 shows that on June 30, 1992, total fund uses were $2,419,069 and the reserve amount for all encumbrances was $1,576,485. FY 91 fund uses of $518,974 and FY 92 fund uses of $1,809,862 contributed to this total. On June 30, 1992, total revenue to the Storage Tank Assistance Fund was greater than expenditures by $4,625,115.

Table 3 (Grant Funds Expended or Encumbered by Date) depicts funds for each fiscal year appropriation expended or encumbered by program by date. On June 30, 1992, a total of $2,930,370 from the Storage Tank Assistance Fund had been used to pay for tank tightness testing, site assessments, tank cleanup, upgrade and closure. The amount of funds expended or encumbered for grants was $1,361,073 and $1,569,297, respectively.

The FY 92 appropriation balance was extended into FY 93 and funds continued to be expended or encumbered for projects. Table 3 depicts grants made by program for each type of grant authorized from the FY 92 appropriation as of December 31, 1992. On this date, a total of $2,813,258 had been expended and $1,402,918 had been encumbered for projects from the FY 92 appropriation. One loan in the amount of $25,000 was processed from the FY 92 appropriation during this period.

Department Activities Summary

During the course of FY 92, program priorities shifted from program development to the administration of the financial assistance program and issuance of grants to owners and operators. Overall, the Department continued to implement the state Underground Storage Tank Program to prevent and correct leaks; and to provide technical, educational and financial assistance to regulated underground storage tank owners and operators. A detailed summary of activities that were carried out by the Department during FY 92 is listed below:

- Brought to final adoption the Underground Storage Tank regulations on August 21, 1991.

- Completed and distributed a Guidance Manual for Underground Storage Tank regulations which included Guidance for preparing a Quality Assurance Program Plan for Site Assessment; Guidance for Data Deliverables and Reporting Requirements; Guidance for Using the Alaska Cleanup Matrix; and Guidance for Storage, Remediation, and Disposal of Petroleum Contaminated Soils.

- Maintained the UST Telephone Hotline and a series of informational reading materials to provide technical assistance about UST regulations, especially UST registration and financial assistance.

TABLE 2

Storage Tank Assistance Fund Summary
For Period Ending June 30, 1992

Fund Sources					
FY 91					
	Initial Capitalization (90/209/78/14)			6,000,000	
	Payroll Supplement (90/45)			9,200	
FY 92					
	Fiscal Year 91 Registration Receipts (91/73/6/9)			525,578	
	Fiscal Year 92 Registration Receipts (91/73/6/7)			509,406	
Total Fund Sources:					7,044,184
Less Fund Uses:					
FY 91					
	Administrative Costs		409,514		
	Grants		109,460	-518,974	
FY 92					
	Prior Year Appropriation				
	Administrative Costs			-22,433	(Note 1)
	Current Year Appropriation				
	Fund Transfer			-67,800	(Note 2)
	Administrative Costs (#48340-92)				
	Personal Services	405,518			
	Travel	36,122			
	Contractual	98,221			
	Supplies	8,392			
	Equipment	9,996	558,250		
	Grants (#48340-92)		1,251,612	-1,809,862	
Total Fund Expenditures					-2,419,069
Revenue Greater than Expenditures					4,625,115
Reserve for All Encumbrances (Note 3)					-1,576,485

Note 1: Encumbrances which existed at the end of FY 91 and paid in FY 92.
Note 2: Fund Transfer for Division of Information & Administrative Services.
Note 3: Encumbrance reserves include $1,569,297 for grants and $7,188 for administrative items.

TABLE 3

Grant Funds Expended or Encumbered by Date

	JUNE 30, 1992		DECEMBER 31, 1992	
	Expended	Encumbered	Expended	Encumbered
FY 91 Appn.48411-91				
Tank Cleanup Program	109,460		109,460	
FY 92 Appn.48340-92				
Tightness Testing	65,517	153,331	77,306	141,150
Site Assessment	20,016	99,699	33,410	77,891
Cleanup	803,893	915,360	1,380,482	334,757
Upgrade	157,576	239,774	305,519	81,496
Closure	204,610	161,133	249,044	110,840
FY 92 Appn.48340-93(Extended FY 93)				
Cleanup			721,636	609,471
Upgrade			15,000	45,000
Closure			30,861	2,313
FY 93 Appn.48700-93				
Cleanup			108,255	201,335
Upgrade			366,512	487,570
Closure			43,629	76,636
Total				
FY 91 Appn. 48411-91	109,460		109,460	
FY 92 Appn. 48340-92	1,251,612	1,569,297	2,045,761	746,134
FY 92 Appn. 48340-93			767,497	656,784
FY 93 Appn. 48700-93			518,396	765,541
Grand Total	1,361,072	1,569,297	3,441,114	2,168,459

Loans One loan in the amount of $25,000 was processed in fiscal year 1993.

♦ Held informational workshops in Alaska communities pertaining to state and federal laws and regulations, tank tightness testing, site assessment, leak detection, closure, tank registration, certification, and financial assistance.

♦ Provided training leading for certification of tank workers. Initiated a home study course for tank worker certification. Coordinated activities with the Division of Occupational Licensing to establish the certification program.

♦ Conducted the second annual UST registration and fee collection.

♦ Reviewed applications and made reimbursements to eligible owners and operators through the Tank Tightness Testing and Site Assessment Incentive Program.

♦ Reviewed applications and awarded grants in the Tank Upgrade and Closure Grant Program. Continued to track grants for upgrade and closure, reviewed "notification of change", "notification of tanks in use", and "notification of closure forms" for tank systems. Reviewed final reports for closure of tanks.

♦ Reviewed applications for grants and loans in the Tank Cleanup Grant and Loan Program. Awarded both Phase One and Phase Two cleanup grants and continued to track grants.

♦ Developed a loan program to pay for a portion of cleanup activities through a reimbursable services agreement with the Department of Commerce and Economic Development, Division of Investments to pay for a portion of the cleanup activities.

♦ Revised and distributed financial assistance application forms and accepted applications for FY 93 priority ranking of applications for the Tank Cleanup Program and the Tank Upgrade and Closure Program. Conducted a series of workshops about the Storage Tank Assistance Program to assist the public in applying for funding.

♦ Priority ranked tank cleanup and tank upgrade and closure applications for FY 93.

♦ Implemented UST regulations regarding mandatory tank tightness testing and site assessment. Encumbered funds for reimbursement for tank tightness testing and/or site assessment activities.

♦ Participated in Board of Storage Tank Assistance meetings. Provided information to the Board as requested.

♦ Coordinated activities with the state UST and LUST program for activities such as UST regulation changes, compliance implementation strategies, UST newsletter publication "Alaska Underground", and policy formulation for statewide UST program.

Assistance Requested and Funded - FY 92

Table 4 (Assistance Requested and Funded - FY 92) details the total number of applications and the dollar amount in requests received for the four financial assistance programs during FY 92. The dollar amount allocated by the Board of Storage Tank Assistance for each grant program in FY 92 is listed in the table.

TABLE 4
Assistance Requested and Funded - FY 92
December 31, 1992

PROGRAM SUMMARY FOR FY 92

Number Applications Received for FY 92 Funding/Total Number Funded	706/474
Total Dollar Amount of Application Requests	$10,410,974
Funds Allocated FY 92	$5,300,000
Encumbrances/Expenditures as of 12/31/92	$4,350,636

TANK TIGHTNESS TESTING AND SITE ASSESSMENT INCENTIVE PROGRAM

Program Total

Total Number of Applications Received/Total Number Funded	416/386
Funds Allocated By Board of Storage Tank Assistance	$330,000
Funds Encumbered/Expended as of 12/31/92	$329,757

Tank Tightness Testing

Total Number of Applications Received/Total Number Funded	352/323
Dollar Amount of Application Requests	$242,164
Funds Encumbered/Expended as of 12/31/92	$218,456

Site Assessment

Total Number of Applications Received/Total Number Funded	64/63
Dollar Amount of Application Requests	$120,354
Funds Encumbered/Expended as of 12/31/92	$111,301

TANK CLEANUP GRANT AND LOAN PROGRAM

Total Number of Applications Received/Total Number Funded	30/24
Dollar Amount of Application Requests	$4,907,197
Funds Allocated By Board of Storage Tank Assistance	$3,470,000
Funds Encumbered/Expended as of 12/31/92	$3,155,806
Loans Issued as of 12/31/92	$25,000

TANK UPGRADING AND CLOSURE PROGRAM

Program Total

Total Number of Applications Received/Total Number Funded	102/64
Funds Allocated By Board of Storage Tank Assistance	$1,500,000
Funds Encumbered/Expended as of 12/31/92	$840,073

Tank Upgrading

Total Number of Applications Received/Total Number Funded	28/12
Dollar Amount of Application Requests	$806,037
Funds Encumbered/Expended as of 12/31/92	$447,015

Tank Closure

Total Number of Applications Received/Total Number Funded	74/52
Dollar Amount of Application Requests	$946,785
Funds Encumbered/Expended as of 12/31/92	$393,058

REIMBURSEMENT PROGRAM

Total Number of Applications Received/Total Number Funded	158/0
Dollar Amount of Application Requests	$3,388,437
Funds Allocated By Board of Storage Tank Assistance	$0
Funds Encumbered/Expended as of 12/31/92	$0

Funds encumbered or expended for each activity as of December 31, 1992, are also reported. The number of awards issued for each activity as of December 31, 1992, appears next to the number of applications received. A total of 706 applications were received for 6 categories in FY 92 for $10,410,974. Each program is discussed separately.

Tank Tightness Testing and Site Assessment Incentive Program

A total of 416 applications were received for assistance for this program, 352 to reimburse a portion of the costs of tank tightness testing and 64 to reimburse a portion of site assessment activities. State regulations required that tank tightness testing or site assessments for all USTs installed before and in use on September 5, 1990, be conducted within 12 months after the initial tank registration was due, unless the owners or operators demonstrated cause for extending the deadline. The date of the initial tank registration was March 5, 1991, making March 5, 1992, the deadline date. Because low temperatures in many portions of the state made tank tightness testing and site assessment activities impracticable by that date, requests for an extension of the deadline were accepted and granted by the Department. Owners and operators submitting a signed and completed application form had funding encumbered for their request unless their applications were ineligible. Three hundred eighty-six applications were funded for tank tightness testing or site assessment for a total of $329,757.

The Board of Storage Tank Assistance had originally allocated 2.3 million dollars for this program, anticipating participation from a far greater number of tank owners and operators. After funds had been encumbered for this program, the allocation was reduced to $330,000 and the balance applied to the Tank Cleanup Grant and Loan Program.

As owners and operators have completed activities in this program, funds have been expended to reimburse the applicants and the appropriate encumbrances have been released. Tank tightness testing and site assessment activities must now be completed by May 1, 1993. Applicants now have more time to perform their activities, however, no additional funds will be allocated to this program. A complete listing showing the status of all applications for the Tank Tightness Testing and Site Assessment Incentive Program appears in Appendix A of this report. Shaded listings indicate that reimbursement has been paid and all other listings have had funds encumbered.

Tank Cleanup Grant and Loan Program

Thirty tank cleanup applications for FY 92 funds were received. Four applications did not meet the eligibility requirements for the program and the remaining 26 were priority ranked according to the relative threat to human health and the environment as well as other criteria specified by the Board of Storage Tank Assistance. The total dollar amount of application requests was equal to $4,907,197. The original amount of funds allocated to this program by the Board was $1.5 million dollars. However, after the deadline to submit letters of intent to apply for the Tank Tightness Testing /Site Assessment Reimbursement Program had passed, the balance of $1,970,000 in unencumbered funds was reallocated to the Tank Cleanup Grant and Loan Program. The new amount allocated for cleanup became $3,470,000.

This allocation was adequate to fund all eligible requests for assistance for cleanup. In most cases, the level of funding approved for each

facility was lower than the amount the applicant requested because the Department used a phased approach to fund cleanups as specified in the UST regulations. Initially, phase one grants are approved to investigate releases and obtain the information necessary to prepare corrective action plans. Phase two grants for remediation work could be approved only after a corrective action plan is submitted and accepted by the Department.

At the time the balance of the unused funds from the Tank Tightness Testing/Site Assessment Incentive Program was reallocated into the Tank Cleanup Program, the majority of applicants had received grants for the initial phases of cleanup. The information gathered at these sites was adequate to prepare corrective action plans and so the newly reallocated funds could be used for the second phase of cleanup. Table 4 shows that on December 31, 1992, $3,155,806 of the $3,470,000 allocated had been encumbered or expended. It is anticipated that the balance of the allocation will be encumbered by February, 1993, when project corrective action plans for the remaining facilities have been approved.

Regulations specify that 15% of the Tank Cleanup Program funds be reserved for cost increases, emergency grants, contingencies and audits (18 AAC 78.535). Use of this reserve totaled $296,828 for cost increases and contingencies in the form of grant amendments and two emergency grants. The balance of this reserve is now $79,420.

Appendix B lists all applicants for the Tank Cleanup Grant and Loan Program for FY 92 funding. Grants already awarded are shaded The grant award amount and the specific activities as listed in Sec. 46.03.410.(c)(3) for each site are also summarized. Each grant received for a facility is listed separately so that a facility which received a phase one and phase two grant is listed twice.

The majority of cleanup grants funded by the FY 92 appropriation were used to carry out cleanup activities which included initial abatement and release investigations. The release investigations usually included both soil and water testing to determine the extent of the release. No risk assessments were funded. Release investigations were funded to produce corrective action reports to determine future cleanup activities. Phase two cleanup projects generally paid for soil and water remediation.

Grants for cleanup exclude a portion of costs not payable which is equal to 10% of the total costs, up to a maximum of $25,000. The Department then offers the excluded amount to the grantee in the form of a loan. Although 11 applicants applied for loans, only one loan of $25,000 has been issued from the FY 92 appropriation. UST regulations originally required that loans be secured by collateral equal to the value of the loan and only one applicant had adequate collateral to qualify. The Board of Storage Tank Assistance recommended that the Department change the regulation to require the option for the state to place a lien in lieu of collateralization. The regulation change became effective on January 6, 1993, thus allowing for the issuance of additional loans in 1993. Combined loan requests for FY 92 sites were for $177,408.

Tank Upgrade and Closure Grant Program

Twenty-eight requests were received for tank upgrading and 74 requests were received for tank closure from FY 92 funding. The allocation of $1,500,000 determined by the Board of Storage Tank Assistance was adequate to fund all eligible applications. A review of

requests revealed that some applications were ineligible for assistance. Sixty-four grants have been issued in this program as of December 31, 1992. Twelve grants have been issued for upgrade activities and 52 grants have been issued for closure activities. On December 31, 1992, $840,073 of the $1.5 million dollars allocated for this program in FY 92 had been encumbered or expended.

Applicants who have not yet received grant offers have not submitted all the required information necessary to issue a grant. Some of these owners are currently conducting cleanups on their sites and cannot upgrade until contaminated soils have been disposed. Proposed changes to the UST regulations will require that owners and operators submit all information necessary to complete a grant offer within a specified time period or be eliminated from the priority list. Once this occurs, funds will be available for reallocation by the Board into another program.

A detailed list of all owners and operators who have applied to the Tank Upgrade and Closure Program appears in Appendix C. The status of the applications are listed. Shaded listings have had grants processed. Regulations specify that 10% of the annual allocation be reserved for cost increases and contingencies. At this time, only $528 of the $150,000 in contingencies has been utilized.

Reimbursement Program

One hundred fifty - eight applications were made to the Reimbursement Program by the deadline for that program on March 5, 1991. A total of $3,388,437 was requested for cleanup, closure or upgrade activities occurring on or after December 22, 1988 and before September 5, 1990.

When making its annual allocation to the grant programs, the Board of Storage Tank Assistance is required to consider work completed under the Reimbursement Program to receive the lowest priority for reimbursement (18 AAC 78.535). Statute requires that this program may be funded only when all eligible requests for funding in the other categories have been satisfied in a given year, and a balance remains in the Storage Tank Assistance Fund. For the FY 92 appropriation, over $10 million in requests were received, which far exceeded the amount of available funds. Accordingly, no funds were allocated to the reimbursement program in FY 92.

Appendix D lists the applicant's name, the facility name, and the amount requested from the Reimbursement Program.

STORAGE TANK ASSISTANCE FUND SUMMARY FOR FY 93

Funding

Table 5 (Storage Tank Assistance Fund Summary for Period Ending December 31, 1992) shows the sources and amount of funds received by the Storage Tank Assistance Fund for FY 93. A $5,000,000 fund transfer from the Mitigation Account Fund and FY 93 tank registration receipts collected as of December 31, 1992, of $372,504 brought the total fund sources to $5,372,504.

Fiscal Year 93 appropriations from the fund totaled $8,488,610. This sum includes the $5 million appropriated from the mitigation account, $507,900 to implement the Storage Tank Assistance Program, $69,600 for the Division of Information and Administrative Services and $2,911,110 which was extended from the FY 92 Storage Tank Assistance Program.

Expenditures

As of December 31, 1992, the balance of the FY 93 appropriation from the Storage Tank Assistance Fund was $5,493,851. Table 5 lists in detail fund transfers, restricted amounts and amounts encumbered or expended. From a total of $7,868,619 appropriated for grants in FY 93, the unexpended and unencumbered balance was $5,135,402.

Table 3 (Grant Funds Expended or Encumbered By Date) shows the funds expended or encumbered from the FY 93 appropriation for all grant programs. On December 31, 1992, a total of $518,396 had been expended and $765,541 had been encumbered. The Tank Cleanup Grant and Loan Program had expended $108,255 and encumbered $201,335. The sums of $366,512 and $487,570 had been expended and encumbered respectively for tank upgrades and $43,629 and $76,636 had been expended and encumbered for tank closure.

Department Activities During FY 93

Most of the Department activities conducted during the first half of FY 93 pertain to the continued implementation of the UST regulations and the UST Financial Assistance Program and do not differ from activities conducted during FY 92. Continuing activities include maintenance of the UST Hotline and distribution of informational reading materials, UST worker certification, awarding and tracking grants in financial assistance, and coordination with statewide UST program activities such as compliance implementation strategies, UST newsletter publication and policy formulation.

Activities which are repeated on an annual basis include registration and fee collection for USTs, priority ranking of cleanup, upgrade, and closure applications, and distribution and acceptance of financial assistance application forms for the next year's priority ranking of requests.

Because the UST Financial Assistance Program is newly implemented, some Department activities were held during the first half of FY 93 which were unique toward improving service and streamlining the program. Efforts at streamlining were enacted in response to staff recommendations and an internal department review. Examples of these Department activities include:

- A survey of consultants and

TABLE 5

Storage Tank Assistance Fund Summary
For Period Ending December 31, 1992

FY 93 Funding Sources

Fund Transfer from Mitigation Account Fund (92/5/28/13)	5,000,000	
Fiscal Year 93 Registration Receipts (92/136/6/5)	372,504	(Note 1)
Total Fund Sources		5,372,504

FY 93 Appropriations

Storage Tank Assistance Program (92/136/79/5)	507,900
Funding Source for Division of Information & Administrative Services (92/136/117/15)	69,600
Storage Tank Grants (92/5/28/13) RPL 18930001	5,000,000
FY 92 Storage Tank Assistance Program Appropriation Extended (92/5/30/10)	2,911,110
Total Appropriated	8,488,610

Status of FY 93 Appropriations - 12/31/92

	Authorized	Restricted	Expended	Encumbered	Balance
Personal Services	408,593		157,730		250,863
Travel	40,198		13,987		26,211
Contractual	80,800		17,988	1,000	61,812
Supplies	10,000		1,237		8,763
Equipment	10,800				10,800
Grants	7,868,619	25,000 (Note 2)	1,285,892	1,422,325	5,135,402
Subtotal for STAF Program	8,419,010	25,000	1,476,834	1,423,325	5,493,851
Fund Transfer	69,600	(Note 3)	69,600		
Total	8,488,610	25,000	1,546,434	1,423,325	5,493,851

Note 1: Registration fee revenue collected as of December 31, 1992.
Note 2: Authorizations for grant expenditures are restricted in the amount of total loan agreements.
Note 3: Fund Source for Division of Information & Administrative Services.

contractors to update the customary cost list and clarify ineligible costs.

- Production of UST program policies and guidance on emergency grants, internal dispute resolution, criteria to issue grant amendments, and criteria for approval of payment requests.

- Development of a revised priority ranking system to result in more equitable distribution of grant funds.

- Revision of UST Regulations to expedite certain steps in the grant award process.

- Implementation of streamlining features which include the adoption of a mark-up fee for administration of subcontractor work, an expedited review process of grant applications, a policy to accept certain lump-sum bids, and a cut-off sum for payment of invoices without detailed backup.

Assistance Requested and Funded-FY 93

Table 6 (Assistance Requested and Funded - FY 93) provides a detailed breakdown of requests and assistance provided for the two financial assistance programs ongoing during FY 93. The amount of funds allocated by the Board of Storage Tank Assistance for each grant program is listed in the table. The number of requests funded by program and total dollar amount funded as of December 31, 1992, is included in the table. A total of 584 applications for $29,422,025 in financial assistance were received for the FY 93 appropriation of $5 million dollars.

Tank Cleanup Grant and Loan Program

One hundred eighty-five applications were received for the Tank Cleanup Grant and Loan Program for $23,560,487 in requests. A portion of these projects were either incomplete or ineligible to receive assistance. The remaining 141 applications were priority ranked in accordance with the criteria determined by the Board of Storage Tank Assistance. The initial priority ranking list was advertised by the Board beginning on July 1, 1992, for a thirty day public comment period. Pertinent testimony was taken at that time and the list was revised as of July 30, 1992.

Applicants were notified of their eligibility for financial assistance within 30 days after the close of the public comment period. Although $3.5 million of the total FY 93 appropriation of $5 million was allocated to the Tank Cleanup Grant and Loan Program, requests far exceeded funding available and only the top 15 applicants on the priority ranking list were notified that they would receive grants upon approval of a workplan, schedule and cost estimates.

As of December 31, 1992, two cleanup grants from the FY 93 appropriation had been expended or encumbered for $309,590 (Table 6). Once the initial group of 15 requests have had grant offers finalized, applicants further down the priority ranking list will be contacted. Because the initial cost estimates submitted by the applicants may differ from final cost estimates used in the grant offer, it is not possible to state exactly how many grants will be funded from the FY 93 appropriation balance. Considering early estimates provided by applicants it is estimated that approximately 20 applications will be funded. As of December 31, 1992, all funds had been expended, encumbered, obligated for projects

TABLE 6
Assistance Requested and Funded - FY 93
December 31, 1992

PROGRAM SUMMARY FOR FY 93

Number Applications Received for FY 93 Funding/Total Funded	584/31
Total Dollar Amount of Application Requests	$29,422,025
Funds Allocated By Board of Storage Tank Assistance	$5,000,000
Encumbrances/Expenditures as of 12/31/92	$1,283,937

TANK CLEANUP GRANT AND LOAN PROGRAM

Total Number Applications Received/Total Funded	185/2
Dollar Amount of Application Requests	$23,560,487
Funds Allocated By Board of Storage Tank Assistance	$3,500,000
Funds Encumbered/Expended as of 12/31/92	$309,590
Loans Issued as of 12/31/92	$0

TANK UPGRADING AND CLOSURE PROGRAM

Program Total

Total Number Applications Received/Total Funded	399/29
Funds Allocated By Board of Storage Tank Assistance	$1,500,000
Funds Encumbered/Expended as of 12/31/92	$974,347

Tank Upgrading

Total Number Applications Received/Total Funded	108/18
Dollar Amount of Application Requests	$2,699,223
Funds Encumbered/Expended as of 12/31/92	$854,082

Tank Closure

Total Number Applications Received/Total Funded	291/11
Dollar Amount of Application Requests	$3,162,315
Funds Encumbered/Expended as of 12/31/92	$120,265

on the priority ranking list or held in required reserve for contingencies (Table 7 - Storage Tank Assistance Fund - Appropriation Expended/ Encumbered/ Obligated). For the tank cleanup program, $829,891 had been expended and $810,806 had been encumbered. Obligations of $3,673,502 consisted of loans pending, grants offered but not encumbered, loans for these grants and anticipated loans and grants for the balance of the top 20 on the priority ranking list. This amount plus the required reserve is equal to the total available funds for the program.

In accordance with the UST regulations, the remaining projects which have been denied financial assistance because of insufficient funding will be processed at the earliest date money is available after higher ranked projects have been funded. These applications will remain on file and be reranked with applications for FY 94.

Appendix E is the priority ranking list for all applicants to the Tank Cleanup Grant and Loan Program for FY 93 funding. Shaded entries have already had funds encumbered or expended. The grant award amount and the specific activities funded are also listed.

No loans had been issued or were on file for the FY 93 funded grants on December 31, 1992.

Tank Upgrade and Closure Program

One hundred eight requests were received for tank upgrading and 291 requests were received for tank closure for the FY 93 appropriation. After the elimination of ineligible and incomplete applications, 63 applications were priority ranked for upgrade and 209 were ranked for tank closure.

The priority ranking system adopted by the Board of Storage Tank Assistance gave maximum points to facilities where old tanks were removed from the ground instead of closed in place, the owner was unable to meet EPA financial ability requirements, the upgrade incorporated double walled USTs with double walled piping and the installation design incorporated special features exceeding normal standards. Because funding for this program was limited to $1.5 million, only those owners and operators who could not meet the self insurability requirements and who had removed old tanks and replaced them with double walled tanks with double walled piping could be awarded grants.

The priority ranking procedure for the Tank Upgrade and Closure Program for FY 93 followed the same time frame as described for the Tank Cleanup Program. The priority ranking list of applications appears in Appendix F. All 29 applicants within the first priority rank were notified that they would be eligible to receive grants using FY 93 funds.

As of December 31, 1992, 18 grants had been issued for upgrades from the FY 93 appropriation for a total of $854,082 expended or encumbered. Eleven of these 18 included closure activities for $120,265 expended or encumbered (Table 6).

All funds for the upgrade and closure program have been expended, encumbered or obligated for the FY 93 appropriation. On December 31, 1992, expenditures were $456,002, encumbrances were $611,519. Obligations for grants offered and anticipated grants totaled $688,007 and the required contingency amount was $194,472. The anticipated total of 29 grants will be encumbered within the next two months. Applications not funded this fiscal year will be kept on file and priority ranked

TABLE 7
Storage Tank Assistance Fund
Appropriation Expended/Encumbered/Obligated

	Appropriation #48340-93	Appropriation #48700-93	Total
Tank Cleanup Program			
Expenditures as of 12-31-92	721,636	108,255	829,891
Encumbrances as of 12-31-92	609,471	201,335	810,806
Obligations:			
Loans Pending for Grants Issued Through 12-31-92	177,408	22,405	199,813
Grants Offered but not Encumbered as of 1-25-93	383,910	338,866	722,776
Loan Portion for Grants Offered but not Encumbered	32,605	37,652	70,257
Anticipated Grants for Ranked Projects	372,753	2,039,838	2,412,591
Anticipated Loans for Ranked Projects	41,416	226,649	268,065
Subtotal Obligations	1,008,092	2,665,410	3,673,502
Reserve for Contingencies	79,420	525,000	604,420
Total Tank Cleanup Program	2,418,619	3,500,000	5,918,619
Tank Upgrade/Closure Program			
Expenditures as of 12-31-92	45,861	410,141	456,002
Encumbrances as of 12-31-92	47,313	564,206	611,519
Obligations:			
Grants Offered but not Encumbered as of 1-25-93	0	226,825	226,825
Anticipated Grants for Ranked Projects	312,354	148,828	461,182
Subtotal Obligations	312,354	375,653	688,007
Reserve for Contingencies	44,472	150,000	194,472
Total Tank Upgrade/Closure Program	450,000	1,500,000	1,950,000
Both Programs	**2,868,619**	**5,000,000**	**7,868,619**

with applications for FY 94.

SUMMARY OF ALL PROGRAMS SINCE INCEPTION

From the inception of the Underground Storage Tank Financial Assistance Program on September 5, 1990, until December 31, 1992, $5,609,573 of the allocated amount of $10,798,989 has been expended or encumbered for 524 grants to pay a portion of the costs of tank tightness testing, site assessment, cleanup, upgrade or closure. Table 8 (Financial Assistance Summary Since Program Inception) displays a monthly recap of the number of grants issued by category and the amount of funds expended or encumbered for FY 91, FY 92 and FY 93. The largest amount of funds dispersed to date has been $3,465,396 for tank cleanups, while the largest number of grants encumbered has been for tank tightness testing at 323 facilities.

Funds allocated for grants which have not been expended or encumbered are being held in required contingency reserves, or have already been obligated for high ranking projects on the priority ranking lists. Obligations comprise loans pending, grants which have been offered but not yet encumbered, loan portions of these grants, and anticipated grants.

PROJECTED COSTS FOR FY 94

In order to estimate the funds required in the next fiscal year to adequately address financial assistance requests, it is necessary to summarize unfunded requests from three categories; requests from the FY 94 application period, requests from prior years which were not funded due to inadequate funding, and projected costs to continue cleanup projects already funded by the program. Table 9 (Summary of Unfunded Requests For Financial Assistance Program) lists the number and dollar amount of requests from each of the categories described above.

The application period for FY 94 financial assistance requests ended on December 31, 1992. On that date, 30 applications had been submitted to the tank cleanup program for a total of $3,139,648 and 72 application had been received in the Tank Upgrade and Closure Program for $1,488,972. The Department has not yet had the opportunity to priority rank the applications for FY 94 funding. The Department and the Board of Storage Tank Assistance have recently proposed changes to the priority ranking score system. These are expected to be incorporated into the UST regulations which are currently being revised. Once the proposed changes have been approved, it is expected that the priority ranking for FY 94 will proceed. The summary of requests for the Tank Cleanup Grant and Loan Program and the Tank Upgrade and Closure Program for FY 94 appear in Appendix G and Appendix H, respectively.

A total of 638 applications submitted in previous years were not funded due to inadequate funding levels. These applications were from the FY 93 Tank Cleanup Grant and Loan Program, FY 93 Tank Upgrade and Closure Program and the Reimbursement

TABLE 8
Financial Assistance Summary Since Program Inception
December 31, 1992

	Tightness Testing		Site Assessment		Cleanup		Upgrade		Closure		TOTAL	
	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value
FY91					1	109,460					1	109,460
Aug-91	2	1,800	3	5,375							5	7,175
Sep-91	11	8,758		1,200	8	204,739					19	214,697
Oct-91	5	3,840	3	7,183	3	75,598					11	86,621
Nov-91	8	5,525			3	182,771	1	10,080	17	141,206	29	339,582
Dec-91	3	2,100							5	41,774	8	43,874
Jan-92	24	12,614	1	694	1	46,157	2	68,874	6	33,609	34	161,948
Feb-92	1	250			2	104,311	2	95,444	8	63,070	13	263,075
Mar-92	42	27,930	1	2,000	2	69,839			1	14,532	46	114,301
Apr-92	104	79,724	15	30,031	2	47,080	1	44,572	4	19,156	126	220,563
May-92	97	60,587	31	45,318	5	504,830	4	164,361	5	27,383	142	802,479
Jun-92	24	13,528	8	16,300	2	483,929	1	3,684	3	24,822	38	542,263
Jul-92	1	1,200	1	3,200	6	677,928			1	2,256	9	684,584
Aug-92	1	600			1	26,557					2	27,1[illegible]
Sep-92					2	227,653			1	528	3	228,181
Oct-92(FY92)					4	394,954	1	60,000	1	22,407	6	477,361
Oct-92(FY93)					1	220,090	6	270,215	4	37,223	11	527,528
Nov-92(FY92)									1	2,313	1	2,313
Nov-92(FY93)							11	538,367	6	68,544	17	606,911
Dec-92(FY93)					1	89,500	1	45,500	1	14,500	3	149,500
SUMMARY:												
TOTAL	323	218,456	63	111,301	44	3,465,396	30	1,301,097	64	513,323	524	5,609,573

GRAND TOTAL DISTRIBUTED SINCE PROGRAM INCEPTION **$5,609,573**

TABLE 9

Summary of Unfunded Requests For Financial Assistance Program
December 31, 1992

PROGRAM SUMMARY OF UNFUNDED REQUESTS			
Number of Unfunded Requests			772
Total Dollar Amount of Unfunded Requests			$33,673,874
Requests for FY94			
Number Applications Received for FY 94 Funding		102	
Total Dollar Amount of Application Requests		$4,628,620	
TANK CLEANUP GRANT AND LOAN PROGRAM			
Total Number Application Requests for FY94	30		
Dollar Amount of Application Requests (Grants)	$2,879,096		
Dollar Amount of Application Requests (Loans)	$260,552		
Total Dollar Amount of Application Requests	$3,139,648		
TANK UPGRADING AND CLOSURE PROGRAM			
Program Total			
Total Number Application Requests for FY94	72		
Total Dollar Amount of Application Requests	$1,488,972		
Tank Upgrading			
Total Number Applications Received	31		
Dollar Amount of Application Requests	$1,096,814		
Tank Closure			
Total Number Applications Received	41		
Dollar Amount of Application Requests	$392,158		
Requests From Prior Years Not Funded			
Number of Application Requests Not Funded		638	
Total Dollar Amount of Application Requests Not Funded		$24,145,254	
TANK CLEANUP GRANT AND LOAN PROGRAM			
Total Number Application Requests for FY 93 Not Funded	141		
Total Dollar Amount of Application Requests	$16,930,928		
TANK UPGRADING AND CLOSURE PROGRAM			
Total Number Application Requests for FY 93 Not Funded	339		
Total Dollar Amount of Application Requests	$3,825,889		
REIMBURSEMENT PROGRAM			
Total Number Application Requests for FY 92 Not Funded	158		
Total Dollar Amount of Application Requests	$3,388,437		
Projected Costs for Continuation of Cleanup Projects			
Number of Cleanup Projects Requiring Additional Funds		32	
Total Dollar Amount to Continue Cleanup Projects		$4,900,000	
TANK CLEANUP GRANT AND LOAN PROGRAM			
Estimated Number of Projects to Continue From FY 92	12		
Estimated Dollar Amount to Continue FY 92 Projects	$1,200,000		
Estimated Number of Projects to Continue From FY 93	20		
Estimated Dollar Amount to Continue FY 93 Projects	$3,700,000		

program offered during FY 92. The total amount of prior year's unfunded requests is $24,145,254.

Tank cleanups are funded according to a phased approach so that a number of cleanup projects will continue to require funding the following fiscal year. At this time, it is projected that 12 facilities from FY 92 will require continued funding at an average of $100,000 per site and that the 20 projects expected to be funded during FY 93 will require an average of $185,000 for the following year. The total cost to continue these projects is estimated to be $4,900,000.

From all three categories, the anticipated total number of unfunded requests after FY 93 is 772. The current dollar amount of these requests is $33,673,874. Without funding levels to meet this demand, the Department will continue to fund the higher priority ranked projects while keeping unfunded requests on file until such time that funding becomes available. The Department is currently exploring methods to provide longterm financial assistance to owners and operators by extending the program to FY 99 to coincide with the federal deadline for upgrade and cleanup of December 1998.

APPENDIX A

TANK TIGHTNESS TESTING/SITE ASSESSMENT INCENTIVE PROGRAM SUMMARY

OWNER NAME	FACILITY NAME	FAC ID#	FA APPLICATION		FA AWARDED		FA ENCUMBERED		NOT ELIGIBLE	COMMENTS
			TTT	SA	TTT	SA	TTT	SA		
Ace Supply	Ace Supply	2464	300.00		300.00					Complete
Adams, Jack	Jack's Corner	1776	900.00	2,400.00	900.00			2,400.00		TTT Complete
Aero Flight Tech Svc	Aero Flight Tech Svc, Inc	2131	742.50		742.50					Complete
Ak Bush Carrier Inc	Ak Bush Carrier Inc	2454	237.50		237.50					Complete
AK Farmer's Co-op	Mile 267.5 Richardson Hwy	1073	750.00		600.00				150.00	Complete
AK Helicopters Inc.	AK Helicopters Inc.	1345	1,200.00		1,200.00					Complete
AK Oil Sales Inc.	Soldotna Key Lock	1602	250.00		250.00					Complete
AK Oil Sales Inc.	Homer Bulk Plant	0358	300.00		300.00					Complete
Ak Sales & Service	National Car Rental	1255	300.00		300.00					Complete
AK Transfer & Storage	AK Transfer & Storage	2465	900.00		900.00					Complete
Alamo Rent-A-Car,Inc.	Alamo Rent-A-Car, Inc	1893	250.00		250.00					Complete
Andres, Robert E.	Bob's Corner Service Station	2340	600.00	1,600.00	600.00	1,600.00				Complete
Arctic Circle Air Svc Inc	Arctic Circle Air Svc Inc Bethel Airpor	0515	600.00		600.00					Complete
Auto Service Co. Inc	Auto Service Co. Inc	0766	300.00		300.00					Complete
B-J's Services Inc	B-J's Services Inc	2463	490.00		490.00					Complete
Big Delta Enterprises	Tanana Trading Post	2559	600.00		600.00					Complete
Borden, Shelby	Borden's Roadside	1630	900.00		900.00					Complete
CEM Leasing Inc	Gas 'n Go	1473	885.00		885.00					Complete
CEM Leasing Inc	Market Basket/Plaza Gas	2518	885.00		885.00					Complete
CEM Leasing Inc	Hub Gas	2519	885.00		885.00					Complete
Central Motor Inn	Central Motor Inn	2506	300.00		300.00					Complete
Childers, Dorothy	The Treasure Cache	1191	600.00		600.00					Complete
City of Homer	Public Safety	2531	600.00		300.00				300.00	Complete
City of Homer	Harbor Fuel Fl	0696	900.00		900.00					Complete
City of Homer	Public Works,35r.. ..th St	2522	1,200.00		1,200.00					Complete
City of Skagway	PW Maintenance Shop	1978		1,306.67		1,306.67				Complete
City of Skagway	Sewage Treatment	1979		1,456.67		1,456.67				Complete
Cohen, David	Sheep Mt Lodge	2005		1,405.00		1,275.00			130.00	Complete
Crabb, Sandra	Crabb's Corner	0341	600.00		600.00					Complete
Daniel G. Cox	Granite Creek Gen Store	0899	900.00		900.00					Complete
Dyn Air Services Inc	Dyn Air Services Inc	2517	825.00		825.00					Complete
Eames, Mike	St. Elias Auto Ctr	0536		1,511.87		694.28			817.59	Complete
Ellis Air Taxi, Inc.	Ellis Air Taxi(Gulkana)	0353	600.00		600.00					Complete
Enstar	Spenard Rd Office Bldg	0133	296.60		296.60					Complete
Enstar	Sterling\Gudenrath	1640	300.00		300.00					Complete
Enstar	Soldotna Ops Ctr	1639	600.00		600.00					Complete
Enstar	Eagle River Operations	0141	890.00		890.00					Complete
Enstar	Anchorage Ops Ctr	0120	1,186.40		1,186.40					Complete
ERA Aviation Inc	ERA Helicopters Valdez	1080	900.00		900.00					Complete

APPENDIX A

TANK TIGHTNESS TESTING/SITE ASSESSMENT INCENTIVE PROGRAM SUMMARY

OWNER NAME	FACILITY NAME	FAC ID#	FA APPLICATION		FA AWARDED		FA ENCUMBERED		NOT ELIGIBLE	COMMENTS
			TTT	SA	TTT	SA	TTT	SA		
ERA Aviation Inc	ERA Aviation Center	1476	1,200.00		1,200.00					Complete
Fairbanks U Drive Inc	Hertz Rent-a-Car	0806	600.00		600.00					Complete
Fbks North Star Boroug	Moose Creek VFD Station	0934	233.85		233.85					Complete
Fbks North Star Boroug	Alaskaland	2205	233.85		233.85					Complete
Fbks North Star Boroug	Old University Park School	2207	233.85		233.85					Complete
Fbks North Star Boroug	North Pole High School	2569	233.85		233.85					Complete
Fbks North Star Boroug	North Pole Elem School	2211	233.85		233.85					Complete
Fbks North Star Boroug	Lathrop High School	2212	233.85		233.85					Complete
Fbks North Star Boroug	Hutchison Career Ctr	2213	233.85		233.85					Complete
Fbks North Star Boroug	Hunter Elementary School	2629	233.85		233.85					Complete
Fbks North Star Boroug	Main Admin Bldg	2216	233.85		233.85					Complete
Fbks North Star Boroug	Chena Lks Rec Area	1246	467.70		467.70					Complete
Fbks North Star Boroug	Steese Area VFD Sta#1	2208	467.70		467.70					Complete
Fbks North Star Boroug	North Star VFD Station #1	0951	701.55		701.55					Complete
Fbks North Star Boroug	School Dist Svc Facility	0199	701.55		701.55					Complete
Fbks North Star Boroug	FNSB Transit Garage	2209	935.40		935.40					Complete
Fbks North Star Boroug	Big Dipper Ice Arena	1260	935.40		935.40					Complete
Frontier Bldg Partnershi	Frontier Building	2489	300.00		300.00					Complete
Furlong, Dan	Short Stop	0643	600.00		600.00					Complete
Garrett's Tesoro	Garrett's Tesoro Int'l Blvd	2527	600.00		600.00					Complete
Gerik Inc	Fide N Shine	2186	900.00		900.00					Complete
Greer Tank&Welding	Greer Tank&Welding	0154	900.00		900.00					Complete
Gregoire, Richard	Homer Rental Ctr	2365	900.00		900.00					Complete
Homer Electric Assoc	HEA-Kenai	0231	900.00		900.00					Complete
Howe, John	Wizard Wash	2551		2,599.32		2,599.32				Complete
Johnson's Fuel Svc Inc	Johnson's Fuel Svc Inc	2296	600.00		600.00					Complete
Ken Bunch, Inc	Gulkana Air Service	1700	900.00		900.00					Complete
Ketchikan Public Util	KPU-Telephone	0238	600.00		600.00					Complete
Ketchikan Public Util	KPU-Electric	1724	600.00		600.00					Complete
Kim, Ok Y.	Oceanview Texaco	0762	735.00		735.00					Complete
Lucile E. Smith	Igloo City	0297	1,100.00		1,100.00					Complete
Mapco Express	#5011 1530 Huffman(Anch)	2373	850.86	2,400.00	775.86	2,400.00			75.00	Complete
Mapco Express	#5016 12021 Glenn Hwy(ER)	1907	850.86	2,400.00	775.86	2,400.00			75.00	Complete
Mapco Express	#5003 2730 Spenard(Anch)	0014	850.86		775.86				75.00	Complete
Mapco Express	#5007 5497 E No Lts(Anch)	1510	850.86		775.86				75.00	Complete
Mapco Express	#5008 717 E No Lts(Anch)	0050	850.86		775.86				75.00	Complete
Mapco Express	#5005 491 E Parks(Wasilla)	2372	1,034.48	3,200.00	1,034.48	3,200.00				Complete
Mike's University Svc	Mike's University Service,Inc.	0956	1,200.00		1,200.00					Complete
Milco, Inc.	Frontier Service Texaco	2483	825.00		825.00					Complete

APPENDIX A

TANK TIGHTNESS TESTING/SITE ASSESSMENT INCENTIVE PROGRAM SUMMARY

OWNER NAME	FACILITY NAME	FAC ID#	FA APPLICATION		FA AWARDED		FA ENCUMBERED		NOT ELIGIBLE	COMMENTS
			TTT	SA	TTT	SA	TTT	SA		
MOA Facility Maintenan	Fire Station #3	1342	300.00		300.00					Complete
MOA Facility Maintenan	Performing Arts Center	2300	300.00		300.00					Complete
MOA Facility Maintenan	Fire Station #8	1322	300.00		300.00					Complete
MOA Facility Maintenan	Fire Station #5	1329	300.00		300.00					Complete
MOA Facility Maintenan	Bering Street Maintenance	1403	300.00		300.00					Complete
MOA Facility Maintenan	Loussac Library	1267	300.00		300.00					Complete
MOA Facility Maintenan	Spenard Rec Center	1315	300.00		300.00					Complete
MOA Facility Maintenan	Fire Lake Ice Arena	2299	300.00		300.00					Complete
MOA Facility Maintenan	Fire Station #1	1347	300.00		300.00					Complete
MOA Facility Maintenan	Fire Station #12	1350	600.00		600.00					Complete
MOA Facility Maintenan	Fire Station #9	1318	600.00		600.00					Complete
MOA Facility Maintenan	Fire Station #6	1328	600.00		600.00					Complete
MOA Facility Maintenan	Fire Station #7	1324	600.00		600.00					Complete
MOA Facility Maintenan	Fire Station #4	1336	600.00		600.00					Complete
MOA Facility Maintenan	Anchorage Police Dept	1298	600.00		600.00					Complete
MOA Facility Maintenan	Northwood Street Maintenance	1409	600.00		600.00					Complete
MOA Facility Maintenan	Klatt Street Maintenance	1415	600.00		600.00					Complete
MOA Facility Maintenan	4th & Post Maintenance	1411	900.00		900.00					Complete
MOA Facility Maintenan	New Transit Maintenance	0585	1,200.00		1,200.00					Complete
MOA Solid Waste Svcs	Anchorage Regional Landfill	2086		800.00		800.00				Complete
Moose Creek Gen Store	Moose Creek Gen Store	2199		3,200.00		1,900.00			1,300.00	Complete
Nixon, Willie	ADKO Cleaners	0256	600.00		600.00					Complete
O.Kraft & Son, Inc.	Speedee Krafts	1967	1,200.00		1,200.00					Complete
Omni Enterprises Inc	DeHarts Store	0107	900.00	2,400.00	900.00	1,770.00			630.00	Complete
Oney, Tony	2631 W. 100th, Anchorage	0637	250.00		250.00					Complete
Petrolane Gas Svc	Petrolane Gas Svc-Palmer	0101	1,200.00		1,200.00					Complete
Pink Elephant Stores	Pink Elephant Stores	1452	1,200.00		1,200.00					Complete
Renner, Darrel	Renner's Chevron	2324		2,619.26		2,619.26				Complete
Renner, Terry	Renner's Gas & Save	2326		1,964.47		1,964.47				Complete
Robinson, George	Robinson's	0583	1,200.00		1,100.00				100.00	Complete
Rosencrans, Harry	Knik Texaco	2540	980.00		980.00					Complete
Smyth(Playle, James)	Smyth Moving Service, Inc.	1445	540.00		540.00					Complete
SouthCentral Air	SouthCentral Air	0431	1,200.00		1,200.00					Complete
SouthCentral Air, Inc.	South Central Air, Inc.	0431	1,200.00		1,200.00					Complete
Tesoro Ak Petroleum	Seward Tesoro	1122	850.00		850.00					Complete
Tesoro Ak Petroleum	Garrett's #3(Muldoon)	1502	900.00		900.00					Complete
Tesoro Ak Petroleum	Rodger's Tesoro(Kenai)	1127	900.00		900.00					Complete
Tesoro Ak Petroleum	Homer Spit	1125	1,200.00		1,200.00					Complete
Therriault, Hector	Hector's Welding Inc	2481	300.00		300.00					Complete

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TANK TIGHTNESS TESTING/SITE ASSESSMENT INCENTIVE PROGRAM SUMMARY

OWNER NAME	FACILITY NAME	FAC ID#	FA APPLICATION		FA AWARDED		FA ENCUMBERED		NOT ELIGIBLE	COMMENTS
			TTT	SA	TTT	SA	TTT	SA		
Tongass Association	Westflight Bldg	2491	900.00		900.00					Complete
Totem Services	Totem Chevron	0234		2,400.00		1,724.21			675.79	Complete
Totem Svcs Inc	Totem Services	0234	900.00		900.00					Complete
Wainer, H Erling	Peters Creek Texaco	0025	1,200.00	3,200.00	1,200.00	3,200.00				Complete
Weber, Gary	Wasilla Chevron	1896	1,200.00	3,200.00	1,200.00	2,500.00			700.00	Complete
Wilbur, Joseph	Flight Safety AK	0448	275.00		275.00					Complete
Wilbur, Joseph	Flight Safety AK	0292	900.00		600.00				300.00	Complete
World Wide Movers	World Wide Movers	0381	300.00		300.00					Complete
Zarcone Bros Real Estat	Lynx Creek Tesoro	2570	600.00		600.00					Complete
AK Aerofuel Inc	AK Aerofuel Inc Tanks #1&#2	1529	600.00				600.00			Received 3/9/92
AK Aerofuel Inc	AK Aerofuel Inc Tanks #3&#4	1529	600.00				600.00			Intents with Applications
Ak Airlines	Ketchikan	1340	215.00				215.00			Received 3/5/92
AK Airlines	Cargo Bldg-Sitka	1486	300.00				300.00			Intents with Applications
AK Airlines	Yakutat	1588	300.00				300.00			Intents with Applications
AK Airlines	Ketchikan	1340	551.50	1,600.00			551.50	1,600.00		Intents with Applications
AK Airlines	Cargo Bldg-Juneau	1570	558.00	1,600.00			558.00	1,600.00		Intents with Applications
AK Airlines	Kodiak	0332	600.00				600.00			Intents with Applications
AK Airlines	Kotzebue	1704	600.00				600.00			Intents with Applications
AK Airlines	Regional Hdqtrs - Anchorage	0813	900.00				900.00			Intents with Applications
Ak Airlines	Nome	1709	900.00				900.00			Received 3/5/92
AK Airlines	Cargo Bldg-Fbks	1348	1,200.00				1,200.00			Intents with Applications
Ak Terminals Inc	Ak Terminals Inc	0940	825.00				825.00			Received 2/28/92
Anders, Ed	Chena Valley Develop	2738	600.00				600.00			Received 2/27/92
Anders, Ed	Valley Center Store	2736	600.00				600.00			Received 2/27/92
Anders, Ed	Anders Cache Store	2737	900.00				900.00			Received 2/27/92
ANICA	Bethel Power Products	2376	600.00				600.00			Intents with Applications
ARA Denali Park Hotels	Hotel Area	1554	600.00				600.00			Received 2/27/92
ARA Denali Park Hotels	Mt McKinley Village	0314	600.00				600.00			Received 2/27/92
Benco Inc	Big Wheel Tire	0868	900.00				900.00			Received 12/31/91
Black Bear Inc.	Black Bear Store	2548	900.00				900.00			Received 2/28/ 2
Bosch, G.	G & G Foodmart	2839	600.00				600.00			Intents with application
Bradford, Gary D.	Penn. Automotive	2649	600.00				600.00			Received 3/4/92
Bristol Bay Contractors I	Bristol Bay Contractors Inc	0702	300.00				300.00			Received 2/28/92
Brunquist, Norm	4618 Lk Spenard	1479	1,200.00				1,200.00			Received 12/31/91
Bush Pilots Air Svc	Bush Pilots Air Svc	0659	900.00	2,400.00			900.00	2,400.00		Intents with Applications
Campbell, A.	Spartan Service	2413	825.00				825.00			Intents with application
Carlson Enterprises	Carlson Enterprises	1504	600.00				600.00			Received 12/30/91
Central Pen Gen Hospit	Central Pen Gen Hospital	2385	600.00				600.00			Received 2/27/92
Chevron USA	2801 Boniface Pkwy	0059	465.00				465.00			Received 3/5/92

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TANK TIGHTNESS TESTING/SITE ASSESSMENT INCENTIVE PROGRAM SUMMARY

OWNER NAME	FACILITY NAME	FAC ID#	FA APPLICATION		FA AWARDED		FA ENCUMBERED		NOT ELIGIBLE	COMMENTS
			TTT	SA	TTT	SA	TTT	SA		
Chevron USA	415 Muldoon	0053	555.00				555.00			Received 3/5/92
Chevron USA	2200 W. Dimond	1961	900.00				900.00			Received 3/5/92
Chevron USA	11836 Old Glenn	1962	900.00				900.00			Received 3/5/92
Chevron USA	1465 W No. Lights Blvd	0007	925.00				925.00			Received 3/5/92
Chevron USA	1304 Airport Heights	0019	1,065.00				1,065.00			Received 3/5/92
Chevron USA	6470 Debarr Rd	0012	1,175.00				1,175.00			Received 3/5/92
Chevron USA	3608 Minnesota Dr	0047	1,175.00				1,175.00			Received 3/5/92
Chevron USA	303 W. Fireweed	1769	1,175.00				1,175.00			Received 3/5/92
Chevron USA	4417 Lake Otis Pkwy	0024	1,200.00				1,200.00			Received 3/5/92
Chevron USA	832 E. 6th Ave	0015	1,200.00				1,200.00			Received 3/5/92
Chevron USA	815 W. International Airport	0074	1,200.00				1,200.00			Received 3/5/92
Chevron USA	439 W Evergreen	0969	1,200.00				1,200.00			Received 3/5/92
Chevron USA	5210 Old Seward	1781	1,200.00				1,200.00			Received 3/5/92
Chevron USA	11460 Old Seward	1784	1,200.00				1,200.00			Received 3/5/92
Chevron USA Inc	Lake Otis Chevron	0024		3,200.00				3,200.00		Received 3/4/92
Chugach Electric Assoc	Headquarters Facility	0726	382.50				382.50			Intents with application
City & Boro of Juneau	Harborview School	2070	300.00				300.00			Intents with Applications
City & Boro of Juneau	Capital School	2073	300.00				300.00			Intents with Applications
City & Boro of Juneau	West Juneau Lift Station	2161	300.00				300.00			Intents with Applications
City & Boro of Juneau	Sitka St Pump Station	2162	300.00				300.00			Intents with Applications
City & Boro of Juneau	S. Franklin Lift Station	2163	300.00				300.00			Intents with Applications
City & Boro of Juneau	Outer Dr Lift Station	2164	300.00				300.00			Intents with Applications
City & Boro of Juneau	Bartlett Hospital Lift Station	2166	300.00				300.00			Intents with Applications
City & Boro of Juneau	Auke Bay Fire Dept	2168	300.00				300.00			Intents with Applications
City & Boro of Juneau	Lemon Crk "A" Lift Station	2172	300.00				300.00			Intents with Applications
City & Boro of Juneau	Lawson Crk Lift Station	2173	300.00				300.00			Intents with Applications
City & Boro of Juneau	Gruening Park Lift Station	2174	300.00				300.00			Intents with Applications
City & Boro of Juneau	Valley Ct Lift Station	2175	300.00				300.00			Intents with Applications
City & Boro of Juneau	Downtown Fire Sept	2159	600.00				600.00			Intents with Applications
City & Boro of Juneau	Basin Rd Pump Hse	2160	600.00				600.00			Intents with Applications
City & Boro of Juneau	Glacier Fire Dept	2167	600.00				600.00			Intents with Applications
City & Boro of Juneau	Twin Lakes Lift Station	2165		800.00				800.00		Intents with Applications
City & Boro of Juneau	Fleet Maintenance	2169		1,100.00				1,100.00		Received 12/31/91
City & Boro of Juneau	Juneau Airport Maintenance	2157		1,600.00				1,600.00		Intents with Applications
City & Boro of Juneau	Busbarn	2171		1,923.66				1,923.66		Received 12/30/91
City & Boro of Juneau	Capital Transit Bus Barn	2171		2,400.00				2,400.00		Intents with Applications
City & Boro of Juneau	Eagle Crest Ski Area	1891		3,200.00				3,200.00		Intents with Applications
City & Boro of Sitka	Green Lake Hydro Plant	2329	300.00				300.00			Intents with Applications
City & Boro of Sitka	The Cove Sanitary Sewer Lift Station	2320	300.00				300.00			Intents with Applications

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TANK TIGHTNESS TESTING/SITE ASSESSMENT INCENTIVE PROGRAM SUMMARY

OWNER NAME	FACILITY NAME	FAC ID#	FA APPLICATION		FA AWARDED		FA ENCUMBERED		NOT ELIGIBLE	COMMENTS
			TTT	SA	TTT	SA	TTT	SA		
City & Boro of Sitka	Halibut Pt Sanitary Sewer Lift Statio	2331	300.00				300.00			Intents with Applications
City & Boro of Sitka	Sandy Beach Sanitary Sewer Lift Sta	2332	300.00				300.00			Intents with Applications
City & Boro of Sitka	Indian River Sanitary Sewer Lift Sta	2333	300.00				300.00			Intents with Applications
City & Boro of Sitka	Thomsen Harbor Sanitary Sewer Lift	2334	300.00				300.00			Intents with Applications
City & Boro of Sitka	Lincoln&Lake St Sanitary Sewer Lift	2335	300.00				300.00			Intents with Applications
City & Boro of Sitka	Jamestown Bay Sanitary Sewer Lift	2336	300.00				300.00			Intents with Applications
City & Boro of Sitka	Airport Maintenance	0464	900.00				900.00			Intents with Applications
City of Craig	Public Works	1708		334.47				334.47		Received 12/26/91
City of Delta Junction	Fire Station	0212	300.00				300.00			Received 2/3/92
City of Fairbanks	Fire Station #4	0347	300.00				300.00			Intents with Applications
City of Fairbanks	Public Works Fac	0345	300.00				300.00			Intents with Applications
City of Fairbanks	Public Safety Bldg	0354	600.00				600.00			Intents with Applications
City of Fairbanks	Wastewater Treatment Plant	0379	600.00				600.00			Intents with Applications
City of Homer	Public Safety	2531					300.00			Intents with application
City of Hoonah	Hoonah Public Works	1743	597.26				597.26			Rec 3-18-92
City of Ketchikan	Public Works Warehouse	1182	600.00				600.00			Rec 4/23/92
City of Kodiak	St Herman Harbor	0126	300.00				300.00			Received 3/5/92
City of Kodiak	Kodiak Police Dept	0524	300.00				300.00			Received 3/5/92
City of Kodiak	Lower Reservoir Pump Station	2418	300.00				300.00			Received 3/5/92
City of Kodiak	Pillar Creek Pump Station	2419	300.00				300.00			Received 3/5/92
City of Kodiak	Wastewater Treatment Plant	2420	300.00				300.00			Received 3/5/92
City of Kodiak	Lift Station 4	2421	300.00				300.00			Received 3/5/92
City of Kodiak	Kodiak Public Works	0520	600.00				600.00			Received 3/5/92
City of Kodiak	Kodiak Fire Dept	0528	900.00				900.00			Received 3/5/92
City of Kodiak	St. Paul Harbor/Pier II	1082	1,500.00				1,200.00		300.00	Received 3/5/92
City of Nome	PW Building	2377	300.00	800.00			300.00	800.00		Intents with application
City of St Paul	City Power Plant	2394		3,200.00				3,200.00		Intents with application
Classen, Thomas J.	Hangar-Fbks Int'l Airport	2538	300.00	800.00			300.00	800.00		Intents with Applications
Columbus Distributing	Airport Texaco	1389	1,200.00				1,200.00			Intents with Applications
Columbus Distributing	Soldotna Texaco	1391	1,200.00				1,200.00			Intents with Applications
Dean, Robert	Pinnacle Mountain	2516	600.00				600.00			Intents with Applications
Delta Airlines	Anch Int'l Airport	0208	900.00				900.00			Intents with application
Ebbert, Keith	Sunrise Inn	2270	600.00				600.00			Intents with Applications
Ellis, W. T.	Duffy's Roadhouse	2497	600.00				600.00			Received 12/31/91
ERA Aviation Inc	ERA Helicopters Fairbanks	0223	600.00				600.00			Received 12/31/91
ERA Aviation Inc	ERA Helicopters Juneau	0477	900.00				900.00			Received 12/31/91
EV-JO Inc	Kenai Texaco	0523	1,200.00				1,200.00			Intents with Applications
Evert's Air Fuel, Inc.	Evert's Air Fuel, Inc.	0425	1,200.00				1,200.00			Received 2/18/92
Fickes, Lester&Dorothy	Riverview Quick Stop	1054	540.00				540.00			Intents with application

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OWNER NAME	FACILITY NAME	FAC ID#	FA APPLICATION		FA AWARDED		FA ENCUMBERED		NOT ELIGIBLE	COMMENTS
			TTT	SA	TTT	SA	TTT	SA		
Fishers Fuel Inc	Larrys Healy Service	0492	900.00				825.00		75.00	Received 3/9/92
Fishers Fuel Inc	Fisher's Fuel Mile 52 Parks	1114	1,200.00				1,200.00			Intents with Applications
Fishers Fuel Inc	Palmer Tesoro	0870	1,200.00				1,200.00			Intents with Applications
Fishers Fuel Inc	Mars Hilltop	0388	1,200.00				1,200.00			Intents with Applications
Frontier Flying Service	Frontier Flying Service	0130	1,200.00	3,200.00			1,200.00	3,200.00		Intents with application
Frosty Fuel Co	Dutch Harbor	0991	300.00	800.00			300.00	800.00		Intents with Applications
Frosty Fuel Co.	Cold Bay	0993		800.00				800.00		Intents with Applications
Frosty Fuel Co.	Port Heiden	2547		1,600.00				1,600.00		Intents with Applications
Gamble, E.B.	Fritx Creek Gen Store	0245	600.00				600.00			Received 3/4/92
Garrett, Nelson	Garrett Tesoro	2527	600.00				600.00			Received 3-10-92
George, Spiro L. Sr.	George's Grocery	0800	600.00	1,600.00			600.00	1,600.00		Intents with Applications
Grammont, Willard	Willard's Auto Electric	2484	1,800.00	4,800.00			900.00	2,400.00	3,300.00	Intents with Applications
Harris Sand & Gravel	Harris Sand & Gravel	2544	600.00				600.00			Received 2/18/92
Hoover, Darlene	Services Unlimited	2437	600.00				600.00			Received 3/4/92
Hoover, Darlene	Hoover's Chevron	1039	900.00				900.00			Received 3/4/92
Hudson Air Svc& Sons In	Talkeetna State Airport	1223	300.00				300.00			Received 3/5/92
Icicle Seafoods Inc	Petersburg Fisheries	0508	300.00				300.00			Received 3/2/92
Icicle Seafoods Inc	Seward Fisheries	1680	600.00				600.00			Intents with application
Illies, Dennis	Valley Country Store #2	1987	550.00				550.00			Received 2/27/92
Illies, Dennis	Valley Country Store #1	1988	825.00				825.00			Received 2/27/92
Int'l Aviation Services	Int'l Aviation Services	0409	300.00				300.00			Intents with Applications
Int'l In-Flight Catering	Int'l In-Flight Catering	0449	300.00				300.00			Received 12/31/91
Island Union Services In	Union Tire & Brake	2379	1,100.00				1,100.00			Received 3/2/92
Jones, Troy	Big Su Lodge	2320	900.00	2,400.00			900.00	2,400.00		Received 12/30/91
Kasilof Riverview Lodge	Kasilof Riverview Lodge	0384	1,200.00	3,200.00			1,200.00	3,200.00		Intents with Applications
Kenai Airport Fuel Svc	Kenai Airport Fuel Svc	2187	1,200.00	2,621.50			1,200.00	2,621.50		Received 2/14/92
Ketchikan Air Service	Wrangell Air	0691	600.00				600.00			Intents with Applications
Ketchikan Air Svc Inc.	Ketchikan Air Svc Inc.	1335	900.00				900.00			Received 2/24/92
Ketchum Air Svc	Ketchum Air Svc	1143	1,200.00	3,200.00			1,200.00	3,200.00		Intents with application
Kim, Ok Y	Kim's Oceanview Texaco	0762	735.00				735.00			Received 3/4/92
Korovin Corp	Olson's Texaco #2(854 E 36th)	2287	900.00				900.00			Received 12/31/91
Korovin Corp	Olson's Texaco #1(3607 Spenard)	2288	1,200.00				1,200.00			Received 12/31/91
Laidlaw Transit	Soldotna	1254	825.00				825.00			Need notif & pd inv
Laidlaw Transit(Cunning	Laidlaw Transit - Homer	1581	300.00				300.00			Need paid invoices
Lake Clark Air Inc	Lake Clark Air Inc	2426	300.00				300.00			Intents with Applications
Lake Hood Associates	Lake Hood Associates	2360	900.00				900.00			Intent with Application
LaPan, Richard	Anchor Point Tesoro	2550	900.00				900.00			Intents with Applications
Larry's Flying Service	Larry's Flying Service	0111	600.00				600.00			Intents with Applications
Lk Hood Air Harbor	Lk Hood Air Harbor	1728	400.00				400.00			Intents with application

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TANK TIGHTNESS TESTING/SITE ASSESSMENT INCENTIVE PROGRAM SUMMARY

OWNER NAME	FACILITY NAME	FAC ID#	FA APPLICATION		FA AWARDED		FA ENCUMBERED		NOT ELIGIBLE	COMMENTS
			TTT	SA	TTT	SA	TTT	SA		
Long Rifle Lodge Ltd	Long Rifle Lodge Ltd	1950	300.00	800.00			300.00	800.00		Intents with Applications
Lot Inc	Hatcher Pass Gateway Ctr	0123	600.00				600.00			Received 12/31/91
Macomber Corp	Macomber Corp	0446	300.00				300.00			Intents with Applications
Mapco Express	#5017 1773 College Rd(Fbks)	1333	850.86				850.86			Received 12/19/91
Mapco Express	#5020 2900 E Tudor(Anch)	2545	850.86				850.86			Received 12/19/91
Mapco Express	#5018 205 E 3rd(Fbks)	0966	900.00				900.00			Received 12/19/91
Mapco Express	#5022 2300 Cushman(Fbks)	2546	1,200.00				1,200.00			Received 12/19/91
Marathon Fuel Corp	Seward Marina	0162	1,200.00				1,200.00			Received 3/3/92
Maritime Helicopters	Maritime Helicopters	0864	300.00				300.00			Received 3/4/92
Mark Air Inc	4100 W Int'l Airport-Anch	0611	300.00				300.00			Received 12/30/91
Mark Air Inc	6441 So Air Park Dr	2718	300.00				300.00			Received 12/30/91
MarkAir Inc	Aniak Airport	1377	300.00				300.00			Intents with Applications
MarkAir Inc	Kodiak Airport	0092	1,200.00				1,200.00			Intents with Applications
MarkAir Inc (Magoffin)	MarkAir Aircraft Hanger	2371	300.00				300.00			Received 12/23/91
MarkAir, Inc	Cargo Terminal, Fbks	1110	1,200.00				1,200.00			Received 12/23/91
MarkAir, Inc	Warehouse/vehicle Main(Fbk)	2751	1,200.00				1,200.00			Received 12/23/91
Matanuska Tele Assoc	MTA Plant Building	0535		786.00				786.00		Received 1/17/92
Matanuska Tele Assoc	MTA Talkeetna C.O.	0419		800.00				800.00		Received 1/17/92
Matanuska Tele Assoc	MTA Willow C.O.	0655		800.00				800.00		Received 1/17/92
Matanuska Tele Assoc	MTA Palmer C.O.	1458		800.00				800.00		Received 1/17/92
Matanuska Tele Assoc	MTA Eagle River	0529		800.00				800.00		Received 1/17/92
Matanuska Tele Assoc	MTA Healy C.O.	1556		1,600.00				1,600.00		Received 1/17/92
McClain,R & Smith L.	Mentasta Lodge	1936	600.00				600.00			Intents with Applications
McMahan, Ronald S.	Ron's Service	1478	900.00				900.00			Received 3/5/92
Missionary Aviation Rep	MARC Flight Center	0158	600.00				600.00			Intents with Applications
MOA Facility Maintenan	Latimer Fire Station	1426	300.00	800.00			300.00	800.00		Received 2-7-92
MOA Solid Waste Svc	Central Transfer Station	1306	300.00				300.00			Intents with application
Mountain Corp	Mountain Market	2616		1,475.75				1,475.75		Received 12/26/91
Nenana Heating Svcs	A Frame Svcs	1623	900.00	2,400.00			900.00	2,400.00		Rec 3-27-92
Nickerson, Vicki	Goldstream General Store	1068	600.00	1,442.50			600.00	1,442.50		Received 12/31/91
Nistler Enterprises	Nistler Enterprises	0594	900.00				900.00			Received 12/31/91
Paxson Lodge Inc	Paxson Lodge Inc	1938	900.00				900.00			Intents with application
Petersburg Motors Inc	Petersburg Motors Inc	0206	900.00				900.00			Received 3/4/92
Prato, Marcel	Cascade Liquor	2508	980.67				900.00			Received 12/27/91
PTI Communication	Juneau-204 Main	0145	260.00				260.00			Intents with application
PTI Communication	Juneau-9229 Cessna	0143	300.00				300.00			Intents with application
Qwik Three Inc	Qwik Lube - Fbks	2474	900.00				900.00			Rec 4-7-92
Rabbage, Terence	Chinook Chevron Svc	0926	900.00				900.00			Received 3/2/92
Rain Proof Roofing, Inc	Rain Proof Roofing, Inc	0286	600.00				600.00			Need paid invoices & FA-1

APPENDIX A

TANK TIGHTNESS TESTING/SITE ASSESSMENT INCENTIVE PROGRAM SUMMARY

OWNER NAME	FACILITY NAME	FAC ID#	FA APPLICATION		FA AWARDED		FA ENCUMBERED		NOT ELIGIBLE	COMMENTS
			TTT	SA	TTT	SA	TTT	SA		
Reeve Aleutian Airways	Port Heiden	0628	300.00				300.00			Intents with Applications
Reeve Aleutian Airways	Anchorage	1593	900.00				900.00			Intents with Applications
Reliable Transfer Corp	Reliable Shop	0181	208.00				208.00			Intents with application
Rogers, Doris	Eagle Auto Service Center	2532	600.00				600.00			Intents with Applications
Roofe, Marvin	Four Corner Store	1662	1,200.00				1,200.00			Intents with Applications
Sadler, Anna L.	A.K. Chevron	2461	900.00				900.00			Intents with Applications
Sea Land Service Inc	Sea Land Freight Svc	0043	1,200.00				1,200.00			Intents with Applications
Sears Roebuck & Co	Sears Roebuck & Co	1466	300.00	1,600.00			300.00	1,600.00		Intents with Applications
Second Ave Service	Second Ave Service	2341		996.80				996.80		Received 12/26/91
Stark Lewis Co.	Stark Lewis Co.	2647	360.00				180.00		180.00	Received 2/24/92
Stelling, John	Stelling Enterprises	2203		800.00				800.00		Received 12/11
Stephan's Tool Rental&	Stephan's Tool Rental&Sales Inc	0975	900.00				900.00			Received 3/5/92
Stephens, Ron	Peter's Creek Svc	2587	1,200.00				900.00		300.00	Received 3/4/92
Strang, Gerald	Gakona Lodge	2357	900.00	2,400.00			900.00	2,400.00		Intents with Applications
Sunny Chevron Svc, Inc.	Sunny Chevron Svc, Inc.	0413	600.00				600.00			Intents with application
Tacks General Store	Tacks General Store	0793	900.00	2,400.00			900.00	2,400.00		Intents with application
Taku Oil Sales	Woodsey's Union Service	0113	600.00				600.00			Received 3/4/92
Taku Oil Sales	Aurora Fuel Services	0282	1,200.00				1,200.00			Received 3/4/92
Tanana Gas Co.	Tanana Gas Co.	2457	300.00				300.00			Intents with application
Tatsuda's Supermarket I	Tatsuda's Supermarket Inc.	0424	900.00				900.00			Received 2/21/92
Tatsunda's Supermarket	Tatsunda's Ward Cove Market	0466	600.00				600.00			Intents with Applications
Temsco Helicopters Inc	Temsco Helicopters-Wrangell	1775	300.00				300.00			Received 3/3/92
Temsco Helicopters Inc	Temsco Helicopters-Juneau	0270	600.00				600.00			Received 3/3/92
Temsco Helicopters Inc	Temsco Helicopters-Ketchikan	1768	1,200.00				1,200.00			Received 3/3/92
Temsco Helicopters Inc	Temsco Fuel Svc-Ketchikan	2634		810.32				810.32		Received 3/3/92
Tesoro AK Petroleum	Huffman Tesoro #15	1984	515.00				515.00			Received 3/5/92
Tesoro AK Petroleum	Willner's Mini Mart	0112	600.00				600.00			Received 3/5/92
Tesoro AK Petroleum	Garrett's #1	1404	900.00				900.00			Received 3/5/92
Tesoro AK Petroleum	Alaska Mechanical	0125	1,200.00				1,200.00			Received 3/5/92
Tesoro AK Petroleum	Discount Truck Stop(Interior Fuels)	0084	1,200.00				1,200.00			Received 3/5/92
The Hanger Group Inc.	Northshore Aviation	0005	1,200.00				1,200.00			Received 3/5/92
Thompson, Dean	AAA Plumbing & Heating	2602	600.00	1,600.00			600.00	1,600.00		Intents with Applications
Tundra Tours Inc	Tundra Tours Bus Co.-Fbks	1671	600.00				600.00			Received 12/31/91
Tundra Tours Inc.	Tundra Tours Bus Co - North Pole	1675	600.00				600.00			Intents with Applications
Tundra Tours Inc.	Tundra Tours Bus Co - Wasilla	1051	600.00				600.00			Intents with Applications
Tundra Tours Inc.	Tundra Tours Bus Co - Palmer	0313	600.00				600.00			Intents with Applications
U-Haul Co of AK	Anch U--Haul Center	1201	600.00				600.00			Intents with application
Uyak Air Service Inc	Uyak Air Service	1034	300.00				300.00			Received 3/4/92
Wadsworth, Norma	Camper City Super Service	2530		3,200.00				3,200.00		Intents with Applications

APPENDIX A

TANK TIGHTNESS TESTING/SITE ASSESSMENT INCENTIVE PROGRAM SUMMARY

OWNER NAME	FACILITY NAME	FAC ID#	FA APPLICATION		FA AWARDED		FA ENCUMBERED		NOT ELIGIBLE	COMMENTS
			TTT	SA	TTT	SA	TTT	SA		
Warren, Stephen	C & W Repair	0316	877.00				877.00			Received 2/12/92
Wickwire, Thomas	Tanana Air Svc	1723		1,600.00				1,600.00		Intents with application
William T Heisler Inc	Sandlake Service	0189	825.00				825.00			Received 12/31/91
Wilson, Mark&Delores	Wilson, Mark&Delores	2561	594.00				594.00			Received 2/21/92
Woods Air Fuel Inc	Woods Air Fuel Inc	1571	1,200.00				1,200.00			Intents with Applications
Wuerth, Julius&Juergen	Pacific Mitsubishi	2566		800.00				800.00		Received 2/24/92
Aero Tech Flight	Aero Tech Flight	2131	742.50						742.50	Work done prior to Sep-90
Benshoof, Lyman	Benshoof, Lyman	2402								No work done
Blackard, Joe&Mary	Bus Barn	0324	517.50						517.50	Work done prior to Sep-90
Chevron USA	2500 Seward Hwy	1778	175.00						175.00	Line test, not tank test
Chumley's Inc	Chumley's Inc	UNK							NE	Received 12/31/91
City of Homer	Public Library, 141 W Pioneer Ave	2522	300.00						300.00	Heating Oil Tank
City of Homer	Wastewater Treatment,3575 Heath S	2522	600.00						600.00	Over Max Limit/FAcility
City of Houston	Volunteer Fire Dept	2733	600.00						600.00	Withdrew appl-other funding
Copper Basin Dist.	Tazlina Service	1949	600.00						600.00	Work done prior to Sep-90
Fbks Daily News Minor	Fairbanks Daily News Minor	2188	600.00						600.00	Work done prior to Sep-90
Fbks Motors, Inc.	Fairbanks Motors, Inc.	1483	400.00						400.00	Not an approved method
Gartz, Albert	OK Fuel Co.	1594	1,500.00						1,500.00	Work done prior to Sep-90
Hammon, Fred	Soldotna Y Chevron	0518								Tanks out of use on 9/5/90
Hanauer, Ellen	Cushman Box Boy Grocery	1089		2,400.00					2,400.00	No proof of work or pymt
Homer Electric Assoc	HEA-Homer	1261	900.00						900.00	Received 11/1
Horrell Investments	Glennallen Chevron	2292	1,200.00						1,200.00	Work done prior to Sep-90
Interior Fuels	Interior Fuels - Discount Trk	0084	1,200.00						1,200.00	Work done prior to Sep-90
Interior Fuels	Interior Fuels - Heating Oil	0084	1,200.00						1,200.00	Work done prior to Sep-90
Mapco Express	#5004 5159 Old Seward(Anch)	1500	850.86						850.86	Out of Compliance
Mapco Express	#5006 1501 E Dimond(Anch)	1505	850.86						850.86	Out of Compliance
Mapco Express	#5014 1900 Muldoon(Anch)	1517	850.86						850.86	Out of Compliance
Mapco Express	#5024 8803 Jewel Lk(Anch)	1521	850.86						850.86	Out of Compliance
Mapco Express	#5021 6010 Old Seward(Anch)	0727	1,134.48						1,134.48	Out of Compliance
Mapco Express	#5010 1500 E 5th(Anch)	1512	1,200.00						1,200.00	Out of Compliance
McMahan, R.S.	Ron's Service & Towing	1478	900.00						900.00	Work done prior to Sep-90
Northwest Airlines	Northwest Airlines-Anchorage	UNK	225.00						225.00	Costs Prior to 9/90
Peters, Ken	Tudor Car Wash	2451	850.00						850.00	Work done prior to Sep-90
Tesoro Ak Petroleum	Willner's Mini Mart	0112	600.00						600.00	Work done prior to Sep-90
Tesoro Ak Petroleum	Garrett's New Seward	1404	900.00						900.00	Work done prior to Sep-90
Tesoro Ak Petroleum	Alaska Mechanical	0125	1,200.00						1,200.00	Work done prior to Sep-90
TOTAL			$242,164	$120,354	$77,306	$33,410	$141,150	$77,891	$32,981	

Shaded Area = Reimbursement Paid

APPENDIX B

TANK CLEANUP PROGRAM FINANCIAL ASSISTANCE FOR FY 92

OWNER NAME	FACILITY NAME	FAC ID#	FY 92 REQUESTS		GRANTS ENCUMBER	LOANS ISSUED	ACTIVITIES FUNDED						
			GRANT	LOAN			C	CA	CL	CU	RA	SA	T
Illies,Riley, Worrell	Stop N Shop-Emergency Grt	2315	109,460	12,163	109,460		X						X
Nixon, William	Anchorage Clean Sweep	1233	247,995	25,000	82,266		X	X		X		X	
Kelly, Bud	Kelly's Tire & Wheel	1460	949,600	25,000	68,957		X		X			X	X
Wilson, Don	Don Wilson	2529	100,000	11,111	Note 1								
Decker, Robert	University Car Care	2285	142,003	15,778	31,485				X			X	X
Cook, John	Sterling Tesoro	2286	33,165	3,685	47,827								X
Continental Baking Co.	Sunrise Bakery	0330	95,655	10,628	97,218		X		X	X		X	X
Miller, Dale	Alaska Chevron	0556	800,148	25,000	50,338							X	
John, Aleo&Ruby	Tsesyu Tesoro	1224	18,828	2,092	22,661							X	X
Illies, Riley, Worrell	Wasilla Stop-N-Shop	2315	686,679	12,837	130,796		X		X			X	X
Cohen, David	Sheep Mtn. Lodge	2005	349,000	25,000	27,167				X			X	X
Weber, Gary	Wasilla Chevron	1896	18,315	2,035	22,760							X	X
Hanauer, Ellen	Cushman Box Boy Grocery	1089	35,500	2,500	35,500		X		X			X	
Alaskan Federal Credit Union	SJ Chapman Subdiv	2422	239,000	25,000	63,056		X	X	X				
Northstore Ventures	Seven - 11 #105	1983	98,100	10,900	49,500			X		X			X
Alaska Sightseeing, Inc	Alaska Sightseeing	1657	109,460	12,162	60,140		X	X		X			
Garrett, Nelson	Garrett's Tesoro	2527	225,000	25,000	54,014			X	X				X
K & L Distributors, Inc	K & L Distributors (Anchorage)	1503	15,523	1,725	35,959			X		X			X
Young, E.J.	Young Investment	0013	6,884	765	5,414		X	X		X			
Alaska Sales & Service, Inc.	Alaska Sales & Service, Inc.	1919	25,055	2,784	8,291		X	X		X			
Benward, Roy	Lot 2A Jeanie Subdiv	2582	2,005	223	1,871		X			X		X	
Byers, Andrea&William	A & B Tool & Equip Rental, Inc.	0105	947	105	861			X		X			X
Allinger, Leroy	Mt. McKinley Rental	2528	6,014	668	7,196			X		X			X
Fairbanks Daily News-Miner	Fairbanks Daily News-Miner	2188	29,579	3,287	19,266		X			X			
K & L Distributors, Inc	K & L Distributing (Fairbanks)	1958	16,200	1,800	9,278			X		X			X
McMahan, Ronald	Ron's Service & Towing	1478	6,903	767	Note 1								
Nixon, William	Anchorage Clean Sweep - Phase II	1233	113,000		99,968		X	X		X			
Kelly, Bud	Kelly's Tire & Wheel - Phase II	1460	301,130		265,908	25,000		X		X			X
Decker, Robert	University Car Care - Phase II	2285	195,290	9,222	318,148			X		X			X
Cook, John	Cook's Sterling Tesoro - Phase II	2286	428,685	21,315	60,332								X
Miller, Dale	Alaska Chevron - Phase II	556	635,642		Note 2								
Illies, Worrell & Riley	Stop N Shop - Phase II	2315	450,000		133,469			X		X			X
Cohen, David	Sheep Mtn. Lodge - Phase II	2005	250,000		235,188					X			
Weber, Gary	Wasilla Chevron - Phase II	1896	427,035	22,965	192,085			X		X			X
Hanuaer, Ellen	South Cushman Box Boy - Phase II	1089	259,536	22,500	99,580					X		X	
Alaskan Federal Cr Union	SJ Chapman Subdiv - Phase II	2422	329,880		Note 1								
Tesoro Northstore	7-11 #105(1246 Noble-Fbks) - Phase II	1983	112,902	12,545	Note 1								
Ak Sightseeing Tours	Ak Sightseeing Tours - Phase II	1657	179,662	12,638	155,389		X	X		X			
Garrett, Nelson	Garrett's Tesoro - Phase II	2527	264,795		224,690			X		X			
K & L Distributors, Inc	K & L Distributors (Anchorage)-Phase II	1503	139,500	15,500	90,466					X			

APPENDIX B

TANK CLEANUP PROGRAM FINANCIAL ASSISTANCE FOR FY 92

OWNER NAME	FACILITY NAME	FAC ID#	FY 92 REQUESTS GRANT	FY 92 REQUESTS LOAN	GRANTS ENCUMBER	LOANS ISSUED	ACTIVITIES FUNDED C	CA	CL	CU	RA	SA	T
Samuel, A.M.	Moose Creek Gen Store-Emerg Grt	2199	112,050	12,450	2,808								X
Decker, Robert	University Car Care - Emergency Grant	2285	215,000	0	210,486		X						
TOTAL			$8,780,125	$387,350	$3,155,806	$25,000	15	18	8	22	0	12	21
INELIGIBLE APPLICATIONS - FY 92			FY92 Application Requests										
Dawson, Leona	Wike's Service Station			no estimate	Ineligible								
Roderick, Paul	Former Service Staion		81,000	9,000	Ineligible								
Wise, Dennis	Cornerstone Gas		162,000	18,000	Ineligible								
Russell, Darrell	Rusell's Texaco			no estimate	Ineligible								

FY 92 Tank Cleanup Program Allocation	FY92 Allocation	Grants/Loans Processed	Allocation Balance
Revised FY92 Allocation	4,137,873	3,180,806	957,067
Financial Assistance	4,058,453	3,180,806	877,647
Contingency Balance	79,420		79,420

Explanation - Activities Funded Codes
C-Containment; CA-Corrective Action
CL-Closure; CU-Cleanup Activities
RA-Risk Assessment
SA-Site Assessment; T-Testing

Note 1: Grant still under review. Need approved Corrective Action Plan before grant can be issued.

Note 2: Grant processed in the amount of $259,128. Funds will be encumbered as soon as signed by grantee.

Shaded Area = Grant Offer Signed and Funds Encumbered

APPENDIX C

TANK UPGRADE AND CLOSURE PROGRAM FINANCIAL ASSISTANCE FOR FY 92

OWNER NAME	FACILITY NAME	FAC ID#	FY 92 REQUESTS		GRANTS ISSUED		NOTES
			UPGRADE	CLOSURE	UPGRADE	CLOSURE	
Agni, Steve	Carr Gottstein			15,600			FA-3
AK USA Federal Credit Union	Big Lake	2308		4,842			NE
AK USA Federal Credit Union	Lamplight Chevron	2307		39,825			NE
Alaskan Federal Credit Union	SJ Chapman Subdivision	2422		57,000		6,635	
Alaska Sightseeing Tours, Inc.	Alaska Sightseeing Tours, Inc.	1657		14,854		14,532	
Anchorage Chrysler Center	Anchorage Chrysler Center	0161		1,323			FA-3,5
Asako Corporation Ltd.	Alaska Sportsman's Lodge	2284		14,998		14,911	
Blackard, Joe & Mary	Laidlaw Transit	0324		11,811			NE
Byers, William	A & B Tool & Equipment Rental	0105		19,585		13,838	
City of Palmer	Public Works Shop	0652		9,626		6,425	
City of Palmer	Public Works Shop/Airport Facility	0892		9,626		9,680	
City of Unalaska	Dept of Public Works-Valley Rd.	0089	16,372	4,538			NE
Cline's Texaco	Cline's Texaco	0031	18,300		8,490		
Cohen, David	Sheep Mountain Lodge	2005	27,600	8,700			
Copper Valley Electric Ass'n.	CVEA - Glennallen	0290		2,614		2,326	
Cooper, Stephen	3712 University Ave. Fbx	2525		3,854		2,042	
Courtney's Tudor Service	Courtney's Tudor Service	2375	51,000	9,000			
Dam, William E.	Government Hill Texaco	2524	60,000				
Deacon, Jacqueline	Sister's Construction			32,822			FA-3
Decker, Robert	University Car Care	2285	40,285	19,715			
Denali Fuel Company	Denali Fuel Company	0537		59,145		14,174	
Dennison, K.M.	Lake Hood, Space #603	0323		1,200			NE
Dunham, Leverne C.	Pigs for Pets			30,240			
Fairbanks Daily News Miner	Fairbanks Daily News Miner	2188	16,584	2,280	15,864	2,290	
Fairbanks Motors, Inc.	Fairbanks Motors, Inc.	1483		1,680			
Fairbanks North Star Borough	Baler/Landfill	0941		22,316		22,316	
Fairbanks North Star Borough	Big Dipper Ice Rink	1260		19,178		5,772	
Fairbanks North Star Borough	Chena Lakes Recreation Area	1248		9,106		3,300	
Fairbanks North Star Borough	Hunter Elementary	2629		9,106		9,106	
Fairbanks North Star Borough	Hutchison Career Center	2213		9,106		9,106	
Fairbanks North Star Borough	Lathrop High School	2212		9,106		9,106	
Fairbanks North Star Borough	North Pole High School	2569		9,106		9,106	
Fairbanks North Star Borough	North Pole Middle School	2630		9,106		9,106	
Fairbanks North Star Borough	North Pole Transfer Station	2631		11,708		11,708	
Fairbanks North Star Borough	Old Sewage Plant	2206		11,708		11,708	
Fairbanks North Star Borough	Steese Volunteer Fire Depart	2436		13,800		7,082	
Fairbanks North Star Borough	Westcott Pool	1253		9,106		3,360	
Fennimore, Ron	Fennimore Service Center	0386	3,165		422		
Gana - A' Yoo	Fbks Int'l Airport	2045		12,000			NE

APPENDIX C

TANK UPGRADE AND CLOSURE PROGRAM FINANCIAL ASSISTANCE FOR FY 92

OWNER NAME	FACILITY NAME	FAC ID#	FY 92 REQUESTS		GRANTS ISSUED		NOTES
			UPGRADE	CLOSURE	UPGRADE	CLOSURE	
Garrett, Nelson	Garrett's Tesoro	2527	39,600		60,000		
Golden Valley Electric Assoc	Golden Valley Electric Assoc	0128		5,152			
Grasto, Gene & Jeanette	Valley View Center	0049		12,611		8,411	
Greer Tank, Inc.	Greer Tank, Inc.	1188	14,635	7,190		7,629	
Haines Light & Power Co.	Haines Light & Power , Co., Inc.	0360		1,451		1,451	
Haxby, John	239 E. Int'l. Airport Road	1922		5,280		5,808	
Head, Henry P.	H.P. Head, Lake Spenard #113	1689		210			NE
Hiddleston, George & Mary	c/o John Starke	0792		10,620		11,577	
Higgins, Charles	Charles Higgins Company	2127		5,534		5,534	
Iilies, Riley & Worrell	Wasilla Stop 'n' Shop	2315	60,000				
John, Alec & Ruby	Tsayu Service Station	1224	3,576	8,160	3,684	6,480	
K & L Distributors, Inc.	K & L Distributors, Fbx.	1958		12,000			FA-3
K & L Distributors, Inc.	K & L Distributors, Inc. Anch.	1503		9,408		3,264	
Kardatzke, Mike	Aviation Insurance of Alaska, Inc.	1694		5,751		5,586	
Kurani, Inc.	Kurani, Inc., Pizza Hut 210 Center Ct.	1218		2,805		2,313	
Lynden Transport, Inc.	Lynden Transport, Inc.	0216		8,335			NE
Markley, Jack & Viola	1208 Gambell	2274		13,601			
Matteson, Barry	House of Harley	2608		6,841		6,268	
McBride, Mike	McBride's Flight Operations	1711	5,031	3,101		3,002	
McManan, Ronald S.	Ron's Service and Towing	1478	1,645	2,926		4,024	
Miller, Dale	Alaska Chevron	0556	29,603	1,320	Issued Grant under FY93 Program		
Moose Creek General Store	Moose Creek General Store	2199	59,092	8,922	60,000		
MOA-Solid Waste Services	Central Transfer Station	1306		13,227	60,000		
MOA-Solid Waste Services	Anchorage Regional Landfill	2086		13,227	43,939		
Nenana Heating Services, Inc.	Nenana Heating Services, Inc.	1626	770				Withdrew
Perkins, James & Barbara	Clear H-2-O	1686		7,725		5,792	
Petroleum Sales	Petroleum Sales	0201		20,370		22,407	
R & M Consultants	R & M Consultants	0249		10,876		7,750	
Rain Proof Roofing	Rain Proof Roofing	0286		5,340		5,038	
Robbins, Mary L.(No-Par Inc)	The Village Store	0219	36,600	23,400	Grant was declined		
Roderick, Paul	Anchor Point Texaco	2432	60,000				NE
Schwanke, Roland	Sterling Chevron	0642				13,304	
Second Ave. Service, Inc.	Second Avenue Service, Inc.	2341	35,444	10,800	35,444	10,800	
Skagway Fuels-Gordon, Alvin	Skagway Fuels	0981		884		884	
Soldotna Y Chevron	Soldotna Y Chevron	0518	7,414				NE
Summit Lake Lodge	Summit Lake Lodge	1935	10,667	5,853		4,734	
Sunrise Distributor, Inc.	Sunrise Distributor, Inc.	2293		3,926		3,428	
Superior Car Wash Systems	Alaska Auto Import Specialties	2576		10,543		10,161	
Superior Car Wash Systems	Wasilla Car Wash	1283	11,876			11,745	

APPENDIX C

TANK UPGRADE AND CLOSURE PROGRAM FINANCIAL ASSISTANCE FOR FY 92

OWNER NAME	FACILITY NAME	FAC ID#	FY 92 REQUESTS		GRANTS ISSUED		NOTES
			UPGRADE	CLOSURE	UPGRADE	CLOSURE	
T. C. T. Communication	T.C.T. Communications	2271		4,990		4,914	
Temsco Helicopters	Temsco Helicopters-Ketchikan	1768	41,678		44,572		
Trail Ridge Air	Trail Ridge Air	0896	7,500	6,513		4,368	
Tundra Copters	Tundra Copters	1681		2,256		2,256	
United Lumber Co., Inc.	Soldotna	0761		6,000		6,000	
United Lumber Co., Inc.	Anchorage	1030		47,909		5,100	
Valley Service Center, Inc.	Valley Chevron	0455	57,600	2,400	60,000		
Vrem, Kelly L.	Birchwood Airport Lot 1 Bk 200		30,000	30,000			NE
Wadsworth, Norma	Camper City Super Service	2530	60,000		54,600	5,400	
Wise, Dennis	Astoria Limited/Cornerstone Gas	0066		60,000			NE
TOTALS			$806,037	$946,785	$447,015	$393,057	

Fy 92 Tank Upgrade & Closure Program Allocation	FY 92 Allocation	Grants Processed	Allocation Balance
Revised FY 92 Allocation	1,213,093	840,072	373,021
Financial Assistance	1,168,621	840,072	328,549
Contingency	44,472		44,472

NOTES:

FA-3 = Should Apply for Tank Cleanup Program

FA-5 = Should Apply for Reimbursement Program

NE = Not Eligible for Financial Assistance Under This Program

Shaded Area = Grant Offer Signed and Funds Encumbered

APPENDIX D

REIMBURSEMENT PROGRAM FOR FY 92

OWNER NAME	FACILITY NAME	FAC ID#	UPGRADE & CLOSURE	CLEANUP	TOTAL REQUEST	
Air Van Lines(Arrow Moving & Storag	Arrow Moving & Storage (209 Post)	1349	$3,978	$12,631	$16,609	
Air Van Lines, Inc.(Bethco Consld)	Anch Moving Svc (135 Post Rd)	795	$3,974	$9,553	$13,527	
Air Van Lines, Inc.(Sumiko Grp)	Air Van Lines (2216 Post)	1351	$8,394	$4,401	$12,795	
AK USA Federal Credit Union	Big Lake Marina	2308/2011	$4,271	$30,231	$34,502	
AK USA Federal Credit Union	Lamplight Chevron (Kenai)	2307		$20,253	$20,253	
Alascom, Inc	12 Sites	12 Sites	$200,000		$200,000	*
Alaska Airlines	Petersburg	1354	$9,767	$7,054	$16,821	
Alaska Sales & Service	Geo Ctr	1919	$28,689		$28,689	
Allinger, Leroy	Mt. McKinley Rentals	2528		$24,779	$24,779	
Alyeska Pipeline Service	Van Horn Facility/Pump Sta #2 & #12	3 Sites			Withdrew Requests	
Anchorage Chrysler Center	Anchorage Chrysler Center	NE			Not Eligible	
Arctic Slope/Ocean Holdings	APC Fabrication Yard		$4,862		$4,862	
Benward, Roy	Roy E. Benward	2582		$4,734	$4,734	
Blackard, Joe & Mary	Bus Barn(Laidlaw Transit)	324	$5,120		$5,120	
Blackard, Joe & Mary	Office/Shop (Mat Su Inc)	570	$4,695		$4,695	
Brannon, Ernest W. & Donna	Burkeshore Marina	498		$8,276	$8,276	
Butler Aviation	Anchorage Fueling & Service Co Plant #4	1270	$836	$130,392	$131,228	
Carr Gottstein, Inc.	6441 C St (J.B. Gottstein & Co.)	830		$25,340	$25,340	
Central Plumbing & Heating,Inc.	Central Plumbing & Heating,Inc.	2290	$6,556		$6,556	
City of Fairbanks	10 Sites	10 Sites	$29,358		$29,358	
Cohen, David	Sheep Mt Lodge	2005		$2,199	$2,199	
Continental Baking Co.	Sunrise Bakery	330	$14,200	$79,622	$93,822	
Continental Motor Co	4940 Old Seward	52	$25,345	$9,048	$34,393	
Continental Motor Co	6239 McKay	647	$2,236		$2,236	
Continental Motor Co	6255 McKay	2201	$5,138	$1,835	$6,973	
Cook, John	Sterling Tesoro	2286		$29,658	$29,658	
Copper Valley Electric	Valdez & Glennallen	290/294	$4,356		$4,356	
Culhane Brothers	Culhane Brothers	1725		$200,000	$200,000	*
Denali Fuel Co	Consolidated Freightways 801 1st Ave	305	$3,035	$48,055	$51,090	
Eastwind, Inc	Old Crowley Shop	397	$12,999	$78,800	$91,799	
Enstar Natural Gas Co.	Beaver Creek	1648	$2,492	$12,881	$15,373	
Enstar Natural Gas Co.	Kenai Operations	1637	$825		$825	

APPENDIX D

REIMBURSEMENT PROGRAM FOR FY 92

OWNER NAME	FACILITY NAME	FAC ID#	UPGRADE & CLOSURE	CLEANUP	TOTAL REQUEST	
Fairbanks Daily News Miner	Fairbanks Daily News Miner	2188	$19,098		$19,098	
FDIC/St of AK Teachers Retiremt	Seair Ak Airlines	1179		$36,127	$36,127	
Fennimore, Ron	Fennimore Service Ctr (#21 Front St)	386	$7,023		$7,023	
Gana A'Yoo Ltd	Fbks Int'l Airport	2045		$9,527	$9,527	
Garrett, Nelson	Garrett's Tesoro	2527		$37,517	$37,517	
GO Invest dba B&B Tool	B&B Tool Supply, Inc.	1914		$22,238	$22,238	
Golden Valley Electric	Usibelli Spur Rd	128	$3,361		$3,361	
Head, H.P.	Lake Spenard #113	1689			Not Eligible	
Healy Roadhouse, Inc.	Healy Roadhouse Inc.	404	$2,505		$2,505	
Hess, Jerry	Katmai Oil & Gas			$6,818	$6,818	
lilies, Dennis	Valley Country Store	1988	$1,848		$1,848	
John, Alec & Ruby	Tsesyu Service Station	1224	$33,121		$33,121	
K&L Distributors, Inc.	K&L Distributors - Fairbanks	1958		$7,850	$7,850	
K&L Distributors, Inc.	K&L Distributors - Anchorage	1503		$79,934	$79,934	
Kenai Peninsula Borough	Homer Maintenance Shop	1881	$674	$14,308	$14,982	
Kenai Peninsula Borough	School Warehouse	1880	$22,633		$22,633	
Lefever, Darrel	Topper's 4th & Ingra	1920			Not eligible	
Lynden Transport	3001 Peger Rd, Fbks	216	$8,335		$8,335	
Mapco Express, Inc.	15 Sites	15 Sites		$200,000	$200,000	*
Mark Air Inc	Mark Air - 1400 W. Int'l Airport Rd	611	$14,887		$14,887	
Matanuska Electric	3 Facilities	3 Sites	$49,316	$35,670	$84,986	
MPH Trust (Transpacific Resources)	Loomis Armored	394	$1,120	$15,603	$16,723	
Municipality of Anchorage	Landfill & Central Transfer Station	2086/1306	$4,050		$4,050	
Nenana Heating Service	A Frame Services	1623		$2,025	$2,025	
Ninilchik Native Association	Clam Gulch Service Station	1592		$14,804	$14,804	
Nixon, William	Anchorage Clean Sweep	1233	$17,850		$17,850	
Northstore Ventures	7-Eleven 28 Facilities	28 Sites	$112,000	$88,000	$200,000	*
Nye Frontier Ford	Nye Frontier Ford	2313	$49,911		$49,911	
Our Lady of Compassion Care Ctr	Our Lady of Compassion Care Ctr	1691	$15,891		$15,891	
Parker Drilling Co.	Parker Drilling Co.	40	$50,993		$50,993	
Petro Products Co. Inc.	Renner's Gas & Save #5	1421	$79,254	$30,870	$110,124	
Phillips Petroleum	Phillips Kenai Plant	610		$6,392	$6,392	

APPENDIX D

REIMBURSEMENT PROGRAM FOR FY 92

OWNER NAME	FACILITY NAME	FAC ID#	UPGRADE & CLOSURE	CLEANUP	TOTAL REQUEST
Pink Elephant Stores, Inc.	Pink Elephant Stores, Inc.	1452	$650		$650
R&M Consultants	R&M Consultants	NE			Not Eligible
Roderick, Paul	Anchor Pt Texaco	2432		$200,000	$200,000 *
Rol-Don's Inc	Sterling Chevron	642		$119,582	$119,582
Russell, Darrell		NE			Not Eligible
Sister's Construction	Sister's Construction	NE			Not Eligible
Skagway Fuels	8th Ave & AK St	981		$27,000	$27,000
Stoner, Vern	Goldpanner Service, inc.	1339		$5,716	$5,716
Suburban Propane Gas Co.	Suburban Propane Gas Co.	963	$3,587		$3,587
Temsco Helicopters	Juneau	270	$31,412		$31,412
Temsco Helicopters	Wrangel	1775	$2,365		$2,365
Temsco Helicopters	Ketchikan	1768	$33,455		$33,455
Transpacific Resources, Inc.	USPS Annex - 3719 Arctic Blvd	2051	$7,299	$18,649	$25,948
Troy Air, Inc	Ak Airlines Anchorage Int'l Airport		$20,425	$32,121	$52,546
Tundra Tours, Inc.	Industrial Ave/Badger Rd	1671/1675	$7,786	$10,412	$18,198
U.S. Small Business Admin	Den Tech (Rent a Wreck 1313 Laona)	2004		$19,796	$19,796
United Lumber Co.	Millwork Plant 160 W. 68th	1030	$47,910		$47,910
United Utilities	Manley Electric	70		$8,134	$8,134
Usibelli Coal Mine, Inc.	Usibelli Healy Creek Facility	267		$11,079	$11,079
Vangas, Inc.	Petrolane - 2550 Cushman, Fbks	519	$45,114		$45,114
Waldec Enterprises, Inc.	Eastside Anch Auto Svc	320	$7,082	$67,225	$74,307
Waldron Corp.	Waldron Corp.	668	$23,929		$23,929
Westours, Inc	Gray Line of Ak - Skagway	308	$168,000	$32,000	$200,000 *
Wilson, Donald	Spenard Property	2529		$29,036	$29,036
Wortham, William & Carol	College Service Station		$1,866	$10,961	$12,827
Young, E.J.	Young Investments	13		$21,935	$21,935
Young, John & Jacques	Dimond Chevron	2444	$6,729	$42,210	$48,939
Matanuska Electric Assoc	Matanuska Electric Assoc	2425	$11,200	$35,670	$46,870
TOTALS	**158**		**$1,341,850**	**$2,046,587**	**$3,388,437**

*Maximum allowable per statute

APPENDIX E

TANK CLEANUP PROGRAM FINANCIAL ASSISTANCE PRIORITY RANKING FOR FY 93

OWNER NAME	FACILITY NAME	FAC ID#	FY 93 REQUESTS			RANK	GRANTS ENCUMBER	LOANS ISSUED	ACTIVITIES FUNDED						
			GRANT	LOAN	TOTAL				C	CA	CL	CU	RA	SA	T
Murray, Kenneth	Lucky Sourdough	2784	40,446	4,494	44,940	1	Note 1								
Heflinger, Carl	Northside Grocery & Gas	0204	383,380	25,000	408,380	2									
Samuel, A.M.	Emergency - Moose Creek Ge	2199	112,050	12,450	124,500	3	220,090		X	X	X	X		X	
Davidson-Fowler Partnership	US Travel System	2742	187,200	20,800	208,000	4	Note 1								
Wortham, William C	College Ctr Svc Station	2745	46,886	5,209	52,095	5	Note 1								
Valley Service Ctr, Inc	Valley Chevron	0455	89,594	9,955	99,549	6	89,500					X			
Continental Motor Co.	4940 Old Seward	0052	173,093	19,233	192,326	7									
Lefever, Darrel	3rd&Ingra,4th&Ingra(Anch)	2747	416,253	25,000	441,253	8									
Renner, Terry	Renner's Gas & Save #3	2327	383,709	25,000	408,709	9									
CDE Co.	The Office Place116 Minnie St	2746	14,706	1,634	16,340	10									
Gavrilovich, Louie	Lake Air Complex	2450	64,783	7,198	71,981	11									
Sig Wold Storage&Transfer	Sig Wold Storage&Transfer	1589				12	Note 1								
Courtney, Estate of	Courtney's Tudor Service	2375	32,400	3,600	36,000	13									
Petro Products	Renners Gas N Save	1421	74,520	8,280	82,800	13.5									
Hammon, Fred	Soldotna Y Chevron	0518	94,761	10,529	105,290	14									
Hutchison, Harry	Hutchison Chevron	1462	28,912	3,212	32,124	15									
Arnoldy, Marty	Summit Lk Lodge - Moose Pa	0818	279,563	25,000	304,563	16									
Bettles Lodge Inc	Bettles Lodge Inc	1535	23,789	2,643	26,432	17									
Schwanke, Roland	Sterling Chevron	0642	65,835	7,315	73,150	18									
Mammoth of Alaska, Inc	Mammoth of Alaska, Inc	1698	310,000	25,000	335,000	19									
Denali Fuel Co.	Equipment Sales, Inc	0537	76,862	8,540	85,402	20									
Bigfoot Auto Svc, Inc	Bigfoot Auto Svc-Haines	1235	18,409	2,045	20,454	20.5									
Hess, Jerry B.	Former Katmai Oil & Gas	2545	45,900	5,100	51,000	21									
Renner, Darrel	Renner's Chevron Full Service	2324	70,200	7,800	78,000	21.5									
JD&S Rentals	Kodiak Rental Center	0639	42,641	4,738	47,379	22									
Empire Airlines Inc.	Empire Airlines Inc.	2615	11,758	1,307	13,065	23									
Hull, Ron	Former H&H Tesoro	2701	198,171	22,019	220,190	24									
Korovin Corp	Olson Gas Service #2	2287	375,000	25,000	400,000	25									
Columbus Distributing Co.	Soldotna Texaco	1391	237,325	25,000	262,325	26									
Wright Air Service	Wright Air Service	0563	14,261	1,584	15,845	27									
Ak Sales & Service	National Car Rental	1255	12,068	1,341	13,409	28									
Gana A Yoo Ltd	Fbks Int'l Airport Bk 101 Lt 1	2045	83,597	9,289	92,886	29									
City of Unalaska	Unalaska Dept of Public Wks	0089	58,725	6,525	65,250	30									
Anch Baptist Temple Inc	Anch Baptist Temple Inc	1145	16,089	1,788	17,877	31									
Mapco Express Inc.	#5002 Mile 7.5 Old Seward(An	1498	377,656	25,000	402,656	32									
World Wide Movers	World Wide Movers	1890	408,000	25,000	433,000	33									
Lovejoy, Dorthea	Bailey's Rent-All	0329	975,000	25,000	1,000,000	34									
Bailey, Frederick	Bailey's Rental	2703	20,012	2,223	22,235	35									
Mountain Corp	Mountain Market	2616	49,254	5,473	54,727	35.5									
Craig, Robert	Craig's Anchor Pt Garage	0228	122,316	13,590	135,906	37									
Campbell, David	Campbell & Sons Fuel	0741	722,749	25,000	747,749	37.5									

APPENDIX E

TANK CLEANUP PROGRAM FINANCIAL ASSISTANCE PRIORITY RANKING FOR FY 93

OWNER NAME	FACILITY NAME	FAC ID#	FY 93 REQUESTS			RANK	GRANTS ENCUMBER	LOANS ISSUED	ACTIVITIES FUNDED						
			GRANT	LOAN	TOTAL				C	CA	CL	CU	RA	SA	T
Kenai Airport Fuel Svc Inc	Kenai Airport Fuel Service Inc	2187	40,241	4,471	44,712	38									
Rountree, Richard	Aero Services	1960	10,602	1,178	11,780	39									
Omni Enterprises, Inc.	DeHart's Store	0107	102,458	11,384	113,842	40									
Nenana Heating Svcs	A-Frame Services	1623	49,500	5,500	55,000	41									
Central Plumbing&Heating	Central Plumbing&Heating	2290				42									
Ak Farmers Co-op, Inc	Mile 267.5 Richardson Hwy	1076	48,600	5,400	54,000	43									
AMP Industries	AMP Warehouse	2798	14,897	1,655	16,552	44									
Cordova Outboard Shop	Cordova Outboard Shop	1737	36,260	4,029	40,289	45									
AK Sales & Service	1300 E 5th	1952	65,431	7,270	72,701	46									
Sunny Chevron Service Inc.	Sunny Chevron Service Inc.	0413				47									
Rainproof Roofing	Rainproof Roofing	0286	18,233	2,026	20,259	48									
Petro Products	Petro 1	1418	53,530	5,948	59,478	48.5									
Nickerson, Vicki	Goldstream General Store	1068	$8,456	$939	9,395	49									
AK Sales & Service, Inc.	Truck Center-1345 E. 8th Ave	1959	7,233	804	8,037	51									
Anch Baptist Temple Inc	ABT Preschool & Bus shop	1144	18,000	2,000	20,000	52									
GO Investments	B&B Tool Supply	1914	37,992	4,221	42,213	53									
Mapco Express Inc.	#5008 717 E. No. Lights(Anch)	0050	354,417	25,000	379,417	54									
Chuck Higgins Co.	Princess Tours Bus Maint	2127	39,016	4,335	43,351	55									
Denali Fuel Co.	Hartzell Road	0542	42,008	4,667	46,675	57									
Transpacific Resources	USPS-Arctic Carrier Annex	2051	113,371	12,597	125,968	58									
Mindoro Partners	775 E 100th Ave Anchorage	2541				59									
Estate of Wm G Knight	Rampart Property	1121	139,212	15,468	154,680	60									
Continental Motor Co.	6239 MacKay St	0647	18,938	2,104	21,042	61									
Stephens, Ronald	Peters Creek Chevron	2587	15,577	1,730	17,307	62									
Dentech	Dentech 1313 Laona Circle	2004	4,981	554	5,535	63									
MPH Trust%Hodge&Lekisch	Loomis Armored Inc	0394	10,082	1,120	11,202	64									
Sister's Construction	Sister's Construction	2644	49,472	5,497	54,969	65									
Yukon Equipment Co., Inc	Yukon Equip Co.	UNK	20,519	2,280	22,799	66									
SEND International	SEND Int'l Glennallen	1913	10,800	1,200	12,000	67									
A & M Investments	Continental Motor Co.	2201	10,761	1,196	11,957	68									
Hermon Bros Contr Co.	Hermon Brothers Equip Yard	0787	22,725	2,525	25,250	69									
United Lumber	United Lumber	1030	64,215	7,135	71,350	71									
Ak Cleaners(Harris&Marten's)	Alaska Cleaners	0821	19,863	2,207	22,070	72									
Marley, Wiliam&Judy	The Roost	0359	15,143	1,682	16,825	73									
City of Craig	Public Works	1708	7,315	813	8,128	74									
Butler, Roger	R & J Enterprises	2423	21,488	2,387	23,875	75									
Alaska Mechanical, Inc.	Alaska Mechanical, Inc.	0186	34,186	3,799	37,985	76									
MarkAir Inc	6311 S Air Park Pl Anchorage	2717	180,000	20,000	200,000	77									
City of Homer	Public Works	2522	12,526	1,392	13,918	78									
Mapco Express Inc.	#5018 205 E Third(Fbks)	0966	158,206	17,578	175,784	79									
Unocal Corp	#5057 4351 Int'l Airpt-Anch	0023	57,870	6,430	64,300	80									

APPENDIX E

TANK CLEANUP PROGRAM FINANCIAL ASSISTANCE PRIORITY RANKING FOR FY 93

OWNER NAME	FACILITY NAME	FAC ID#	FY 93 REQUESTS			RANK	GRANTS ENCUMBER	LOANS ISSUED	ACTIVITIES FUNDED						
			GRANT	LOAN	TOTAL				C	CA	CL	CU	RA	SA	T
Unocal Corp	#4854 2730 Spenard-Anch	0014	77,220	8,580	85,800	81									
Texaco Refining& Mktg	Sand Lake Texaco	0912	975,000	25,000	1,000,000	82									
Unocal Corp	#4581 636 C St-Anch	0006	117,900	13,100	131,000	83									
Mapco Express Inc.	#5015 S/E Minn/No Lts(Anch)	1519	49,964	5,551	55,515	84									
Mapco Express Inc.	#5022 2300 Cushman(Fbks)	2546	356,262	25,000	381,262	85									
ERA Aviation Inc	ERA Helicopters-Fbks	0223	420,715	25,000	445,715	86									
Tesoro Ak Petroleum Co	North Rd Kenai Tesoro	1138	68,400	7,600	76,000	87									
Mapco Express Inc.	#5017 1773 College(Fbks)	1333	211,582	23,509	235,091	88									
Tesoro	Former 7-11 #104(550 3rdFbk	1098	134,100	14,900	149,000	89									
Wards Cove Packing	WCP Kenai	1459	62,403	6,934	69,337	90									
Unocal Corp	#4652 1441 C St-Anch	0011	116,235	12,915	129,150	91									
Mapco Express Inc.	#5003 2730 Spenard(Anch)	0014	263,739	25,000	288,739	92									
Fbks North Star Borough	Westcott Pool	1253	32,804	3,645	36,449	93									
Tesoro(Interior Fuels)	Interior Fuels	0084	99,697	11,077	110,774	94									
Anch Fueling&Service Co	AFSC Plant No.4	1270	443,139	25,000	468,139	95									
Tesoro(R. Cosgrave)	7-11 #111(3679 College-Fbks)	1112	545,250	25,000	570,250	96									
Homer Electric Assoc	3977 Lake St, Homer	1261	48,187	5,354	53,541	97									
Anderson Trucking Svc	Anderson Trucking Service, In	2008	38,652	4,295	42,947	98									
Alaska West Express	Alaska West Express	1524	4,267	474	4,741	99									
Alaska Airlines	Ak Airlines Term-Wrangell	1359	41,355	4,595	45,950	100									
Mapco Express Inc.	#5007 5497 E No Lights(Anch)	1510	297,146	25,000	322,146	101									
City of Palmer	Equipment Yard	0652	354,945	25,000	379,945	102									
Alascom Inc.	Tok	0209	16,452	1,828	18,280	103									
ERA Aviation Inc	ERA Helicopters-Juneau	0477	438,879	25,000	463,879	104									
Green Alaska, Inc.	Green Construction Co.	0387	178,830	19,870	198,700	105									
Int'l In-Flight Catering Co.	Int'l In-Flight Catering Co.	0449	75,361	8,373	83,734	106									
Laidlaw Transit(FDIC)	Laidlaw Transit, Eagle River	0093	135,253	15,028	150,281	107									
MOA ATU	600 Telephone Ave	1355	227,391	25,000	252,391	108									
Usibelli Coal Mine Inc.	Lignite Creek	0264	301,958	25,000	326,958	109									
MOA Facility Maintenance	4th & Post Maintenance	1411	210,024	23,336	233,360	110									
Tesoro Northstore	7-11 #65 (Wasilla)	1981	37,800	4,200	42,000	111									
Usibelli Coal Mine Inc.	Healy Creek	0267	975,000	25,000	1,000,000	112									
Texaco Refining& Mktg	Boniface Texaco	0878	186,197	20,689	206,886	113									
Laidlaw Transit	Laidlaw Transit, Soldotna	1254	195,444	21,716	217,160	114									
Tesoro(Carr Gottstein)	Tesoro Huffman Carwash	1984	7,095	788	7,883	115									
City&Borough of Juneau	PW Utilities Div	1177	5,850	650	6,500	116									
Alascom Inc.	Glennallen	0333	17,005	1,890	18,895	117									
City of Fairbanks	Public Safety Bldg	0354	16,389	1,821	18,210	118									
Temsco Helicopters Inc	Temsco-Ketchikan	1768	19,229	2,137	21,366	119									
MOA Facility Maintenance	Klatt Maintenance	1415	121,368	13,486	134,854	120									
City&Borough of Juneau	Parks & Recreation	2158	8,231	914	9,145	121									

APPENDIX E

TANK CLEANUP PROGRAM FINANCIAL ASSISTANCE PRIORITY RANKING FOR FY 93

OWNER NAME	FACILITY NAME	FAC ID#	FY 93 REQUESTS			RANK	GRANTS ENCUMBER	LOANS ISSUED	ACTIVITIES FUNDED						
			GRANT	LOAN	TOTAL				C	CA	CL	CU	RA	SA	T
City&Borough of Juneau	Juneau Airport	2157				122									
City&Borough of Juneau	Eaglecrest Ski Area	1891	8,059	895	8,954	123									
40 Mile Air	Tanacross Hanger	0242				IC									
Alascom Inc.	Talkeetna Bartlett	1139	18,046	2,005	20,051	IC									
Alascom Inc.	Pedro Dome	1674	14,587	1,621	16,208	IC									
Alyeska Seafoods, Inc	Alyeska Seafoods, Inc	1170				IC									
Anchorage Chrysler	Anchorage Chrysler Center	0161				IC									
Arctic Slope Regional Corp	Executone, Inc-Fbks	2729	49,006	5,445	54,451	IC									
B-J's Services, Inc	B-J's Services, Inc	2463				IC									
Bradford, Gary	Peninsula Automotive	2649				IC									
Brattrud, Robert	3002 Spenard, Anchorage	2800	7,894	877	8,771	IC									
Carr-Gottstein Inc	J B. Gottstein Warehouse	0830				IC									
CEM Leasing	Gate 28 W Ramp,Fbks Airpt	0201	12,699	1,411	14,110	IC									
City of Seward	Public Works Shop	1491	166,320	18,480	184,800	IC									
City of Soldotna	City Maintenance Garage	1215				IC									
Foster, Corrine	Cache Creek Chevron	0328				IC									
Halliburton Co.	Halliburton Geophysical Svcs	1886				IC									
Jones, Troy	Big Su Lodge	2320	90,000	10,000	100,000	IC									
Korovin Corp	Olson Gas Service #1	2288	225,000	25,000	250,000	IC									
Lynden Transport	Lynden Transport-Fbks	0216	31,038	3,449	34,487	IC									
Matanuska Telephone Assoc	Palmer Plant	0535				IC									
Matanuska Telephone Assoc	Healy Facility	1556				IC									
MOA AWWU	Pump Station #2	1288	93,420	10,380	103,800	IC									
MOA AWWU	Pump Station #12	1292	381,000	25,000	406,000	IC									
Ninilchik Native Assoc	Ididastop, Clam Gulch	1592	11,610	1,290	12,900	IC									
Nistler Enterprises	Nistler Enterprises	0594	69,300	7,700	77,000	IC									
Petro Star Fuel, Inc	Sourdough Fuel-Beaver Brl St	0090	247,951	25,000	272,951	IC									
Petro Star Fuel, Inc.	Sourdough Fuel	1926				IC									
Pietrok, Michael	Chickaloon General Store	1934				IC									
Sourdough Properties, Inc.	Sourdough Properties, Inc.	0881				IC									
Spenard Builders Supply	SBS 4412 Lois Dr	1526	22,500	2,500	25,000	IC									
Stelling, John D	Stelling Enterprises	2203				IC									
Tesoro Ak Petroleum Co	Former Eagle River Auto Parts	0798	61,159	6,795	67,954	IC									
Tesoro(Laurence Intl)	7-11 #59 (12870 Old Seward)	0784	12,419	1,380	13,799	IC									
Tesoro(Petro Products)	Petro #1	1418	18,258	2,029	20,287	IC									
Tundra Tours	Tundra Tours	UNK				IC									
Wise, Dennis	Cornerstone Gas	0066	460,000	25,000	485,000	IC									
Wise, Dennis	Former 5 Star Auto	UNK	360,000	25,000	385,000	IC									
Powell, Fran	AK State Troopers Bldg	0476				NE									
AK Railroad Corp	Various Sites	UNK	407,582	25,000	432,582	NE									
Alascom Inc.	Sitka	0114	27,675	3,075	30,750	NE									

APPENDIX E

TANK CLEANUP PROGRAM FINANCIAL ASSISTANCE PRIORITY RANKING FOR FY 93

OWNER NAME	FACILITY NAME	FAC ID#	FY 93 REQUESTS			RANK	GRANTS ENCUMBER	LOANS ISSUED	ACTIVITIES FUNDED						
			GRANT	LOAN	TOTAL				C	CA	CL	CU	RA	SA	T
Alascom Inc.	Talsona	0322	14,589	1,621	16,210	NE									
Alascom Inc.	Sawmill	0367	18,189	2,021	20,210	NE									
Alascom Inc.	Eagle River Earth Station	1155	15,944	1,771	17,715	NE									
Brunquist, Norm	4618 Lk Spenard	1479				NE									
Chumley's Inc	Chumley's Inc	0915				NE									
Darby, Ted	Space 424, Lake Hood	2445				NE									
Falcon Properties	Gate 28 West Ramp Fbks Airpt	0022	2,899	322	3,221	NE									
IWW Partnership	700 I street	2142	6,962	774	7,736	NE									
Ketchum Air Service, Inc	Ketchum Air Service Lk Hood	1143	165,150	18,350	183,500	NE									
Mapco Express Inc.	#5021 6010 Old Seward(Anch	0727	632,632	25,000	657,632	NE									
Mapco Express Inc.	#5009 1209 Gambel(Anch)	0756	153,361	17,040	170,401	NE									
Mapco Express Inc.	#5001 1405 Bragaw(Anch)	1496	235,973	25,000	260,973	NE									
Mapco Express Inc.	#5004 5159 Old Seward(Anch	1500	220,685	24,520	245,205	NE									
Mapco Express Inc.	#5006 1501 E Dimond(Anch)	1505	226,855	25,000	251,855	NE									
Mapco Express Inc.	#5010 1500 E 5th(Anch)	1512	277,493	25,000	302,493	NE									
Mapco Express Inc.	#5012 150 W Tudor(Anch)	1513	198,945	22,105	221,050	NE									
Mapco Express Inc.	#5014 1900 Muldoon(Anch)	1517	208,618	23,180	231,798	NE									
Myers, Carole	Aerotwin(Merrill Field)	2404	8,957	995	9,952	NE									
Plunkett, James	Former Willow Cache Realty	2735				NE									
Prato, Marcel	Cascade Liquor	2508	10,598	1,178	11,776	NE									
Tyonek Native Corp	Native Village-Timber Camp	UNK	49,050	5,450	54,500	NE									
TOTAL FY 93 APPLICATIONS	185		$21,967,138	$1,693,349	$23,560,487		$309,590								

RANK = Applications are listed in numerical order from highest score to lowest score, i.e. Rank "a" received highest score and Rank "123" received lowest score.
RANK "IC" = The information submitted with the application was insufficient to rank the application.
RANK "NE" = The application was determined to be ineligible for Financial Assistance.

Note 1 = A grant offer has been issued and funds will be encumbered as soon as grantee signs the grant offer.

Shaded Area = Grant Offer Signed and Funds Encumbered

APPENDIX F

TANK UPGRADE AND CLOSURE PROGRAM FINANCIAL ASSISTANCE PRIORITY RANKING FOR FY 93

OWNER/OPERATOR	FACILITY NAME	FAC ID#	FY 93 REQUESTS			RANK	DATE RECEIVED	GRANTS ENCUMBER	
			UPGRADE	CLOSURE	TOTAL			UPGRADE	CLOSURE
Hill, Stephen	Aniak Transportation Svc	2754	14,400	5,133	19,533	1	10/1/91	Note 1	
Horrell Investments	Tazlina Trading	1949				1	11/7/91	38,934	14,427
Horrell Investments	Glennallen Chevr	2292	26,249		26,249	1	11/7/91	37,689	22,311
Orville D. Arnold Estate	Butte Quick Shop	2626		6,000	6,000	1	11/15/91	Note 1	
Stelling, John D.	Stelling Enterprises	2203	13,033	1,545	14,578	1	12/11/91	15,049	2,377
Nenana Heating Services	A-Frame Services	1623	44,400	15,600	60,000	1	12/20/91	60,000	
Miller, Dale	Alaska Chevron	0556	30,923		30,923	1	12/23/91	60,000	
Warren, Stephen	C & W Repair	0363	21,630	2,580	24,210	1	12/26/91		
Totem Services Inc	Totem Services Inc	0234	51,600	8,400	60,000	1	12/27/91	60,000	
Marley, William & Judy	The Roost	0359	6,713	867	7,580	1	12/30/91		
Campbell, David	Campbell & Sons Fuel	0741	41,000	19,000	60,000	1	12/30/91	60,000	
Bigfoot Auto Svc., Inc	Bigfoot Auto Svc	1235	45,600	14,400	60,000	1	12/30/91	48,089	4,159
Bettles Lodge, Inc	Bettles Lodge, Inc	1535	60,000		60,000	1	12/30/91	50,941	9,059
Paxson Lodge, Inc	Paxson Lodge	1938	36,000	24,000	60,000	1	12/30/91	40,200	19,800
Omni Enterprises	DeHart's Store	0107				1	12/31/91	60,000	
Missionary Aviation Repair Ctr	MARC Flight Center(tank #1&#2)	0158	21,317	17,838	39,155	1	12/31/91	37,035	14,015
Tack, Stephen & Cyndie	Tack's General Store	0793	19,500	16,947	36,447	1	12/31/91		
Nickerson, Vicki	Goldstream Gen Store	1068	3,618		3,618	1	12/31/91	Note 1	
Cordova Outboard, Inc	Cordova Outboard Shop	1737	42,466	6,032	48,498	1	12/31/91	46,664	7,124
Pietrok, Michael	Chickaloon General Store	1934	20,865		20,865	1	12/31/91	Note 1	
Kenai Airport Fuel Svc Inc	Kenai Airport Fuel Svc Inc	2187	39,600	20,400	60,000	1	12/31/91	60,000	
Alaska Aerofuel Inc	FAI Gate #38	1529	39,600	20,400	60,000	1	12/31/91		
Warning Lites of Alaska Inc	Warning Lites of Alaska Inc	1735	22,244	4,820	27,064	1	12/31/91	20,335	6,139
Wilson, Mark&Dolores	Hamilton's Place	2561	34,597	12,334	46,931	1	12/31/91		
Cook, John	Cook's Corner Sterling Tesoro	2286	57,402		57,402	1	2/14/92	60,000	
Papadrew Inc	Fisherman's Bend	0605	53,646	6,354	60,000	1	3/4/92	53,646	6,354
Kim, Ok Y	Kim's Oceanview Texaco	0762	55,800	4,200	60,000	1	3/4/92	45,500	14,500
Ebbert, Keith	Sunrise Inn	2270	41,771	16,242	58,013	1	3/27/92	Note 1	
Thurmond, Wm & Rochelle	Thurmond's Automotive	UNK	60,000		60,000	1	4/1/92		
William T Heisler Corp	Sand Lake Service 7211 Jewel Lk	0189	48,000	12,000	60,000	2	12/31/91		
ERA Aviation Inc	ERA Helicopter-Juneau	0477	60,000		60,000	2.5	12/31/91		
MOA- ATU	Anch Telephone Utility	1355	60,000		60,000	3	10/31/91		
Temsco Helicopters	Temsco - Petersburg	1763	51,592	5,920	57,512	3	12/23/91		
Texaco Refining&Marketing	Boniface Texaco	0878	60,000		60,000	3	12/24/91		
Providence Hospital	Providence Hospital	1947	15,618	5,452	21,070	3	12/30/91		
ERA Aviation Inc	ERA Helicopter-Fbks	0223	52,200	7,800	60,000	3	12/31/91		
Matanuska-Susitna Borough	Talkeetna PSB #111	0278	10,415	7,563	17,978	3	12/31/91		
Matanuska-Susitna Borough	Fishook Public Safety Bldg#41	0281	4,651	3,955	8,606	3	12/31/91		
Matanuska-Susitna Borough	Meadow Lakes PSB #71	0287	2,865	7,420	10,285	3	12/31/91		
Kodiak Electric Assoc, Inc	Kodiak Electric Assoc, Inc	0606				3	12/31/91		
Fairbanks U-Drive, Inc	Hertz Rent A Car	0806	18,920	10,383	29,303	3	12/31/91		

APPENDIX F

TANK UPGRADE AND CLOSURE PROGRAM FINANCIAL ASSISTANCE PRIORITY RANKING FOR FY 93

OWNER/OPERATOR	FACILITY NAME	FAC ID#	FY 93 REQUESTS			RANK	DATE RECEIVED	GRANTS ENCUMBER	
			UPGRADE	CLOSURE	TOTAL			UPGRADE	CLOSURE
ERA Aviation Inc	ERA Helicopters-Valdez	1080	45,600	14,400	60,000	3	12/31/91		
Matanuska-Susitna Borough	Butte Public Safety Bldg#21	1290	8,291	4,715	13,006	3	12/31/91		
Matanuska-Susitna Borough	Sutton Public Sarety Bldg #11	1300	7,963	5,620	13,589	3	12/31/91		
Matanuska-Susitna Borough	Cottonwood Public Sfty Bldg#65	1812	11,291	7,299	18,590	3	12/31/91		
MOA- AWWU	AWWU-Operations Facility	1945		22,500	22,500	3	12/31/91		
Hoover, Karl & Darlene	Services Unlimited	2437	32,400		32,400	3	3/27/92		
Providence Hospital	Medical Office Bldg	1946	52,748	7,252	60,000	3	3/31/92		
JH&M Investments	Anchorage Nissan	2470	14,277	5,640	19,917	3	4/1/92		
Sea-Land Freight Services	Sea-Land Services - Anchorage	0043	26,956	3,987	30,943	4	12/27/91		
Prato, Marcel	Cascade Liquor	2508	38,854		38,854	5	12/27/91		
Brattrud, R(c/o Marston Prop)	3002 Spenard Road	2800		7,844	7,844	6	9/10/91		
Hammon, Fred	Soldotna Y Chevron	0518		19,029	19,029	6	9/27/91		
CDE Co.	The Office Place(Fbks)	2746		1,455	1,455	6	10/3/91		
Charlie's Sport Shop	Charlie's Sport Shop	1777		5,727	5,727	6	10/14/91		
AK Childrens Services	Jesse Lee Home	2802		7,789	7,789	6	10/16/91		
A & W Services	2425 Merrill Field Dr (Anch)	2426		5,204	5,204	6	10/28/91		
Northern Air Cargo	NAC-3488 W. Int'l Airport	1472		3,593	3,593	6	11/1/91		
Ak Sales & Service	National Car Rental	1255		18 012	18,012	6	11/13/91		
AK Sales & Service, Inc.	Truck Ctr-1345 E 8th Ave	1959		25,640	25,640	6	11/18/91		
Butler, Roger & Judy	R & J Enterprises	2423		7,297	7,297	6	11/18/91		
AK Sales & Service, Inc.	1300 E. 5th	1952		33,995	33,995	6	12/2/91		
Stanger, Joseph	Eyak Air - Willow Airport	0662		1,632	1,632	6	12/11/91		
Paratex Pied Piper	Paratex Pied Piper	1925		15,383	15,383	6	12/11/91		
Dancing Eagles Corp	12512 Old Glenn Hwy	0180		18,000	18,000	6	12/12/91		
40-Mile Air Ltd.	Tanacross Hanger	0242		4,920	4,920	6	12/17/91		
Arnoldy, Marty	Summit Lake Lodge-Moose Pass	0818		17,572	17,572	6	12/17/91		
Gavrilovich, Louie	Lake Air Complex	2450		14,797	14,797	6	12/17/91		
Coulter, Maurice	Parks Highway Truck Stop	1206		10,709	10,709	6	12/18/91		
Commercial Contractors, Inc.	Allen & Petersen Co.	0266		13,800	13,800	6	12/20/91		
Alaska Cleaners	Ak Cleaners, 610 W. Fireweed	0821		40,506	40,506	6	12/20/91		
AK Farmers Co-op	Mile 267.5 Richardson Hwy	1076		9,250	9,250	6	12/20/91		
Kobuk Inc.	Kobuk Inc	1173		15,052	15,052	6	12/20/91		
Frederick, Richard	Sportsmen's Paradise	2314		6,243	6,243	6	12/20/91		
Heflinger, Carl	Northside Grocery & Gas	0204		2,128	2,128	6	12/23/91		
City of North Pole	North Pole Police Station	0352		4,500	4,500	6	12/23/91		
Hermon Bros Constr Co.	Hermon Bros Constr Shop	0787		17,380	17,380	6	12/23/91		
Smyth Moving(Payle,James)	Smyth Moving Service, Inc.	1445		6,559	6,559	6	12/23/91		
Allwine, Steven/Tollefson,Karla	Mendenhall Auto Ctr	2146		12,193	12,193	6	12/23/91		
Sky Harbor Prop Owners	Sky Harbor Airstrip	0142		5,037	5,037	6	12/24/91		
Four Aces	Four Aces	0172		7,200	7,200	6	12/24/91		
Sig Wold Storage& Transfer	Sig Wold Storage & Transfer	1589		7,004	7,004	6	12/24/91		

APPENDIX F

TANK UPGRADE AND CLOSURE PROGRAM FINANCIAL ASSISTANCE PRIORITY RANKING FOR FY 93

OWNER/OPERATOR	FACILITY NAME	FAC ID#	FY 93 REQUESTS			RANK	DATE RECEIVED	GRANTS ENCUMBER	
			UPGRADE	CLOSURE	TOTAL			UPGRADE	CLOSURE
AMP Industries Inc.	AMP Warehouse	2798		3,840	3,840	6	12/24/91		
Brannon, Ernest & Donna	Burkeshore Marina	0498		4,555	4,555	6	12/26/91		
City of Craig	Public Works	1708				6	12/26/91		
Peter Pan Seafoods	Dillingham Cold Storage	1915		4,618	4,618	6	12/26/91		
Lovejoy, Dorthea	Bailey's Rent-All	0329	9,996	24,104	34,100	6	12/27/91		
Denali Fuel Co.	Hartzell Road	0542		2,018	2,018	6	12/27/91		
Birchwood Camp of AkMisConf	Birchwood Methodist Camp	2460		4,942	4,942	6	12/27/91		
City of Homer	Public Works	2522				6	12/27/91		
Empire Airlines	Empire Airlines	2615		3,504	3,504	6	12/27/91		
Dan's Aircraft Repair	Dan's Aircraft Repair	2826		9,420	9,420	6	12/27/91		
Fox General Store, Inc	Fox General Store, Inc	0049	60,000		60,000	6	12/30/91		
Ak Industrial Hardware	Ak Industrial Hardware	0178		18,000	18,000	6	12/30/91		
Alaska Mechanical	Alaska Mechanical	0186				6	12/30/91		
Lynden Transport, Inc.	Lynden Transport - Fbks	0216		5,141	5,141	6	12/30/91		
America Rents	America Rents	0240		2,142	2,142	6	12/30/91		
McLane & Associates	McLane & Associates	0307	1,152	2,382	3,534	6	12/30/91		
Powell, Fran	Ak State Troopers Bldg-Kodiak	0476		3,780	3,780	6	12/30/91		
Abbott, Rohn D.	Shannon & Wilson-Fbks	0609		846	846	6	12/30/91		
Floyd & Sons, Inc	Thrifty Car Rental-Anchorage	0825		5,625	5,625	6	12/30/91		
Rabbage, Terrance	Chinook Chevron Svc	0926				6	12/30/91		
North Star Aviation Inc	Willow Airport	1327		5,400	5,400	6	12/30/91		
SEND International of AK	SEND Hanger - Gulkana	1913		5,532	5,532	6	12/30/91		
Estate of Don C Chandler	Chandler Plumbing & Heating	2384		1,815	1,815	6	12/30/91		
Estate of Don C Chandler	Acme Elect Bldg	2384		6,118	6,118	6	12/30/91		
Myers, Carole	Aerotwin(Merrill Field)	2404		5,971	5,971	6	12/30/91		
Johnston, William N. Jr	B.J.'s Gas & Grocery	2715		9,600	9,600	6	12/30/91		
Yukon Trading Post	Yukon Trading Post	1119		7,771	7,771	6	12/30/91		
Woodard Construction Co	Woodard Construction Co	0147		3,606	3,606	6	12/31/91		
Greer Tank & Welding Inc	Greer Tank & Welding Inc	0154	24,307	10,860	35,167	6	12/31/91		
Branham Adventures	Branham Adventures	0207	4,740	1,530	6,270	6	12/31/91		
Juneau Ready-Mix Inc.	Juneau Ready-Mix Inc.	0317		6,300	6,300	6	12/31/91		
City of Fairbanks	MUS Telecommunications	0376		3,002	3,002	6	12/31/91		
McBirney, Derrall&Winona	CJM Construction Inc	0420		3,237	3,237	6	12/31/91		
Rent-A-Can Toilet Co. Inc	Rent-A-Can Toilet Co. Inc	0462		2,490	2,490	6	12/31/91		
Young's Partnership	Young's Chevron	0599	52,800	7,200	60,000	6	12/31/91		
MarkAir Inc	4100 w Int'l Airport Anchorage	0611		23,387	23,387	6	12/31/91		
DOWL, Inc	DOWL Engrs/Ak Testlab	0747		9,364	9,364	6	12/31/91		
Enterprise Co.	SKW Constructors, Inc	0805		5,569	5,569	6	12/31/91		
Chris Berg, Inc	Chris Berg, Inc	0807		13,948	13,948	6	12/31/91		
Kenai Air Ak, Inc	Kenai Air Ak, Inc	0985		21,420	21,420	6	12/31/91		
Estate of Wm G Knight	Moosehorn Property	1124		12,190	12,190	6	12/31/91		

APPENDIX F

TANK UPGRADE AND CLOSURE PROGRAM FINANCIAL ASSISTANCE PRIORITY RANKING FOR FY 93

OWNER/OPERATOR	FACILITY NAME	FAC ID#	FY 93 REQUESTS			RANK	DATE RECEIVED	GRANTS ENCUMBER	
			UPGRADE	CLOSURE	TOTAL			UPGRADE	CLOSURE
Anch Baptist Temple, Inc	ABT Preschool & Bus Shop	1144		2,795	2,795	6	12/31/91		
Anch Baptist Temple, Inc	Anch Baptist Temple, Inc	1145		6,686	6,686	6	12/31/91		
Douglas Trucking, Inc	Douglas Trucking, Inc	1266		3,360	3,360	6	12/31/91		
Ketchikan Air Service	Ketchikan Air Service	1335	25,200	34,800	60,000	6	12/31/91		
AK Helicopters, Inc	AK Helicopters, Inc	1345		19,874	19,874	6	12/31/91		
MarkAir Inc	Bethel Passenger & Cargo Term	1392		1,516	1,516	6	12/31/91		
Haltness, Erik	Johnson Sand & Gravel	1393		6,606	6,606	6	12/31/91		
Hutchison, Harry	Hutchison Chevron	1462		14,474	14,474	6	12/31/91		
Brunquist, Norm	Brunquist, Norm	1479		5,223	5,223	6	12/31/91		
Rodeheaver, Sallie	Hertz Car & Truck Rental-Kodiak	1520	8,142	2,550	10,692	6	12/31/91		
JD & S Rentals	Kodiak Auto Center	1645		9,033	9,033	6	12/31/91		
Kenai Natives Assoc	Wildwood Village	1686		10,560	10,560	6	12/31/91		
Lake Hood Air Harbor Inc	Lake Hood Air Harbor Inc	1728		6,603	6,603	6	12/31/91		
World Wide Movers	World Wide Movers - Anchorage	1890		9,300	9,300	6	12/31/91		
Kim, Il Soo	Speedy Auto Glass	2191		60,000	60,000	6	12/31/91		
Renner, Darrel	Renner's Chevron Full Svc	2324		60,000	60,000	6	12/31/91		
Renner, Terry	Renner's Gas&Save #1	2325		60,000	60,000	6	12/31/91		
MarkAir Inc	Bethel Aircraft Maintenance	2370		7,018	7,018	6	12/31/91		
Seven W dba Hilltop	Seven W dba Hilltop	2442		5,726	5,726	6	12/31/91		
Peters, Kingston	Tudor Car Wash	2451		24,000	24,000	6	12/31/91		
Peninsula Plumbing&Heating	Peninsula Plumbing&Heating	2453		2,340	2,340	6	12/31/91		
Fbks Street Investor's	Fbks St Investor's Commercial Building	2485		5,550	5,550	6	12/31/91		
Mindcro Partners	775 E 100th Ave	2541		3,900	3,900	6	12/31/91		
Gills, Ray	Lake Spenard	2558		3,720	3,720	6	12/31/91		
Grate Land Auto	Grate Land Auto	2560				6	12/31/91		
Budiona Inc	Budiona Inc	2567		6,015	6,015	6	12/31/91		
Lowell-Maher Co.	1885 Marica, Fairbanks	2652		4,200	4,200	6	12/31/91		
Troy Air Inc	Troy Air Inc	2662		60,000	60,000	6	12/31/91		
Bailey, Frederick	Bailey's Rental	2703				6	12/31/91		
MarkAir Inc	6311 S Air Park Pl Anchorage	2717		41,070	41,070	6	12/31/91		
Plunkett, James	Former Willow Cache Realty	2735		10,800	10,800	6	12/31/91		
Chris Berg Inc	Chris Berg Inc - Fbks	2741		3,194	3,194	6	12/31/91		
Apling, Floyd	Plaschem Supply & Consulting	2806		1,710	1,710	6	[illegible]		
Hull, Ronald	Former H&H Tesoro	2701		1,993	1,993	6			
IWW Partnership	700 I Street	2142		21,094	21,094	6	[illegible]		
Eames, Mike	St. Elias Auto Center	0536		1,566	1,566	6	1/10/92		
Ak Electric Light&Power Co.	Ak Electric Light&Power Co.(Juneau)	0812		840	840	6	2/10/92		
City of Ketchikan	Fire Station II	2106		3,060	3,060	6	2/18/92		
Reliable Transfer Corp	Reliable Shop	0181		2126	2,126	6	2/19/92		
Haines Home Bldg Supply	Haines Home Bldg Supply	2656		1,452	1,452	6	2/26/92		
AK Oil Sales Inc.	Kenai Chevron Station	1603		4,526	4,526	6	2/27/92		

APPENDIX F

TANK UPGRADE AND CLOSURE PROGRAM FINANCIAL ASSISTANCE PRIORITY RANKING FOR FY 93

OWNER/OPERATOR	FACILITY NAME	FAC ID#	FY 93 REQUESTS			RANK	DATE RECEIVED	GRANTS ENCUMBER	
			UPGRADE	CLOSURE	TOTAL			UPGRADE	CLOSURE
AK Oil Sales Inc.	Steves Chevron	1607		4,233	4,233	6	2/27/92		
Waldec Enterprises	Eastside Service Station	0320				6	2/28/92		
Bradley Sky Ranch Inc	Bradley Sky Ranch Inc	0197		7,200	7,200	6	3/4/92		
Cunningham, John T	Homer School Bus Terminal	1581		4,680	4,680	6	3/5/92		
Alaska Pacific University	Alaska Pacific University	2706		6,480	6,480	6	3/5/92		
City of Cordova	Cordova Harbor Wasteoil Site	1757		12,000	12,000	6	3/6/92		
Favco Inc.	Favco Inc.	2322		4,347	4,347	6	3/25/92		
City of Fairbanks	Public Safety Bldg	0354		13,723	13,723	6	3/27/92		
City of Fairbanks	Fire Station #4	0347		2,376	2,376	6	3/31/92		
Doyle, Patrick	Big Dipper Car Wash	2307		18,120	18,120	6	4/1/92		
Grammont, Willard	Willard's Auto Electric	2484		13,480	13,480	6	4/1/92		
Homer Electric Assoc	HEA-Seldovia	1249		2,326	2,326	7	9/30/91		
Homer Electric Assoc	HEA-Kenai	0231		34,406	34,406	7	11/1/91		
Homer Electric Assoc	HEA-Homer	1261		14,958	14,958	7	11/1/91		
MOA-Merrill Field Airport	Aircraft Apron	0296		8,100	8,100	7	11/13/91		
MOA-Merrill Field Airport	Snow Equipment Bldg	1310		6,270	6,270	7	11/13/91		
MOA Facility Maintenance	New Transit Maintenance	0585		15,111	15,111	7	12/18/91		
MOA Facility Maintenance	Public Health Facility	1312		10,230	10,230	7	12/18/91		
MOA Facility Maintenance	Fire Station #1	1347		17,100	17,100	7	12/18/91		
MOA Facility Maintenance	Northwood St Maintenance	1409		19,050	19,050	7	12/18/91		
MOA Facility Maintenance	4th & Post St Maintenance	1411		22,017	22,017	7	12/18/91		
MOA Facility Maintenance	Muldoon St Maintenance	1417		23,997	23,997	7	12/18/91		
MOA Facility Maintenance	Latimer Fire Station	1426		15,777	15,777	7	12/18/91		
MOA Facility Maintenance	Girdwood Fire Station	1429		16,257	16,257	7	12/18/91		
MOA Facility Maintenance	Fire Maintenance	1436		7,680	7,680	7	12/18/91		
MOA Facility Maintenance	Fire Station #11	1439		16,602	16,602	7	12/18/91		
MOA Facility Maintenance	Fire Station #10	1444		7,680	7,680	7	12/18/91		
MOA Facility Maintenance	Old Transit Maintenance	1448		50,517	50,517	7	12/18/91		
MOA Facility Maintenance	Cemetery	2304		8,406	8,406	7	12/18/91		
Fbks North Star Borough	FNSB Transit Garage	2209		11,850	11,850	7	12/23/91		
Anch Fueling&Service Co.	AFSC Plant #4	1270		57,240	57,240	7	12/26/91		
Laidlaw Transit (FDIC)	Laidlaw Transit-Eagle River	0093		17,151	17,151	7	12/27/91		
Laidlaw Transit	Laidlaw Transit-Soldotna	1254		29,913	29,913	7	12/27/91		
Sourdough Properties, Inc	Sourdough Express	0881		11,405	11,405	7	12/30/91		
Alascom Inc	Yakutat	0213		9,938	9,938	7	12/31/91		
Matanuska-Susitna Borough	Wasilla PSB #61	0262		2,071	2,071	7	12/31/91		
Usibelli Coal Mine Inc	Lignite Creek	0264		19,531	19,531	7	12/31/91		
Usibelli Coal Mine Inc	Healy Creek	0267		42,522	42,522	7	12/31/91		
Matanuska-Susitna Borough	Lakes Public Safety Bldg #51	0277		3,799	3,799	7	12/31/91		
Matanuska-Susitna Borough	Big Lake Public Safety Bldg#81	0285		3,448	3,448	7	12/31/91		
Alascom Inc	Windy Point	0312		4,831	4,831	7	12/31/91		

APPENDIX F

TANK UPGRADE AND CLOSURE PROGRAM FINANCIAL ASSISTANCE PRIORITY RANKING FOR FY 93

OWNER/OPERATOR	FACILITY NAME	FAC ID#	FY 93 REQUESTS			RANK	DATE RECEIVED	GRANTS ENCUMBER	
			UPGRADE	CLOSURE	TOTAL			UPGRADE	CLOSURE
Alascom Inc	Tern Lake	0319		5,756	5,756	7	12/31/91		
Alascom Inc	Neklasson Lake	0364	30,774	15,733	46,507	7	12/31/91		
Alascom Inc	Cordova Earth Station	0487		9,038	9,038	7	12/31/91		
Alascom Inc	Bird Point	0549		4,335	4,335	7	12/31/91		
Alascom Inc	Ketchikan Toll Ctr	1017		9,038	9,038	7	12/31/91		
Gunalashka Corp	Tony's Service Center	1271		15,000	15,000	7	12/31/91		
MOA- AWWU	AWWU-Headquarters Facility	1281		31,248	31,248	7	12/31/91		
MOA- AWWU	Pt Woronzof	1284		24,900	24,900	7	12/31/91		
Matanuska-Susitna Borough	Lakes Public Safety Bldg #52	1304		3,243	3,243	7	12/31/91		
Matanuska-Susitna Borough	MSB Maintenance Facility	1317		4,397	4,397	7	12/31/91		
ERA Aviation Inc	ERA Helicopter Tours-Anch	1480		36,542	36,542	7	12/31/91		
Matanuska-Susitna Borough	Willow Public Safety Bldg#121	1813		5,436	5,436	7	12/31/91		
Matanuska-Susitna Borough	Animal Control Shelter	1815		2,310	2,310	7	12/31/91		
Alaska USA Federal Cr Union	777 Juneau ST, Anchorage	1970		12,548	12,548	7	12/31/91		
Matanuska-Susitna Borough	MSB School District Maint Yard	2348		7,994	7,994	7	12/31/91		
Matanuska-Susitna Borough	MSB School District Auto Shop	2349		7,077	7,077	7	12/31/91		
Anderson Trucking Svc Inc	K&W Trucking (Fbks)	2832		14,135	14,135	7	12/31/91		
Alaska West Express	Alaska West Express	1524		2,037	2,037	7	1/3/92		
Boyd, Roger	One Stop Grocery	2266	1,668		1,668	8	12/11/91		
Wainer, H Erling	Peters Creek Texaco	0025	8,630		8,630	8	12/31/91		
Scott, John H.	Scotty's Chevron	2716	22,180		22,180	8	12/31/91		
Air Tek Inc	Air Tek Inc	2478		8,541	8,541	IC	12/31/91		
Alascom Inc	Talkeetna/Bartlett	1139		20,664	20,664	IC	12/31/91		
Alascom Inc	Pedro Dome	1674		8,897	8,897	IC	12/31/91		
Alaska Pacific Transport	Alaska Pacific Transport	1245		7,500	7,500	IC	12/31/91		
Alyeska Seafoods, Inc	Alyeska Seafoods, Inc	1170				IC	12/31/91		
Arctic Slope Regional Corp	Executone Inc.	2729				IC	12/30/91		
B-J's Services,Inc	B-J's Services	2463				IC	12/30/91		
Bradford, Gary	Peninsula Automotive	2649				IC	12/30/91		
Brady's Floor Covering, Inc.	Brady's Floor Covering, Inc.	0992		5,400	5,400	IC	12/30/91		
C.R. Lewis Co., Inc.	C.R. Lewis Co., Inc.	1432		30,000	30,000	IC	12/30/91		
Carboy, Philip	Gold Hill	0440				IC	12/31/91		
CEM Leasing Inc	Gas n Go	1473	48,000	12,000	60,000	IC	12/27/91		
CEM Leasing Inc	Plaza Gas	2518	46,800	13,200	60,000	IC	12/27/91		
CEM Leasing Inc	Hub Gas	2519	48,000	12,000	60,000	IC	12/27/91		
City of Fairbanks	Public Works Facility	0345	23,497		23,497	IC	4/1/92		
City of Kenai	Kenai Public Safety Bldg	0526	1,980	12,600	14,580	IC	12/31/91		
City of Kenai	Kenai Municipal Airport	0532	1,980	6,000	7,980	IC	12/31/91		
City of Seward	Public Works Shop	1491		17,647	17,647	IC	12/23/91		
City of Soldotna	Central Emergency Services	1211		8,098	8,098	IC	12/20/91		
City of Soldotna	City Shop	1215		8,098	8,098	IC	12/20/91		

APPENDIX F

TANK UPGRADE AND CLOSURE PROGRAM FINANCIAL ASSISTANCE PRIORITY RANKING FOR FY 93

OWNER/OPERATOR	FACILITY NAME	FAC ID#	FY 93 REQUESTS			RANK	DATE RECEIVED	GRANTS ENCUMBER	
			UPGRADE	CLOSURE	TOTAL			UPGRADE	CLOSURE
City of Soldotna	WasteWater Treatment Fac	2829		8,098	8,098	IC	12/20/91		
Classen, Thomas	Hangar - Fbks Int'l Airport	2538		3,300	3,300	IC	3/31/92		
Crabb's Corner	Crabb's Corner	0341		7,085	7,085	IC	12/27/91		
Denali National Park Hotel	MtMcKinley Village Hotel	0314				IC	12/31/91		
Denali National Park Hotel	Hotel Area	1554				IC	12/31/91		
Earth Movers of Fbks, Inc	Earth Movers of Fbks, Inc.	0631	12,420		12,420	IC	10/14/91		
Ev-Jo Inc	Columbus Dist Cc., Inc	2085		6,555	6,555	IC	12/31/91		
Falcon Properties	Gate 28 West Ramp Fbks Airpt	0022		6,509	6,509	IC	12/31/91		
Foster, Corine	Cache Creek Chevron	0328				IC	12/31/91		
Generator Venture-KAKM	Goose Bay Tower	1050	19,500		19,500	IC	12/31/91		
George, Spiro	George's Grocery	0800	22,200		22,200	IC	3/3/92		
Grant, Hugh N.	Gas 'n Go	2269				IC	12/31/91		
Harri Plumbing & Heating Inc	Ak Laundry & Cleaners Inc	0512		2,400	2,400	IC	12/31/91		
Harvey, Kieth W.	Kieth Harvey	0644		2,940	2,940	IC	4/1/92		
Herrick, James	Herrick's Aero-Auto-Aqua	0493		15,600	15,600	IC	12/31/91		
Hudson Air Svc & Sons Inc	Hudson Air Service & Sons Inc	1223				IC	12/31/91		
Int'l Aviation Service, Inc	Int'l Aviation Service, Inc	0409		3,175	3,175	IC	12/30/91		
Ivey, Rose Mary	Chitna Fuel & Grocery	2744				IC	12/31/91		
Jones, Troy C.	Big Su Service	2320	30,000	30,000	60,000	IC	12/30/91		
Ketchum Air Service, Inc	Ketchum Air Service, Inc	1143		12,900	12,900	IC	12/31/91		
Lower Kuskokwim Schl Dist	Nelson Island Area HS	2643		60,000	60,000	IC	12/27/91		
M&M Constructors	M&M Constructors	1058				IC	12/31/91		
Mapco Express Inc.	#5005 491 E Parks Hwy(Wasilla)	2372	49,200	10,800	60,000	IC	12/30/91		
Matanuska Telephone Assoc	Palmer Plant	0535		15,000	15,000	IC	1/7/92		
Matanuska Telephone Assoc	Healy Facility	1556		12,000	12,000	IC	1/7/92		
McMahan, Ronald	Ron's Service	1478	52,800	7,200	60,000	IC	12/31/91		
Nistler Enterprises	Nistler Enterprises	0594	30,000	30,000	60,000	IC	12/31/91		
Northern Energy	Northern Energy	0284	13,357	3,881	17,238	IC	12/31/91		
OMB Realty Inc	OMB Realty Inc	UNK		36,000	36,000	IC	12/31/91		
Petersburg Motors Inc	Petersburg Motors Inc	0206	8,070		8,070	IC	12/30/91		
Petro Star Fuel	Sourdough Fuel	1926		13,597	13,597	IC	12/24/91		
Petro Star Fuel Inc	Sourdough Fuel Inc	0090	60,000		60,000	IC	12/31/91		
Renner's Gas & Save	Renner's Gas & Save	2327		5,964	5,964	IC	9/17/91		
Renner, Terry	Renner's Gas&Save #2	2326		60,000	60,000	IC	12/31/91		
Rountree, Richard	Aero Services	1960				IC	11/18/91		
Russell, Darrell	Russell's Texaco	0962	48,000	12,000	60,000	IC	12/27/91		
Rust's Flying Service, Inc.	Rust's Flying Service, Inc.	1368				IC	12/30/91		
Spenard Builders Supply	SBS 4412 Lois Dr.	1526				IC	12/31/91		
StarFlite Inc.	StarFlite Inc.	2446		37,200	37,200	IC	12/31/91		
Stephens, Ronald	Peters Creek Chevron	2587	42,699	15,060	57,759	IC	12/31/91		
Sunny Chevron Service, Inc.	Sunny Chevron Service, Inc.	0413				IC	1/30/92		

APPENDIX F

TANK UPGRADE AND CLOSURE PROGRAM FINANCIAL ASSISTANCE PRIORITY RANKING FOR FY 93

OWNER/OPERATOR	FACILITY NAME	FAC ID#	FY 93 REQUESTS			RANK	DATE RECEIVED	GRANTS ENCUMBER	
			UPGRADE	CLOSURE	TOTAL			UPGRADE	CLOSURE
Thompson, Billy E.	Thompson's Gas Service	1172	60,000		60,000	IC	12/26/91		
Tundra Tours, Inc.	Tundra Tours, Inc.	UNK				IC	12/31/91		
Utopia Inc	Quinnat Landing Hotel	2367				IC	12/27/91		
Vend Alaska	Vend Alaska	0686		4,800	4,800	IC	12/31/91		
Wilbur, Joseph	Flight Safety AK	0448				IC	12/31/91		
Wrangell Fisheries	Wrangell Fisheries	2520				IC	3/4/92		
Wrightway Auto Carriers, Inc	101 W. Whitney Rd	2646		19,923	19,923	IC	12/30/91		
Alascom Inc	Sitka	0114		8,794	8,794	NE	12/31/91		
Alascom Inc	Juneau Toll Ctr	0227	29,794	16,511	46,305	NE	12/31/91		
Alascom Inc	Sawmill	0367	29,314	13,801	43,115	NE	12/31/91		
Alascom Inc	Nikishka	1024		6,093	6,093	NE	12/31/91		
Alascom Inc	Eagle River Earth Station	1155	26,400	14,294	40,694	NE	12/31/91		
Alascom Inc	Haines	2018		7,674	7,674	NE	12/31/91		
Alaska Railroad Corp	14 Sites	Various		60,893	60,893	NE	12/31/91		
Anchorage Chrysler Center	2601 E 5th Ave	0161				NE	10/21/91		
Central Plumbing & Heating	Central Plumbing & Heating	2290		20,381	20,381	NE	12/19/91		
Copper Center Lodge	Copper Center Lodge	UNK				NE	12/31/91		
Darby, Ted	Space 424 Lake Hood	2445				NE	10/11/91		
Gamble, Edward	Fritz Creek General Store	0245		6,000	6,000	NE	12/31/91		
Geri, Warren	Hangar-Merrill Field	2601		2,520	2,520	NE	12/31/91		
Halliburton Co.	Halliburton Geophysical Svcs	1886		19,928	19,928	NE	10/22/91		
Int'l In-Flight Catering	Int'l In-Flight Catering	0449	5,870		5,870	NE	12/31/91		
JD&S Rentals	Kodiak Auto Ctr #2	1643		5,841	5,841	NE	12/31/91		
Kenley, Fred	Lake Hood Slip 601	2395				NE	12/31/91		
Mapco Express Inc.	#5021 6010 old Seward(Anch)	0727	49,200	10,800	60,000	NE	12/30/91		
Mapco Express Inc.	#5001 1405 S. Bragaw(Anch)	1496	49,200	10,800	60,000	NE	12/30/91		
Mapco Express Inc.	#5006 1501 E Dimond(Anch)	1505	49,200	10,800	60,000	NE	12/30/91		
Mapco Express Inc.	#5024 8803 Jewel Lk(Anch)	1521	49,200	10,800	60,000	NE	12/30/91		
Matanuska-Susitna Borough	Big Lake Elementary	UNK		5,203	5,203	NE	12/31/91		
Second Avenue Service	Second Avenue Service, Inc	2341	16,338		16,338	NE	12/26/91		
TOTAL FY 93 APPLICATIONS	399		$2,699,223	$3,162,315	$5,861,538			$854,082	$120,265

RANK 1 is the highest score, 2 the second highest, 3 the third highest, etc. (Several facilities may be in the same rank.)

RANK "IC" = The information submitted with the application was insufficient to rank the application. See "Information Required" column for list of missing items.

RANK "NE" = The application was determined to be ineligible for the Financial Assistance Program.

Note 1 = A grant offer has been issued and funds will be encumbered as soon as grantee signs the grant offer.

Shaded Area = Grant Offer Signed and Funds Encumbered

APPENDIX G

TANK CLEANUP PROGRAM REQUESTS FOR FY 94

OWNER NAME	FACILITY NAME	FAC ID#	FY 94 REQUESTS			DATE RECEIVED	COMMENTS	FACILITY LOCATION
			GRANT	LOAN	TOTAL			
Blackard, Joe & Mary	Heated Bus Barn-Moose Creek	1070	76,791	8,532	85,323	12/31/92		Moose Creek
Blackard, Joe & Mary	Shop & Office-Anchorage	0570	130,264	14,474	144,738	12/31/92		Anchorage
Blackard, Joe & Mary	Heated Bus Barn-Fbks	1066	130,126	14,458	144,584	12/31/92		Fairbanks
Blackard, Joe & Mary	Bus Barn-Anchorage	0324	130,063	14,451	144,514	12/31/92		Anchorage
C. R. Lewis Co. Inc	C. R. Lewis Co. Inc	1432	106,200	11,800	118,000	12/30/92		Anchorage
City & Borough of Sitka	City Garage	0525	7,432	826	8,258	12/31/92		Sitka
City of Cordova	Small Boat Harbor	1757	36,180	4,020	40,200	12/30/92		Cordova
Eichner & Eichner	2480 Tongass	2645	12,700	1,410	14,110	12/29/92		Ketchikan
Global Finance & Investment Co.	Chena Pump Plaza	1094	33,858	3,762	37,620	12/23/92		Fairbanks
Goldpanner Service Inc.	Goldpanner Service Inc.	1339	10,913	1,213	12,126	12/31/92		Fairbanks
Haxby, John	Call Earl Inc	1922	20,072	2,230	22,302	11/20/92		Anchorage
Horrell Investments	Glennallen Chevron	2292	113,070	12,563	125,633	12/10/92		Glennallen
Juneau Ready Mix	Juneau Ready Mix	0317	2,730	303	3,033	12/31/92		Juneau
Kenai Air Alaska	Kenai Air Alaska	0985	48,127	5,347	53,474	12/31/92		Kenai
Mark Air	Hangar/Cargo Facility	1110	462,479	25,000	487,479	12/31/92		Fairbanks
Mark Air	Vehicle Maintenance/Warehouse	2751	417,039	25,000	442,039	12/31/92		Fairbanks
MB Contracting Co.	MB Contracting Co.	0635	14,260	1,584	15,844	12/18/92		Anchorage
Peninsula Ford Inc.	Peninsula Ford Inc.	2613	23,830	2,648	26,478	10/21/92		Soldotna
PERS & FDIC	Kenai Supply, 3061 Peger Rd	UNK	137,700	15,300	153,000	12/30/92		Fairbanks
Renner, Terry	Renner's Gas & Save #2	2326	242,873	25,000	267,873	12/31/92		Anchorage
Shaw, Bert	2605 E. 5th	2176	22,500	2,500	25,000	12/29/92		Anchorage
Smithson, Charles E.	Circle S Groc. Texaco	1714				12/14/92	No Cost Estimates	Chugiak
Sourdough Fuel	Sourdough Beaver Brook	0090	311,709	25,000	336,709	12/31/92		North Pole
Suburban Propane, Quantum Che	Petrolane Gas Service	0519	92,991	10,332	103,323	12/30/92		Fairbanks
Temsco Helicopters Inc.	Juneau Airport	0270	6,904	767	7,671	12/30/92		Juneau
Totem Services Inc.	Totem Chevron	0234	147,510	16,390	163,900	12/31/92		Fairbanks
TRS & FDIC	Searmotive, 5301 Lk Shore Dr	1179	66,246	7,361	73,607	12/31/92		Anchorage
Wuerth, Julius & Juergen	European Motors	2565	37,265	4,141	41,405	12/29/92		Anchorage
Wuerth, Julius & Juergen	Pacific Mitsubishi	2566	37,265	4,141	41,405	12/29/92		Anchorage
Young's Partnership	Young's Chevron	0599				12/28/92	No Cost Estimates	Tok
TOTAL FY 94 APPLICATIONS	30		$2,879,096	$260,552	$3,139,648			

APPENDIX H

TANK UPGRADE AND CLOSURE REQUESTS FOR FY 94

OWNER NAME	FACILITY NAME	FAC ID#	FY 94 REQUESTS			DATE RECEIVED	COMMENTS	FACILITY LOCATION
			UPGRADE	CLOSURE	TOTAL			
Alaska Dial a Car Inc	Payless Car Rental-Anchorage	1909				12/31/92	Closure-No cost estimates	Anchorage
Alaska Dial a Car Inc	Payless Car Rental-Fbks	UNK				12/31/92	Closure-No cost estimates	Fairbanks
Alaska Dial a Car Inc	Alaska Dial a Car Inc	UNK				12/31/92	Closure-No cost estimates	Fairbanks
Alaska Frontier Resort	Iliamna Lake Resort	2431	12,495	16,040	28,535	12/31/92		Iliamna
ARA Denali Park Hotels	McKinley Village	0314		9,450	9,450	12/14/92		Denali Park
Bishop, Thomas	Nugget Aviation	0375	42,649		42,649	12/1/92		Palmer
Burt, Marilyn	Awesome Auto Inc.	2340				12/30/92	No Cost Estimates	Palmer
C.R. Lewis Company Inc.	C.R. Lewis Company Inc.	1432		8,428	8,428	12/15/92		Anchorage
CCEK Halverson Properties	Precision Grind	UNK		43,015	43,015	12/31/92		Anchorage
CEM Leasing	Hilltop Truck Stop	2442	60,000		60,000	12/31/92		Fairbanks
Chamberlain, Cleo	Eagle Air	0353		3,750	3,750	10/16/92		Gulkana
Chena Goldstream Fire & Rescue	3210 Murphy Dome	1183		8,222	8,222	12/23/92		Fairbanks
Chena Goldstream Fire & Rescue	716 Chena Ridge Road	1181		8,222	8,222	12/23/92		Fairbanks
City & Borough of Sitka	Crescent Harbor	0082		3,359	3,359	12/31/92		Sitka
City & Borough of Sitka	Fire Dept	2337		1,740	1,740	12/31/92		Sitka
Eagle Airmotive	Gulkana Airport	0353		3,765	3,765	11/23/92		Glennallen
Eero Volkswagen	Eero Volkswagen	2503		10,941	10,941	11/3/92		Anchorage
Eichner & Eichner	2450 Tongass	2645		5,750	5,750	12/29/92		Ketchikan
Eldridge, Chet	AK Mechanical Fuel Service	0125	29,128	30,872	60,000	12/31/92		Delta Junction
Ellis, W.T.	Duffy's Roadhouse	2497	6,000	3,300	9,300	12/31/92		Slana
Fickes, Lester & Dorothy	Riverview Qwick Stop	1054	1,042		1,042	6/22/92		North Pole
Fisher's Fuel Inc.	Larry's Healy Service	0492	60,000		60,000	12/31/92		Healy Fork
Fisher's Fuel Inc.	Fisher's Fuel Inc.	1114	60,000		60,000	12/31/92		Big Lake
Fisher, Robert B.	Big Lake Rent-All	1123	60,000		60,000	12/31/92		Big Lake
Fisher, Robert B.	Mars Hill Top	0388	60,000		60,000	12/31/92		Sutton
Fisher, Robert B.	Palmer Tesoro	0870	60,000		60,000	12/31/92		Palmer
Fox General Store Inc.	Fox General Store Inc.	0049	60,000		60,000	12/31/92	FY93 Applied for just Closure	Fairbanks
Gerik Inc.	Ride 'N Shine	2186	41,100	18,900	60,000	12/31/92		Anchorage
Helms, Orville R.	1524 Stacia St	2427		1,118	1,118	12/31/92		Fairbanks
Hildre, Harvey & Loretta	Porta Shop	1703	3,814	3,343	7,157	12/31/92		Juneau
Hoover, Carl & Darlene	Hoover's Chevron	UNK	60,000		60,000	8/17/92		Skagway
Hudson Air Service	Village Airstrip-Talkeetna	2549		1,375	1,375	12/31/92		Talkeetna
Lerude, Robert	Central Motor Inn	2506				12/31/92		Central
Loop Services Inc	Noble Street Texaco	0962	45,386	14,614	60,000	12/31/92		Fairbanks
Lot Inc.	Hatcher Pass Gateway Center	0123	34,710	8,940	43,650	12/30/92		Palmer
Maritime Helicopters, Inc.	Maritime Helicopters, Inc.	0864	33,525	19,500	53,025	12/7/92		Homer
Mark Air	Hangar/Cargo-Fbks	1110	55,831	4,169	60,000	12/31/92		Fairbanks
Mark Air	Vehicle Maint/Warehouse-Fbks	2751	21,177	38,823	60,000	12/31/92		Fairbanks
Miller, Ralph D.	Tanana Trading Post	2559	51,660	8,340	60,000	12/31/92		Delta Junction
Nordstrom Inc.	Nordstrom Inc.	2779		7,569	7,569	12/18/92		Fairbanks

APPENDIX H

TANK UPGRADE AND CLOSURE REQUESTS FOR FY 94

OWNER NAME	FACILITY NAME	FAC ID#	FY 94 REQUESTS			DATE RECEIVED	COMMENTS	FACILITY LOCATION
			UPGRADE	CLOSURE	TOTAL			
Pacific Alaska Fuel Services	Kotzebue Airport	1225	48,096	11,904	60,000	12/30/92		Kotzebue
Roofe, Marvin & Mary Lou	4 Corner's Store	1662	44,957	15,043	60,000	12/31/92		Wasilla
Seawell, William	Tryph's Lodge	2573		7,800	7,800	4/4/92		Salcha
Shaw, Bert	2605 E. 5th	2176		6,197	6,197	12/29/92		Anchorage
Smithson, Charles E.	Circle S Groc. Texaco	1714				12/14/92	No Cost Estimate	Chugiak
Sourdough Fuel	Sourdough Beaverbrook Station	0090	60,000		60,000	12/31/92		North Pole
Spernak Airways	Spernak Airways	1065	1,967		1,967	12/31/92		Anchorage
Temsco Helicopters Inc	Juneau Airport	0270		5,360	5,360	12/30/92		Juneau
Temsco Helicopters Inc	Ketchikan	1768		3,186	3,186	12/30/92		Ketchikan
Turner, Betty J.	Cork's Pit Stop	0215		13,420	13,420	12/30/92		North Pole
Weaver, Patrick & Joanne	Curry's Corner	0210	44,642	15,358	60,000	12/31/92		Fairbanks
Weber, Gary	Wasilla Chevron	1896	38,160	21,840	60,000	12/30/92		Wasilla
Wizard Wash	Wizard Wash	2551		8,505	8,505	12/31/92		Anchorage
Wuerth, Julius & Juergen	Pacific Mitsubishi	2566	475		475	12/29/92		Anchorage
TOTAL FY 93 APPLICATIONS	72		$1,096,814	$392,158	$1,488,972			

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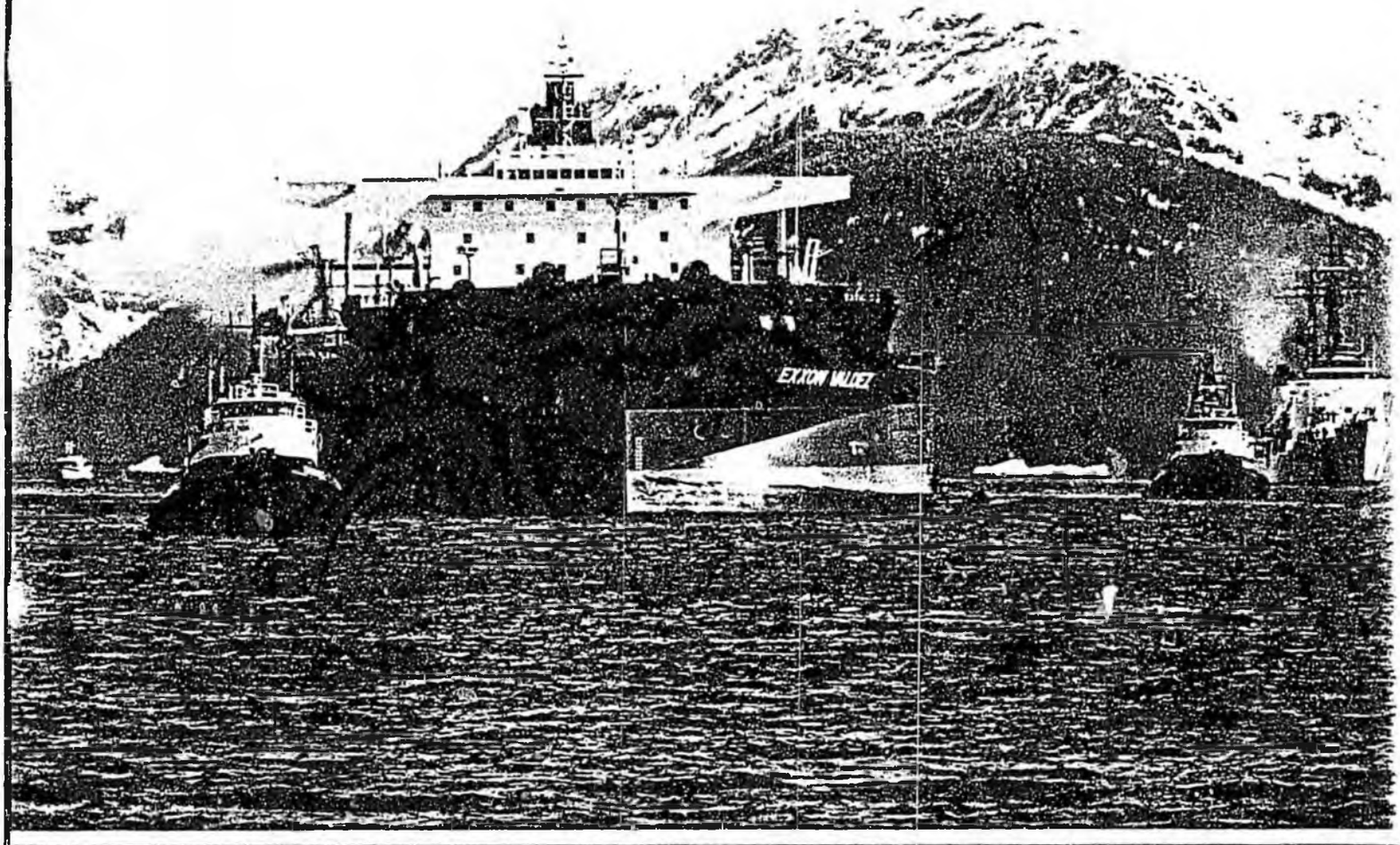
Alaska Department of Environmental Conservation
Underground Storage Tanks Financial Assistance Program
3601 C Street, Suite 398
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The *Exxon Valdez* Oil Spill

Final Report, State of Alaska Response



Alaska Department of Environmental Conservation June 1993

The *Exxon Valdez* Oil Spill

Final Report, State of Alaska Response

prepared by Ernest Piper

Anchorage, Alaska

Alaska Department of Environmental Conservation

June 1993 • Walter J. Hickel, Governor • John A. Sandor, Commissioner

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Foreward

The publication of this report comes approximately four and one-half years after the grounding of the Exxon-Valdez on Bligh Reef in Prince William Sound, Alaska, and the consequent spill of eleven million gallons of North Slope crude oil into one of America's most valued and beautiful natural environments. A primary purpose of the report is to glean all the lessons we can from that experience and record them for the future so that we do not forget.

Alaskans are a proud people — a people who are dead serious about our role as stewards of the rare and rich ecosystems that make up Alaska. We work, live and play in close association with nature. We have a deep awareness of the necessity to prosper in nature and also to conserve it for a later day and a coming generation. For us, that later day is the reality of next week as well as the next century, and the coming generation is made up of our children. The environment is not an abstract concept to Alaskans.

Therefore, when the tanker went aground on March 24,1989, all Alaskans felt the shock, profoundly, then rolled up their sleeves and went to work. This report is written from the point of view of Alaska's state government, especially the Department of Environmental Conservation (DEC) and other agencies that faced the formidable task of responding to the spill and protecting Alaskans and their natural resources. But also evident and important to report is that Alaskans of all types, ages and occupations pitched in and did their part. So, one of the lessons learned is that people who are closest to the disaster — in nearby towns and villages, on the fishing grounds, in the local governments and schools — make up one of the most valuable sources of immediate information, local knowledge, and, importantly, motivation to do the spill response and cleanup job right.

It is also important to recognize other Americans and people of foreign nations. Immediately after the spill, and during the whole first year of response and cleanup, the Alaska Governor's Office and other state agencies received thousands of letters and calls from other states and countries. We still receive inquiries on the spill's after-effects and restoration of the environment. This heartfelt outpouring of concern dramatized the significance of Alaska as a planet-wide symbol of majestic natural environment, wildlife, and the last frontier. Our sincere thanks go out to all of those who cared, and along with our thanks, an assurance that we also care.

The writer of the report, Ernie Piper, is uniquely qualified to put the *Exxon Valdez* oil spill in historical perspective. When the spill occurred he was serving as Special Assistant to Governor Steve Cowper, specializing in resource issues relating to local governments; earlier, he was a policy analyst in the division of strategic planning and chief speech writer and researcher for Governor Bill Sheffield. Mr. Piper had been following oil development issues for a number of years, was knowledgeable about the Trans-Alaska Pipeline and the Valdez terminal, and was personally acquainted with many of the key DEC staffers who became members of the spill response team.

In the first two seasons of the spill response, Mr. Piper was the liaison to local governments in the spill-affected area, and one of the Governor's primary strategists and coordinators working with DEC's technical managers and Commissioner Dennis Kelso. Beginning in October of 1990, Ernie Piper became the State's On Scene Coordinator, managing Alaska's state agency and community response programs. He continued in that capacity with the election of Walter Hickel as Governor in December of 1990 and represented the State of Alaska during the final two years of spill response and cleanup. He is therefore a most appropriate author to summarize and analyze Alaska's response to the largest oil spill ever to occur in our state.

This report is intended to focus on the lessons the state learned from America's largest tanker spill. Representatives of state and federal agencies, citizens who live in

the towns and villages near oil development and transportation routes, regulators of oil and gas production in our state, and businesspersons in exploration, production or transportation of oil and gas — all have a responsibility to examine the lessons we gained at a costly price.

I believe one of the most vital lessons is that prevention is the key to the problem of oil spills, and DEC has rededicated itself to the principle that it is much easier, more cost-effective, and environmentally safer to prevent spills than to clean them up. A second essential lesson is the importance of building partnerships among the communities, government agencies, and private enterprises to keep prevention standards high and to stand ready to respond if the need ever arises again. A third lesson is that people and communities as well as natural resources are impacted by oil spills and must be a part of the restoration process. Fortunately, the federal and state governments' litigation against Exxon was resolved in 1992 with a billion-dollar settlement — the largest dollar settlement of its type in United States history. This agreement enabled the restoration process to move forward.

We've made some great strides in these endeavors, as Ernie reports here in the final chapters of this history. Restoration is well underway, but much remains to be done. We need to keep the commitment strong, to keep the communication lines open, to maintain cooperation at all levels so that the resources, people and communities impacted by the *Exxon Valdez* oil spill are restored and that future spills are prevented.

John A. Sandor, Commissioner
Alaska Department of Environmental Conservation
September, 1993

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Acknowledgments

The idea of preparing some kind of final report on the spill response came up early in 1989, but as the response got longer, finality seemed ever more distant. Many people in state government helped make it happen — finally — but a few were truly instrumental and I would like to note their involvement here.

At the Alaska Department of Environmental Conservation, Joe Ferguson refused to let anyone forget that there should be a report, and he kept the idea alive every step of the way. Marti Early was extraordinarily patient while waiting for my revisions, even while juggling the layout and graphics. Ward Lane provided invaluable computer services. David Bruce showed great resourcefulness and tenacity when it came to handling those critical and innumerable administrative details, like contracts and budgeting. Larry Dietrick and Steve Provant provided substantial technical insight and got me back on course at a number of points in this report. L.J. Evans loaned me files (against her better judgment), slogged through the footnotes, and edited much of the text. Support from Mark Brodersen at the Restoration Office was also very much appreciated. Commissioner John Sandor continued his pattern of professionalism in dealing with the *Exxon Valdez* project as a whole; he actively supported independent writing and research for this report.

Other special contributions from sister agencies included those from the Alaska Department of Fish and Game's Mark Kuwada, a careful writer and thoughtful public servant; Jim Fall of the Division of Subsistence, on whose research and writing much of the subsistence section of chapter three depended; Jim Frechione, Judy Bittner, and my many colleagues at the Division of Parks and the Department of Natural Resources. Many thanks to all those other state employees who took the time to write down their experiences and opinions in the record. The Oil Spill Public Information Center from the *Exxon Valdez* Trustee Council provided important access to documents and research assistance.

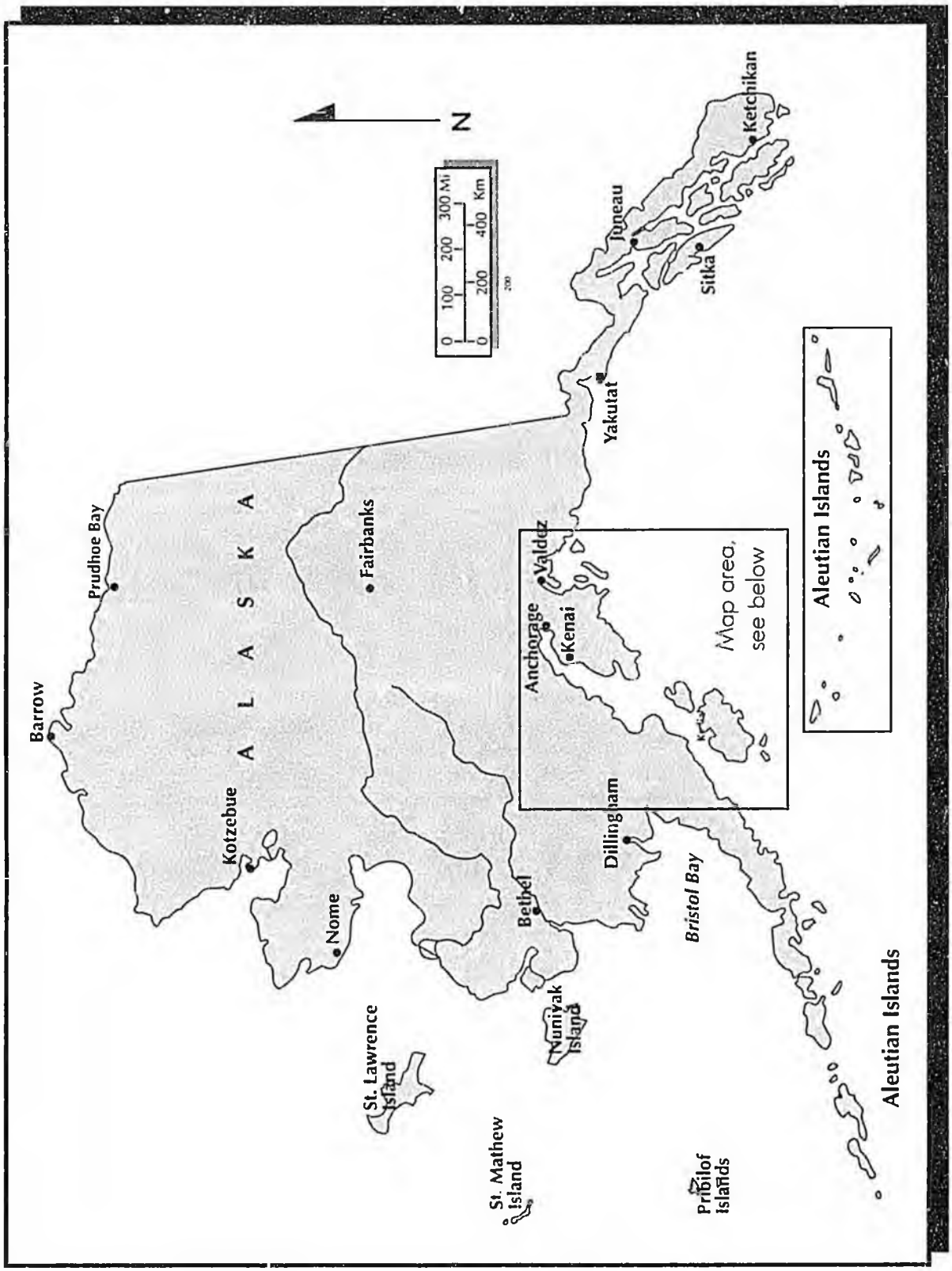
A special acknowledgment and thanks go to former Governor Steve Cowper, former DEC commissioner and good friend Dennis Kelso, and former DEC manager Gary Hayden, all of whom showed the greatest confidence and trust by bringing me into the spill response management at various points and in various ways. They showed tremendous leadership during a tough time, and provided critical access and explanation to me. And I offer special thanks to Commander Ed Page of the U.S. Coast Guard, who didn't agree with me all that much, but who is a good friend, an honest critic, and an outstanding officer.

I also wish to acknowledge the assistance of The Oil Spill Public Information Center, the Alaska Department of Environmental Conservation, the Alaska Department of Fish and Game, the U.S. Coast Guard, and a great number of individuals with state and federal agencies involved with the spill response.

Most of all, I wish to thank the people of the oil spill region, whose thoughts, efforts, emotions, and experience flow strongly and deeply below the surface of this brief government report. Someday, I hope, you will all tell your stories with the same strength, energy and passion you put into this noble fight to protect your communities and our environment.

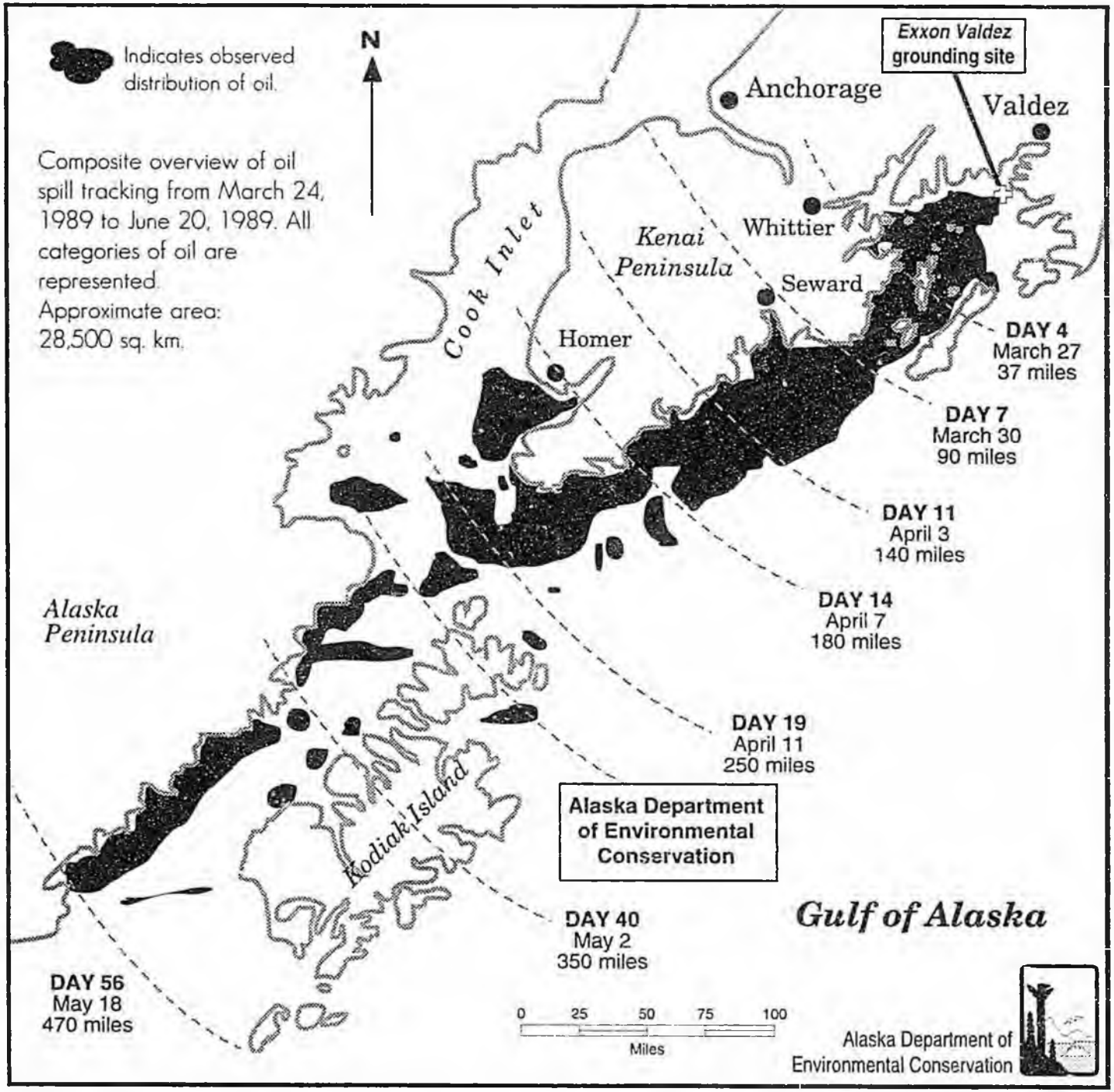
Ernest Piper
Eagle River, Alaska
June 5, 1993

Alaska Map — Oil Spill Location

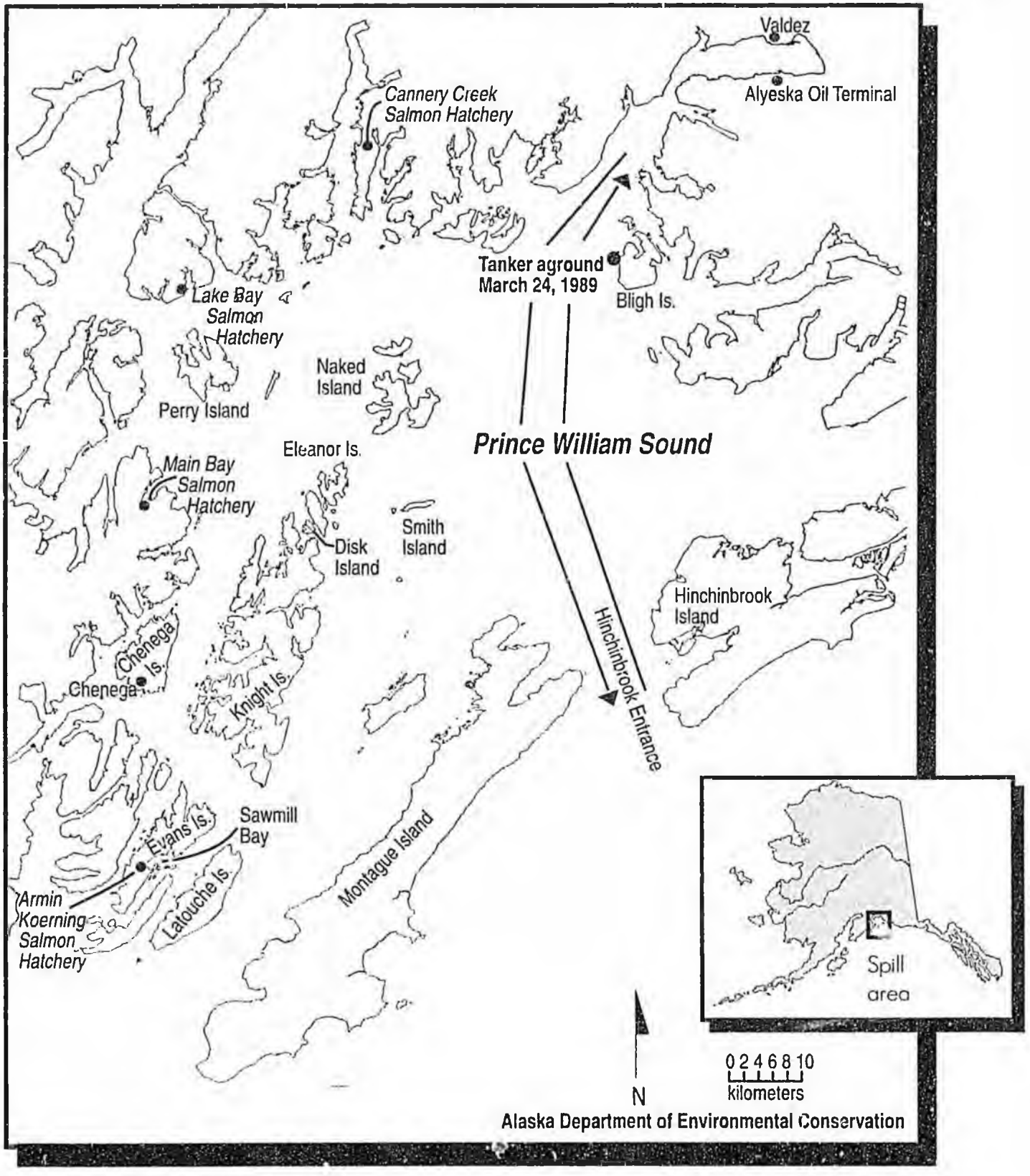


Spread of Oil from the *Exxon Valdez* Spill

March 24, 1989 to June 20, 1989



Prince William Sound and Tanker Grounding Location

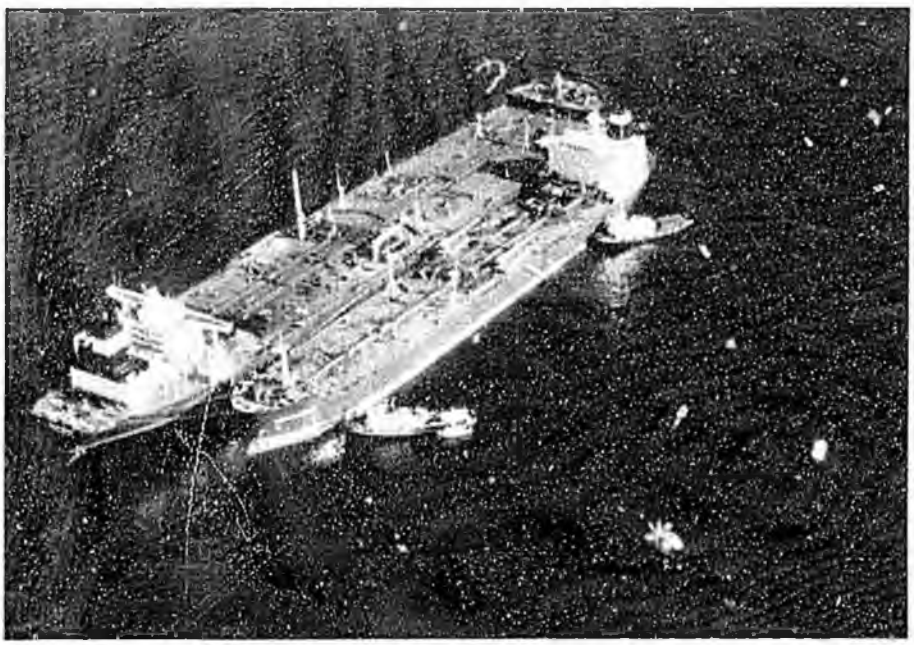


Introduction

The facts of the grounding of the T/V *Exxon Valdez* on March 24, 1989, have been fairly well documented in the official record of government and the unofficial record of journalism, video documentary, television fiction and popular non-fiction.

The tanker ran aground shortly after midnight on a well-charted, well-marked reef about 25 miles from the Trans-Alaska Pipeline terminal at Valdez. The National Transportation Safety Board concluded that the accident was due to a combination of bad seamanship, bad judgment, bad management and bad luck. The Alaska Oil Spill Commission expanded the blame in its 1990 findings, concluding that industry was poorly prepared, government had not pushed hard enough and consistently enough as regulators, and the public and political leadership had grown complacent before the disaster.

The tanker lost about 11 million gallons of North Slope crude oil from its tanks. The state and federal governments agree that the on-the-water response by industry was slow and inadequate. Equipment was unavailable, performed poorly, or was simply not up to the task of responding effectively to a spill of that magnitude. Cleanup on all or part of nearly 1,300 miles of Alaska shoreline continued from 1989 through June 1992.



The *Exxon Valdez* and a lightering vessel after the grounding.
Photo by U. S. Coast Guard

This report does not attempt to recreate the accident or redistribute the blame already spread at the feet of various parties. It does not purport to tell every story from every aspect of the spill, nor is it intended to duplicate or compete with a longer, more extensively researched, federally mandated report prepared by the U.S. Coast Guard. This is an account of the actions taken by the Alaska state government, especially the Alaska Department of Environmental Conservation, during the three years of spill response and cleanup. It is tangent to many other stories — from Alaska Native villages, from the federal government, from the commercial fishing fleets of the area, for example — and it attempts to explain the state government's interaction with those parties. It is beyond the scope of the project and the ability of this author to tell all those stories.

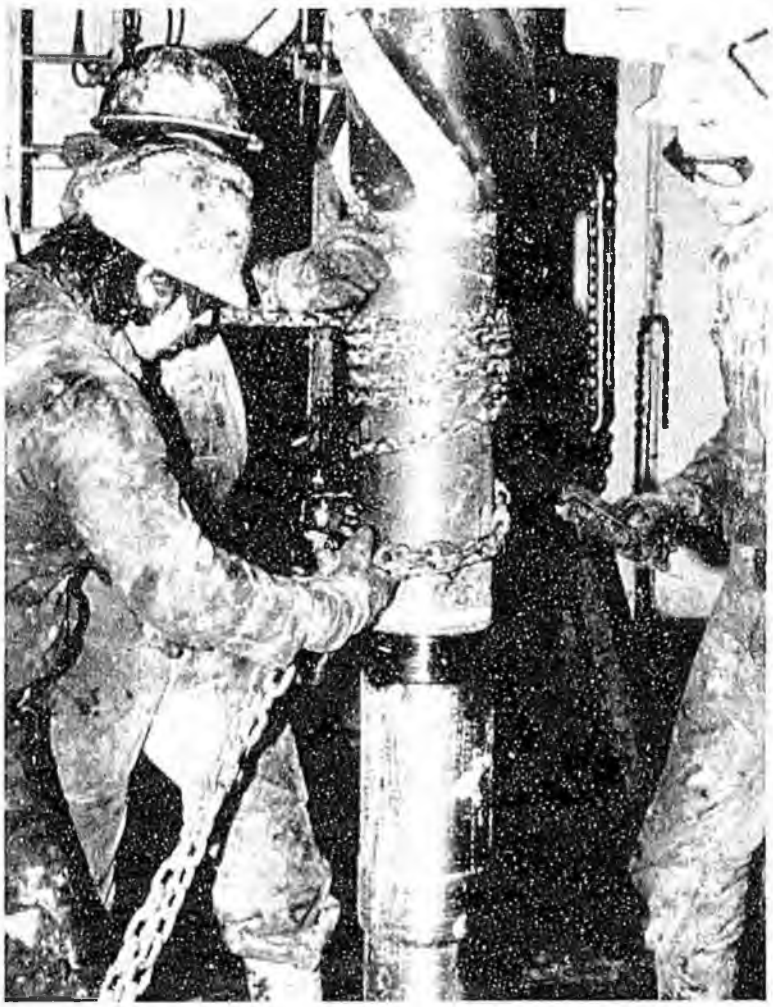
It is arranged by issue, rather than by chronology. A brief overview of the content and organization may help the reader at the outset.

Oil in Alaska

Oil had been flowing through Alaska's modern history long before the tanks of the *Exxon Valdez* ripped open and poured 11 million gallons of grief into Prince William Sound in March of 1989. The social and economic history of the young state has been alternately steered and altered by oil development since the discovery and development of the Kenai and Cook Inlet oil and gas fields in the 1950s and '60s.

The idea of a place called Alaska — from far Southeast to the Arctic and west deep into the North Pacific — is an invention of mapmakers, European governments, and the mind of America. Through the middle of the 20th century, this vast area was made up of regions that were defined by language, geography, culture, economics and politics. Native cultures were very distinct from each other; the arrival of Europeans and Americans did not change this pattern much. Alaska's cities tended to grow up around specific economic interests — Anchorage and the Alaska Railroad; Nome, Fairbanks and Juneau around gold mines or districts. Through the 1950s, the only area of the territory where Americans had developed a more or less integrated economy was the Southeast panhandle. Political life of the territory was centered there as well.

Even after the war and during the subsequent boom in military construction around Anchorage and Fairbanks, the areas outside of Southeast were, economically speaking, really only appendages of various federal government programs and operations: the Alaska Railroad, the Federal Aviation Administration, the Army Signal Corps, the regular Army and Air Force. The retail and service industries (especially construction) were directly and firmly tied to the federal presence. Mining and fishing were seasonal, and any year-round economic activity was limited because of that.



Workers at an oil drilling rig. Photo by Rob Schaeffer

Southeast, of course, had its own federal economic dependencies and seasonal fluctuations, but its fishing and logging industries provided the base for communities that were more like permanent, year-round towns of the Pacific Northwest, and less like the work-camp outposts of Southcentral and the so-called "westward" area of Alaska — i.e., everything west of the Panhandle.

Oil and gas development on the Kenai Peninsula and in the Cook Inlet changed this balance significantly. Throughout the 20th century there had been bursts of mining activity in Alaska: gold in the Interior, copper at Kennecott, coal at various locations. There had even been some limited drilling for oil early in the century near the natural seeps at Katalla, to the east and south of Cordova. But the discovery and development of the Swanson River oil field near Kenai, and subsequent development of gas and oil fields on- and offshore, sparked the first serious, non-government economic activity in Alaska outside of Southeast since World War II.

After statehood, in 1959, oil development also bailed the young state government out of early financial trouble. In 1962 the new, three-year-old State of Alaska had been depending for support largely on transition funds from Washington, D.C. It was not clear where the state would get the funds it needed to provide even basic state services; the population base and gross economic product were simply not large enough to produce significant revenue through usual methods of taxation.

Then, in 1963, the state Department of Natural Resources offered Cook Inlet offshore tracts for oil and gas leasing. The state expected to receive a modest amount in bids, perhaps $15 million; instead, the high bidders put up nearly three times that amount. The high bids were a minor windfall and solved a short-term fiscal crisis.

The emphasis is on "short-term," however. In 1964, the largest earthquake in North American history turned southcentral Alaska upside down, causing massive geological

change, and presenting Alaska with the daunting and expensive prospect of rebuilding virtually all its public infrastructure. Congress eventually authorized more than $350 million in disaster relief, loans, construction funding, and other programs to Alaska.

Ironically, the event that literally tore much of the state apart set the stage for the next major flurry of economic activity in Alaska. The federal infusion of cash was massive — almost a billion dollars at 1990 values — and it was spread around in varying ways: $51 million to rebuild schools and other public buildings, $25 million in urban renewal projects, $5 million in 23 highway reconstruction projects, and $92 million in disaster and small business loans. The federal government also purchased or otherwise financed more than $15 million in bonds that the state had already issued, or planned to issue, to finance previously planned public construction projects.[1] Obviously, much of that wealth and many of the jobs wound up going to Outside[2] concerns. But it is safe to say that in raw economic terms, disaster reconstruction money carried many state government programs, allowed the government to redistribute its own money to other needs, and helped the state generate income from taxation it might not have normally raised.

But like military construction or statehood transition funds, this federally sponsored economic shot in the arm would not sustain state programs and the private economy for very long. "Something else" would have to come along.

The "something else" came along in 1967, when Atlantic Richfield, again, made its first major oil strikes at Prudhoe Bay. This would lead to more than $900 million (about $1.5-$1.8 billion in 1990 dollars) in state lease sale revenues in 1969, authorization and construction of the pipeline in the 1970s, and waves of population and economic growth in the 1980s.

But while the actual effects and benefits of North Slope oil discoveries couldn't be foretold exactly in 1967, it was no accident that the State of Alaska would be a major participant in whatever occurred.

The fear that Alaska would be broke (or nearly so) without federal help was one of the minor themes running through the debate about statehood for Alaska during the 1950s.

Opponents of statehood suggested that Alaska would become little more than a drain on federal resources; proponents of statehood countered that the territory could never achieve real economic growth while under management by "absentee" owners in Washington. Often these arguments were smokescreens for other larger (frequently unspoken) political or economic concerns, but the prospect of a cash-poor state of Alaska was real enough that at statehood, Alaska's land grant was unlike that given to any other Western state. The realization that Alaska would have to support itself from its natural resources and lands was the driving force for this new federal policy.

Alaska not only received the right to select 104 million acres from the public domain, but the state could make its selections in large blocks. Other Western states had usually been granted the right to pick (or to have chosen for them) small blocks of land within larger federal holdings; Alaska, on the other hand, could put together hundreds or thousands of acres in a contiguous block. Instead of choosing a small parcel for a small and particular purpose (eventual sale as a homesite, for example), Alaska could choose massive parcels for large-scale purposes (lease as a mineral development, for example). Alaska also, unlike other states, received title to tideland and submerged lands up to three miles offshore.

This seemingly arcane bit of land management strategy set the stage for a new way of managing public lands in America. Other states had used land disposals as a way to finance government projects. But generally that involved the outright sale of public domain parcels for homes or farms, with the money generated being earmarked to finance the schools (or other public needs) demanded by families moving to the new homes and farms. Ultimate disposal of public domain lands was not just a consequence of this type of policy, it was the goal.

That would not be the case in Alaska. Land in most of Alaska — without roads, without suitable agricultural or grazing conditions — was, in modern economic terms,

worth little on its own. The resources on and under the land held potentially more value over time — much more value, in fact, than could be realized by a one-time sale that sent the resources and the land into private hands.

This led to a land selection strategy by the state government that concentrated on finding resource-rich lands that could be leased for development, with the state receiving royalties based on production over time. And this, in turn, led the new state planners directly to the North Slope of Alaska. There would be no farms or New England town sites on the tundra, but there might be lucrative resource development — particularly oil development.

Everyone — from local villagers to the U.S. Defense Department to the oil industry to the new state managers — everyone knew that there was oil, in some amount, under the North Slope. There were numerous natural seeps, and even as far back as the 1920s there was a fair amount of technical geological data suggesting large reservoirs of oil. A massive area in the central and western Arctic had been designated a national strategic petroleum reserve three decades before Alaska became a state.

Alaska's land selections would be to the east, in and around Prudhoe Bay, the Sagavanirktok River, Oliktok — essentially, almost everything in between the National Petroleum Reserve-Alaska to the west and the Arctic National Wildlife Refuge to the east.

The 1968 announcement of a large discovery at Prudhoe Bay by Atlantic Richfield confirmed what many people had suspected all along: The North Slope reserves were potentially huge, perhaps 10 billion recoverable barrels, the largest find ever in North America. In June of 1969, the core of what later became a larger consortium of oil companies operating at Prudhoe Bay applied for federal permits to build a pipeline from the North Slope. That fall, Alaska's fourth Prudhoe Bay oil and gas lease sale brought in more than $900 million in high bids to the state. This represented more than seven times the state's budget at the time.



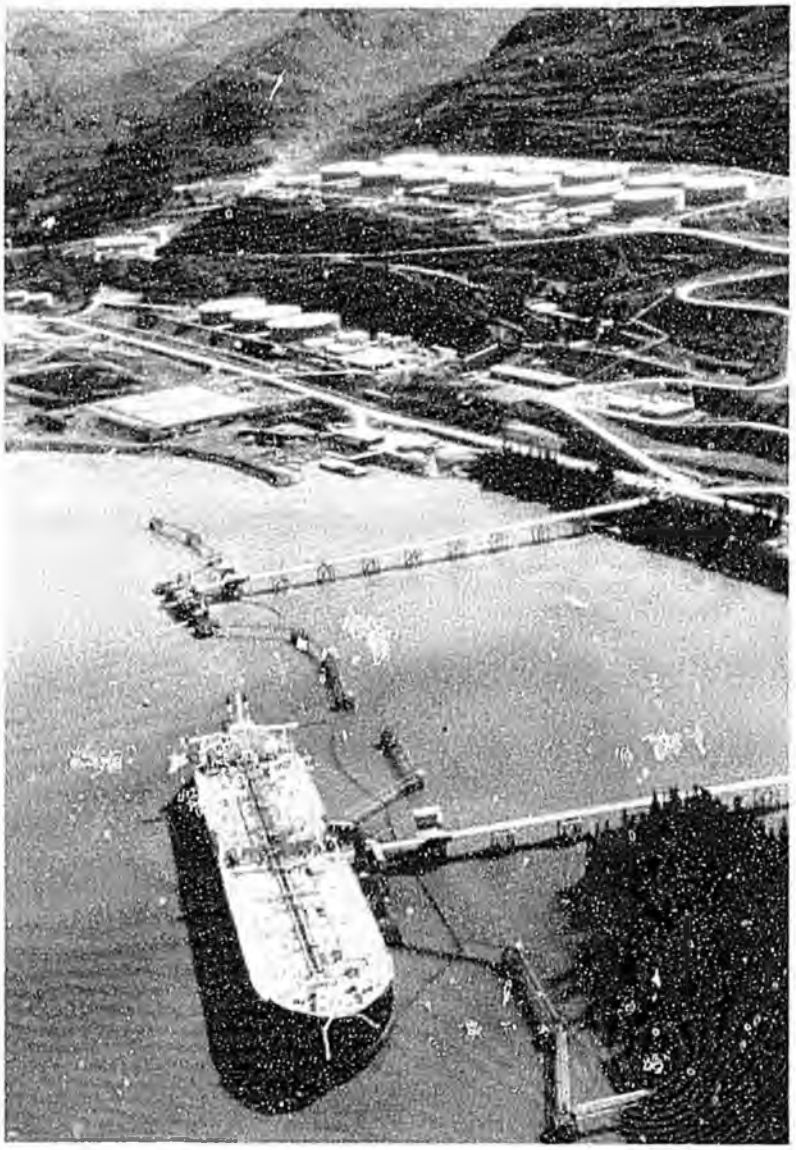
The Trans-Alaska oil pipeline. Photo by Rob Schaeffer

The pipeline was still a long way off. At the federal level, the Nixon Administration supported the project and took several administrative actions to ease the path of the right of way permit. In Alaska, Governor Bill Egan's administration also supported the project.

However, there was substantial opposition to such a project outside Alaska, and some within the state as well. The U.S. Congress moved carefully on various pieces of pipeline legislation. Several lands and right of way issues wound up in federal court. The passage of the landmark National Environmental Policy Act in 1969 raised other, more complicated issues. Alaska Natives pointed out that their historical claims to much of Alaska had not been resolved through the treaties and laws that had dealt with Native American land claims in the Lower 48; they wanted some control, compensation — or both — regarding pipeline construction. A tangle of claims, lawsuits, statutes and proposals from Congress and the state legislature, oil industry negotiations and plans, proposals for Alaskan or Canadian routes — all these combined to form a tightly-woven barrier to construction of the pipeline.

That barrier was unraveled by a combination of events, politics, settlements, and laws: Native claims were settled in the landmark Alaska Native Claims Settlement Act;

Congress exempted much of the pipeline construction and planning from some of the major federal environmental requirements; Alaska negotiated taxation and some regulatory issues directly with the industry; the all-Alaska route was selected. On July 17, 1973, the Trans-Alaska Pipeline Act was approved in the U.S. Senate by a single vote — that of Vice President Spiro T. Agnew, who used his constitutional power to break a 50-50 tie.



Terminus of the Trans-Alaska Pipeline in Valdez, Alaska.
Photo by Rob Schaeffer

Construction started in 1974 and lasted until 1977. On June 20, 1977, the first barrels of oil flooded the pipeline and started downstream to Valdez.

Ultimately, the pipeline project offered its support among Alaska's elected leaders and much of the relatively small population (about 300,000 at the time) because oil development held the promise of jobs, increased prosperity, and revenue to support programs and facilities that could raise the state's standard of living.

At the national level, the pipeline was supposed to lessen the nation's dependence on foreign oil. The control of world oil markets — and pricing — by the Organization of Petroleum Exporting Countries (OPEC) was beginning to squeeze oil-dependent industrial economies in Japan, Europe, and the United States. Here at home, the nation was beginning a decade-long economic slump, exacerbated in part by OPEC's embargoes and the cartel's ability to raise the price of oil to unheard-of levels. An Alaska pipeline was supposed to help protect or strengthen the U.S. economy to some degree. It was also considered in many respects a national security issue — an issue so strong, in fact, that the Congress exempted the pipeline project from many of the emerging environmental requirements in federal law. The first OPEC embargo against the United States had come for political reasons, not market reasons: America's support of Israel in its wars with neighboring Arab states cost the nation its access to Middle East oil.

The promises of Alaska North Slope oil and the pipeline have largely come true. Alaska oil did not solve all the state's problems, but oil revenues, state spending, and associated activity certainly did help raise Alaska's standard of living. Alaskans wisely decided in 1976 to put aside at least a quarter of all oil income in a constitutionally protected savings account; the Alaska Permanent Fund in 1992 contains about $14 billion, and holds the promise of stable government support for programs after the oil runs out. The state has used its oil revenue to improve water and sewer systems, pay for construction and operation of public schools even in the smallest communities, protect and improve its fisheries, build senior citizen centers and community halls, upgrade other public services and amenities — all while its citizens enjoy the lowest rates of overall taxation anywhere in America.

Right now, for good or for ill, Alaska's economy and government are substantially dependent on the revenue generated by oil development at Prudhoe Bay. And at the national level, Alaska oil is critical to America's energy supply, at least at current levels

of consumption. Unfortunately, Alaska oil did not cause America to kick its foreign oil habit; imports as a total percentage of U.S. consumption have continued to rise. However, Alaska oil makes up nearly a quarter of all oil produced in the United States, and the products refined from North Slope crude oil fuel — literally — the automobiles and the giant economy of California and much of the American West: The bulk of the West Coast refining capacity is filled by oil that travels down the Trans-Alaska Pipeline System to Valdez. Many geologists believe there are other untapped oil fields in the Alaska Arctic.

Without Alaska oil, the American economy would not look exactly the same. That is why, in part, there is continuing interest and debate about where, when, how — and if — there will more oil exploration and development in Alaska. Many people have argued that Alaska's valuable oil has come at a dear price to America, not only by changes in the land, but by stalling or allowing America to avoid dealing with long-term questions about conservation and use of alternative fuels. Others contend Alaska oil has helped keep the U.S. economy strong, and that the nation should continue its search for oil in Alaska's frontier areas.

Yet regardless how one feels about Alaska oil development, people from all sides of the debate felt together the shock and anger and initial despair when the news came on March 24, 1989, that a supertanker had run hard aground in Prince William Sound. While the promises of North Slope oil development had come true, so had the major threat.

This is where this report picks up the story. The subsequent sections are arranged as follows:

1.0 The Oil Spill Response Organization — This section explains how the standard institutions functioned within the spill response, but more important, how separate and unique institutions emerged. It looks at how decisions were made, primarily at the state level, but also how state interests and decisions conflicted with, overlapped, or were harmonized with the decisions of other entities involved in the response.

2.0 Technology — This section looks at how oil spill response technology worked on the *Exxon Valdez* oil spill. Perhaps of more general interest is the discussion of how public and private institutions viewed certain technologies, and how they made the decisions to use (or not use) certain types of technology.

3.0 Shoreline Cleanup, 1989-92 — This section is a somewhat sequential look at the shoreline cleanup, which began after the relatively brief on-the-water response phase. It touches on some of the issues from previous sections — institutional interaction, technology assessment, etc. — but applies the analyses of the previous sections to specific incidents and periods. This, I hope, puts the previous discussions into context.

4.0 Legal, Regulatory and Administrative Changes — This section is a brief overview of state and federal law and regulation changes made since the *Exxon Valdez* oil spill.

5.0 Restoration — This section begins with a description of how and why the State of Alaska addressed the principal legal issues raised by the spill. It touches on two early, failed attempts to settle various aspects of the cases, as well as the final civil and criminal settlements of October 1991. It then explains the basic approaches to restoratio. nticipated by the state and federal government in the early stages (winter, 1992-93) of the restoration process.

Readers wishing more detailed, but relatively brief descriptions of the events leading up to the grounding, the regulatory history of the Alyeska Pipeline Service

Company terminal at Valdez, the first six weeks of the oil spill response, and a complete review of restoration efforts can start with several governments reviews or summaries including: National Transportation Safety Board; the Alaska Oil Spill Commission reports, especially the background sections; the National Response Team report to the President in May 1989; and all the restoration reports to date.

Notes, Introduction

[1]*Ernest Gruening, The State of Alaska (Random House [revised edition] 1968), p. 531.*

[2]*"Outside" may refer to anywhere that is not Alaska, but is used here to refer to the rest of the United States.*

Chapter 1: The Oil Spill Response Organization

Oil spills occur with surprising frequency in the United States. In 1989 alone, the year the *Exxon Valdez* ran aground, the U.S. Coast Guard logged about 8,000 spills, small and large, in the marine waters of the U.S. Most are relatively small (the average is around a hundred or two hundred gallons). The State of Alaska deals with a variety of spills on water and land, as well. In 1991, for example, the state responded to more than 40 spills of more than 1,000 gallons.

Usually these spills involve leaking tanks and fuel lines, improperly stored product, mishaps in transferring product from one area to another, and other events and mistakes outside the public's general field of vision.

When the pollution is so massive, and the potential effects so critical and threatening, the public and virtually all its institutions find themselves right in the middle of what had been formerly a distant and specialized activity.

Oil spill response on this level is largely a technical and regulatory exercise. The people who appear at the site are generally confined to those in government regulatory agencies and the dozens of pollution control and cleanup contractors who operate in a given area. They speak the same regulatory and scientific language and understand the rules, the hierarchy, and the procedures involved in pollution control. It is, in short, much like any other technical trade: The only people who usually show up at a building site are carpenters, electricians, concrete finishers, building inspectors, and so on. One would not expect a member of the general public to know much more about building codes and rafter framing techniques than he or she knows about oil spill regulations, or the optimal speed for towing containment boom.

But when the pollution is so massive, and the potential effects so critical and threatening, the public and virtually all its institutions find themselves right in the middle of what had been formerly a distant and specialized activity. When they go to the people in charge of this activity to look for answers and reports, the public is given information that has been only partially translated, at best. It is similar to what happens when a speaker of high-school-level French tries to participate in a conversation with



Oily subsurface residue from the *Exxon Valdez* found on Eleanor Island, Prince William Sound.
Photo by Patrick Endres

two native speakers chattering in colloquial terms: The listener picks up a sentence here, a few ideas there, but generally he misses much of it and winds up being a little confused.

In many cases, particularly on the level of a response such as the *Exxon Valdez* operations, the fog of the technical and regulatory details can influence strongly the way the public, the media, and the government itself view the response.

1.1 Who's in charge here?

"The National Oil and Hazardous Substance Response System is a difficult and complicated system which blurs the lines of responsibility and is confusing to many observers," wrote one of the U.S. Coast Guard's chief public information specialists in 1991. The way to counter the confusion, he advised, is to immediately establish an identifiable leader, set attainable goals, and communicate them realistically to the public. The most likely identifiable leader candidate in a large spill is the federal on-scene coordinator, he concluded.[1]

This is not necessarily what happened in the first few hours and days of the spill. Exxon emerged, partly by choice, as the focus of questioning and the principal source of information. The company staged the briefings, supplied the lead spokesman, and held court front and center for the media. While state and federal officials were present and available, Exxon chose to assume the point position in public. This may have been consistent with the established spill response structure, but it also may have sent a confusing message to a public and a media corps used to dealing with government officials during such a crisis.

Federal regulatory structure

Federal law divides authority for pollution containment and cleanup between the U.S. Coast Guard and the U.S. Environmental Protection Agency (EPA). The Coast Guard deals with spills in marine waters (including the Great Lakes), and the EPA deals with oil and hazardous substance spills on inland waters and on land. This is why the EPA was the lead federal agency at the Love Canal and Times Beach chemical cleanups, and the Coast Guard was the lead agency on the *Exxon Valdez* oil spill. Each EPA- or Coast Guard-led cleanup has a federal on-scene coordinator.

Three basic federal documents govern pollution control (oil or chemical spills, essentially) on land and water.

The Clean Water Act of 1973, the sweeping legislation that was designed to both clean up polluted waters and prevent further pollution in years ahead, is the root of the program. The law mandated a national strategy for pollution control and led to the National Oil and Hazardous Substance Response System, guided principally by the National Contingency Plan.[2] The National Contingency Plan, in turn, established a series of regional authorities to oversee operations in areas such as the Gulf of Mexico, Puget Sound, and other principal zones of marine traffic.

More localized planning and oversight organizations can be formed, but all work in descending order under the umbrella of the federal laws and plans mentioned above.

State structure and lead agency

The National Contingency Plan sets the nation's policy for pollution control and response. States may use the federal program alone, or they may add special provisions or regulations on top of it. Simply explained, a state may enact stricter pollution controls than the federal government, but it cannot enact weaker regulations than those

established by Washington, D.C. This strategy, used in many kinds of unrelated federal-state programs, is designed to allow states to tailor regulation to local or state needs.

The state's pollution control laws designate the Alaska Department of Environmental Conservation (DEC) as the lead agency for pollution control within our borders and waters. DEC works with both the Coast Guard and the EPA. In the event of a spill, DEC appoints a state on-scene coordinator to manage state operations, work with federal agencies, and integrate the needs of other state and local agencies in state and federal activities.

DEC is the state's chief representative on the Alaska Regional Response Team, a management and policy oversight group established under the National Contingency Plan. All major policy decisions, and many technical decisions regarding spill response must be considered by the Regional Response Team first. The Regional Response Team is a mix of state and federal agencies that steers response activities and, in some cases, approves or rejects spill response methods. It also coordinates the variety of federal, state, and local contingency plans for spill response in Alaska. During an actual response, the on-scene coordinator has the authority to make the final decision about what actions to implement.

Technically, in all cases, the government is "in charge." In practice, however, on-scene coordination – rather than on-scene command by the government – is a mix of oversight and negotiation and common sense.

The "responsible party"

One of the principal jobs of state and federal regulators in a spill is the need to identify the person, group, or company is responsible for the spill. Federal and state laws allow the agencies to spend public money on pollution cleanup, but the government is supposed to get that money back. And getting paid back is not just an option: The state law governing how DEC spends its response fund requires the agency to recover its costs whenever possible.

Usually, that means finding the party responsible for the spill and making arrangements not only to pay for the cleanup (along with any applicable fines or penalties), but to arrange the cleanup itself. Under ideal circumstances, an agency finds the responsible party, and the responsible party finds a contractor, arranges the logistics, and pays the bills.

The government's role — and options

The first thing the lay person notices about this structure is that there seems to be a great deal of coordinating going on at the government level, but not a lot of ordering.

Under what might be called the "responsible party" system, both federal and state agencies oversee the cleanup activities and coordinate other agency concerns and requirements in the program. In the case of a small oil field spill of drilling muds or chemicals, the government tells the responsible party to clean up the mess, setting whatever conditions state or federal law require (fish habitat, wildlife protection, public health issues, etc.). The responsible party then hires a contractor, writes a proposed cleanup plan, and submits it to the federal and state on-scene coordinators for approval. If the plan receives the government stamp of approval, the cleanup proceeds. Appropriate government regulators check up on the progress of the cleanup to make sure it meets the requirements of the plan. When the job is done to the governments' satisfaction, the spiller is released and monitoring begins, if necessary.[3]

If the spiller is doing a poor job, or not following the plan, or otherwise refusing to do what the government requires, the on-scene coordinator has the option of taking over the cleanup. In that case, the government — state or federal — would take over the business of hiring and directing a contractor to do the work. A basic rule of thumb in making that kind of a judgment is whether the government is likely to be able to do the job better or faster than the responsible party.

Both federal and state pollution control strategies are a mix of government and

private efforts. They try to keep the polluter involved in the cleanup. Ideally, this allows the cleanup to get going quickly and to proceed efficiently. It also allows the government to concentrate efforts on strong oversight of pollution problems and abatement, without being sidetracked by financial or administrative headaches of the cleanup.

Technically, in all cases, the government is "in charge," since ultimately the government has authority to take over a cleanup (or, more frequently, to threaten takeover) if the public's goals for the cleanup aren't met.

In practice, however, on-scene coordination — rather than on-scene command by the government — is a mix of oversight and negotiation and common sense. The goal of a cleanup is not to punish a spiller or maximize the government's opportunity to collect fines in court. The goal is to protect the public, the public's resources, and to clean up the mess. Frequently, the fastest, most efficient, and least expensive method is to work with the responsible party.

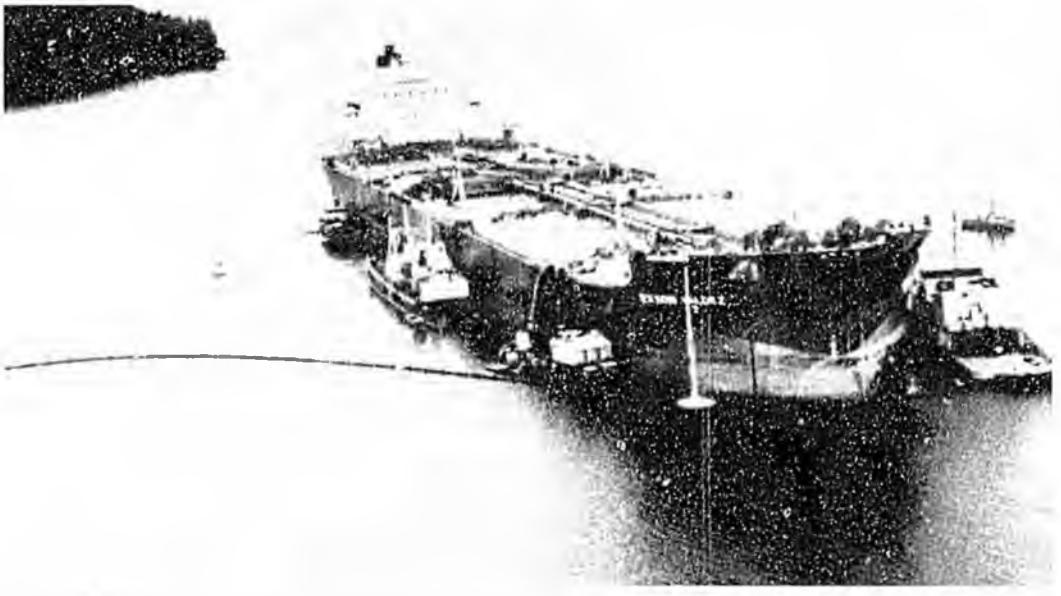
1.2 The *Exxon Valdez* oil spill

It was not long after the *Exxon Valdez* hit the rocks that the public became confused about who was running the response, and why the command and decision-making structure was the way it was.

For matters of both perception and fact, the public expressed little confidence in the spill response structure that was emerging in Alaska. To the public's eye, Exxon was leading and the government was somewhere in the background. Considering the threat to the environment and the local economy, to many people it seemed odd that a private company was running what was, in many respects, a public safety program with broad public policy implications.

Exxon was not a government agency, therefore not responsible to the public; the Coast Guard was the coordinator of the effort, but Exxon managers, not the Coast Guard, told workers where to go and what to do; the state DEC, adopting its usual role as an oversight agency and coordinator for state policies and requirements, couldn't tell the Coast Guard what to do. The federal on-scene coordinator, a vice admiral and, to the public, a military leader, complained in frustration that he was a "coordinator, not a commander."[4]

To someone who knew and understood the national spill response system, the



The disabled tanker Exxon Valdez hours after the grounding Photo by Dan Lawn

structure made some kind of sense. The response was hardly running smoothly, but the principal officials understood the relationships in spill response and were working within the existing system.

To the public, however, the consistent and troubling question was either, "Who's in charge?", or "Why is Exxon in charge? They spilled the oil in the first place."

The answer — correct under the federal law and the general spill response strategy — was what U.S. Transportation Secretary Samuel Skinner told USA Today in July 1989. Asked if the Coast Guard ought to be in charge — meaning in command — Skinner replied, "They should be in an overall supervisory responsibility [sic]. Where there is an industry player who has the funds, resources, and the response team ready, I do not believe we should supplant that with the Coast Guard."[5]

To someone who knew and understood the national spill response system, the structure made some kind of sense. The response was hardly running smoothly, but the principal officials understood the relationships in spill response and were working within the existing system.

In some respects, this "in charge" issue was not as big a problem as some people perceived it to be. The real problem was that there simply were not sufficient resources available in the area to deal with a spill of that size. Regardless of how the chain of command took shape, if there was nothing to command it didn't really matter.

Yet as the size and the complexity of the disaster grew, upper-level policy makers for all three parties became more directly involved in the decision-making. Alaska Governor Steve Cowper, DEC Commissioner Dennis Kelso, the Alaska Oil Spill Commission, leaders of fishing groups and local governments, members of Congress — all concluded that at a certain point, the national response system, with its blurry lines of responsibility, was not the only way to handle this multidimensional response operation.[6]

While there were a number of institutional procedures unique to the *Exxon Valdez* spill response, the parties generally attempted to operate the response on the model set up in the National Oil and Hazardous Substance Response System, the National Contingency Plan (NCP), and DEC's Alaska statewide contingency plan.[7] Coast Guard historians, however, concluded in a recent memo to DEC that "the NCP model got 'lost' in the process. The President became involved, the military was used in a manner and extent never envisioned by the NCP, cabinet-level officers were involved, and new structures such as the ISCC [Interagency Shoreline Cleanup Committee] were established by the FOSC [federal on-scene coordinator]."[8]

Under these plans, the Coast Guard has the basic responsibility for managing or coordinating spill response in Alaska's coastal waters. The state on-scene coordinator works as an advisor to the federal on-scene coordinator. The state's designated role is to make sure federal authorities know what state resources are available and what state or local needs must be considered or complied with. Both the state and federal coordinators are supposed to make sure that the responsible party is carrying out whatever contingency plan is in place at the time. In March of 1989, everyone was working off the contingency plan negotiated and developed between the state and Alyeska Pipeline Service Company.[9]

The plan had been developed between 1984-87. It spelled out how fast Alyeska was to respond to various spill scenarios, including a potential 200,000 barrel spill. On March 24-25, Alyeska's response did not take shape the way the plan dictated it should. A barge was out-of-service; equipment was buried under several feet of snow; skimmers and other on-the-water response equipment was anywhere from 6-18 hours behind the response schedule in the plan.

Yet despite the slow and inadequate response on the water immediately after the grounding, organizationally, the spill response structure took shape the way it was designed. Alyeska Pipeline Service Company was the designated responder; the Coast Guard assumed its role as chief federal coordinator; DEC took the necessary steps to oversee the response, especially as it affected specific state and local interests.

Alyeska, however, quickly dropped into the background as Exxon assumed complete control as the responsible party. Exxon said this hand-off was consistent with the agreements among Alyeska's parent companies, of which Exxon is one. However, Exxon did not make clear its intentions to follow through with the Alyeska contingency plan.

Under the Prince William Sound Contingency Plan, approved by the DEC, Alyeska was supposed to coordinate and execute the industry response; indeed, that is exactly what Alyeska had done two months earlier during the Thompson Pass spill near the Alyeska terminal. This arrangement insures that when a spill happens, the state and the designated responder know with whom each is supposed to communicate. Exxon's take-over injected a whole new group of managers who, it turned out, were unfamiliar with the contingency plan and unfamiliar with their counterparts from the State of Alaska.

The system was designed so that the state could use the provisions of the contingency plan to help determine if the responder was successfully carrying out the multitude of recovery and habitat protection tasks that had been figured out in advance.

The owner companies' unilateral decision to make the hand-off of responsibility for spill response from Alyeska to Exxon the second day threw several years of planning and expectations to the wind.

The hand-off by Alyeska to Exxon left the state in a difficult position. Exxon's officials said they had their own plan, and did not necessarily intend to use the Alyeska plan the state had approved. Exxon never provided the state with a copy of its plan. According to a federal government report to the President[10], the Exxon Shipping Company Headquarters Casualty Response Plan listed the company's internal structure for managing a marine spill, "but it is not specific to any location." And more important, the Exxon plan had never been reviewed or approved by state or federal officials, or the public at risk from a spill. In other words, the years of planning, negotiation, and public review that had gone into the thick Prince William Sound Contingency Plan were suddenly rendered meaningless. The hand-off left the responders with no commonly accepted plan for action.

It also left the public on the short end of the deal it had made with oil producers. The public agreed to the construction of the Alyeska facility on the premise that Alyeska would provide the best protection possible from damage caused by oil spills. The government-approved contingency plan was designed to show the public specific details about what protection they could expect for their public resources.

At the time of the grounding, the Alyeska contingency plan had detailed discussions about its command structure, which included an oil spill response coordinator designed to be the industry counterpart to the federal and state on-scene coordinators. The plan listed more than 130 sensitive habitat sites that would form the basis for any protective booming or other defensive measures. The plan set target times for initial response under different scenarios. It had lists of officials responsible for various aspects of response.

The point of the plan was that in an emergency, everyone ought to be working from the same, familiar set of instructions and plans. And further, if Alyeska was having trouble following the plan or even refusing to do so, the state would have the ability to objectively gauge the Alyeska effort, and the legal basis for triggering a state take-over or requesting federalization of a spill. The owner companies' unilateral decision to make the hand-off from Alyeska to Exxon the second day threw several years of planning and expectations to the wind.

As a matter of public regulation of the private Alyeska terminal, the industry position was troubling to state officials. Under state law, Alyeska cannot operate the terminal without an oil spill contingency plan reviewed and approved by the state. The "c-plan" was one of the ways that the public could hold the industry accountable for protecting public resources in the Sound. Regardless of who conducted a response for Alyeska — whether it was a contractor or another owner company — the state expected to use the Alyeska contingency plan as a mechanism to insure accountability. The "hand-off," which Exxon and Alyeska said was their plan all along, actually opened up a dangerous loophole in the government's ability to hold the oil companies to their plans and promises.

Perhaps more important than the legal and regulatory issues raised by the hand-off were the expectations of the public. In this case, at least initially, the "public" was defined primarily by the area residents, and the commercial fishing fleet based in Cordova. These people had participated in the development of the Alyeska contin-

gency plan, to some degree or another, through formal and informal meetings, hearings, and comments. They assumed they would be dealing with Alyeska, and the Alyeska plan. When the change came, they were confused and instantly skeptical; to the fishing families of Cordova, the sudden change in command and plan — and the confusion it caused — seemed almost intentional.

The plan had never explicitly stated that dispersants would be the first-line defense. Now, right in the midst of an emergency, the fishing fleet and local residents were being told to accept a major change in the game plan.

And when Exxon's chief executive officer Frank Iarossi stood up in Valdez on Friday, March 24, and announced that Exxon intended to fight the spill with dispersants as a first-line defense, the fishing vessel owners and local residents felt that the industry was changing the response rules without consulting the people and the industry most at risk from the spill. This, coupled with the fact that Alyeska had already failed to carry out its designated duties according to the plan's time and equipment requirements, led many to question whether the plan had been just a convenient fiction. Dispersants were potentially dangerous and extremely controversial, and the plan had never explicitly stated that dispersants would be the first-line defense. Now, right in the midst of an emergency, the fishing fleet and local residents were being told to accept a major change in the game plan — a controversial change even if there had been no emergency.

Under questioning from state and federal attorneys in 1992,[11] Exxon's Iarossi said the company always intended to take over response to a major tanker spill; and further, that dispersant use was the cornerstone of initial response plans for such a spill. Yet Iarossi was not sure what the approval process was for dispersants. At the time of the spill, he did not know that the state had pre-approved dispersant use in some areas, required special permission in others, and excluded a third zone. He did not know that under certain circumstances both Exxon and the federal on-scene coordinator needed concurrence from the Alaska Regional Response Team. He had not read the Alyeska contingency plan. He did not know that the State of Alaska had regulatory oversight, and he did not understand why a DEC official was accompanying the Coast Guard and Exxon on the overflights that would assess the effectiveness of dispersants. In short, he knew less about the prearranged plans and requirements than many of the fishermen and government officials he would tell on March 24 — as if it were common knowledge — that dispersants were the first line of defense.



"When Exxon entered the picture in the first days of the spill, they did not follow the Alyeska plan, and later said they followed their own. Whatever plan they were following, if any, it was not a state-approved plan," said DEC Commissioner Dennis Kelso. Photo by Rob Schaeffer

Much of the disagreement, animosity, and confusion about the decisions to use dispersants can be traced directly to Iarossi's general ignorance of the pre-approved spill response plans in Alaska, the authorities held by specific government agencies, and the role and the interest of the local fishing fleet.

"Well, we were led to believe that we needed a permit from the Coast Guard both to use dispersant and to burn," Iarossi stated during his deposition."[12]And then what the Coast Guard did with it is a mystery to us. But they apparently needed the concurrence from some committee. And it got even more confusing, because depending on where the oil was, they either did or they didn't. And it's not clear to me to this day [Aug. 5, 1992] what the Coast Guard had authority to and not do."

In earlier statements to movie-makers and authors,[13] Iarossi has portrayed the dispersant discussions of the first few days as an exercise in indecision and fear by the governments and the public. Yet the governments were doing exactly what they had agreed to do weeks, and in some cases, years before; Iarossi's perceptions are largely based on the fact that Exxon had a preferred strategy — a controversial, potentially dangerous one — and it had failed to consult with the government and the public about it. What Exxon wanted — full authority to do what the company felt most important — simply was not part of the plan. And when the public was confronted with the matter-of-fact statement that Exxon planned to rely on dispersants, and that it intended to carry out its own plan, the first question from the public to both governments was: Hey, who's in charge here?

Exxon would later claim that the hand-off concept was well understood between Exxon and Alyeska, and that Exxon was proceeding in those early days according to a long-standing company plan. However, Exxon's "plan" was actually a general compendium of available equipment and contractors, and a series of management strategies that applied to setting up command centers and assigning personnel *within Exxon itself.* This plan was not site-specific, nor did it address certain types of spills or specific scenarios.[14] Exxon had, in 1982, notified DEC that the company may take over response to major tanker spills under certain conditions.[15] However, regardless of Exxon's intentions, such a hand-off could not happen under the provisions of the government-approved contingency plan. The Alyeska plan of 1987 states explicitly, "Alyeska will maintain full responsibility and control in the event of an oil spill unless a government agency specifically notifies Alyeska they have assumed responsibility and control."[16]

In testimony before a Congressional committee in 1989 after the spill, DEC commissioner Dennis Kelso summarized the state's position regarding implementation of the Alyeska contingency plan.

"Recently, both Exxon and Alyeska have asserted that the state-approved contingency plan was somehow not really a set of requirements. Under Alaska statutes, it is unquestionably a binding document. Our law states that the company must have a state-approved plan in place as a condition of operating the terminal at Valdez. Failure to do what the plan says is a violation of state law.

"When Exxon entered the picture in the first days of the spill, they did not follow the Alyeska plan, and later said they followed their own. Whatever plan they were following, if any, it was not a state-approved plan."[17]

Exxon's unilateral detour from existing plans fostered skepticism, confusion and anger among the very people Exxon needed most at the time. True, it raised serious regulatory and legal questions for the government's responders who, as part of their jobs, are supposed to collect evidence as well as respond to the emergency. The public interest, in the case of a major oil spill, is not limited to simply responding to the oil on the water. The public interest includes protection of the people's ability to enforce liability requirements on the spiller.

But more important, as a matter of emergency response, any confusion about who should be doing what raised the possibility of a confused and ineffective response. When oil is on the water, there is no time to debate the fine points about whose plan is actually the real one. As a practical matter, the "hand-off" left state regulators with a moving target. It also left the public — especially the area's residents who depended on the commercial and subsistence resources — unclear about who would make good on the promises of protection detailed in the contingency plan. This loophole in the contingency planning process would not be closed off until 1992[18], but in the context of the 1989 response to the *Exxon Valdez,* the immediate alteration of existing strategy was just the first in a series of precedents that raised questions about the state's ability to enforce its environmental standards.

Within a few days, a group of higher-level authorities began meeting to iron out principal differences among parties and to coordinate their plans. Exxon sent its spill response manager, Frank Iarossi, who met with DEC commissioner Dennis Kelso and Rear Admiral Edward Nelson, the commander of the 17th Coast Guard District.

This arrangement was the first tangible evidence that this spill response would be more of a compound public policy operation than a straightforward technical exercise. The federal and state governments gradually took various organizational actions that reflected the magnitude and breadth of the response.

On April 6, the Coast Guard formally elevated all its decisions when it relieved the captain of the port of his duties as on-scene coordinator and installed Rear Admiral Nelson as federal on-scene coordinator. From this point forward, the Coast Guard maintained a flag officer as its on-scene coordinator. In addition, President George Bush charged the Coast Guard's commandant, Admiral Paul Yost, to maintain "personal oversight" of the response, further beefing up the upper-level command structure. As part of the same set of actions, the President also authorized the Department of Defense to provide whatever resources the Coast Guard needed.[19]



On April 5, 1989, frustrated by what he perceived to be Exxon's inability to deliver equipment to the spill area, Cowper called U.S. Coast Guard Admiral Nelson and asked the federal government to take full authority for the spill. However, the federal government did not want to federalize the spill. Photo by Rob Schaeffer

While this significantly elevated decision-making within the federal government and expanded the capabilities for providing federal support for the response, it was not actual "federalization" of the spill. The largest and most expansive spill response action in the nation's history would remain, essentially, under the team management concept described in the National Contingency Plan. This arrangement had both significant strengths and significant weaknesses.

The Coast Guard's official position on federalization was that the spiller, Exxon, was doing about as well as one could reasonably expect given the problem and the conditions. Federal officials informed the President in May, "The [federal on-scene coordinator] deemed it inappropriate to 'federalize' the incident as long as Exxon continued to cooperate with the federal OSC, fund the entire operation, and perform satisfactorily."[20]

To state officials, the situation was not quite so simply assessed. The hand-off by Alyeska to Exxon, Exxon's subsequent refusal to use the Alyeska contingency plan — and the federal government's tacit acceptance of this — left state officials uneasy. Spill response strategy and priorities that had been carefully worked out with Alyeska in previous years were no longer in place, and a new organization was starting somewhat from scratch. Under this scenario, the state would be forced to negotiate with federal and Exxon officials on defensive measures and response priorities, with no guarantee of performance. In fact, given the shortage of manpower and equipment relative to the size of the spill, federal priorities were likely to make first claim on limited resources.

Further, and more important, the state recognized early on that the event was not just a massive pollution control exercise, but that there were massive economic and social problems compounding the response. The kinds of upheaval and displacement caused by the spill and the response were more like those in a natural disaster, and therefore required broader government intervention and aid. Yet, as Governor Steve Cowper later recalled, there was a "substantial question" in the mind of state officials about how to increase government involvement, and whether federal takeover was the best strategy.[21]

On March 26, Governor Cowper declared a state emergency, which officially made available the emergency management expertise of the state Division of Emergency Services. It also allowed the state's responders to use equipment, manpower, and aircraft of the Alaska National Guard. On March 27, the Governor asked the President to declare a national emergency, specifically requesting that an emergency services

coordinator be appointed to work with state and local governments. His goal was to bring more federal resources to the spill and increase the influence of the federal government over Exxon's actions. However, his first inclination was to avoid actual federalization of the spill. "The original plan — which was Cowper's decision — was to try having Exxon, DEC and the Coast Guard to reach 'the appropriate decisions' on a consensus basis," according to Alaska Oil Spill Commission records.[22] So, at least at first, the Governor was willing to give the established management strategy a try.

On April 5, frustrated by what he perceived to be Exxon's inability to deliver equipment to the spill area, Cowper called Rear Admiral Nelson and asked the federal government to take full authority for the spill. Cowper was also influenced by consistent reports from state personnel in the field that many of Exxon's statements about equipment working in the field were either misleading or incorrect, such as reports that equated skimmers "deployed" with skimmers actually recovering oil. Cowper felt that in the interest of effectiveness and accountability, the federal government needed to step in. However, the federal government did not want to federalize the spill.[23] Instead, on April 6-7, the federal government took steps to elevate spill response to a higher level within the Coast Guard, and the President announced his decision to allow greater Department of Defense involvement.

Essentially, the state, the Coast Guard and Exxon agreed on a management system that provided for more federal involvement and direction, but allowed Exxon to write the checks. It was not a perfect arrangement, but it appeared better than the alternatives available at the time.

The state decided not to push the issue of federalization. Admiral Yost, the Coast Guard Commandant, assured the state that a joint response effort would work and that the federal government would make its decisions "in concert and in consonance" with the state and its regulations.[24] In addition, Cowper, Kelso, and the Governor's staff reluctantly agreed that yet another changeover in management -- this time from Exxon to the government — could cause delays and confusion. And finally, Exxon's procurement and financial management appeared more efficient than the governments', even under emergency conditions. Essentially, the state, the Coast Guard and Exxon agreed on a management system that provided for more federal involvement and direction, but allowed Exxon to write the checks. It was not a perfect arrangement, but it appeared better than the alternatives available at the time.

Despite the problems this would cause for all parties, in various ways at various times, there were practical reasons for taking this approach. For one thing, Exxon had accepted responsibility for the spill on the second day and already had begun purchasing and transporting equipment, hiring vessels, and putting other contractors in the field. By keeping Exxon involved under the team management idea, the governments were by-passing a chance for tighter authority in exchange for the prospect of putting more resources in the field with a minimum of delays.

Despite the decision to pursue a team management approach, all three entities would guard their legal and operational prerogatives. It was unrealistic to assume that any one of the three would be willing to yield control of its most important interests to the basic response organization, since even at the start policy questions were woven into response issues. To deal with the mix between policy and technical issues, the three parties formed a high-level steering committee, which ostensibly would meet to iron out major policy disputes or agree to basic strategies.

There was a good deal of overlap between the high-level policy group and what might be termed the "basic" response organization headed by the federal and state on-scene coordinators. When first formed, the steering committee included Exxon's Frank Iarossi, DEC's Kelso, and the Coast Guard's Nelson. But when the job of federal on-scene coordinator was bumped up to a flag officer, the federal on-scene coordinator became part of the steering committee, and for most practical purposes, a deputy federal on-scene coordinator assumed the day-to-day technical burden. So, the protocol "equivalency" was generally maintained.

Occasionally, a decision by one or the other governments would be bumped up even higher, to the level of Governor Cowper or Commandant Yost. Governor Cowper maintained a consistent interest in the details of the response, but he left most strategic decisions to Kelso (or in some cases, other members of the Cabinet). The Governor spent most of his oil spill time on issues such as making sure commercial fishing

interests had access to restitution, or that communities could get necessary relief from state funds or resources. He was also consulted when DEC and the Cordova fishing community proposed to conduct independent cleanup, a move that some attorneys suggested could limit Exxon's liability for damages. Cowper quickly approved the action.

All in all, it was more of an *ad hoc* command-level structure than one that could be neatly drawn with boxes on an organizational chart.

This left the Coast Guard completely "in charge" of the effort, but misperceptions about the "in charge" issue would persist throughout the first summer, triggering confusion and frustration among the people of the spill region. It would also come up again in a series of bitter and sometimes acrimonious clashes in 1990 over state and federal jurisdiction.

The obvious problems caused by the blurred lines of authority and control led to numerous calls for changes in national response strategy. "The spiller should not be in charge of a major spill," the Alaska Oil Spill Commission concluded flatly in 1990.

Regardless of Vice Admiral Robbins' firm declaration, "[t]here can only be one boss and I have that responsibility,"[25] his authority and his actual command ability were something less than that of an admiral moving cruisers and destroyers during a naval battle. Exxon still controlled nearly all of the equipment, and Exxon supervisors, not Coast Guard officers, directed actual actions on the "battlefield."

"Exxon is charge of things now," reported DEC's contractor from the field on April 26. "[DEC manager] assures me we are still under contract to ADEC, but for the most part, Exxon is giving me directions as to where to direct skimmers." He later referred to Exxon's control of operations as a "military takeover," and noted that by the end of April he had little control over dispatch and deployment of response vessels in his sector.[26]

These observations would be mirrored by field notes, meeting minutes, and other events throughout the spill, but especially during the first year. The Coast Guard was, indeed, "in charge" of the response, but the "in charge" of a military operation and the "in charge" under the National Contingency Plan were very different.

For state monitors attempting to make sure that Exxon and its contractors did the job according to government and public requirements, the blurry lines of authority caused constant friction and confusion in the field. Exxon's contractors, from the shoreline cleanup company to the geologists hired by the company to work on surveys, naturally put the orders of the people who were paying them over the requests or orders of state monitors. The government, whether Coast Guard or state, was not in command of the response.[27]

The problem for the public was more confusing and in many ways, more acute. Members of the public found themselves directed to Exxon, not the government, when they requested information or some solution to a problem. In Cordova, for example, the spill response drained adults from the usual patterns of home and work, and after a while the town simply ran out of child care. The only licensed child care facility was swamped — first, because more parents were working more uneven schedules, and the demand for child care was up, and second, because there weren't enough child care workers. This was not just a matter of demand; it was also a matter of wages. Like many other small businesses throughout the spill area, the child care center could not pay wages high enough to compete with the $16.69 an hour available for shoreline workers.

The people of Cordova perceived this as a problem needing government intervention of some kind. The government was running a shoreline cleanup, and the shoreline cleanup was not the usual government public works project. It was, rather, a high-stakes environmental battle designed to protect the economic base of the region and the social system around it. This was about people's lives and families and towns — and naturally, the people wanted their public institutions to respond appropriately.

But Coast Guard commanders, however well-intentioned, are not equipped to deal with complex social problems — like meeting child care emergencies, or mental health problems, and so on. The Coast Guard admiral "in charge" of the response could not issue some order or tap some fund to mobilize an agency to help the Cordova child care facility.[28]

The Coast Guard's authority under the National Contingency Plan (NCP) is largely confined to the basics of pollution control (after all, the NCP's full name is the National Oil and Hazardous Substances *Pollution* Contingency Plan). And while the NCP charges the federal government with the task of protecting the public health and welfare in the event of a spill, health and welfare issues are not the Coast Guard's institutional strength. Essentially, the Coast Guard was acting as a pollution control agency, not an agency responsible for Exxon's actions outside of the pollution control operation, and not an agency responsible for solving social and economic problems far outside the chain of causation.

Eventually, the Cordova child care facility's managers found themselves negotiating with Exxon to find a solution to the child care crisis. Like vessel owners, local governments, and many other Alaskans who found themselves in a similar situation over the next few years, they found this arrangement curious and troubling: curious, because social problems caused by natural disasters are not the usual responsibility of private industry, and troubling, because there was no way for these members of the public to enforce accountability. Exxon certainly stretched outside the usual realm of private industry involvement in solving social problems. However, a private corporation is not the same thing as a public institution. In dealing with a public institution, citizens have some leverage through the democratic process of politics and elections; when dealing with Exxon, they had no leverage beyond their own negotiating skills.

It is questionable whether "federalizing" the spill under the laws at the time would have solved all the problems. However, it certainly would have given the state and the Alaska public a more precise and stationary target for negotiation on both the mechanics of pollution control and the solutions to social and economic upheaval caused by the spill and the response.

The obvious problems caused by the blurred lines of authority and control led to numerous calls for changes in national response strategy, from private citizens to Governor Cowper, from the Alaska Oil Spill Commission to the U.S. Congress.

"The spiller should not be in charge of a major spill," the Alaska Oil Spill Commission concluded flatly in 1990. "A spiller should be obligated to respond with all the resources it can summon, but government should command that response."[29]

The idea that "the spiller should not be in charge" of such a complex public action led directly to provisions in the federal Oil Pollution Act of 1990 that would give command authority to the government under circumstances similar to those during the *Exxon Valdez* disaster.[30] However, the federal government's role in directing the *Exxon Valdez* response remained essentially the same from start to finish.

1.3 State government organization[31]

The Cowper Administration adapted to the internal management challenges of the oil spill in a variety of ways. The front-line agencies such as the Alaska departments of Environmental Conservation, Natural Resources (DNR), and Fish and Game (ADF&G) all created special oil spill divisions or task forces, with separate staff and budgets. Other agencies, such as the Alaska Department of Labor, which oversaw worker health and safety on the shorelines, added additional temporary workers as needed. The Alaska Department of Law hired private law firms and devoted some in-house staff to oil matters exclusively. The Office of the Governor included an Oil Spill Coordination Office, and the Governor often consulted with an informal oil spill "mini-cabinet."

It was foolish to believe that the Exxon Valdez was just another issue for state government, but Governor Cowper felt it was important not to let the issue eat the government altogether.

However, the basic management premise was that state government is designed, institutionally, to deal with concurrent problems, issues, and crises — some foreseen, some not. It was foolish to believe that the *Exxon Valdez* was just another issue for state government, but Governor Cowper felt it was important not to let the issue eat the government altogether. Commissioners were to retain their usual discretion to manage their divisions; department staff retained their usual permitting and management authority. The oil spill coordinator in the Governor's office had no special authority to

direct commissioners or manage agency affairs.

Publicly, DEC was the front-line agency. And although the public nature of the response often put DEC technical staff in front of news media that demanded more than mere technical information, the department's managers protected technical staff from political or policy disputes. Whenever possible, appointed officials, such as the commissioner or a Governor's office representative assigned to the spill, would comment on policy developments or provide the public response to positions or charges made by outside parties. This was done partly to protect the professional integrity of technical staff and ease their working relationships with the Coast Guard and Exxon; relationships were strained enough as it was. But the separation of church and state, so to speak, was also designed to simply let DEC's people do their work with as few distractions as possible — they had enough to do as it was.

DEC duties and management structure

In terms of sheer volume, DEC had more to deal with, from the standpoint of personnel and resource allocation, than its sibling agencies. At the time of the spill, DEC had 296 employees overall. Within a few days, more than 30 regular staff were in Valdez, with dozens more handling various support and administrative tasks at DEC offices around the state. And of course, when someone was pulled off a task unrelated to the oil spill, someone had to cover, which meant yet another task lost staff attention temporarily.

"I could see right away we were going to burn our people out," recalled DEC's first on-scene coordinator, Bill Lamoreux. "We did well because we had everyone in the department working on it 20 hours a day."[32]

Obviously, that couldn't last.

Under normal circumstances, it would not be unusual for DEC to rotate full-time, permanent employees from scheduled tasks to spill response. At the start, that's what the department did with responders, including the state on-scene coordinator. However, as the shoreline cleanup plans started to come together, the exercise was becoming an undertaking of unprecedented proportions. In June, DEC appointed a former Alaskan and EPA official, Steve Provant, to the full-time job of state on-scene coordinator.[33] The department also designated the *Exxon Valdez* Oil Spill Response Center as a separate entity within the department. It remained separate, with a full-time coordinator position staffed from outside the department, until being merged with the department's Pipeline Corridor Regional Office in spring 1992.

By the final spring of shoreline cleanup in 1992, the Oil Spill Response Center had a staff of 12 doing a mix of shoreline monitoring, project close-out, and legal documentation. But just three years before, the operation was among the largest in state government.

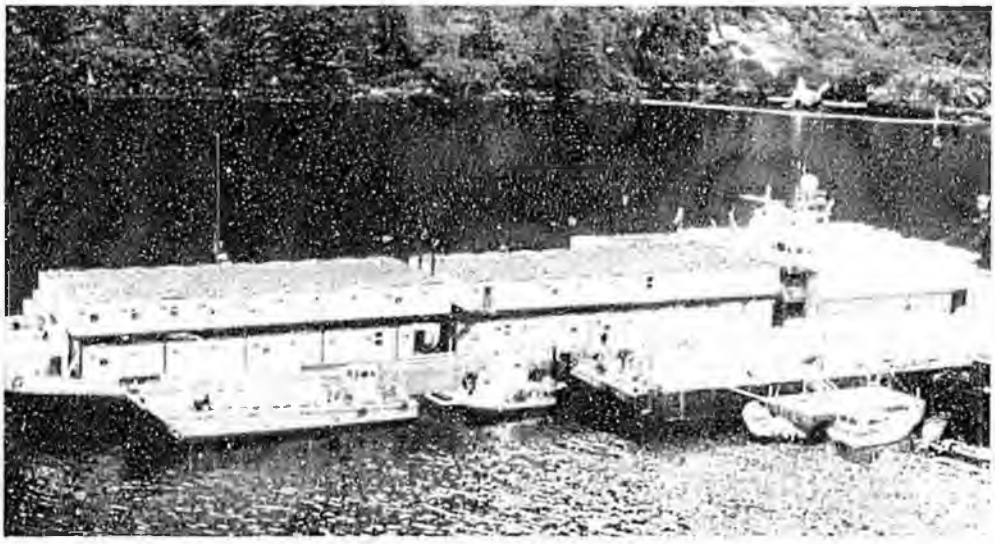
In early May 1989, DEC received authorization to hire temporary employees to fill out its ranks on the oil spill. In raw numbers, more than 150 people were assigned to the oil spill alone during the peak of the response in the summer of 1989, and that number does not take into account an additional 50-60 who worked occasionally or

ADEC staffing statistics for spill response, summer of 1989

Temporary staff	150 persons plus part-time
Shoreline monitoring staff	60 persons
Overseers for oily solid waste handling	6-10 persons
Seafood inspection	12 inspectors
Payroll billings	nearly $6 million

part-time on the project.

The spill response center was based in Valdez, and maintained regional offices in Seward, Homer, and Kodiak. These offices included field monitors, field managers, and clerical support. They also included computer mapping experts and technicians, a group assigned to monitor the storage and disposal of solid oily waste, a small group to work as agency staff or liaisons on dozens of state and federal scientific monitoring programs, a special public information team, and an entire section devoted to finding housing, handling payroll and procurement, and paying bills and billing Exxon.



Quarters for the thousands of spill response workers at remote sites included arrangements such as these trailers atop barges. Photo by Rob Schaeffer

Some of the department's tasks were intuitively obvious, such as carrying out its specified regulatory duty to oversee cleanup operations. As the Exxon shoreline presence grew to several thousand workers and vessel-based support crews,[34] DEC had to expand its shoreline monitoring capabilities. On May 1, there were eight staff assigned to shoreline monitoring; six weeks later, staffing was up to 40, and by August it peaked at 60. These were the people who lived on the crew vessels and walked the beaches, noting whether the work was going as it should and reporting on conditions. Again, this group was a mix of DEC veterans and new, temporary hires. The department (as well as ADF&G and DNR) attempted throughout the spill to maintain continuity in staff assignments, especially on the shorelines.

And with anywhere from 2,500 to 3,000 people living and working on vessels and in remote sites,[35] DEC had to maintain staff to inspect the sanitation systems, cooking and food storage facilities, and drinking water systems for the work crews. The department reviewed almost 150 plans and conducted more than 120 site inspections during the summer of 1989.

DEC was responsible for making sure other departments did their accounting on time and correctly, as well, so that the state could recover its costs from Exxon. DEC was the principal source of cash flow for state oil spill response for nearly the entire three years.

The handling, storage, and transportation of roughly 30,000 tons of oily solid waste generated by the cleanup required the full-time attention of 6-10 workers in 1989, and an additional dozen full-time seafood inspectors stepped up oversight of tenders, processing plants, and product throughout the spill zone.[36] A significant problem was presented by the hundreds of fishing vessels that were working on oil spill response. Many of these vessels left the oil spill navy to work fisheries that were open. DEC required that any vessel making the switch from oil to fish had to undergo hull, gear, and hold inspection; the department conducted 280 such inspections in 1989.

DEC's *Exxon Valdez* employees dropped to 80 at the end of 1990, 30 during the 1991 cleanup season, and 20 during the summer of 1992 (including several who worked full- or part-time on restoration). Throughout the response, there was an effort to rotate permanent, full-time employees through the ranks, and most of the top technical managers were longtime department employees.

Employees were scattered around the spill area, on vessels, shorelines, and in field offices. Much of the communication among workers and supervisors was by hand-held VHF radio, facsimile machines (even aboard vessels), radio telephone, and regular land communication. Paperwork demands increased, rather than decreased, with the emergency, in part because of extensive documentation requirements for purchases and payroll, and the need to keep track of oil spill expenses separate from general

department activities.

The demands of the project, the conditions, the communication systems and the general atmosphere of urgency all combined to cause a variety of management problems. Normal scheduling was difficult; overtime costs were high; financial tracking and property control had gaps.

Administrative staff were constantly struggling to keep up with billings and documentation, since the state was sending invoices to Exxon for reimbursement of state expenses. Payroll alone accounted for nearly $6 million in 1989 billings, and almost $14 million through June 1992.[37] Payroll staff not only had to insure that the wage claims were precisely documented, but they also audited the original payroll requests to make sure overtime, leave time, health benefits, etc. were correct.[38]

DEC was responsible for making sure other departments did their accounting on time and correctly, as well, so that the state could recover its costs from Exxon. DEC wound up with this task because it was the principal source of cash flow for state oil spill response for nearly the entire three years. At first, state agencies responding to the spill paid their workers and purchased supplies from state general fund revenues in the usual agency budget. Then, responding to the growing cash-flow crisis, the state Legislature in late April made a special appropriation of $20 million to the state's Oil and Hazardous Substances Release Response Fund (known in government vernacular as the "470 Fund" because of the number of a legislative bill modifying the fund several years before). DEC used the "470 Fund" as its source for cash flow, as did other agencies,[39] then sought reimbursement from Exxon. This was the basic financial arrangement throughout the spill.[40] It didn't always work smoothly, as both DEC and other departments often had large backlogs of billings for Exxon. Gaps in documentation, or delays due to the crush of the original billings, often slowed the reimbursement system down. Exxon also sent back billings from time to time, requesting more complete documentation or questioning some items. Some billings the company simply refused to reimburse. For example, if passenger manifests for any DEC overflight included a single member of the news media, Exxon would reject the billing.[41]



Response personnel review of part of the 30,000 tons of oily solid waste generated by the cleanup in 1989. Photo by Rob Schaeffer

The state received just under $80 million from Exxon in reimbursements based on state billings during the three years of the response. An additional $27 million in unbilled expenses were repaid to the state treasury out of the $1 billion state-federal claims settlement with Exxon, and at this writing (spring, 1993) roughly $30 million in additional reimbursement is outstanding.

DEC made a number of internal changes to deal with the special demands of the spill response. The department's actions showed how the agency could be flexible, but it also pointed out some things that DEC was not and is not.

For example, there was a strong and insistent public demand for development and testing of oil spill response products. DEC did organize a task force in its Treatment Technology section within the oil spill response center to evaluate many of the proposals that came in. However, this effort did not extend too much beyond evaluation of proposals, or

determining whether the scientific information submitted to the department looked as if it were done to accepted scientific standards. DEC was not designed as a research and development agency, even in what might be called "peacetime." The state government does not have an agency that serves this type of function.[42]

There was also a demand, primarily from within the state-federal-Exxon response organization, for the state to provide basic scientific advice or consultation. Again, DEC did not necessarily have those scientific resources in its organization. DEC is a technical agency, as opposed to a scientific agency. This may seem like a semantic subtlety, but it really is quite important. DEC oversees waste management systems, hazardous site cleanups, air quality, drinking water and sanitation, and so on. This is a job primarily performed by engineers, or specialists with varied scientific or technical training. The department had a lot of professional engineers, but few, if any people with advanced degrees in microbiology. DEC's oil spill office waxed and waned on its commitment of people and resources to science or other research. Ultimately, the state's spill managers decided that its resources and personnel were stretched thinly enough without trying to launch a major new enterprise outside the traditional realm of agency operations and expertise.

The state-federal-Exxon oil spill structure brought together a number of people to work on a given problem, or set of problems, but the technicians didn't always bring the same set of tools to the table. Metaphorically speaking, one might come to the table prepared to discuss the best way to drive a nail, only to discover that the rest of group only had wrenches, and didn't think nails were particularly effective fasteners in the first place. This occasionally led to breakdowns in communication and sharp differences of opinion among the response agencies.[43]

Alaska Departments of Fish and Game and Natural Resources

The Alaska Department of Fish and Game had a smaller, less visible continuing presence than the DEC, but its involvement came at a number of critical levels, and its influence on the response was the most profound, in many ways.



Dead, oiled ducks mark the high tide line at Puale Bay on the Alaska Peninsula in May of 1989. Photo courtesy of the Exxon Valdez Restoration Office

Officially, the department's response organization was split between the Division of Habitat and what later became the Division of Oil Spill Impact Assessment and Restoration (OSIAR).

The OSIAR division was the initial recipient of $10.8 million in 1989[44] to begin independent assessment of the damage caused by the spill. Fish and Game had received some earlier funding for damage assessment study when it appeared that the federal government, the state, and Exxon would conduct damage assessment jointly, with primary funding from Exxon. This arrangement fell apart quickly as litigation loomed larger. The governments and Exxon chose to pursue independent courses of damage assessment.[45]

From the standpoint of response management, the damage assessment program rarely emerged. The governments intended to use the study results to prosecute their natural resource damage claims against Exxon, and therefore data from the studies were held confidential. Access to damage assessment data was extremely restricted, although the state on-scene coordinator was able to receive occasional briefings if he felt damage assessment might aid in making a specific response decision. However, it appeared that despite limited circulation of biological damage assessment to DEC, Fish and Game response personnel had regular access and could provide information to other state responders.[46]

Interaction between federal responders and damage assessment personnel was even less frequent, if it occurred at all. The federal on-scene coordinator in both 1990 and 1991 said many times, in public and private, that not only did he not have any damage assessment information, but furthermore, he did not *want* any.

Despite the heavy investment in Fish and Game's damage assessment, and its status as the sole, detailed government program to figure out how the oil spill might have affected natural resources, it was virtually invisible to the public and barely visible to the response organizations.

So, despite the heavy investment in Fish and Game's damage assessment, and its status as the sole, detailed government program to figure out how the oil spill might have affected natural resources, it was virtually invisible to the public and barely visible to the response organizations.

Fish and Game's public point of contact during the response was primarily the Division of Habitat. Fish and Game biologists played a central role in setting the priorities and schedules for cleanup, particularly in 1989.[47] They also conducted specific monitoring of conditions at anadromous streams throughout the spill, and served as the state's cleanup monitors (often in DEC's stead) at anadromous streams.

Other Fish and Game divisions were the focus of some of the response's most difficult issues, such as the widespread commercial fishing closures of 1989, and the effect of the spill and response on subsistence foods and harvest patterns. However, on most issues, at most times, Fish and Game dealt with the principal state and federal response agencies through the habitat division.

Fish and Game faced the same problems as DEC when it came to committing staff to the oil spill effort.

At the outset, many of the staff dispatched to the oil spill were mid- and upper-level managers. The oil spill was the biggest thing on everyone's plate, but it was open-ended, and the government — at all levels — simply could not put everything else on hold all around the state while key people dealt with oil spill issues in Valdez, Cordova, Homer, Seward and Kodiak. Key managers had to go back to managing the rest of the state's programs. Similarly, as the project geared up, it was obvious that it was going to take a long time and a lot of people; Fish and Game, like DEC, simply could not pull away its permanent staff from all projects for an unlimited period of time.

During the first two or three months, permanent staff originally detailed to the oil spill were "called home." New people were rotated in. This solved one problem and created another — a problem that nearly every organization involved in the spill had to deal with at one time or another.

The new problem was that the new people were coming to a fast-paced and highly charged project. The learning curve was steep and the time was short. The "rotation" problem was slowing down and confusing the response, as new people asked old questions that had been discussed, debated, and resolved before they arrived.

As noted above, DEC undertook a massive temporary hiring program. However, most of the DEC field jobs were basic monitoring positions; they required some technical background, but essentially people had to be able to observe and report, as opposed to interpret and recommend.[48]

Fish and Game would also attempt to solve its staffing problems by hiring temporary employees intended to work solely on the oil spill for the life of the project. However, Fish and Game's role was more immediately technical, which made its staffing problem more difficult to solve. While the department needed some entry-level workers (fisheries technicians), it really needed experienced fisheries biologists who could speak with authority within the growing number of resource assessment teams

and technical advisory organization

As the Fish and Game's lead representative on the project explained later, "The state's administrative procedures are designed to provide an objective evaluation process for selecting applicants; they are not designed to facilitate hiring itself."[49] The state's hiring system puts an emphasis on giving every applicant an even break; it does not necessarily give supervisors the ability to hire the best qualified applicant in the shortest amount of time.

The state system does allow an agency to make an emergency hire (and the oil spill unquestionably qualified as an emergency), but the rules say an emergency hire is good for only 30 days[50], after which time the agency must go back and hire off the certified state list of qualified applicants.[51]

DNR monitors either augmented DEC's presence on the shoreline or served as a region's front-line cleanup representative.

Fish and Game had an additional problem: The oil spill created a bull market for biologists as agencies, Exxon, and consultants scrambled to add people to collect samples, undertake studies, and provide expert advice. The same people on Fish and Game's registers were being simultaneously recruited by consultants (many on contract to Exxon), who had more flexibility when it came to negotiating pay and other terms with an employee. It was, at first, difficult to get a commitment from some of these people until they had examined and exhausted other options.

Fish and Game got around these problems, in many cases, by calling former department staff out of retirement. These retirees were frequently biologists with two or more decades of experience in Alaska (one was a former commercial fisheries division director), which provided them with considerable authority. They also knew the state management system and general department policies and procedures, which made it easier to integrate them into the operation. Fish and Game would hire these people on an emergency basis, then, during the next 30 days, get them back on the registers, where they could be legally hired beyond the 30-day emergency limit.

The Department of Natural Resources (DNR) formed a special section within its Division of Land and Water Management (now the Division of Lands) to coordinate with DEC on land uses and cleanup priorities, but the division primarily reassigned permanent staff. In addition, much of the department's presence came from the Division of Parks and Outdoor Recreation, the custodian of a dozen small state park sites in Prince William Sound, the wild and largely unknown Shuyak State Park at the north end of the Kodiak archipelago, and the Kachemak Bay Wilderness State Park, which abuts the Kenai Fjords National Park on the Kenai Peninsula. DNR monitors either augmented DEC's presence on the shoreline or served as a region's front-line cleanup representative. The difference was largely dependent on personalities and land ownership patterns in a given area; in both the Homer and Kodiak cleanup zones, the primary state interests outside of anadromous streams were the state parks. The rangers there served as primary state representatives on regional advisory committees, or worked interchangeably with DEC staff.

The parks division also had one of the least visible — for a reason — roles in cleanup planning. The division's archeologists were in charge of making sure that cleanup activity did not disrupt or destroy archeological sites, and that workers did not take artifacts. They worked directly with their federal government counterparts on a special cultural resources committee, and did not usually interact with DEC, except during budget discussions.

DNR and Fish and Game components of the spill response were the largest outside of DEC throughout the response. Other agencies, such as the Alaska departments of Labor, Administration, and Community and Regional Affairs, would enter the management structure at various points, but generally it was to provide a specific service to the organization, not to claim a separate authority. Funding was for specific and recognizable purposes, easy to track, and in relatively small amounts.[52] Some additional personnel were hired on a temporary basis, but most agency staffing outside of DEC was handled in-house.

The Office of the Governor

Governor's Office of Oil Spill Coordination duties

- Head state's participation in National Transportation Safety Board proceedings
- Oversee how state agencies dealt with spill-related issues
- Manage the $35 million special appropriation by the Legislature to the Office of the Governor
- Troubleshooting
- Serve as Governor's point of contact with Exxon management for business matters

The state had a number of projects or responsibilities that were not DEC's job. DEC (and other agencies) had a general responsibility to collect and properly handle information, samples, and other items that could be used in litigation, but the department was not responsible for implementing legal strategy. DEC commissioner Kelso said the state's legal team maintained its distance from DEC and did not ask it to take any specific actions, other than to document events and handle its oil samples in ways that would meet legal standards for submission as evidence in court.[53]

Governor Cowper felt that the oil spill presented several tasks that did not fall neatly into the operational plans of any of the state agencies, and that the executive office should coordinate them. However, he did not want a new level of authority inserted between his commissioners and him.

In early May, the Division of Emergency Services, in the Alaska Department of Military and Veterans Afairs, suggested that it serve as the government's overall coordination arm for executive branch oil spill matters. Cowper did not think that appropriate. Instead, on June 1, he appointed Dr. Robert LeResche, director of the Alaska Energy Authority and a former DNR commissioner, to the job of managing everything that didn't fall under regular agency operations.

LeResche's Office of Oil Spill Coordination had two sets of tasks, one that was sharply defined and one that was more free-form.

LeResche became the project manager for the state's participation in National Transportation Safety Board proceedings on the grounding of the *Exxon Valdez*. LeResche and his immediate staff, working with the attorney general, prepared the state's basic finding of fact about why the accident happened. He was the state's chief representative on the panel that conducted hearings in Anchorage that summer.

LeResche was also responsible for looking at how state agencies were dealing with spill-related issues, from internal management policies to field cooperation and data collection. His staff was to make sure that the state's management actions and response strategies were consistent with each other. This ranged from making suggestions about how departments handled overtime, to what kind of computer software they used to collect information about the spill. Normally, there is no pressing need to make every agency do everything exactly the same way; management or computer procedures that are efficient in the revenue department may be completely wrong for the fish and game department, and so on.

But in the case of the oil spill, it was important that data was collected and presented in a uniform manner The state was billing Exxon for all its spill-related expenses, and it was important that fish and game's payroll or purchasing information looked the same as the information from the labor department; discrepancies could lead to delays or rejections of reimbursements. Also, maps and field notebooks and photos, all of which might be used in some aspect of legal proceedings, had to be treated and handled the same throughout the government; inconsistencies or discrepancies could cause confusion, or cause some information to be thrown out. And finally, of course, it was important to make sure that departments weren't duplicating each other's efforts. While certain clusters of agencies — the resource agencies, for example — are in frequent contact with each on a routine basis, rarely do so many state agencies wind up working on the same project at the same time; at least 13 of the 16 state departments were involved in some way on the spill response.

LeResche was also the manager of the $35 million special appropriation made by the Legislature to the Office of the Governor. This amount of money was far beyond the Governor's usual budget, and more than many agencies spend in a given year. Governor Cowper wanted to make sure the money was distributed efficiently and accounted for properly.

The second set of responsibilities was less well-defined, falling into a category that could best be described as general trouble-shooting. LeResche took over day-to-day management of Governor's Office personnel who had been in the field since early in

the spill. These people were supposed to stay somewhat in the background, serving as part observer and part safety valve, helping to break administrative logjams or handling questions that could slow down or distract regular agency personnel. For example, a fish biologist in a field office really wasn't equipped — either in terms of authority or resources — to handle complaints about the child care center funding, or the need for an extra state trooper to deal with trouble among all the transient workers in town. The Governor's office representatives were not in Valdez, Cordova, Homer, Seward and Kodiak to manage the spill operations; they were there to serve as community liaisons and work with the local governments.

LeResche's last major job was to serve as the Governor's point of contact with Exxon management for business matters, as opposed to technical response issues. LeResche worked with Exxon on reimbursement for state expenses. He also helped negotiate some of the preliminary payments by Exxon to Alaska commercial fishermen whose fisheries were shut down because of the oil.

LeResche's office did not coordinate all aspects of the response for the executive branch. Its focus was more on administrative, legal, and fiscal matters, while actual response policy and technical coordination was left to DEC. Agency staff outside of DEC were not always satisfied with DEC's ability or efforts to coordinate response policy for the government as a whole. Fish and Game, in particular, felt that DEC would lapse into a pattern of tending its own institutional needs first, sometimes taking technical positions that were directly contrary to Fish and Game's.[54] Some of these disputes might be considered garden-variety intramural arguments, although others were serious enough to suggest that in a catastrophic spill, the state might consider some modifications to its basic management procedures.

1.4 The joint response

The government was in charge of making sure Exxon conducted the cleanup properly. But there was not just one government, of course: Federal, state, and even some local government entities had various authorities over cleanup activities, land use, or resources.

Essentially, Exxon would come up with a proposed cleanup plan, which would be distributed to affected agencies and landowners for review and comment. The state and federal on-scene coordinators would confer and alter the plan, based on the comments, then authorize Exxon to proceed.

The authority was not always drawn clearly and sharply in the law. The federal and state governments in Alaska have a long-running legal battle over who owns the land underneath rivers and lakes. A series of court decisions has solved a few pieces of the issue, but the matter of who owns the tidelands has not been hashed out. Lawyers from the state and federal governments, working in the context of the *Exxon Valdez* spill, agreed not to argue about this particular issue when it came to pursuing and collecting money from damage claims from Exxon. Thinking practically, they realized that a squabble over tidelands ownership could not only hurt damage cost recovery, but it could certainly slow down disbursement of whatever was collected; the submerged lands cases usually take years of litigation to resolve.

When it came to sorting out authority over cleanup, there was an equally practical reason for putting aside issues of who held ultimate control of which decisions. A joint response, directed by the Coast Guard with high-level assistance from DEC, made more sense. DEC and other state agencies retained their regular statutory authorities — Exxon still needed approval from Fish and Game to work around salmon streams, or from Natural Resources to operate on state lands, or from DEC to burn logs, for example — but basic cleanup orders would be harmonized in a single work order to Exxon from the federal on-scene coordinator. In mid-April, DEC commissioner Kelso met with Coast Guard commandant Yost, who assured the state that Coast Guard decisions would be "in concert and in consonance" with state requests and requirements. In theory, all state agencies funneled their requirements through the state on-scene coordinator, and all federal agencies put theirs through the federal on-scene coordinator.[55] The two coordinators would then work out a common set of priorities.

The legal issue lurking behind this practical agreement concerned "pre-emption" of state law by the federal government. In very broad terms, a state may impose stricter (or simply different) environmental cleanup requirements than those of the federal government, as long as the state rules do not conflict with the federal ones. So theoretically, on the shorelines, the state could hold a crew on a work site to do more work, even if the federal monitor was satisfied.

But wait: If the federal manager decided to move anyway, he might be able to argue that the pressing need for basic federal cleanup at another site might be jeopardized if the crew stayed to do the state-ordered work. A court might agree. Again, in very broad terms, the state probably did not have the authority to unilaterally divert resources from the federal-directed cleanup to a state-directed work order.



Coast Guard on-scene coordinator Rear Admiral Dave E. Ciancaglini speaks to the public and panel, while DEC Commissioner Kelso listens, during an oil spill operations meeting in Anchorage.

Photo courtesy of Oil Spill Information Center

Ultimately, the state had the authority to require Exxon to conduct cleanup to state requirements, but when resources were limited or the timetable tight, federal authority to conduct its cleanup probably superseded the state authority.

While the lines of authority in the cleanup issue might have been in better focus than those in the submerged lands issue, they were still not always crisply or boldly drawn. In the real world of the cleanup, on the beaches, the state and federal monitors were in constant negotiation and consultation about how much Exxon ought to do at a particular site at a particular time.

However, in April of 1989, the emergency was bigger than the jurisdictional questions. On April 20, Vice Admiral Clyde Robbins, the Coast Guard's Pacific Region commander who had taken over as federal on-scene coordinator, announced a spill management structure that would remain largely intact for the duration of the spill response.

Essentially, Exxon would come up with a proposed cleanup plan, which would be distributed to affected agencies and landowners for review and comment. The state and federal on-scene coordinators would confer and alter the plan, based on the comments, then authorize Exxon to proceed. When Exxon had implemented the plan, the state and federal coordinators would assess whether the work was done properly, or whether it needed to be modified. This flow pattern was the same whether the issue was a general, area-wide work plan or a site-specific cleanup order.[56]

The state had several primary concerns. First, the state made sure that all its affected agencies maintained their respective permitting authority. Alaska was agreeing to let the Coast Guard coordinate the massive response, but the state was not giving away its statutory right to review and approve activities on state lands, to regulate air and waste disposal, or to protect fisheries habitat.

If Exxon wanted to burn debris, DEC maintained its authority to review the burn plan and make sure that it met state air quality standards, and that Exxon applied for

and received the proper permit. If Exxon were to work in or around a salmon spawning area, the Fish and Game department maintained its authority to permit and monitor the activity. If Exxon were to work on state-owned lands, Natural Resources retained the right to issue a land use permit.

The permitting authority was the clearest and most effective way for the state to control cleanup activity, and it wound up playing an important role.

The response would be extremely disruptive to the local environment. With the state retaining permitting authorities, the Alaska public had a way to insure that the "fallout" from cleanup activities was acceptable to Alaskans in the area. All the state permits were subject to public comment and review, and in some cases, the preferred course of action by Exxon or the federal government was unacceptable to local residents.[57] The permitting process gave citizens access to important decisions affecting the public lands and resources.

The Interagency Shoreline Cleanup Committee

A second point of entry into the process for the public was the Interagency Shoreline Cleanup Committee (ISCC), formed by order of Vice Admiral Robbins on April 20. Robbins gave formal standing to an ad hoc group of agencies and citizen groups that had come together to help Exxon and the governments plan shoreline cleanup operations. The elevation of the group to advisory status to the federal on-scene coordinator was a departure from normal procedures; usually, the federal on-scene coordinator depends on the scientific support coordinator (currently the National Oceanic and Atmospheric Administration, or NOAA) to advise him on the resource considerations and impacts of cleanup.

The ISCC consisted of state and federal resource agencies, plus representatives from established commercial fishing organizations, the regional Native corporation, and a private conservation organization. Each region (Prince William Sound, Kodiak, Homer and Seward) had an ISCC, and specific membership varied depending on principal land ownership patterns and resource interests. The National Park Service, for example, had a primary federal role in the Kodiak, Seward, and Homer ISCCs because of the Kenai Fjords National Park, and the Katmai National Park and Preserve on the Alaska Peninsula. The U.S. Forest Service had a greater federal role on the Prince William Sound ISCC because much of the land adjoining the Sound is in Chugach National Forest. In all cases, the three state resources agencies — DEC, Fish and Game, and Natural Resources — held seats on the ISCCs.

With the state retaining permitting authorities, the Alaska public had a way to insure that the "fallout" from cleanup activities was acceptable to Alaskans in the area. All the state permits were subject to public comment and review.

These groups reviewed Exxon cleanup plans and government strategies, established priorities for cleanup, commented on what techniques they preferred, and evaluated the results of cleanup. They made specific recommendations to the federal on-scene coordinator about work orders, determined appropriate buffer zones and the timing of work to protect wildlife, and noted specific resources uses at certain areas, such as tourism or recreation. In addition, archeologists from the governments and Alaska Native organizations made recommendations about delicate cleanup of important archeological sites.

Within the ISCC, federal and state authorities for resource management were not too difficult to sort out or synthesize. While specific responsibilities varied — the U.S. Fish and Wildlife Service manages eagles and migratory birds, NOAA manages marine mammals, and Alaska Fish and Game manages salmon and other commercial fish species — the wildlife managers had generally similar concerns and goals. They were able to agree on critical dates for cleanup deadlines (early to mid-May for seal pupping habitat, early to mid-July for Prince William Sound salmon species, for example) and wildlife protection buffers (several hundred yards around eagle nests, up to three miles for some marine mammal haul-outs) and their priorities generally did not compete with each other's. The regional flavor of the ISCCs also meant that federal or state agencies played lesser or greater roles based on a regional consensus about who had

the greatest problems presented by the oil spill. The Seward group, for example, had strong leadership from the local national park superintendent, while in Kodiak the managers of the national wildlife refuge and the state commercial fisheries managers set much of the governments' agenda.

Exxon and the ISCC members formed what became known as the Resource Assessment Teams, or RATs,[58] that spent much of the first several months doing the field work to find out what areas were affected, how badly they were oiled, and how well work crews were doing their jobs. Again, like the ISCC, the assessment teams had basic public and resource agency representation depending on who was available, who owned the uplands, and which kinds of wildlife habitats were being surveyed. Exxon added consultants from various disciplines to the mix, and assessment team and ISCC members tended to coalesce around specific disciplines — fisheries biology, geomorphology, archeology, etc. — rather than agency or institutional interests. Certain agencies had nominal "lead" designations — NOAA as the group's chair, DEC as the lead state agency — but in actual deliberations, the "lead" was frequently determined by consensus, based on the specific issue or site under review. The structure and activities of the ISCC were, as a result, practically fluid and basically democratic.

The members of ISCC viewed their organization like this:

"The Interagency Shoreline Cleanup Committee was:

- A participatory, interdisciplinary, interagency resource that included Exxon for planning input on decisions affecting shoreline cleanup;
- A forum for ecological, cultural, and social resource identification;
- A forum for setting resource and work priorities;
- An on-scene planning body;
- A public component of the planning [and] decision-making process;
- A primary advisor to the federal on-scene coordinator;
- A consensus-building group;
- A focus for Prince William Sound shoreline cleanup."[59]

Vice Admiral Robbins gave formal standing to an ad hoc group of agencies and citizen groups that had come together to help Exxon and the governments plan shoreline cleanup operations. Each region (Prince William Sound, Kodiak, Homer and Seward) had an Interagency Shoreline Cleanup Committee.

This is not to imply that the ISCC deliberations, and the relationships among agencies, were a consistent exercise in peace, love, and understanding.

One of the basic problems that took some time to overcome was the fact that many of the people sitting on the ISCC were unfamiliar with the national oil spill response structure, the role of the Regional Response Team and the federal on-scene coordinator, role of state and other federal agencies, etc. The blurry lines of authority that confused the general public occasionally confused ISCC members.

The paper cited above refers somewhat obliquely to other problems with the ISCC structure. It notes that "differing agencies had differing expectations" about cleanup planning and approaches, which is a polite way of saying that some things that concerned some agencies were viewed by others as lower priority, at best, or unimportant or uninformed, at worst. Some of the NOAA personnel assigned to spill management and strategy were openly hostile to state agency suggestions and condescending in dealing with Alaska officials. NOAA's principal field representative went so far as to publicly accuse the state of being "vindictive" in its cleanup recommendations, and questioned whether Alaska was trying to punish Exxon through the cleanup.[60] This attitude did not set the tone for positive discussions and "consensus-building."

The paper also notes a "lack of clarity" on the issue of who actually spoke for his or her agency or government as a whole, and mentions a problem with "maintaining continuity" of agency representatives on the committee. The "lack of clarity" issue was a big one, especially in the view of the Coast Guard coordinators and the federal on-scene coordinator himself. Vice Admiral Robbins frequently expressed frustration at hearing from several state agencies on a single issue, rather than hearing a synthesized State of Alaska position. In addition, some agencies (including the Coast Guard) rotated representatives in and out of areas and jobs; in other cases, weather and staff shortages would require that new agency people stand in for those who spent most of

their time with a given committee or assessment group. A new agency staffer, hearing the details of an issue for the first time, might not arrive at the same position as his or her predecessor who was negotiating an agreement or providing one of the building blocks of consensus on a given issue.

The ISCC system also moved slowly for a variety of reasons. Information did not always move quickly from the field, to the ISCC, through the federal on-scene coordinator and back to the field.

"Coordination with the Resource Assessment Team (RAT) is not what we had hoped it would be," DEC's contractor reported at the end of May. "By the time feedback gets back to the proper channels to the Inter Agency Shoreline people, most of the issues are moot."[61]

The meetings were long (often several hours) and frequently were held twice a day. Like any committee with a number of members, there was a great deal of discussion. The meetings were also open to the public, which added another level of discussion and explanation. Agency staff on the committee were working 14 to 16 hours a day;[62] regardless of whether this was a management problem or a simple lack of manpower to deal with a massive number of tasks, the result was that people were tired, not eating properly, and patience frequently ran thin.

The ISCC was an innovative departure from established response planning practices. State of Alaska officials liked the ISCC, and so did the members of the public who attended the meetings. Yet the ISCC system didn't last past the first summer of cleanup.

Even considering the problems, the ISCC was an innovative departure from established response planning practices. State of Alaska officials liked the ISCC, and so did the members of the public who attended the meetings. The ISCC had a structure that was familiar to government managers and the public at-large. The public's business was being done largely in public, and government agencies with various resource management authorities were hashing out their differences and finding common solutions within the confines of understandable p[illegible]res for state and federal government coordination.

Yet the ISCC system didn't last past the first sum[illegible]er of cleanup. In February 1990, at a mid-winter meeting among the response organizations in Newport Beach, California, Exxon proposed a number of structural changes, including some modifications to the way in which information flowed through resource agencies and the public to the Coast Guard.

The ISCC and its support structure (specifically, the resource assessment teams) were the focus of a developing struggle for influence and control over both cleanup policies and their implementation in the field. Two major blocs began to form: the first included Exxon and the Coast Guard, along with NOAA, and to some degree, the U.S. Forest Service; the second included state agencies and public interest groups and local governments.

The state-public bloc in the fall of 1989 proposed that the ISCC's policies and procedures be updated based on 1989 field experience, and advocated that the ISCC's role be clarified and strengthened. State agencies, such as Fish and Game, felt that the ISCC had served as a powerful counterbalance to the federal government and Exxon, and that the ISCC had helped insure that Alaska's interests were best blended with federal goals.

The federal-Exxon bloc did not always share the state-local position. "NOAA, along with the Coast Guard and the U.S. Forest Service, frequently supported Exxon's efforts to dictate policies and procedures," Fish and Game's ISCC representative reported in his summary of the department's involvement in 1989-90.[63] State representatives felt that the ISCC provided a forum in which debate among equals could produce acceptable compromises for all.

"There were times when total agreement on priority or treatment methods could not be reached. In those cases when they could not reach a consensus, the final vote was decided by a simple majority. More often than not, some kind of compromise was worked out," one of DEC's technical representatives reported.[64]

The ISCC would not survive the winter.

The Technical Advisory Group

The Technical Advisory Group (TAG) was not originally intended to eliminate the role of the ISCC or their institutional cousins, the Multi-Agency Committees (MACs)[65] The stated goals for the creation of the TAG were to streamline the decision-making process and focus cleanup recommendations on technical questions, as opposed to policy issues. It probably accomplished one of the goals — streamlining decision-making — but it never was able to fully separate policy considerations from technical points, and it never truly harmonized the principal goals for cleanup.

The TAG was created in February 1990 in Newport Beach, California, where federal, state and Exxon officials met to discuss the principal technical issues facing responders in the coming summer. The two days of meetings dealt with the distribution of oil on shorelines, the chemical composition of the weathered oil, and the use of fertilizers to enhance natural degradation. The group also discussed plans for the spring survey, and how the information from the survey would translate into work orders on the shorelines.



The general public and the press were free to attend the Interagency Shoreline Cleanup Committee meetings. The Technical Advisory Group, however, held meetings closed to the public by the order of the federal on-scene coordinator. The TAG was created in early 1990 and eventually replaced the ISCCs.

Photo courtesy of the Oil Spill Public Information Center

This is where the TAG emerged, although at the time it did not seem as if an entirely new decision-making body was being born. The "cooperative" approach to technical decision-making did not seem to exclude an ISCC review. It did, however, alter the way in which the parties would survey shorelines.

In the fall and early winter of 1989, DEC and other state agency monitors walked literally every mile of affected shoreline, noting oiling distribution and characteristics. The state survey paid special attention to locating and describing oil that had been buried, or been driven, below the beach surface. Exxon proposed that the spring survey be done jointly among state, federal, and Exxon representatives, so that data collected would be in a similar format, and evaluations of conditions would be conducted at the same places at the same times.

There were really two slightly different sets of information on which cleanup decisions were based. The first was an assessment of the resources at risk, and the priority uses of the shorelines; the second was an assessment of what cleanup technique worked the best on a given problem. In 1989, both of these sets passed through the ISCC. The resource assessment teams collected one set, and Exxon's shoreline cleanup assessment teams collected the other. The ISCC looked at both and came up with a recommendation for cleanup to the federal on-scene coordinator.

The Newport Beach proposals for 1990 operations were different. Resource assessment was still an integral part of the decision, but, presumably, that assessment would

not change from year to year; a shoreline segment close to a spawning stream or a nesting area or a subsistence use area had the same attributes in 1990 as in 1989. The change would come in the distribution and composition of the oil stranded on (or under) the shoreline. Therefore, the principal point of discussion for 1990 would be strictly technical, i.e., What are the oiling conditions and what is the best way to treat them?

Fish and Game and Natural Resources did not like the fact that they did not have the same access to the decision-making table with the TAG. DEC would, theoretically, serve as Fish and Game's conduit to the federal on-scene coordinator.

And rather than have each agency collect its own technical information, the proposal was to collect it together and work from the same set of observations for each shoreline.

State on-scene coordinator Steve Provant and the DEC staff at the meeting viewed this arrangement as an improvement over the previous year.[66] The joint survey meant that DEC would be there on the shoreline, shoulder to shoulder with both the federal government and Exxon, giving the state more influence over what information went into the reports and how it was described. The ensuing technical discussion would also give the state a more direct line to the federal on-scene coordinator on technical matters. It was, actually, a more active and direct role for DEC than its usual monitoring-oversight responsibilities in a federally directed response.

Members of the ISCC, including other state agencies, would not view this arrangement in quite so positive a light. The ISCC had met in October of 1989 to work out its suggested improvements for 1990. The group planned to rewrite the shoreline cleanup manual it had produced earlier that year, adopt policies on bioremediation and other chemical cleansers, and otherwise tighten the loose bolts on the whole operation. The ISCC assumed that it would retain — or actually enhance — its authority as the principal forum for the government and the public to hash out the details and primary recommendations to guide the response.

But when the group met again on December 1, 1989, something had changed. The Coast Guard questioned the need for rewriting the shoreline manual, and NOAA, Exxon and the U.S. Forest Service agreed. These agencies took the position that the shoreline manual was an "historical document," rather than an active set of policy and technical guidelines in need of refinement.[67] When the group met in February, after the Newport Beach workshop, they were told of the TAG, although both Exxon and NOAA staff assured the ISCC that they still had a role to play. That role, however, was never defined clearly enough for many ISCC members, and it was certainly not the active role the group had played in reviewing operations and making recommendations during the 1989 season.



Cordova fishing boat protesting spill response policies at a demonstration in September, 1989.

Photo by Rob Schaelfer

The state agencies — Fish and Game and Natural Resources — did not like the fact that they did not have the same access to the decision-making table with the TAG. Whether by fact or by perception, DEC was assuming a much more pronounced role as the state's lead agency. DEC would, theoretically, serve as Fish and Game's conduit to the federal on-scene coordinator.

The public, defined primarily as local governments, commercial fishing, and conservation organizations, felt most left out. While they

were free to provide comment either directly to the federal on-scene coordinator or through the state on-scene coordinator, they were no longer at the negotiating and discussion table as they were in the ISCC.

Where once the major cleanup recommendations were hashed out in public, they now were debated behind closed doors; where the chief advisory group had once been dominated by a diverse group of government agencies and the public, it now was administered by the spiller.

The issue of public access would flare up several times during the spring and early summer of 1990. The ISCC meetings were not conducted as open town meetings, but the general public and the press were free to attend. The TAG, however, was closed by the order of the federal on-scene coordinator, Rear Admiral D.E. Ciancaglini. Rear Admiral Ciancaglini said the TAG was a technical group in which scientists and technical experts had to be free to speak frankly and think out loud, and the admiral did not feel a public forum was conducive to such a discussion. When the new state on-scene coordinator, Randy Bayliss,[68] pressed the issue, Rear Admiral Ciancaglini said open meetings laws did not apply to the TAG, and he steadfastly refused to allow public access.

The TAG differed from the ISCC in another important way: Exxon was now the director of the chief advisory group to the federal on-scene coordinator. In the ISCC, Exxon was a kind of adjunct member, a technical advisor to the government and public agencies making the recommendations about the response. But in the TAG, Exxon was installed as administrator by the federal on-scene coordinator. The company's field managers now coordinated a small advisory group consisting of DEC, NOAA, the Coast Guard, and Exxon. Where once the major cleanup recommendations were hashed out in public, they now were debated behind closed doors. Where the chief advisory group had once been dominated by a diverse group of government agencies and the public, it now was administered by the spiller. An advisory group that was developing a multidisciplinary approach to cleanup decisions was replaced by small group looking only at "technical" issues.

The lack of public access and the narrowing of state agency involvement were not necessarily fatal flaws to the process. The decision-making process had indeed been streamlined, and the reduction in participants had the potential to cut down on the number of hours people spent tied up in meetings. Using the Coast Guard and DEC as the choke point for respective federal and state policies reduced confusion and had the potential for forcing each government to come to single, clearly defined positions on issues. And the idea that the advisors would make only "technical" judgments left the policy calls, in theory, to the upper-level policy-makers in both the state and federal governments.

Yet what may have been a well-intentioned effort to cut down on bureaucratic wrangling, streamline decision-making, and climb for the high ground of technical objectivity turned out to be less than a success in the view of the state agencies and the public.

The basic tension in the TAG was the result of two differing points of view about why, where, and how oil pollution should be treated on the Alaska shorelines. The federal position, shared largely by Exxon, was formed by NOAA and implemented by the Coast Guard. The state had a different point of view than its three partners in the TAG. Theoretically, this should not have caused a problem. However, as we will see later, the TAG's structure and its fundamental premise made it difficult to reconcile the two positions. But first, a look at the essential differences in the state and federal positions is useful.

a) State and federal responders did not agree on several key technical points.

NOAA argued that oil should be left in place absent a "compelling reason"[69] to remove it. The assumptions behind this reasoning were that the oil had weathered to a point where it presented little harm, if any, to humans or wildlife,[70] and that disruption of shorelines was unacceptable or ill-advised in most cases. NOAA argued that shorelines disrupted by mechanical treatment would not only cause harm to intertidal creatures, but they would also be destabilized and exposed to unacceptable levels of erosion. A third assumption was that natural weathering and degradation was proceeding fairly rapidly, even at sites with buried oil.

State officials believed that the NOAA assumptions probably held at certain sites and under certain conditions, but the data supporting those assumptions were neither extensive nor overwhelmingly persuasive. Investigation through 1990 and into 1991 would challenge some of the NOAA assumptions, and support the state's arguments that cleanup could proceed at more extensive and more aggressive levels.

State fish and game biologists were concerned that even low levels of weathered hydrocarbons could alter the development of salmon in the early stages of life. In a study that was partly associated with damage assessment, ADF&G researchers noticed that a significant number of salmon emerging from the eggs in oiled streams developed abnormally. The research led state fisheries biologists to doubt the assumption that weathered oil posed little or no threat to the fish.

An associated study looked at whether mature fish of several species were showing evidence that they were continuing to be exposed to unnatural levels of hydrocarbons. The study's preliminary results suggested that fish in the oiled zone were, indeed, subject to some continuing exposure.[71] An additional damage assessment study (to which NOAA's responders did not have access) was also beginning to suggest that leaving oil in place was not as benign as once believed. By 1991, the researchers were strongly convinced that oil was not weathering very quickly at certain kinds of sites — under mussel beds, in particular — based on samples of mussel flesh, shells, and the sediment under the beds. Researchers suspected that there was a link between the oiled mussel beds and continuing mortality and nesting abnormalities among several different species of bird and mammals in the spill zone. The link, they hypothesized, was because mussel beds like those they sampled are a primary or secondary food source for many animals.[72]

State response officials also did not accept the blanket assumptions that subsurface oil would weather well, or that efforts to remove the subsurface oil would seriously affect the geomorphological stability of most beaches. Again, as various people continued their investigation of oiled sites, the original NOAA assumptions got weaker. Experts from both NOAA, and Exxon's chief consultant on geomorphology, began to conclude that many of the area's beaches were more active (and

Essential differences in the state and federal positions in the Technical Advisory Group

a) State and federal responders did not agree on several key technical points.

- NOAA argued that oil should be left in place absent a "compelling reason" to remove it.
- State officials argued that cleanup could proceed at more extensive and more aggressive levels.

b) The state and the federal-Exxon officials viewed the issue of "more harm than good" in fundamentally different ways.

- The state's definition of harm was very broad, because the state's resource management responsibilities and its social and economic interests were more diverse and more acute than those of either the federal government or Exxon.
- The federal government frequently took the position that active cleanup efforts were not necessary because the oiling was largely nontoxic and resource uses were not significantly disrupted by the presence of the oil.

c) Despite its name, the TAG was not just a "technical" advisory group; it was actually an arbiter of public policy and regulatory issues.

- The TAG was understood and explained by both the federal government and Exxon as a group of technical experts reaching consensus on what was the best treatment for a given shoreline.
- The state was concerned that the TAG was, in a piecemeal fashion, establishing overall State of Alaska policies on subjects wholly within the State of Alaska's authority.

active in different ways) than originally assumed, and that subsurface oil did not appear to be changing much at some sites.[73]

State TAG representatives had bits and pieces of these studies over time. Taken together, they were not willing to stipulate to the assumptions that the oil was weathering fast at all sites, that it posed little or no risk to wildlife, and that aggressive treatment (such as tilling with heavy equipment or removing oiled rocks and sediment) was a bad idea.

As a matter of response strategy, it led state officials to two important conclusions that were opposite from the prevailing attitude among federal and Exxon representatives to the TAG in 1990 (and 1991). First, given the uncertainty about the lingering sub-lethal toxicity of subsurface oil (or oil around salmon streams), DEC and ADF&G assigned to weathered oil a higher level of risk than the federal government and Exxon. Second, given that many kinds of beaches were more resilient to aggressive work than previously thought, more extensive and aggressive cleanup could take place.

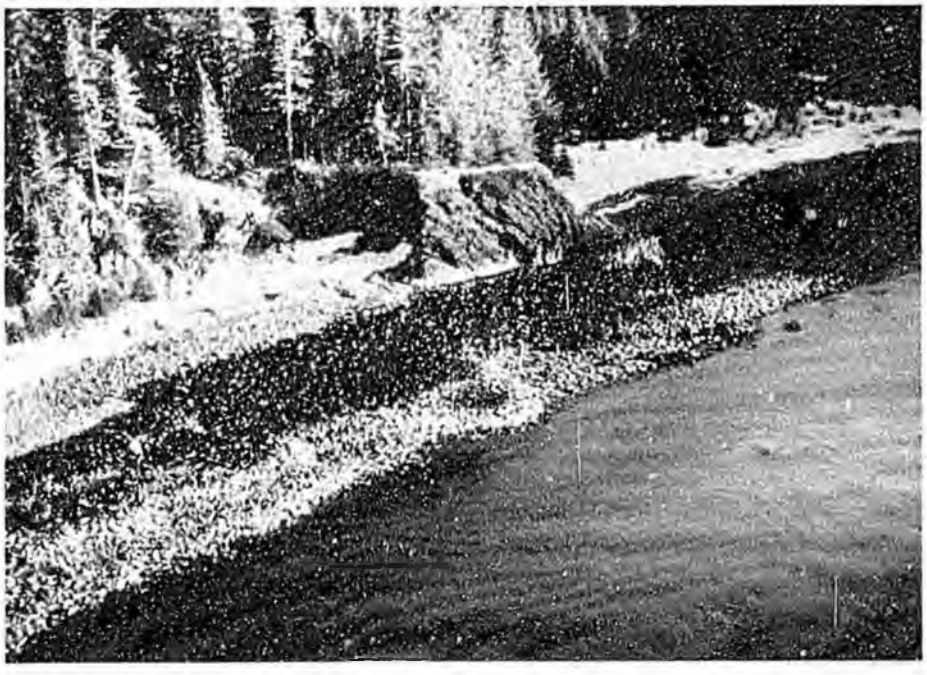
But as a functioning society, Alaska also was justified in considering whether leaving long stretches of beach with subsurface oil might affect how tourists viewed vacation opportunities, or how consumers viewed the quality and purity or Alaska seafood.

b) The state and the federal-Exxon officials viewed the issue of "more harm than good" in fundamentally different ways.

The issue, at root, was a matter of public policy, not strictly technical analysis. It also leads back to the "compelling reason" test mentioned briefly above. Under state regulations and state resource management responsibilities, Alaska had more "compelling reasons" for cleanup than the federal-Exxon bloc.

The state regulation setting DEC's general limits of pollution cleanup says that cleanup should continue until one has either reached the limits of technology, or until cleanup efforts cause more environmental problems than they solve.[74] The regulation is broad enough that it gives the DEC the latitude to make a decision based on existing conditions and available technology.

The federal government has a variety of regulatory requirements for a variety of pollution control and abatement programs, but basically, federal regulations aren't too different from the principal that the government can require cleanup only to the limits of technology and environmental good sense.



While a "bathtub ring" of weathered oil in a cove might pose little or no immediate environmental problem, it might discourage subsistence users from harvesting shellfish or seaweed there. Photo by Pamela Bergman

So when the federal government and Exxon promoted a TAG policy based on achieving what they termed a "net environmental benefit," it did not seem that it would be difficult to harmonize state and federal cleanup requirements within the TAG.

But there was, of course, a lot more to the shoreline cleanup of the *Exxon Valdez* response. Major cleanup decisions went far beyond a simple assessment of technology and a general look at the environmental health of a site. Had this been a cleanup concentrating on a single site, the questions would have been much easier to answer and the state and federal priorities much easier to harmonize.

But the size of the spill, the area it covered and — most important — the number of ways it affected resources, economies and communities meant that the *Exxon Valdez* cleanup calculus would have many more variables,

many more dimensions, and much more complicated equations than your average contaminated site cleanup.

Under both state and federal pollution control schemes, the on-scene coordinator or the lead cleanup agency is supposed to weigh factors such as economic and social impacts of a spill along with the limits of technology and environmental good sense. But the rules don't say how much weight each factor gets, and they don't spell out a formula for setting priorities. As a general rule, one is always supposed to avoid doing "more harm than good." But who defines harm? What is good? Whose good is harmed more than someone else's good, and who says which good is more important than another?

The state's definition of harm was very broad, because the state's resource management responsibilities and its social and economic interests were more diverse and more acute than those of either the federal government or Exxon. The state viewed the problem, therefore, in different ways and came to different conclusions about what needed to be done.

The TAG was, in a piecemeal fashion, establishing overall State of Alaska policies on subjects wholly within the State of Alaska's authority. And in nearly every case, these *de facto* regulatory interpretations were something less than state regulators and resource managers felt were acceptable.

The state considered primary issues, such as how oiling might affect the health of fisheries. But as a functioning society, Alaska also was justified in considering whether leaving long stretches of beach with subsurface oil might affect how tourists viewed vacation opportunities, or how consumers viewed the quality and purity or Alaska seafood.

While a "bathtub ring" of weathered oil in a cove might pose little or no immediate environmental problem, it might discourage subsistence users from harvesting shellfish or seaweed there. This "displacement effect" could then have a real effect on a village, as people stopped collecting traditional foods and started relying on store-bought goods.[75]

One might correctly argue that leaving buried oil throughout a series of uninhabited ocean beaches away from commercial or subsistence fisheries posed little threat to the environment. However, if those beaches were in a specially designated state wilderness park — which requires a specific level of management and protection — then the state might perceive the oil as "harm" to state resources.

These are only a few of the kinds of issues that came up in the TAG, and on which state and federal-Exxon representatives differed. NOAA's general policy of "net environmental benefit," adopted by the Coast Guard and Exxon, put more weight on biological factors and less weight on other public policy variables. The federal government frequently took the position that active cleanup efforts were not necessary because the oiling was largely non-toxic and resource uses were not significantly disrupted by the presence of the oil. That is fundamentally different than the state's regulatory requirement for cleanup.

The state does not require cleanup only if the pollution causes a measurable problem; the state can require cleanup simply because pollutants are someplace where they shouldn't be. In the case of Prince William Sound and the Gulf of Alaska shorelines, Alaska consistently held to the position that as a matter of overall state policy, we should remove as much pollution as we can within the boundaries of technology and environmental good sense. NOAA's position was something less strict than that.

"[T]he state argued that removing the oil quickly meant that normal use (and full value) of the areas would return more quickly. The intertidal communities would reestablish themselves fairly quickly, despite initial impacts, and the beach profiles would not be irrevocably changed or damaged," state officials later explained in a management summary of the 1990-91 season.

"The federal government, which did not share the state's responsibility to manage those uses or protect those values, felt that it was acceptable to leave more oil to weather naturally. This was not an invalid position, of course; it simply did not fully reflect the state's needs."[76]

The state's "more harm than good" calculus was a more complex matrix of economic, social and environmental variables that frequently placed significant

weight on intrinsic or intangible values of a resource. Displacement, special land designations, even the simply value of an oiled vs. unoiled site played important roles in many state decisions.

The state did not propose to protect these other values at the expense of the environment; rather, the state was willing to accept certain levels of short-term disruption in exchange for long-term use or preservation of values at a given site or area. NOAA and the Coast Guard, using a different set of variables based on their different perceptions of risk, and on different regulatory authorities, often came up with a different answer to their equations. In the TAG, these different methods of calculating harm and good often clashed.

*c) **Despite its name, the TAG was not just a "technical" advisory group; it was actually an arbiter of public policy and regulatory issues.***

From a broader perspective, it was especially important for the state that the Exxon Valdez "standards" produced in the TAG be understood for the compromises they were – the best possible compromises, given the existing conditions and availability of resources.

The TAG considered many technical issues, as its name implies. But as it developed, it was clear to state officials that the TAG had simply replaced the ISCC. However, where the ISCC was generally acknowledged to be a public policy group, blending resource priorities and public expectations for cleanup, the TAG was billed as a group that took a strictly objective look at what treatment would be best for which shorelines.

This was a noble, if naive, notion. As noted in *b)* above, it was impossible to separate economic, social, and overall environmental policies from discussions about what to do at which sites. These were not merely technical discussions about whether tilling or bioremediation[77] would do a better job of removing oil or minimizing threats to the environment. They were, at root, discussions about how public resources were to be managed and protected.

This presented two very critical problems for the state. First, the TAG was interpreting state regulatory standards and making important management decisions about state resources. Second, the administrative record being developed within the TAG had the potential to delay, thwart, or confuse any supplemental state effort to remove more pollution than the federal government would tolerate.

The TAG was, in a piecemeal fashion, establishing overall State of Alaska policies on subjects wholly within the State of Alaska's authority. The TAG recommendations set state policy about oiling near anadromous streams, acceptable levels of pollution in state parks, and basic levels of residual hydrocarbon pollution allowed by DEC. And in nearly every case, these *de facto* regulatory interpretations were something less than state regulators and resource managers felt were acceptable.

Yet the people with the most direct influence on setting these state policies were not even state resource managers: A private corporation — the company responsible for the pollution — and two federal officials made up an overwhelming majority of the group. State resource managers were daily in a position of negotiating state policy and pollution control standards so that they were acceptable to the spiller and the federal government.

There was plenty of reason to cooperate and communicate, but there was no reason why the State of Alaska had to share its regulatory and management authority with a private company and two federal agencies — which is precisely what was going on in the TAG.

Now, theoretically, the state was not bound by any lower standard for cleanup set by federal managers. If NOAA and the Coast Guard interpreted their regulations such that leaving buried oil was acceptable, or that a 10-year weathering process was better than a one-year removal program, the state was free to step in and set its own standards — as long as its standards were not in direct conflict with federal pollution control requirements. The general rule of thumb is that a state can require more stringent pollution control than the federal government, but it cannot require less.

A second test for stricter state enforcement of pollution cleanup standards would,

of course, be whether any removal action was consistent with state regulations — the applicable state regulation being the one that says the state cannot require cleanup past the limit of technology or to a point where the damage caused by cleanup is worse than the damage from the pollution.

So again, theoretically, if the federal on-scene coordinator ordered Exxon to do something less than full removal, according to state requirements, nothing in federal or state law stood in the way of the state issuing its own work order to Exxon. The state might have to wait until the federal government was through with Exxon, but the federal government couldn't prohibit the state from having its own standard (again, assuming no direct conflict with federal law).

However, the structure (and the administrative record) of the TAG put this theory of state autonomy and independent authority in some jeopardy.

In other words, the official government survey records were produced by the spiller, and, in the TAG, subject to the same negotiation process (and in the state's view, the same policy imbalance) as other cleanup issues.

The TAG was understood and explained by both the federal government and Exxon as a group of technical experts reaching consensus on what was the best treatment for a given shoreline. Therefore, one could argue, any solution different than the one recommended by the TAG was technically unsound.

So, if the state argued in the TAG for removal of sediments, and the other three members of the TAG decided removal would cause "more harm than good," than the state would be in a difficult position if it later ordered Exxon to remove the oiled material. If Exxon chose to challenge the state's more stringent requirement, it could simply argue that the TAG had already considered and rejected the state's position as technically unsound. And if the state's recommendations were, indeed, technically unsound, then it was inconsistent with the state's own regulations concerning cleanup.

The TAG was not a purely objective forum for scientists and engineers. It was a group of people discussing public policy questions with technical aspects. The cleanup decisions in the TAG were no different than those at any other stage in the spill response: Nearly all response actions involve some subjective evaluation of whether the benefits of the action outweigh the negative side effects.

It would not be surprising that different agencies might make different subjective evaluations, and it would be reasonable to expect, for the sake of progress, that each would make concessions or compromises from time to time.

But the administrative record of the TAG did not truly reflect this dynamic. Instead, it portrayed the recommendations of the TAG as the best technical consensus of all parties.

The TAG was administered by Exxon, and dominated by a policy interpretation the state did not share. The "consensus" in the TAG was frequently less than what the state wanted — not surprising, since the cleanup resources were controlled by Exxon and the Coast Guard, and Exxon and the Coast Guard shared a similar philosophy about how much cleanup should be done.

"The state has been isolated in the decision-making process by Exxon, the Coast Guard, and NOAA," the state Fish and Game department reported in June 1990. "There are other federal agencies, local governments, and public interest groups . . . that have a legitimate stake in how decisions are formed."[78]

The challenge for the state was to work within the TAG, since it served as a useful vehicle for finding common ground with other parties in the cleanup — as long as that common ground were not portrayed as the only ground. In agreeing to a given course of action in the "joint" response under federal direction, the state had to make sure that it preserved its own options to enact stricter cleanup standards, if necessary, on its own.

From a broader perspective, it was especially important for the state that the *Exxon Valdez* "standards" produced in the TAG be understood for the compromises they were — the best possible compromises, given the existing conditions and availability of resources. The idea that the TAG recommendations represented the best possible technical solution might limit the state's ability to require more complete cleanup not only on the *Exxon Valdez* spill, but in other spills and other cleanups in years to come.

After the 1990 season, the state clarified its role within the TAG and defined the

ground rules for its involvement in the TAG. For the state, the TAG was "a forum for our agencies to explain what action the spiller should take based on the state's priorities and requirements."[79] The state produced its own work orders based on its specific regulatory authority and requirements, and submitted them to the TAG. Under this plan, the federal government would have the option of accepting the state's policies and requirements, and including them in the federal work order. If the federal government chose not to, the state reserved its right to re-evaluate the situation and issue a supplemental work order later.

The ISCC and the TAG each had their strengths and weaknesses.

The ISCC better reflected the diversity of interests involved, and more directly dealt with cleanup issues as matters of policy. It also put the governments and the spiller in roles that were more immediately understandable to the public. Under the ISCC, the government — and the public it represents — established the policies and Exxon implemented them. The Coast Guard and DEC monitored the cleanup to make sure Exxon implemented the policies properly.

The TAG was less understandable and less accessible. It considered the same issues as the ISCC, only with fewer participants and in private. It was described as a strictly technical group, but its deliberations frequently spilled over into policy. It tipped the balance of influence, giving Exxon better access and control over government deliberations than the public. Because of fundamental misunderstandings among the parties about what was policy and what was technical, the TAG caused significant misunderstandings. It presented potential problems for the state in setting cleanup requirements and standards that fulfilled the statutory and regulatory responsibilities of state resource managers.

State reviewers did not give the TAG high marks. Although the theory might have been good — technical positions only, a single federal agency coordinating all the recommendations of their respective governments — in practice it was not.

By 1991, state agency managers had made enough adjustments in the administrative record to restore some of the eroded authority of the government to regulate and direct spill activities.

"The Exxon chairman said he expected the [Coast Guard] and ADEC reps to coordinate input from other state and federal agencies. In theory this might be okay. In practice it dilutes other agency and community input," a DEC analysis concluded. ". . . If TAG was supposed to provide the federal on-scene coordinator with a combined interagency, land manager/owner, public interest input to treatment decisions, it largely failed."[80]

The state Fish and Game department also felt that the TAG hindered the response rather than helped it. "More overall decision-making authority should be restored to an inter-organizational body like the ISCC and no authority to a TAG-like group. The 1990 TAG should have been restricted to what its name implied: technical advice for analyzing oiling conditions and devising cleanup procedures. The TAG of this year was too influenced by Exxon and the [Coast Guard]."[81]

Fish and Game also felt that its influence as the state's primary wildlife resource manager was blunted in the TAG because Fish and Game had to first pass its recommendations through DEC. While Fish and Game could advocate its position within the state policy-making structure, department representatives were uncomfortable at being kept at arm's length from the actual TAG deliberations.[82]

And, like DEC, Fish and Game questioned the wisdom of letting Exxon control the administrative record, and participate as a full partner in decisions regarding the management of state-owned resources and habitat. The department noted that the information gathered on the "joint" field surveys was accurately recorded, but that it was handled and presented by Exxon in the TAG. It was Exxon's role as the responsible party to propose how they intended to treat a particular shoreline, and it was the governments' role to accept, modify or reject the proposal. Then the company would then sit down and help form the official policies about the resources. "The State should not accede to any other organization or agency deciding what 'net environmental benefit' is or is not concerning our resources. Exxon is a commercial oil company having no legal authority to render management decisions about the status of our wildlife and habitats."[83]

DEC shared its sister agency's concerns about the production and presentation of the baseline TAG data by Exxon. The forms and maps developed during the surveys were drafted largely by Exxon and placed before the TAG for editing and approval. In other words, the official government survey records were produced by the spiller, and, in the TAG, subject to the same negotiation process (and in the state's view, the same policy imbalance) as other cleanup issues. Exxon was able to drive the recording of information it felt was important, even if the government did not. It was also able to control the flow of certain information to its advantage.

In 1990, there were two spring surveys. The first, dubbed the SSAT[84] survey, involved state, federal and Exxon personnel who recorded general oiling conditions and individual shoreline profiles. A second, smaller task force involving ADF&G, a federal government rep, and Exxon concentrated on anadromous streams in the ANADSCAT[85] survey. The ANADSCAT information formed the basis of specialized anadromous stream work orders (called AWOs). These were part of the package considered by the TAG for the basic shoreline work orders that went to the field.

During cleanup in 1990, Fish and Game monitors became concerned that cleanup crews were not fulfilling the intent of the AWOs, and when disputes or questions arose they requested that supervisors refer back to the AWOs. In one case, an Exxon supervisor (who, interestingly, had worked on the ANADSCAT) denied the AWOs existed; in another, Fish and Game reported that the AWOs were closely held and not distributed by a Coast Guard supervisor.[86] The AWO experience is an example of how a state agency, with full statutory authority to protect salmon spawning habitat, had to petition the spiller for release of information that could lead to full enforcement of state cleanup requirements.

"Throughout the spill, Exxon -- with extensive manpower, computer and technical resources beyond those of the governments — produced the documents and forms that became part of the official record. Further, as a charter member of the TAG group, the Exxon corporation began to take on a quasi-official, sub-governmental status," state spill managers reported in 1991. "Exxon was making recommendations about the effectiveness and the desirability of treatment techniques; it was offering comment on the health of fisheries, the recovery of the environment, the ability of people to use the areas according to previously established patterns."[87]

These comments and assessments were not included in the official record in the form of an Exxon letter or communication to the government, on Exxon letterhead. They were on the official recording forms, alongside, in equal standing, to those of the government. In fact, in the TAG, the shoreline profile and preliminary recommendation for cleanup came from Exxon. It was then up to the governments (or in many cases, the state government alone), to make a case for cleanup. This seemed to state managers a curious reversal of roles: Instead of the government informing Exxon what it needed to do to meet state and federal pollution standards, Exxon told the governments what was necessary, forcing regulatory agencies to work from Exxon's baseline. While the state was uncomfortable with this arrangement,[88] the federal government was not. In fact, the Coast Guard actively promoted the system and enthusiastically praised its effectiveness.

"The 'cooperative effort' that Exxon and the Coast Guard keep promoting is not in the state's interest since cooperation typically means that the state should go along with any FOSC [federal on-scene coordinator] decision without objecting publicly. Cooperation means that the state legitimizes Exxon's efforts simply through joint participation. Once the state agrees to participate in a project (TAG . . . etc.) Exxon typically assumes control by dedicating inordinate amounts of personnel, equipment, logistics, and administrative services that eventually overwhelm the state.

"Suggest the state modify its cooperation with the Coast Guard and Exxon by promoting performance criteria over process, that is, we state what we want to achieve and then critically review whatever policies or products Exxon develops. If they are unacceptable then the state should be prepared to either implement its own policies, or use public opinion to assist in convincing Exxon to modify its planned program," Fish

and Game's chief response manager argued to other state responders in June 1990.[89]

By 1991, state agency managers had made enough adjustments in the administrative record to restore some of the eroded authority of the government to regulate and direct spill activities. The state wrote its own work orders and conducted supplemental treatment on its own, instead of bringing every issue to the TAG for resolution. Yet within the context of the "joint" response, the state could achieve only limited independent action without support from the federal government.

1.5 Summary

Neither the state nor the federal government had in place a management system that could be implemented quickly or run smoothly during a disaster as complex and as lengthy as the *Exxon Valdez* oil spill. The "joint" response cobbled together with the consent of both governments was a well-intentioned, but unrealistic effort to harmonize state and federal authority.

The public, which normally had access to and influence over its government's actions, was pushed aside by the emergency and never fully returned to the process. The spiller assumed an ambiguous role — part government, part polluter, part contractor — answerable only to government "coordinators" and insulated from public accountability.

Little doubt, then, that the spill and the response have led to changes and new suggestions about how the state and federal governments, and the industry, should prepare for and implement oil spill response.

Notes, Chapter 1

[1] *Meidt, Chief Warrant Officer R. M., 1991. "Public Perceptions in Oil Spill Response," (proceedings of the 1991 Oil Spill Conference), pp. 333-336.*

[2] *The "National Oil and Hazardous Substances Pollution Contingency Plan" is articulated in the Environmental Protection Agency's reglations, 40 CFR, Part 300.*

[3] *The spiller is still liable for criminal penalties beyond actual cleanup costs.*

[4] *Vice Admiral Clyde Robbins made this statement on many occasions, such as to a Multi-Agency Committee meeting in Homer and to a reporter for the Anchorage Daily News.*

[5] *"USA Today." July 5, 1989, p. 9A.*

[6] *A more complete discussion of this issue, and how it related to all aspects of the spill's bureaucratic and decision-making structure, can be found in chapter 3 of this report.*

[7] *The "Alaska Oil and Hazardous Substances Pollution Contingency Plan." Alaska Department of Environmental Conservation, May 26, 1983. The statewide plan has since been revised, although the basic roles of the Coast Guard and DEC remain roughly the same as*

in 1989.

[8] *Captain Dennis Maguire, U.S. Coast Guard, memo to Mr. Craig Tillery, Alaska Department of Law, July 23, 1993.*

[9] *"Oil Spill Contingency Plan, Prince William Sound." Alyeska Pipeline Service Company, January, 1987.*

[10] *National Response Team, "The Exxon Valdez Oil Spill: A Report to the President." May 1989, p. 8.*

[11] *The following statements from Exxon chief executive officer Frank Iarossi all come from his deposition as part of state and private litigation taken August 5, 1992, in Houston, Texas.*

[12] *Ibid., p. 387.*

[13] *See, especially, Davidson, In the Wake of the Exxon Valdez. (San Francisco: Sierra Club Books, 1989), pp. 29-54.*

[14] *This is noted first in the National Response Team's report of May 1989. Iarossi elaborates on the company's general plan in his deposition.*

[15] *Notification came as a single comment in what was otherwise a routine filing of contingency plans for tank vessels owned and operated by Exxon on March 5, 1982.*

[16] *"Oil Spill Contingency Plan, Prince William Sound," Ibid.*

[17] *Kelso, D., Testimony before the House Subcommittee on the Coast Guard and Navigation, July 1989.*

[18] *See Chapter 4. While the state has clarified Alyeska's responsibility to implement the contingency plan, federal regulations remain murky on the question.*

[19] *Although the Coast Guard is, practically speaking, a military organization, its role is primarily civil and its command is in the U.S. Department of Transportation, not at the Pentagon.*

[20] *National Response Team report, p. 21.*

[21] *Author's note: Governor Cowper was interviewed in his office in November 1989, by Larry Persily, a member of the Alaska Oil Spill Commission staff. Persily summarized Cowper's comments in a memorandum to commission director John Havelock dated Nov. 28, 1989. Persily used a newspaper style, reporting on his interview and using quotation marks when using Cowper's remarks verbatim. In the interest of clarity, where Cowper's quote is used along with a citation from Persily's summary, I have used interior quotation marks to mark Cowper's statement; where using one of Cowper's quotes directly, without additional comment from Persily, I have simply used exterior quotation marks.*

[22] *Persily, ibid.*

[23] *Author's note: I have tried to not to rely solely on personal recollections in writing this report, attempting instead to always cite documents or audio-visual sources. However, I had several conversations at the time with Cowper, his chief of staff, his press secretary, and DEC commissioner Dennis Kelso. All of them said that in their meetings with federal officials, including the U.S. Secretary of Transportation, federal policy was to continue a team management approach.*

[24] *D. Kelso, personal communications, 1989, 1990, and 1993. The former DEC commissioner's recollection of this statement is vivid; according to Kelso's account, Yost told him this in a conversation (later reiterating it before a news reporter) during an April meeting with the commandant in Anchorage. In July, Yost told a Congressional subcommittee (July 20, 1989, U.S. Senate Committee on Commerce, Science, and Transportation, Subcommittee on Merchant Marine, Washington, D.C.) that the Coast Guard was making cleanup determinations "in consonance with the Regional Response Team, including the State of Alaska." This was consistent with Kelso's understanding of the Coast Guard's policy.*

In 1990, during a meeting with the new commandant, Admiral William Kime, and the federal on-scene coordinator, Rear Admiral Ciancaglini, state officials who mentioned their recollection of the "concert and consonance" statement were told by both Coast Guard

officers that no such statement had ever been made. In commenting on this report, Commander Dennis Maguire, who coordinated the preparation of the Coast Guard's history of this response, wrote in July 1993: "In conversations with Rear Admiral Ciancaglini, he states Admiral Yost denied making the statement, furthermore our own extensive research has failed to turn up any such quote. More important, however, is the fact that the commandant cannot extend more authority to the State than federal law allows. The NCP [National Contingency Plan] speaks in terms of consultation with the State. This theme was often repeated by Vice Admiral Robbins and Rear Admiral Ciancaglini and was the position taken by the federal government."

The author has no reason to disbelieve either account; it may be that the parties involved misunderstood or misheard each other. However, regardless, the state's understanding of Coast Guard policy in 1989 and 1990 was based on a theme of "concert and consonance." In addition, Kelso' recollection is exceptionally vivid, and the author had a number of conversations with Kelso about it. Indeed , the letter that sparked Kime and Ciancaglini's 1990 statements about the "in consonance" theme was written by the author of this report, working with Kelso and DEC staff, who expressed a similar understanding of Coast Guard policy.

[25] *Vice Admiral Robbins, memorandum to state and federal agencies, April 20, 1989.*

[26] *Hull, R., Northwest EnviroService Inc., "Final Report on Exxon Valdez Oil Spill," December, 1990, pp. 30, 33.*

[27] *Alaska Oil Spill Commission, "Spill: The Wreck of the Exxon Valdez," January, 1990, p 40. One of the primary recommendations of the Commission was that, unlike the* Exxon Valdez *cleanup, the spiller should not be in charge of a large spill. A form of this recommendation was included in the Oil Pollution Act of 1990.*

[28] *The state ran into similar problems, and did not necessarily do a substantially better job of solving them. The state's approach is discussed in more detail later.*

[29] *Alaska Oil Spill Commission, op. cit., p 40.*

[30] *See Chapter 3.*

[31] *Although this section makes mention of specific actions or duties taken by various state agencies, it is not intended as a complete recitation of who did what at a given time. rather, it attempts to examine how the government responded to special organizational and management demands caused by the spill response in general.*

[32] *Personal communication, Bill Lamoreux, Sept. 3, 1992.*

[33] *Provant remains with DEC as chief of the team that oversees Alyeska Pipeline Service Company operations and facilities in Valdez.*

[34] *The most frequently quoted number for the 1989 response season was 11,000 workers, however, only about a quarter of that number were in Prince William Sound or the Gulf of Alaska at a time. Crew rotation, shoreside support contractors (caterers, etc.) and shoreside Exxon employees accounted for the rest.*

[35] *To put that number in perspective, the usual year-round population of Valdez itself is about 3,000 people.*

[36] *Not all fisheries were closed because of the spill in 1989. Terminal fisheries for pink salmon regular halibut openings, and new fisheries (such as Prince William Sound bottomfish) all went on during the spill. The most lucrative, highest visibility, and most important fisheries — mostly red and pink salmon — were frequently closed because they normally take place in nearshore areas, coves, bays, etc. These areas suffered season-long impacts due to "leaking" beaches, floating oiled debris or seaweed, or oil released from shoreline cleaning operations.*

[37] *Exxon reimbursed DEC for $8.2 in oil spill wages before the governments settled their claims with the company.*

[38] *In some cases, they weren't. Errors somewhere in the chain from employee to supervisor to central computer were frequent, especially in 1989. DEC auditors reported that the state*

underpaid workers a total of $145,000, and overpaid others a total of $40,000. The department made back payments to some workers and collected overpayments from the others.

[39] *State agencies lend each other money through an internal system of Reimburseable Services Agreements when one department is carrying out an approved function for another.*

[40] *Also in 1989, the Legislature made an additional special emergency appropriation of $35 million to the Office of the Governor. The Governor was authorized to spend this money at his discretion, as long as the Attorney General reviewed the proposed expense and determined that it met reasonable criteria for reimbursement by Exxon. Most of this money was used for state legal costs and scientific damage assessment, not day-to-day operations. The state expected to recover its legal costs at trial, or in an out-of-court settlement; therefore, the attorney general concluded these costs were technically "reimburseable."*

[41] *At last accounting in late 1991, the billings of this nature came to roughly $300,000.*

[42] *This does not include the University of Alaska system, which, like most universities, has programs and faculty that conduct basic and applied research in a variety of areas.*

[43] *Perhaps the best, and most critical example of this was the "net environmental benefit" debate, detailed in Chapter 3, section 4.*

[44] *This came out of the $35 million special appropriation to the Governor's office.*

[45] *Results of damage assessment studies and their implications for restoration are discussed in Chapter 5, Restoration.*

[46] *In 1991, DEC and Fish and Game were requesting that the federal government pursue more complete cleanup of anadromous stream sites, even though oil was by that time heavily weathered. The National Oceanic and Atmospheric Administration and the Coast Guard maintained that the weathered oil posed a limited threat, if any, to salmon spawning, reproduction, and survival. Fish and Game provided general interpretations of damage assessment data from pink salmon studies that helped buttress state requirements for more complete cleanup. However, this type of interaction between response and damage assessment was the exception rather than the rule.*

[47] *See Chapter 3, section 4 for a more complete discussion of Fish and Game's role in the various committees formed with Exxon and the Coast Guard during the "joint" response period.*

[48] *DEC's field monitors began to assume greater responsibility and authority in 1990 and 1991, as experience on this specific spill response became more important than general technical knowledge.*

[49] *Kuwada, M., unpublished ADF&G summary of department oil spill activities, 1991.*

[50] *This requirement was not always met. DEC's personnel officer said later that the emergency hire provision was frequently ignored, and "emergency" hires were kept in the field and on the payroll.*

[51] *These lists for all state job classes are known as the "registers." They rank applicants according to objective analysis of experience, education, etc. Supervisors must hire from the top several names on the applicable register.*

[52] *Labor's involvement was required by both federal and state occupational safety laws (Alaska administers the federal program here); Community and Regional Affairs administered some small state grants and coordinated community meetings; Administration's telecommunications division set up and maintained the state's remote radio communications system.*

[53] *Personal communication, July 1992. In fact, Kelso and the DEC project staff often complained that the state's legal department was not working closely enough with DEC in its usual way, namely, providing legal support and advice on enforcing cleanup regulations.*

[54] *The problem was not endemic, but it cropped up on major issues from time to time: funding and procurement of equipment to protect hatcheries over the winter of 1989-90, comments on the federal government's proposed cleanup stragey for 1990, DEC's approval of Corexit testing in 1990, development of written standards for cleanup that integrated all agency*

positions, and a few others.

[55] *There were some occasional departures from this flow pattern. In the early stages, it was partly due to confusion; later, it would happen with tacit acceptance by the state and federal coordinators because a certain agency had an overwhelming interest in an issue or the primary presence in a region.*

[56] *This is the Incident Command System approach that is in use in Alaska today.*

[57] *The most controversial example of state permitting of cleanup activity occurred in 1989, when Exxon proposed to burn tens of thousands of tons of oily solid waste in large incinerators. The controversy is discussed in more detail in section 3.0, Cleanup Activities.*

[58] *Terminology differs among agencies. These teams were also called Shoreline Cleanup Assessment Teams, or SCATs, and tasks and focus sometimes varied from place to place. From here on out they are called simply "assessment teams," a term intended to include the various and changing groups that conducted assessments during the entire response.*

[59] *Knorr, J., Lethcoe, N., Teal, A., Christopherson, S., and Whitney, J., "The Interagency Shoreline Cleanup Committee: A Cooperative Approach to Shoreline Cleanup — The* Exxon Valdez *Spill," (Proceedings of the International Oil Spill Conference, San Diego, 1991), pp 191-192.*

[60] *David Kennedy, quoted in the October 31, 1991 issue of Pacific magazine, a Sunday supplement to the Seattle Times.*

[61] *Hull, op. cit., p. 44.*

[62] *Kuwada, M., Alaska Department of Fish and Game, unpublished summary of agency activities, 1991 (updated somewhat in 1992). Payroll records from DEC also show staff, almost uniformly, working extended st iches of 10-18 hour days with irregular time off.*

[63] *Morrison, J., memorandum to Kuwada, M., ADF&G, Sept. 11, 1990. This is a common theme through state summaries, memoranda, field reports, etc. State monitors and contractors frequently expressed frustration about what they perceived to be a coalition made up of Exxon-Coast Guard-NOAA, whose policies and recommendations were often in opposition to the state's.*

[64] *Morris, R., unpublished DEC summary of ISCC and Technical Advisory Group activities, October 1991. The author was a member of the state teams that generated state recommendations for cleanup at specific sites from 1989-92.*

[65] *The MACs were not exactly the same as the ISCC, but they served a similar function. The MAC meetings in Homer and Kodiak and Seward were the principal forums for regional agency staff and the public to address spill issues and communicate with the federal on-scene coordinator. In addition to the MAC in the Kenai Peninsula area, there was a smaller agency group called the RMAC (Resource Multi-Agency Group) that dealt exclusively with resource concerns, as opposed to broader public policy concerns. Kodiak's local spill management was centered in an emergency response committee, which paralleled the Kodiak borough's normal emergency services management plan, and a Kodiak Interagency Shoreline Cleanup Committee.*

[66] *Personal communication, Steve Provant, DEC, September 1992.*

[67] *Morrison memorandum, op. cit.*

[68] *Randy Bayliss served as state on-scene coordinator (SOSC) from April 4 to September 25, 1990, when DEC Commissioner Dennis Kelso appointed Ernie Piper to the post. Piper stepped down March 16, 1992. Commissioner John Sandor then appointed Simon Mawson as SOSC.*

[69] *ADF&G staff notes from the Newport Beach meeting quote NOAA's Dave Kennedy, ADF&G files, February 1990.*

[70] *The primary exception cited by NOAA was the presence of oil in shellfish beds, such as clams.*

[71] *Stegeman, John J. and Bruce R. Woodin. "Cytochrome P450E (P450I) induction in fish from Prince William Sound." Unpublished preliminary report, August 1990. Woods Hole,*

Massachusetts. The Stegeman study and associated ADF&G work used a marker enzyme — cytochrome P450 — to determine if the fish were absorbing hydrocarbons. When this enzyme showed up at a certain level in the livers of the fish, the researchers concluded that the fish were metabolizing hydrocarbons; there was a significant difference in the enzyme level between fish in the oiled zone and those taken from an unoiled area used as a control.

[72] *See generally* Exxon Valdez *Oil Spill Symposium Abstract Book, February 1993, Anchorage, sponsored by the* Exxon Valdez *Oil Spill Trustee Council, University of Alaska Sea Grant Program, and the American Fisheries Society, Alaska Chapter. A Symposium Proceedings is slated to be published in 1994.*

[73] *Throughout the response there were ongoing research projects into the effect of storm berm relocation conducted by Exxon contractor Woodward Clyde, the State of Alaska and also by a NOAA contractor. All of them showed the shorelines were fairly resilient, and they returned readily to the original profile or to a stable profile.*

[74] *The citation is 18 AAC 75.*

[75] *Despite a number of government tests showing that subsistence foods were safe to eat unless they looked, smelled, or tasted oily, many people (especially older Alaska Natives) simply stopped eating certain foods because of the perception of risk. State subsistence official documented this effect in a paper: Fall, James A. "Subsistence After the Spill: Uses of fish and wildlife in Alaska Native villages and the* Exxon Valdez *oil spill." November, 1990, presented at the American Anthropological Association annual meeting, New Orleans, LA.*

[76] *Piper, E., Winter, G., Gibeaut, J., Bauer, J., Kuwada, M., Copland, B., and Frechione, J., "*Exxon Valdez *Oil spill Response — Year Three,"* Exxon Valdez *Oil Spill Response Center, March 1991, p. 8.*

[77] *Bioremediation, in very simple terms, is the process of applying fertilizer to speed up the natural rate of degradation of oil by microbes that break down hydrocarbons.*

[78] *Kuwada, M., notes from presentation to state management meeting, June 19, 1990.*

[79] *Piper, et al., Year Three report, p. 12.*

[80] *Morris, DEC, op. cit.*

[81] *Morrison, ADF&G, op. cit. Other department managers, including Kuwada, the habitat division's chief spill representative, echoed this criticism in similar ways in a variety of other documents and forums.*

[82] *DEC sometimes came to the TAG with Fish and Game concerns, especially when the issue at hand was directly related to fisheries or spawning habitat. In 1991 Fish and Game (and Natural Resources) started attending the TAG meetings regularly, as the state took more of a team concept into the proceedings.*

[83] *Morrison, ADF&G, op. cit.*

[84] *Spring Shoreline Assessment Team.*

[85] *Anadromous Stream Cleanup Assessment Team.*

[86] *Morrison, ADF&G, op. cit.*

[87] *Piper, et al., op. cit.*

[88] *Kelso, D., Commissioner, DEC, letter to Rear Admiral D.E. Ciancaglini, July 18, 1990. This letter was the final piece of a long paper trail within the state agencies about how Alaska's interests were either ignored or diminished by the federal government.*

[89] *Kuwada, notes, op. cit.*

Chapter 2: Technology

Oil spill response is most effective when oil is on the water, rather than stranded on shorelines. The faster responders act, the better chance they have. The effectiveness of most on-the-water techniques drops substantially as the oil weathers, emulsifies, and large slicks break up.

Oil spill response has more in common with fighting fires than with cleaning up a mess. It is possible to control or extinguish a house fire, but in the end you're still left with a burnt house, and areas that were not damaged by the fire were damaged by water used to put out the fire. In the same way, oil spill response is damage control, not damage elimination. All techniques, to some degree, have adverse side effects. Nearly all response and cleanup decisions are a matter of weighing the negative effects of response and treatment against the negative effects of letting oil go free.



Oil spill response has more in common with fighting fires than with cleaning up a mess. It is possible to control or extinguish a house fire, but in the end you're still left with a burnt house, and areas that were not damaged by the fire were damaged by water used to put out the fire. Photo by Vanessa Vick

Every oil spill is different, and so is every response. The amount of oil spilled is often less important than where it is spilled, whether people or wildlife habitat might be affected, and how weather, wind and water affect the response strategy. However, in nearly all cases, the suite of spill response technologies and techniques is roughly the same. And, as noted above, each technique or technology has limitations; none, by itself, is a solution to spilled oil on the water.

However, almost as soon as the oil from the *Exxon Valdez* was on the water, the new ideas were on the way. The entrepreneurs were calling, faxing and flying to Valdez to try to sell their products. Everyone involved in the response was inundated with requests, offers, and demands from vendors selling everything from reasonably well-known solvents and products to off-beat and untried techniques. One vendor had diatomaceous earth, another had crushed cork, and yet another proposed spreading lemon juice on the oil. Backyard inventors sent hastily drawn schematics of new and as-yet unbuilt skimmers and other machines. People sent home videos and studio-produced efforts. In one of the most memorable homemade video promotions, a vendor stumbled over the slick cobbles of a Prince William Sound shoreline, hawking his product as he spread it on the rocks — all the while cradling a stuffed baby seal.

Surfing on that tidal wave of commercial communications were some outright hucksters, but there were also well-intentioned and thoughtful citizens, some creative-but-unrealistic inventors, and many reputable vendors. If one sorted out the greedy, the dreamers, and the opportunists, most of the suggested products fell into two general classes: absorbents and solvents. One group of products would, in theory, soak up or congeal floating oil; the second would loosen it from rocks or break slicks up on the water. Nearly all suffered from basic technical, chemical, or operational flaws.

First, many of the products were obviously limited in the same ways that burning or chemical dispersants are limited. Fresh oil is the best oil to work with. On weathering oil in cold, subarctic waters, or on oil that was quickly turning tarry and thick, or

on emulsion that was primarily water, many of the suggested techniques just wouldn't work, based on the information provided to Exxon, the Alaska Department of Environmental Conservation (DEC), or the Coast Guard,

Next, the use of any solvent or absorbent usually means there is a by-product. During one test conducted in April on Naked Island, crews spread peat moss on oily rocks. Indeed, the peat moss soaked up free oil and emulsion. But like other absorbents, responders were still left with the problem of collecting the moss-oil mixture and disposing of it properly. Collection, storage, and disposal of oily waste would loom as one of the biggest problems in this massive spill response, and any significant addition to the volume of waste was judged impractical. An addition problem with loose absorbents is that when used on the water, they would likely create a thicker substance that could not be skimmed using existing equipment.



Many innovations for oil cleanup were tested: During this test conducted in April of '89 on Applegate Rocks, crews spread peat moss on oily rocks. The peat moss soaked up free oil and emulsion but left the problem of collecting the moss-oil mixture and disposing of it properly.

Photo by the U. S. Coast Guard

The most common technical problem with hundreds of products, however, was a lack of verified field testing or demonstrated use on other spills. This was not merely a problem with the new products that came across the fax machines and desk of DEC, the Coast Guard and Exxon; it is a basic problem with oil response equipment and products in the United States. Even the dispersants approved for use by the U.S. Environmental Protection Agency (EPA) have had limited actual testing, simply because it is difficult to conduct a properly controlled and monitored test of an oil spill product without spilling some oil. Only a few governments (Norway among them) authorize controlled spills for testing or for response drills, so vendors are dependent on "spills of opportunity" to try their luck — which probably explains, in part, why some vendors offered to do test applications largely at their own expense. Also, the level and scope of testing that a chemical product might require is a time-consuming and expensive proposition. In the United States, this task rests primarily with the private sector, and most, if not all of the small companies or vendors hawking their wares to the *Exxon Valdez* responders did not have the financial or technical capability to have conducted the right kinds of tests.

In addition, what were the "right" tests? At the time of the spill, there were no standard suite of tests and methodologies adopted by the federal or state governments for use in screening the wide variety of products people were selling.[1]

Since the *Exxon Valdez* spill, the state has begun to develop a product screening procedure, however, no large-scale or systematic screening program was in place at either the state or federal level in March of 1989.

In testimony before a Congressional committee on April 19, 1989, Governor Steve Cowper called for a nationwide program of intensive research into oil spill response. "We should not have to use a spill like that in Prince William Sound to find out the best way to contain and clean up oil. We should know in advance."[2]

The Alaska Oil Spill Commission, formed by Governor Steve Cowper to review the incident and make recommendations, found that government and industry had done little to prod development and testing of creative approaches in spill response.

"Despite two decades of rising public concern for the environmental consequences

of oil spills, research on the subject is still in its infancy," the commission reported in 1990. ". . . Spill response technology is untested and underdeveloped. Research investment is low, and institutional commitment to the field is scarce . . . .

"Much of the available cleanup equipment had not been tested in the various circumstances facing cleanup crews. Due to caution or uncertainty, untested techniques were not quickly implemented."[3]

Vice Admiral Clyde E. Robbins, who served as federal on-scene coordinator for the U.S. Coast Guard in 1989, often said that he was shocked to find upon his arrival in Valdez that oil spill response technology was no further advanced than what he had seen 15 years before.

"Despite two decades of rising public concern for the environmental consequences of oil spills, research on the subject is still in its infancy," the Alaska Oil Spill Commission reported in 1990.

The most fundamental problem with essentially all the thousands of offers from vendors was that no one had the time, the people, and the equipment to devote to testing all these products right in the middle of the largest oil tanker spill in North American history. As a practical matter, most agencies were already devoting all available resources to immediate emergency response tasks. Also, state agencies, such as DEC, were not designed to function as research and development centers.[4]

As the response evolved, the DEC set up a Treatment Technology section within the *Exxon Valdez* Oil Spill Response Center. The section evaluated as many as 1,500 offers, requests and ideas over time, but the small section concentrated primarily on evaluating a solvent that Exxon and the Coast Guard wanted to use, and working with the EPA and Exxon on evaluation of fertilizers for bioremediation.

With the exception of the bioremediation project, spill response techniques and technology used in the *Exxon Valdez* response were confined to those in general use at the time of the spill. Most reviewers have pointed out that research and development of alternative response and cleanup techniques has been lacking in the United States.

In addition, most official reviews of the incident point out that planners had not designed the Prince William Sound response system to handle a spill of 240,000 barrels. The Alaska Oil Spill Commission found that the federal government had never properly determined if the industry had the resources to deal with a catastrophic spill.[5] A federal review prepared shortly after the grounding concluded that the regional and State of Alaska-approved contingency plans were similarly flawed.[6]

There was simply not enough of anything in the area to deal with a spill of 240,000 barrels — not enough mechanical equipment, not enough trained manpower, not enough boom, not enough dispersant, not enough gear required for burning. While it is well understood that there was not nearly enough of any of these, it is somewhat less well understood how the equipment and people actually performed, once deployed. A closer look at what worked and what didn't gives us a good idea of both the ingenuity of responders and the limitations of spill response.

2.1 On the water

Efforts to contain and recover spilled oil and mousse[7] on the water continued, at varying levels, throughout the four seasons of the response. However, the principal on-the-water recovery phase began on March 24 and extended through roughly the middle of May, when shoreline cleanup began in earnest.

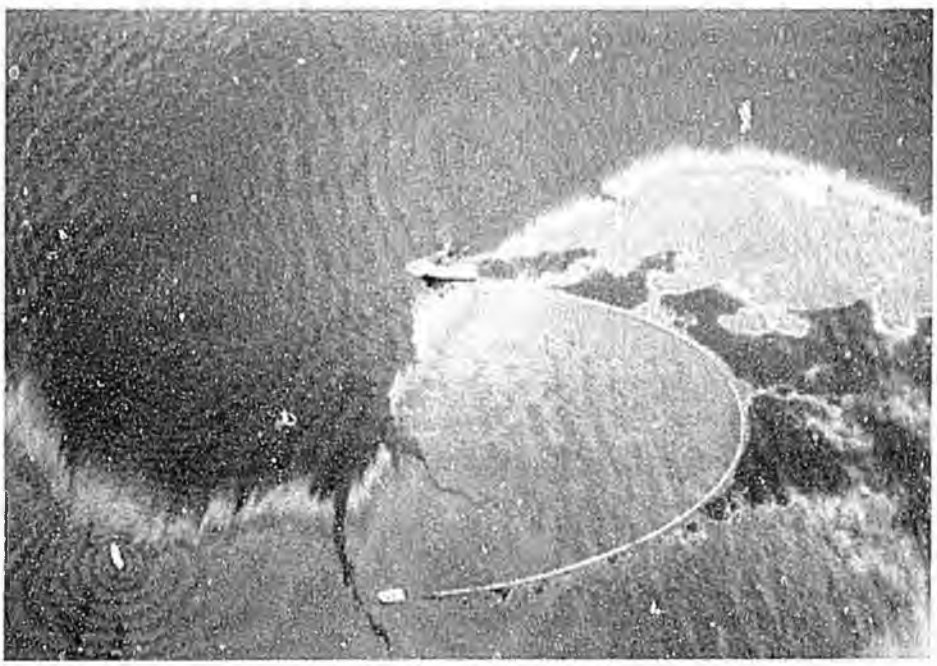
Boom

A boom works at the water's surface, and just below the surface, and can be used as a barrier, a deflection device, a corral for contained oil, an absorbent, and as a component in some other technique, such as burning. Boom of varying types is the mainstay of most response efforts.

Most containment, or "hard" boom, has a profile above and below the surface of the water. It is stored in containers in large rolls, or something like an accordion, and is played out over the side or stern of a vessel much like fishermen deploy nets. The size

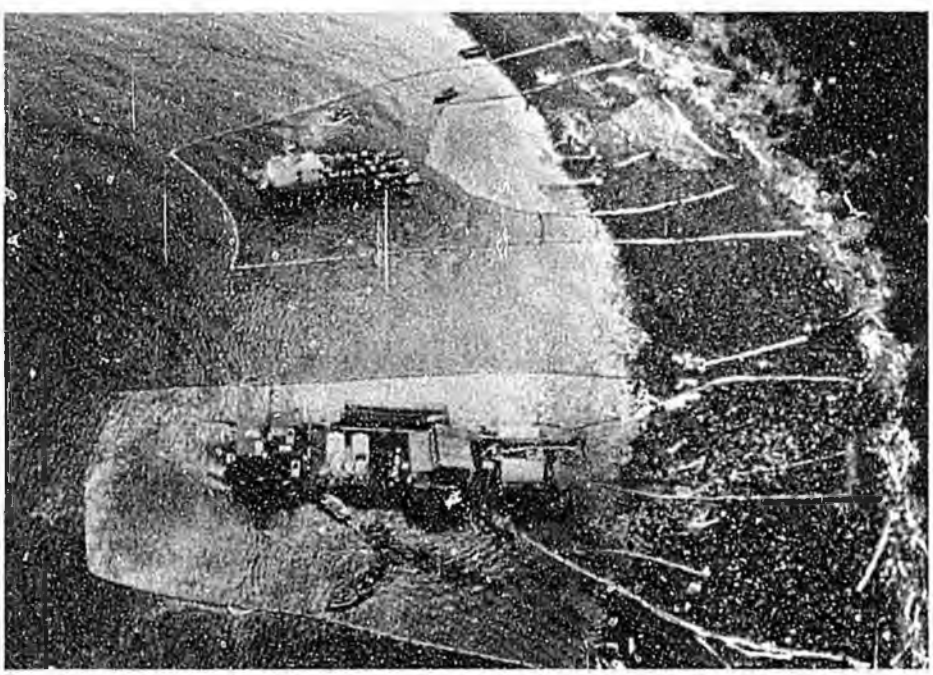
and durability of the boom varies depending on the conditions responders expect in a given area. An area with strong currents and tides, or large seas, needs a larger and more durable boom than one to be deployed in a quiet estuary.

The effectiveness of the boom depends on conditions and on the skill and training of the people deploying it. If boom is being used to corral an oil slick, much like a purse seine net, it must be towed smoothly and steadily at very low speeds — not a simple boat-handling skill, by any means. At a towing speed (or in a current) or anything more than two or three knots, the effectiveness of the boom drops considerably, as oil begins to slosh over the top, or slip underneath the bottom of the moving boom. Tides, wind, waves and current all raise similar problems, and boom anchored to fixed points needs nearly constant attention and maintenance.



Boom deployed between two boats in an attempt to corral oil from the *Exxon Valdez*. Much like a purse seine net, the boom must be towed smoothly and steadily at very low speeds – not a simple boat handling skill, by any means.

Photo by Michael Lewis



Several layers of boom contain oil washed from the beach until it is picked up by a skimmer.

Photo by Rob Schaeffer

Responders also may deploy smaller floating booms (many look like long sausages) made of absorbent material.

The effectiveness of boom ing and skimming operations varied widely from site to site. All operations that combined these basic technologies were affected by the skill of the people assembling and tending the boom, the condition of the oil, the amount of vegetation in the mousse, the tides and currents, the opportunities for cleaning, fixing or resupplying a site with gear, and the quality or ingeniousness of the design.

DEC field reports from the first six weeks of the spill are full of observations, complaints, and frustrations about boom deployment, tending, and maintenance. This was a product of both limited training and difficult conditions. However, local fishing vessel skippers were a tremendous source of skilled labor, since most quickly discovered that towing a boom was very similar to handling a purse seine.

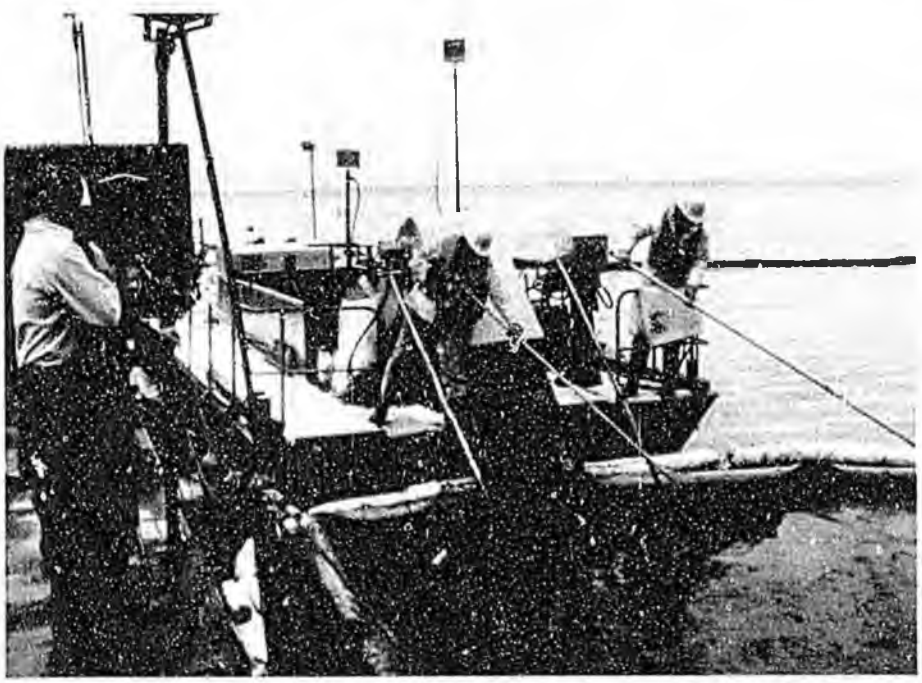
Local residents and state workers also figured out, by trial and error, site-specific methods for maintaining boom "fences." Frequently, this entailed arranging different kinds of boom (absorbent and containment boom of varying sizes) in tiers, so that oil lost by one would be caught by the next one. This was, however, extremely labor intensive, requiring night patrols and other round-the-clock efforts at both tending and maintenance. Boom repair was a constant problem, since anchored boom was roughed up by waves, tide

changes, and rocks. It also needed to be cleaned frequently, since once enough oil soaked into or coated a boom, it started to leak into areas of clean water. A crew of a dozen or so could clean about 1,000 feet of boom per day; however, at the height of the hatchery protection effort at Sawmill Bay, Evans Island, more than 28,000 feet of containment boom was in use.

The bottom line on defensive booming was that it required substantial resources and manpower to maintain even the most basic barriers, such as at the hatchery sites in Prince William Sound. And over time, even with the impressive amount of material coming into the Sound from around the world, defensive booming simply gobbled resources too quickly to be effective on a large or continuing scale. Although during the height of the April response, DEC reported that its local crew at Sawmill Bay (Evans Island) could repair 300 to 400 feet of boom per day, returning the gear to at least serviceable effectiveness, even the most rugged boom had a short life. Exxon estimated that nearly 30 percent of the boom deployed during the course of the 1989 response was damaged beyond repair or proper use.[8]

Also, while "boom" is an interchangeable term, boom types and brand names are not always easily interchangeable. In 1989, as many as 30 brands of containment boom, of various kinds (self-inflatable, foam flotation, etc.) and sizes (18 inches to more than four feet in depth) were in use, and it was generally mixed from site to site. Fittings, connectors, valves, and other hardware were not necessarily compatible and frequently had to be modified so they would work together. And there was no guarantee that the boom delivered on a given day to a given site was compatible with the actual conditions. DEC and Cordova District Fishermen United teams working in Sawmill Bay in early April noted with frustration that the first boom they received was in poor repair and too light to deal with currents that ran as swiftly as seven knots.

As the cleanup moved from on-the-water to shoreline cleanup, various boom combinations and configurations were used in tiers in the nearshore area to close off the cleanup zone from open water. Hard boom and absorbent boom were both used, and improvised boom made from absorbent "pom-poms" were strung throughout the cleanup area.



Conveyor belt style skimmer in use at Point Helen, Knight Island, August of 1989, on oil contained within boom. Photo by Patrick Endres

Skimmers

Most skimmers in use in the United States are shallow draft, small vessels designed to work in protected areas such as inshore or nearshore waters. There are a number of skimming systems, but all operate on a basic principal: Oil is lighter than water, and can therefore be skimmed off the surface, or separated from water in some kind of controlled tank or area.

Most skimmers are not designed to handle much of a sea. Their effectiveness also depends directly on the storage capacity available at a given site or in the area. Other factors affecting the effectiveness include the consistency of the oil, the sea state, the amount of debris in the emulsion, the thickness of the slick, etc.

The effectiveness of skimmers cannot be judged solely by the ability of the machines to pick up oil from the water. Skimming is a system, not just a vessel; an effective operation needs good containment,

good maintenance and repair capabilities, and a good transfer and storage capability once the oil is recovered. And most important, skimmers in Prince William Sound needed instructions from the air.

"It's very hard to see the oil from the deck of a boat," DEC's chief contractor reported on April 20, 1989. "Some boats pass within 200-300 feet of a slick and can't see it."[9]

In the early days of the spill, DEC's overflight and mapping information was the principal source of direction for skimming operations. Observations from low-flying, fixed wing aircraft and helicopters were used to track the spill. DEC landed float planes in oil slicks to sample and measure the depth of the oil. DEC's computer services chief, working with a consultant from Arthur D. Little Co., devised a system in which overflight information could be digitized and transferred to computer-generated maps. The first accurate maps of spill size and movement were issued by DEC on March 27.[10]



Two different kinds of skimmers at work: a disc skimmer in the foreground, attached by hose to a vessel, and a stationary rope mop skimmer in the center, which pulls the rope through the oil and around a pulley.

Photo courtesy of the Exxon Valdez Restoration Office

However, federal, state, and Exxon reports all note that there was a shortage of aircraft, initially, to provide direction for skimmers. Further, weather was often a problem. Even when weather in the Sound was decent for flying, frequently the airport at Valdez — at the base of the mountains, at the back of a bay nearly surrounded by mountains — was fogged in for long periods. Cold morning air and ample humidity caught within the mountain barrier combined to make flight operations an iffy proposition on many days. Ironically, the problem was most pronounced when the weather was best, with windless mornings after cool and clear nights.

Despite the problems with targeting slicks and directing skimmers, more than 260 skimmers of varying kinds were acquired by various parties, primarily Exxon, in 1989; a limited number worked in 1990.[11] Exxon reports in April frequently mentioned as many as 50 skimmers deployed at a time in the Sound and in the Gulf of Alaska. However, DEC monitors noted that these numbers were misleading.

While a given number of skimmers might be deployed in the spill zone at a given time, it was unlikely that all were actually working at once. Maintenance and repair were one problem; field repairs were not always possible, and some skimmers had to be towed long distances to get shop work in port.[12]

Furthermore, a full skimmer was a useless skimmer.

"There was one major problem that plagued all the skimming efforts and repeatedly brought skimming operations to a halt," wrote one of DEC's chief monitors. "Both the skimmers and the super suckers [a vacuum machine used to transfer oil from skimmers to barges] often sat idle with full tanks of recovered oil due to an insufficient number of support vessels and barges for off-loading the oil. Fishing boats would spend one or two hours gathering oil within booms and then, after waiting for 10 to 12 hours for a super sucker or a skimmer to arrive, the boats would sometimes abandon the boom, allowing the oil to float free."[13] The skimmers themselves had limited practical working time when transfer and storage was a problem. The majority of skimmers in use filled up with water and oil in less than an hour.

An additional, completely non-mechanical problem was that the response team could not immediately put to use skimmers that were flown into Alaska from abroad. U.S. shipping laws make it difficult for foreign-flag vessels to conduct business in U.S. waters, and skimmers built in France, Norway, and other countries had to receive

special clearance from U.S. Customs authorities in order to work. This was especially ironic because the most effective skimmer turned out to be a French-designed and built paddle-belt skimmer called an Egmopol.[14] And the largest skimmer available to work on the spill was in the Soviet Union. With help from the State of Alaska and the federal government, Exxon was able to put the 425-foot Vaydaghupski on contract on April 21. Unfortunately, by the time the vessel arrived, oiling conditions and the state of the oil were rapidly deteriorating for optimal recovery.

Skimmers working on free-floating oil worked fairly well at the start of operations in March and early April, but as oil weathered and emulsified it clogged gear and suction hoses with annoying frequency. Like defensive booming, recovery of free-floating oil with skimmers had a limited window of efficiency, given oil conditions and gear limitations.

Two innovative developments in skimming operations emerged. The U.S. Army Corps of Engineers sent a pair of dredges whose suction gear was designed for use in pulling sand and mud from ship navigation areas. The suction heads normally pointed downwards and pulled material up; response crews figured out that by turning the heads upside down, the suction head pulled viscous oil off the surface. It was a small innovation, but it worked well on weathered oil. Furthermore, the dredges had larger storage holds than the average skimmer, which made them a bit more independent.



The business end of a "supersucker," a hose attached to a vacuum truck on a barge, an innovation from the North Slope oil fields. The operator picks up oil contained by boom.

Photo courtesy of the Exxon Valdez Restoration Office

A second innovation came from the North Slope oil fields. At Prudhoe Bay, DEC contractors located two large vacuum trucks that were normally used to transfer spent drilling muds to disposal sites. The machines, mounted on trucks, had powerful vacuum heads that worked well on the weathered oil and emulsion. The two machines were trucked 800 miles down the Dalton and Richardson Highways in a high-speed trip under Alaska State Trooper escort from the Arctic to southern tidewater — quite an achievement under late winter driving conditions.

The supersuckers were mounted on barges and first used to pump some speed and volume into the tedious and halting job of off-loading full skimmers at Sawmill Bay. After seeing how effective the vacuums worked on weathered oil, DEC moved the barges to Herring and Northwest bays on Knight Island, where oil and mousse were thick enough to vacuum. The DEC recovery operation with supersuckers pulled about 450,000 gallons of mousse and oil from the water between April 3 and the first week of May.

Skimmers were used extensively in shoreline cleanup operations throughout 1989. As oil was washed off shorelines or freed by tilling, the oil floating in the nearshore zone was pushed by fire-hose spray towards a skimmer, which would pick up the mousse and oil. Exxon and the Coast Guard phased out skimmers during 1990 operations over the objections of state monitors and cleanup directors. State monitors frequently recorded that sheens released from cleanup operations were skimmable, while Exxon or Coast Guard monitors disagreed and skimmers were not deployed.

Instead, crews depended on various absorbents, such as boom, pom-poms, and pads. While this may have been an effective alternative to skimmers,[15] it also generated large amounts of solid oily waste. State monitors speculate that Exxon made the choice of sorbents over skimmers, in part, because the solid waste problem was easier to deal with than deployment, maintenance, off-loading and storage problems associated with skimmers. However, the reason given for denial of DEC's suggestion to use skimmers was usually simply that the sheens observed were too light to skim.

Burning

Burning is highly dependent on the freshness of the oil. The gases that ignite and burn most easily evaporate quickly; 12-72 hours immediately following the discharge is the optimal window for attempted burning of North Slope crude oil effectively on the water.

Also, while oil is, indeed, lighter than water, most oil in an oil spill does not settle into a homogenous, unbroken pancake. The thickness of the slick can vary from point to point, areas of water may alternate with patches of oil, wave and wind action may break up the slick, and oil and water emulsions may contain too much water to ignite. It is no easy trick to ignite oil and keep it burning on the water. In addition, burning oil produces a large volume of thick, noxious smoke. Any burn must take into account negative effects downwind for human settlements or possibly wildlife.

On the morning of the second day, Saturday, March 25, equipment needed to conduct a burn (special igniters and fire-resistant boom) was arriving in Valdez. Shortly before noon, the Alaska Regional Response Team (RRT)[16] agreed generally to attempt burning. Although Exxon had not formally applied to conduct the burn, DEC's on-scene coordinator gave a verbal go-ahead, on the general condition that the smoke from a burn did not threaten residents of any area. Exxon got its gear to the burn site late Saturday evening.

The burn reduced to tarry residue about 12,000 to 15,000 gallons of oil.[17]

Yet, as with other conventional response methods, the size of the spill and the variability of conditions showed the limits of even this relatively successful technique. The state, which actively encouraged the burn, gave the go-ahead the next day for Exxon to try burning in other areas. Unfortunately, the wind was rising, breaking up compact slicks and whipping water into the oil. On Sunday, sampling showed that the oil was becoming mousse, with a water content as high as 80 percent of total volume. Attempts to ignite the watery mousse failed. Shortly thereafter, the wind storm of March 26-27 made further burning impractical or impossible.

One of the principal factors in a decision to use dispersants is whether the immediate harm in the immediate vicinity of the slick is better than having the oil go elsewhere to cause more widespread damage.

Dispersants

"Dispersant" is a very general heading for a group of chemicals or formulations designed to break up large concentrations of oil on the surface into smaller and smaller concentrations.

Dispersing an oil spill doesn't make the oil disappear, and dispersants do not necessarily change the oil into something less harmful to the environment. Generally speaking, this class of chemicals disperses the oil into larger volumes of water. In a sense, dispersants dilute an oil slick by taking part of the oil off the surface and distributing it in the upper layers of the water column. Experts generally agree that putting oil into the water column, even in larger dilutions, can have negative effects on fish, plants and smaller animals that live or feed near the surface. One of the principal factors in a decision to use dispersants is whether the immediate harm in the immediate vicinity of the slick is better than having the oil go elsewhere to cause more widespread damage. Dispersants are intended less as a solution and more as a defensive technique.

"[T]he principal biological benefit of dispersant use is prevention of oil stranding

on sensitive shorelines," states a National Academy of Sciences report on the technique.[18] Decision-makers balance the potential harm of using dispersants against the harm of allowing oil to wash up on beaches, in marshes and in estuaries.

The charges and counter-charges [concerning disperants] received so much publicity that it is impossible to separate the technical information and field reports from the high-level, highly public arguments.

The effectiveness of dispersants, like other methods and technologies, depends on how well the chemicals are mixed and applied, what the conditions are at the site, and what the composition of the oil is at the time. Generally speaking, oil is more difficult to disperse as it weathers.

The dispute over the approval and testing of dispersants on the *Exxon Valdez* spill quickly left the realm of technology and science and leaped into the world of politics, popular media, and legal maneuvering.

The charges and counter-charges received so much publicity that it is impossible to separate the technical information and field reports from the high-level, highly public arguments that included the Governor of Alaska, the U.S. Secretary of the Interior, and the chief executive officer of the Exxon Corp.

On April 18, in a speech to the Anchorage Chamber of Commerce, the president of ARCO Alaska, Bill Wade, wondered aloud "Why did it take from 8:30 a.m. Friday to 7 p.m. Sunday evening to get permission to use [dispersants] on a full-scale basis?" Wade's comments pointedly implied that the response "could have been better" had Exxon received permission to spray dispersants earlier.[19] Then, in a national magazine interview appearing less than a week later, Exxon chief executive officer Lawrence Rawl was more direct in his accusations. The federal and state governments — mostly the Alaska DEC — did not let Exxon use dispersants that would have kept 50 percent of the oil from reaching the shorelines, Rawl charged.

"The basic problem we ran into is that we had environmentalists advising the Alaska Department of Environmental Conservation that the dispersant could be toxic," Rawl said.



Dispersant application equipment is tested in a spill drill conducted in March, 1992, in Prince William Sound. Photo by L. J. Evans

And in answer to another question, in which the reporter asked Rawl to state specifically who stopped Exxon from applying dispersants immediately, Rawl added, "It was the state and the Coast Guard that really wouldn't give us the go-ahead to load those planes, fly those sorties, and get on with it. When you get 240,000 barrels of oil on the water, you cannot get it all up. But we could have kept up to 50 percent of the oil from ending up on the beach somewhere."[20]

Just two days later, in an April 26 interview in the newspaper USA Today, U.S. Secretary of the Interior Manuel Lujan echoed and expanded upon Rawl's assertions — taking care to extract the U.S. Coast Guard from Rawl's assignment of blame. The newspaper's interviewer asked Lujan why the Coast Guard wasn't in charge, and why the response seemed so slow. Lujan replied, "The Coast Guard was in charge, very clearly. But when they started doing the things that they were supposed to do, the state of Alaska objected to it."

In answering another question, Lujan added, "The Coast Guard tried burning; Alaska objected. They tried chemical dispersants; Alaska objected. The Coast Guard,

which is the federal cleanup agent, just didn't know what to do."

Lujan did lay some blame at the feet of the Coast Guard, but only "for letting Alaska intimidate them," presumably on burning and dispersant use.[21]

The story that was developing implied that the spill had been controllable — primarily through the use of dispersants — but that the government had blocked use of the chemicals because of pressure from environmentalists, ignorance of spill response, or plain indecision. Exxon and Alyeska would repeatedly claim that the state, in particular, had insisted too hard and too long on mechanical cleanup — booms, skimmers, etc. — a technique that was clearly inadequate for the size of the spill.

There are serious strategic and factual problems with such a claim.

Exxon and Alyeska had neither enough dispersant nor the equipment to deploy it. There was never a case in which loaded dispersant planes were held on the ground because the government couldn't or wouldn't make a decision. Whatever delays occurred came because the right equipment wasn't in Valdez, the equipment failed to work properly, or because the weather prevented the airplanes from getting in the air.

Exxon and Alyeska had neither enough dispersant nor the equipment to deploy it. There was never a case in which loaded dispersant planes were held on the ground because the government couldn't or wouldn't make a decision.

The problem with dispersant applications was essentially the same as the problems that plagued other early efforts to contain and control the oil: The spill was enormous, and the resources to deal with it were not available.

Exxon's upper management ignored these facts and chose, instead, to weave a tale of bungling bureaucrats and scheming environmentalists. It was an easier, perhaps less painful way to explain away a problem that was bigger than any control and containment technique on hand.

This dispersant story, as it unfolded, prompted Governor Steve Cowper to demand some kind of substantiation for these claims from Lawrence Rawl. The Governor called Rawl's statements "demonstrably false."

"I urge you to repudiate the inaccurate statements you and other Exxon officials have made regarding the State's actions on dispersant use," Cowper wrote in a letter to Rawl. "If your company decides instead to cling to its story, I think the public is entitled to see some proof."[22]

In a reply sent by facsimile the same day, Rawl wrote that all he had said was that "officials of the State of Alaska and the Coast Guard were in discussions during the first three days on whether dispersants should be used." He also stated flatly that the dispersants worked "extremely well" in the early tests. He did not repeat the implication from his Fortune comments that "environmentalists" were advising against dispersants because they were toxic. Rawl said proof of all his statements would follow during Congressional hearings the next week.[23]

The exchanges died down after that, and Exxon's position reverted largely to the contention that the dispersants worked and therefore should have received earlier approval. The "proof" became little more than a battle of conflicting opinions, rather than a battle of conflicting facts.

The whole incident generated more heat than light. Putting aside the anger, the rhetoric, the blame-avoidance and the potential legal posturing, the record from the field and from the Regional Response Team (RRT) gives a better picture of the technical problems associated with dispersant use during the first three days.

The story of dispersant use on the *Exxon Valdez* spill begins, actually, before the tanker ever hit the rocks.

Dispersants began to be considered as an first-line defense against spill damage in the 1970s, although the first formulations and applications proved to be extremely harsh, environmentally. By the mid-1980s, dispersants had been somewhat refined, although potential problems with wildlife and plant damage still exist. However, by the late 1980s the state and Alyeska Pipeline Service Company began discussions about how to improve Alyeska's initial response capabilities by adding equipment and stockpiles of dispersant. Alyeska was interested, but insisted that the Alaska RRT adopt guidelines for dispersant use before Alyeska went ahead with the investment in additional resources.

On March 8-9, 1989 — just more than two weeks before the *Exxon Valdez* spill —

the RRT adopted initial guidelines for dispersant use, making Alaska one of the few states in the nation to have a mechanism for pre-approval of dispersant use. The RRT divided a hypothetical response zone — Prince William Sound and the northern Gulf of Alaska — into three zones, adopting guidelines for each.

Initial Guidelines for Dispersant Use

Adopted March 8-9, 1989, by the Alaska Regional Response Team

for Prince William Sound and the northern Gulf of Alaska:

Zone 1: the approved traffic lanes for tankers entering and leaving the Sound, and large areas of deep, open water to the east and west of the lanes.

- Dispersants use acceptable with caution.
- Federal or state on-scene coordinators had authority to use chemicals at their discretion.

Zone 2: the Gulf of Alaska.

- Dispersants use acceptable in this area, but
- Actual approval would be on a case-by-case basis because of the zone's size.

Zone 3 all of Prince William Sound outside the traffic lanes.

- Chemicals not considered an acceptable option because of critical nesting, rearing, and feeding areas for birds, marine mammals, fish and other wildlife.

Zone 1 included the approved traffic lanes for tankers entering and leaving the Sound, along with large areas of deep, open water to the east and west of the lanes. In this area, dispersants were considered acceptable, and the federal or state on-scene coordinators had authority to use chemicals at their discretion.

Zone 2 included the Gulf of Alaska. The RRT considered dispersants acceptable for use in this area, but because of the size of Zone 2 the RRT decided that actual approval would be on a case-by-case basis.

Zone 3 included all of the Sound outside of the traffic lanes. In this area, chemicals were not considered an acceptable option because of the many islands and bays that were critical nesting, rearing, and feeding areas for birds, marine mammals, fish and other wildlife. This designation was consistent with both the prevailing knowledge about the harshness of dispersants and general strategy for using them. Chemicals were pre-approved for use in Zone 1 because it was important to do everything possible to keep oil out of the sensitive Zone 3.

Yet pre-approval did not imply that dispersants presented no potential dangers, even in Zone 1. The RRT, which includes EPA and DEC, knew very well that the scientific literature on oil spill dispersants warned of some potential harm to wildlife from dispersed oil.

According to a committee looking at the general aspects of dispersant use for the National Academy of Sciences, "In open waters, organisms on the surface will be less affected by dispersed oil than by an oil slick, but organisms in the water column, particularly in the upper layers, will experience greater exposure to oil components if the oil is dispersed."[24]

More specifically, on the particular dispersant Exxon planned to use in 1989, a Canadian federal government report found that in laboratory tests, certain marine animals that live in the water column suffered greater mortality when exposed to dispersant-oil-water concentrations as opposed to the oil-water concentration alone.[25]

On the day of the spill, winds were light and seas were less than two feet; the dispersant was not mixing with the oil well enough to break up the slick.

The RRT action of March 8-9, 1989, also included some extra conditions for Zone 1 use based on whether birds, fish and other animals were present because of seasonal migrations, when they were giving birth or raising their young.

In other words, the RRT recognized the role of dispersants as a potential defensive measure against spill damage, but the state and federal agencies encouraged caution because dispersants were potentially harmful. This action reflected the realities of spill response: Every decision involves balancing the potential harm of the ailment against the side effects caused by the treatment.

A second reality — one that would present itself during the *Exxon Valdez* spill — is that dispersants are neither 100 percent effective nor 100 percent guaranteed. Field tests

most dispersants are not common, and various monitoring methods to assess effectiveness do not often produce scientific or technical consensus. Therefore, before approving widespread dumping of potentially damaging chemicals on the water, a responder will want to be reasonably certain that the dispersants are going to do some good. Even in the case of Zone 1, where dispersants were pre-authorized for use by the RRT, an on-scene coordinator would be expected to use prudence, discretion, and experience to guide his or her actions before pouring tens of thousands of gallons of chemical into the ocean.

A third point to consider is that no single method of response was likely to solve the problem of 200,000 barrels of oil on the water. The volume of oil was so great, and so concentrated, that dispersing the oil with chemicals was hardly a sure thing.

"At this early stage of the spill, the oil slick was extremely thick," wrote DEC's technical expert on dispersants in a later analysis of Exxon's claims that dispersants would have effectively eliminated 50 percent of the oil. "Using tables from Exxon's Oil Spill Chemicals Training Seminar Handbook, I calculated that a slick of 240,000 bbls. [barrels] volume over 2,500 acres would have had an average thickness of 3.8 mm. This is simply too thick to disperse."[26]

Despite Exxon's claims of government interference and indecision, dispersant use was shut off by the limitations of the product and the unpredictability and force of Alaska's late winter weather.

Nonetheless, the first conversation between DEC and Coast Guard officials in the early hours after the grounding was about dispersants. At about 1:15 a.m. on March 24, Dan Lawn of the Valdez DEC office spoke with Commander Steve McCall of the Coast Guard, the captain of the port and the pre-designated federal on-scene coordinator.

"Within 10 minutes of the department being notified we had the discussion about dispersants, and we recognized that if conditions were right we'd use them," Lawn recalled.[27]

At 8:30 a.m. on Friday, March 24, Alyeska Pipeline Service Company made formal request to the federal on-scene coordinator to drop 50,000 gallons of dispersant, beginning that day. At the time of the request, Alyeska had less than 4,000 gallons in Valdez, although an estimated 8,000 gallons were stored in Kenai and another 8,800 gallons in Anchorage. However, Alyeska did not have the equipment or the aircraft to make any drop at all.[28]

The oil slick was in Zone 1, the area of pre-authorization, so Cmdr. McCall at 3 p.m. approved a test application. At 6 p.m., a special arm and bucket that could be hung from a helicopter arrived in Valdez from Kenai. After loading, the helicopter flew to the site of grounding and dropped its load on the thick, compact slick near the tanker.

The Coast Guard and DEC agreed that the dispersant did little good, if any. Dispersants are, in large part, designed to weaken the surface tension of the oil, thereby "breaking" the slick up. However, simply laying the chemical on top of a slick isn't the best way to get results; agitation, whether from wind or seas, is needed for optimal efficiency. Other factors, such as the size of the droplets of chemical, could not be properly controlled using the helicopter and bucket.

In fact, Exxon's consultant, Gordon Lindblom, was dead against the helicopter drop. According to Iarossi's deposition taken in August 1992, he and Lindblom heard about it while the two were in an Exxon jet bound for Valdez from Texas. Iarossi told the attorneys that Lindblom was visibly angered by the prospect of the helicopter drop, saying that it was likely to fail, and make it more difficult to get subsequent agreement to use more dispersant.

Especially when seas are calm and there is little wind. On the day of the spill, winds were light and seas were less than two feet; the dispersant was not mixing with the oil well enough to break up the slick. The Coast Guard and DEC concluded conditions were simply not right for depending on the dispersant because there was insufficient mixing.

The Coast Guard approved another test the following morning, in hopes conditions had changed or that better application might yield better results. It didn't. Once again, the light winds and calm seas did not mix the dispersant properly.

A third test, on Sunday morning, was hampered because the aircraft's deployment

system did not work properly. The fourth, and last test in Zone 1 came on the afternoon of Sunday, March 26, as seas were building and a gale was brewing to the north. Commander McCall of the Coast Guard was satisfied the dispersants had a reasonable chance of working now that the weather had changed, and he approved full use of dispersants in Zone 1 on Sunday evening.

The weather was getting better, relatively speaking, for using dispersants to battle the oil slick. Winds had increased to 15-20 knots, and seas were kicking up. But the building winds and seas also began to break the large pancake of oil into smaller slicks and streamers; the main body of the slick was also moving out of the middle of the Sound and closer to the shore of the islands to the west.

On Monday, as a full-scale storm started to swirl in the Sound, Exxon applied about 5,500 gallons of dispersants in Zone 1, but the weather was driving the slick west-southwest, towards Disk, Eleanor, and Knight Islands — and into Zone 3. More than two weeks earlier, the Alaska RRT had considered the use of dispersants in that sensitive zone and rejected the idea. However, Exxon requested special permission to spray in that zone late Sunday afternoon. To spray there, Exxon would need special clearance from DEC; within an hour of the request, at 5:20 p.m., DEC determined that the water was deep enough and the drop zone was far enough from shore to allow a Zone 3 drop.

It never happened. Monday's gale turned into a 70-mph maelstrom by Tuesday. All aircraft were grounded. And more important, the window for effective use of dispersants had closed.

Despite Exxon's claims of government interference and indecision, dispersant use was shut off by the limitations of the product and the unpredictability and force of Alaska's late winter weather. Equipment problems, uneven application, and a shortage of the chemicals the responders needed exacerbated the problem.

2.2 Shoreline cleanup

Shoreline contamination was a major issue for state authorities and local communities. The rapidly fragmenting "fronts" and the limited recovery and storage capabilities were quickly overwhelming the response effort.

The oil started to wash ashore in large amounts, and over wide areas, beginning in early April. Throughout that month, resources and techniques were targeted mainly on the massive and expanding problem of on-the-water recovery, and on defensive booming. Although oil was weathering, breaking up, and was frequently concentrated at nearshore sites, there was no single or main "oil slick." The battle against the oil was more like a guerrilla war, fought in skirmishes on multiple fronts, rather than a concentrated attack against a massed enemy.

Yet even as on-the-water efforts expanded and Exxon mobilized more and more vessels and equipment, it was becoming clear that shoreline cleanup was about to become perhaps an even bigger priority. Oil was washing ashore at one site, only to be lifted off by the next tide cycle.

"It is discouraging for the crews to see oil come off a beach during a tide change and impact another (sometimes clean) beach," reported DEC's main contractor on April 19. The contractor added, the following day, "All attention is still directed to offshore recovery. Nothing being done to shoreline contamination."[29]

This was a major issue for state authorities and local communities. The rapidly fragmenting "fronts" and the limited recovery and storage capabilities were quickly overwhelming the response effort. Oil was not only heading out of the Sound for the outer Kenai Peninsula and Kodiak archipelago, but it was swirling throughout the Sound and hitting more and more shorelines.

"There is some kind of correlation between the tides and the movement or relocation of free-floating oil," the DEC contractor explained in that April 19 report. "The oil appears to be moving through Northwest Bay in a counter-clockwise direction, up and around Pt. Eleanor in a clockwise direction, down the east side of Knight Island and back to the west through Upper and Lower passages. Then (depending on the tide

stage), when it reaches the west side, it either travels north to Northwest Bay or south to herring Bay."

A week later, on April 26, the report noted, "Lots of oil is being washed from Smith, Little Smith and Seal islands as well as the north east corner of Point Eleanor. These areas were heavily impacted during the major release of oil."[30]

The only way to truly stop the recurring cycle of oiling was to break it onshore, by recovering stranded oil and preventing it from getting loose every six hours when the tide changed.

This scenario, occurring around northern Knight Island and the smaller islands to the east that April, suggested that much of the on-the-water recovery was really becoming an endless — and losing — game of chase with familiar oil concentrations. The only way to truly stop the recurring cycle was to break it onshore, by recovering stranded oil and preventing it from getting loose every six hours when the tide changed. And there was plenty of oil to be washed off: A number of DEC field reports noted pooled oil and stretches of greasy, brown emulsion up to and exceeding two feet deep stranded on shorelines of the area.

The re-oiling problem was starting to move south, as well, as prevailing currents and changes in wind carried oil off the beaches of the Smith Islands, Seal Island, and Green Island. Two of the most heavily oiled areas of 1989 — Point Helen at the southern tip of Knight Island, and at Sleepy Bay at the northern head of Latouche Island — were affected largely by secondary oiling from their northern cousins. These two southern Prince William Sound sites would be the focus of some of the most intense cleanup activity well into 1991, and even 1992.

While there was little activity on the shorelines during the first weeks after the spill, by the second week in April (around the 19th-20th day of the response), the Coast Guard and DEC were putting increasing pressure on Exxon to plan for and execute a full-fledged shoreline cleanup program.

Working off the relative success of vacuum equipment to pick up weathered oil from the water, there was one attempt at Smith Island to use vacuum equipment on the shoreline. The trick was to vacuum oil without pulling up cobbles and fine sediments. Where the oil was deep and the rocks were large, vacuuming actually worked. However, recovery was slow and the areas where it might work were limited.

Exxon made one highly publicized, almost desperate effort to do shoreline cleanup with workers literally wiping rocks by hand with absorbent material. This looked ludicrous on television, and supervisors from all parties thought it useless and impractical almost as soon as they saw it. State monitors reported during 1989 that contractor crews occasionally resorted to hand-wiping when waiting to be re-deployed or when equipment was down, but rock-by-rock cleanup was essentially eliminated as a realistic option after a single attempt.

Washing the beaches was generally regarded as the most practical method, but there were various theories about how to do it. Exxon tried several combinations of manpower and equipment. Under one arrangement, at the "top" of the beach (roughly the high-tide line) workers strung a perforated hose that could carry a high volume of cold sea water, which flooded the sediments at low pressure. Workers "down-beach" agitated the sediments with rakes and other hand tools to release the oil, which was lifted off by the flood and collected in front of booms strung just offshore. This worked fairly well, and DEC monitors reported that the tilling released more oil than flooding alone. However, while hand-tilling passed in and out of fashion throughout the response, it was rarely used with the flooding system after those [illegible] tests. Not all shorelines lend themselves to hand-tilling, and the amount of labor necessary for full-scale application was, at the time, a daunting proposition. At that point, there was still no firm plan to house workers, feed them, clean them, and dispose of all the waste they would produce.

A second variation of the header flooding system added workers using moderate- to high-pressure hoses to wash rocks. This released more oil than the flood alone, and it covered more ground at a faster rate than the hand-tilling method. It could also be used on many types of shoreline. This variation was not without some obvious problems. Biologists were concerned about blasting animals and plants off the shorelines. Coastal geologists were concerned that high-pressure blasts would wash away the fine sedi-

ments underneath big rocks and cobbles; that, in turn, might de-stabilize the beach and trigger serious erosion.

The temperature of the water was a problem, too: The nearshore waters in the Sound, even in the summer, rarely rise much above 45-50 degrees Fahrenheit. Lots of cold water tended to make the oil thick and tarry, making it harder to move and harder to recover. This also tended to encourage workers to use higher pressure to blast the tarry oil, which made biologists and geologists more nervous than before. Cold water would not cut the oil.

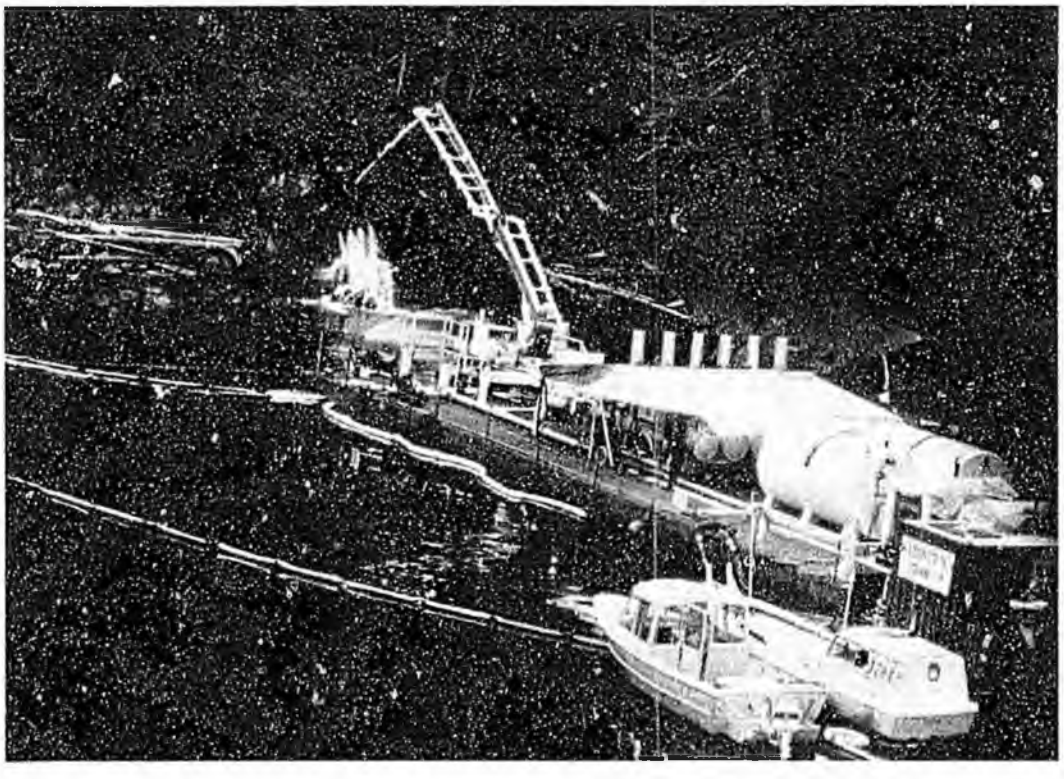
Little more than six weeks after full-scale hot-water washing became standard shoreline treatment, both the Coast Guard's scientific advisor and independent biologists expressed concern that the hot water was "cooking" the beach life and perhaps doing more harm than good.

Hot water and high pressure

One of the enduring images of the *Exxon Valdez* cleanup is of workers in hard-hats and yellow rain gear blasting at rocks with high-pressure hoses that fired hot water. Virtually every beach that had significant oiling (moderate to heavy, by DEC definitions) was washed with either hot-water hoses or hot-water mechanical washing devices called "omnisweeps" or "omnibooms." In all, as much as 150 miles of shoreline were probably washed with hot (140-160 degrees Fahrenheit) water in 1989.[31]

In terms of shoreline ecology, hot water hurts. As early in the cleanup as July, 1991, little more than six weeks after full-scale hot-water washing became standard shoreline treatment, both the Coast Guard's scientific advisor and independent biologists expressed concern that the hot water was "cooking" the beach life and perhaps doing more harm than good.[32] This group was not solely concerned with the immediate, acute impacts of the hot water and high pressure. These scientists were also concerned that the plants and animals on the shorelines washed with hot water would actually return to normal *more slowly* than those left alone, or those treated less harshly.

In an article published in 1990, two independent Alaska biologists questioned the wisdom of the hot water wash based on information gathered from a study site they established on Green Island.[33] A second paper expanded on this hypothesis, offering data that, the authors suggested, showed that hot water and high pressure had killed more animals and plants than the oil might have. They took their analysis a step further and suggested that recovery might therefore be slower.



An omnisweep, or omniboom in operation, washing oiled shoreline. Photo by Rob Schaeffer

"Complete loss of mussels and rockweed [due to treatment] at these sites has changed or eliminated several ecological niches," the study concluded.[34] Without the cover of the mussels and seaweed, the biologists said, it was hard for the usual array of small intertidal plants and animals to establish themselves and survive; the exposed rock surfaces were too dry, too exposed to predators, and too heavily pounded by wave action. Moreover, the normal progression of

plant life was likely to be delayed because the exposed surfaces allowed so-called "opportunistic" species, such as various algae, to establish themselves in formidable and overwhelming numbers.

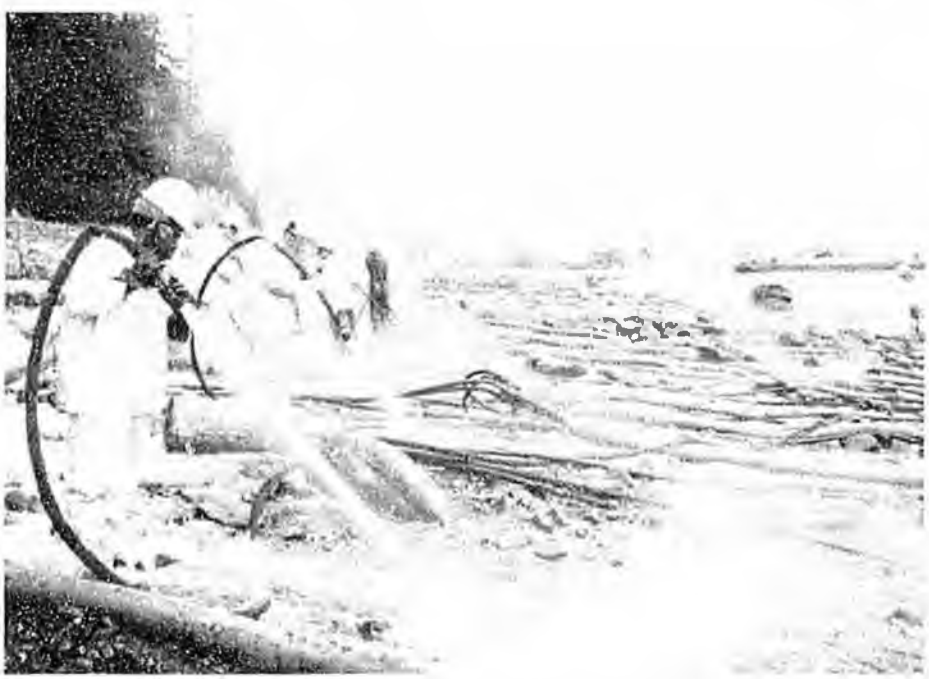
This paper was actually part of a larger study commissioned by the National Oceanic and Atmospheric Administration (NOAA), and financed by the EPA, the Coast Guard, the American Petroleum Institute and Exxon, among others. The NOAA study was much more forceful, and its conclusions more pointed, than the previously published work. NOAA released the paper[35] in April 1991 at a Washington, D.C. press conference. NOAA's top officials not only said hot water washing did more harm than good and set back recovery, but closed by suggesting that "sometimes the best thing to do in an oil spill is nothing."[36]

Having "survivors" of shoreline organisms, in other words, is an important step on the way to full recovery. But in hot-water, high-pressure treatment, there are few survivors, if any; therefore, recovery is likely to take longer.

"It is clear," the study reads, "that the data . . . strongly support the conclusion that hydrocarbon contamination and high-pressure, hot-water treatment each caused major adverse impacts to the intertidal biota of western Prince William Sound, but that the effects of the treatment predominated. Moreover, it appears likely that the treatment, while removing oil from the upper and mid-intertidal zone, where its effects were somewhat restricted to relatively tolerant organisms such as barnacles, rockweed, and mussels, transported the remobilized oil into the lower intertidal and shallow subtidal zones, where the oil was placed into contact with relatively more sensitive and productive organisms such as hard shelled clams and crustaceans."[37]

The authors of the study argue, in short, that a lot of the tougher shoreline organisms might have been killed by the oil, but that a fair number would survive. Therefore, while the overall health of the shoreline might suffer, populations would limp along and gradually re-establish themselves fully. Having "survivors," in other words, is an important step on the way to full recovery. But in hot-water, high-pressure treatment, there are few survivors, if any; therefore, recovery is likely to take longer.

The study also suggests that the high-pressure wash drove oil out of the upper beach, but the hoses also drove oily fine sediments into places below the tide line, thereby oiling places that would have escaped oiling otherwise.



Workers washed oil with hot-water hoses toward the water where skimmers picked up the oil. Photo by Patrick Endres

Before addressing the specific technical and scientific points raised by the NOAA study, it is helpful to look at the study first within the context of the larger technical debate about shoreline cleanup in general, and second, within the context of *Exxon Valdez* spill politics.

There has long been a debate among responders, biologists and policy-makers from industry and government about whether oil spill cleanup should proceed beyond anything more than simple pickup. Indeed, NOAA's introduction to the 1991 report cites several of the best-known references on the subject from the past decade or so. The NOAA report is not necessarily an isolated analysis; rather, the conclusions (and some of the principal authors and directors) of the study are a product of a certain school of thought about oil spill cleanup.

The NOAA Hazardous Materials section, which is the designated scientific support coordinator for the federal on-scene coordinator, leans towards the approach taken by

the school of limited cleanup. John Robinson, who led much of NOAA's work on the *Exxon Valdez* spill, was not generally in favor of aggressive cleanup. He took direct control of the controversial Net Environmental Benefit Analysis study of 1990, which concluded that rock-washing or sediment excavation was ill-advised. It became the federal government's official policy.

Robinson's position was largely based on concern for intertidal communities, and the technical literature has a number of references to support his position. In addition to those cited in the NOAA report, other studies — including one conducted in part by DEC's chief technical consultant (Erich Gundlach, now of the Arthur D. Little Co.) — suggest that most oiled shorelines exposed to wind and weather have a good chance of recovering their biological health within periods often measured in years, not decades.[38] So, given the facts that Prince William Sound's ecosystems were largely not exposed to other external environmental stresses, that the weather is harsh, that ocean conditions are generally high energy, and that there are a lot of nutrients flushing into the marine ecosystems to aid recovery, it would not necessarily be unreasonable to suggest that minimal shoreline cleanup might be better than aggressive cleanup in such a situation.

This raises serious questions about the cleanup: Is the NOAA study accurate in its picture of hot-water, high-pressure washing during the *Exxon Valdez* cleanup? Are the results strong enough to prompt a conclusion that the technique should not have been used in Alaska, and should not be used in the future? These questions address both scientific and strategic issues.

The data collected by the NOAA researchers is thought-provoking, but it suffers from a certain imprecision — no fault of the researchers, really — because of the working conditions on the shorelines in 1989. It is impossible to generalize too broadly about hot-water, high-pressure washing, since that meant different things at different sites, with different heaters, different crew chiefs, different external pressures (meeting goals in scheduling, for example), and differing levels of fidelity to proper procedures. While this might have affected some of the data, this also might affect the general conclusions about washing mentioned by NOAA officials when the report was released.

Some washing crews were careful and some were not. Some basic problems in variability of performance included:

- **Uncoordinated spraying**

  State monitors often observed Exxon crews spraying hoses randomly on the shorelines, rather than working systematically down a beach. This often meant that some people put more hot water and more pressure on a given area than others. Some workers were allowed to point hoses directly into fine sediments, which mobilized oil and sand and allowed it to be transported into the lower intertidal. In short, treatment was uneven, not just from site to site, but within sites themselves.

- **Ignorance or carelessness in application of treatment**

  Everyone agreed that it was important for crews to avoid spraying the so-called "green zone," the rich, lower intertidal area characterized frequently by the presence of filamentous green algae.

  "Generally, a cleanup squad was to wash a beach by following the tidal waters down the beach on the ebb tide and moving back up the shore with the flood tide, stopping intrusive treatment if the green zone were exposed. However, many crews ignored these restrictions, insisting on working the area rather than shutting down or moving to a less sensitive location," the DEC's cleanup monitoring section reported in its 1992 summary.[39]

  Also, once oil was released from the beach into the containment zone for a skimmer to retrieve, workers were supposed to turn down the pressure on their hoses and gently push the floating oil towards the skimmer.

"Unfortunately, despite repeated explanations of this method, crews were often allowed to turn most if not all of their hoses on the oil without reducing the intensity of their spray," DEC's monitors reported.[40] This not only caused a lot of mixing and turbulence, but dumped a good deal of warm water into the nearshore area, which could affect the survival and recovery of the extreme lower intertidal areas.

❒ **Scheduling and reporting of results**

Throughout 1989, DEC pointed out to both federal and Exxon authorities that too much time and effort was being spent on shorelines that were not as heavily oiled as others. Crews were often deployed on moderately oiled shorelines that could be completed quickly, rather than on more heavily oiled shorelines that might take more time, and therefore throw off the crews' scheduled goals, and reports of progress, for shoreline miles treated.

From the standpoint of the NOAA study, this issue raises questions about whether the damage from hot water washing could have been minimized throughout the region by concentrating the harsh technique only on the most heavily oiled sites, using milder techniques on others.

❒ **Poor choices or combinations of equipment**

Shore washing was more effective at releasing oil when hoses and the omnibooms were used in conjunction with a low-pressure beach deluge system (such as the perforated hoses). However, some places used it and some did not, which meant that more work was done with the most powerful equipment. In addition, the omnibooms were originally intended to work primarily on steep, rocky faces and some large boulder beaches. However, Exxon gradually began using them on almost all kinds of beaches, with the exception of low-energy, fine-sediment shorelines.

Hot water and high pressure are harsh treatments, and the data gathered by NOAA give us a better idea of how harsh they might be.

NOAA's data did not, and probably could not, correct for these important variables. The study's model for hot-water washing was based on one actual observed test of the technique. The rest relied on imprecise or incomplete documentation. Records may show that a beach was washed with hot water, but the records used by NOAA did not show where on the beach the hot water and high pressure were applied.[41] There are some ways to reconstruct this,[42] but to DEC's knowledge NOAA did not know about them or chose not to use them. From the standpoint of science, this is a real problem: Data based on imprecise sources weakens the data and the conclusions based on them.

Biologists from the Alaska Department of Fish and Game (ADF&G) remarked, "The NOAA report attempts to circumvent this problem by relying on general segment reports and from observations by 'individuals working in the field (e.g. field bosses for specific locations).' While this may provide additional detail on beach cleanup efforts, one must question the ability of such individuals to recall the exact treatment that occurred (temperature, duration, number of passes, etc.) on a specific location where the NOAA transects were conducted. Where multiple treatments occurred, different individuals were involved."[43]

Hot water and high pressure are harsh treatments, and the data gathered by NOAA give us a better idea of how harsh they might be. However, because of the variability of the treatment from site to site, coupled with the scientific unreliability of some of the sources used, the conclusions NOAA reaches about setbacks to recovery caused by treatment are closer to hypothesis than proof. One year's data based on observations immediately after the spill makes for an incomplete data set, state reviewers suggested; several years of recruitment and recolonization data are needed to reach the kind of conclusions the report's authors suggested.[44]

NOAA was working under difficult circumstances, and it is not surprising that its data would suffer from the weaknesses described above. The state, in reviewing the report and in responding to questions from the press, tried to make clear that it did not

dismiss NOAA's findings out-of-hand.

The state's reviewers agreed generally that the NOAA report's conclusions, especially estimates of rates of recovery, are not fully supported by the study's data. However, it would be imprudent to ignore the general picture the report draws about the harshness of hot water and high pressure on intertidal life. Applying this piece of science to oil spill shoreline cleanup strategy, one might conclude that:

a) Hot water and high pressure can be extremely harsh on intertidal communities.

b) Such treatment probably has implications for recovery as well as initial acute effects.

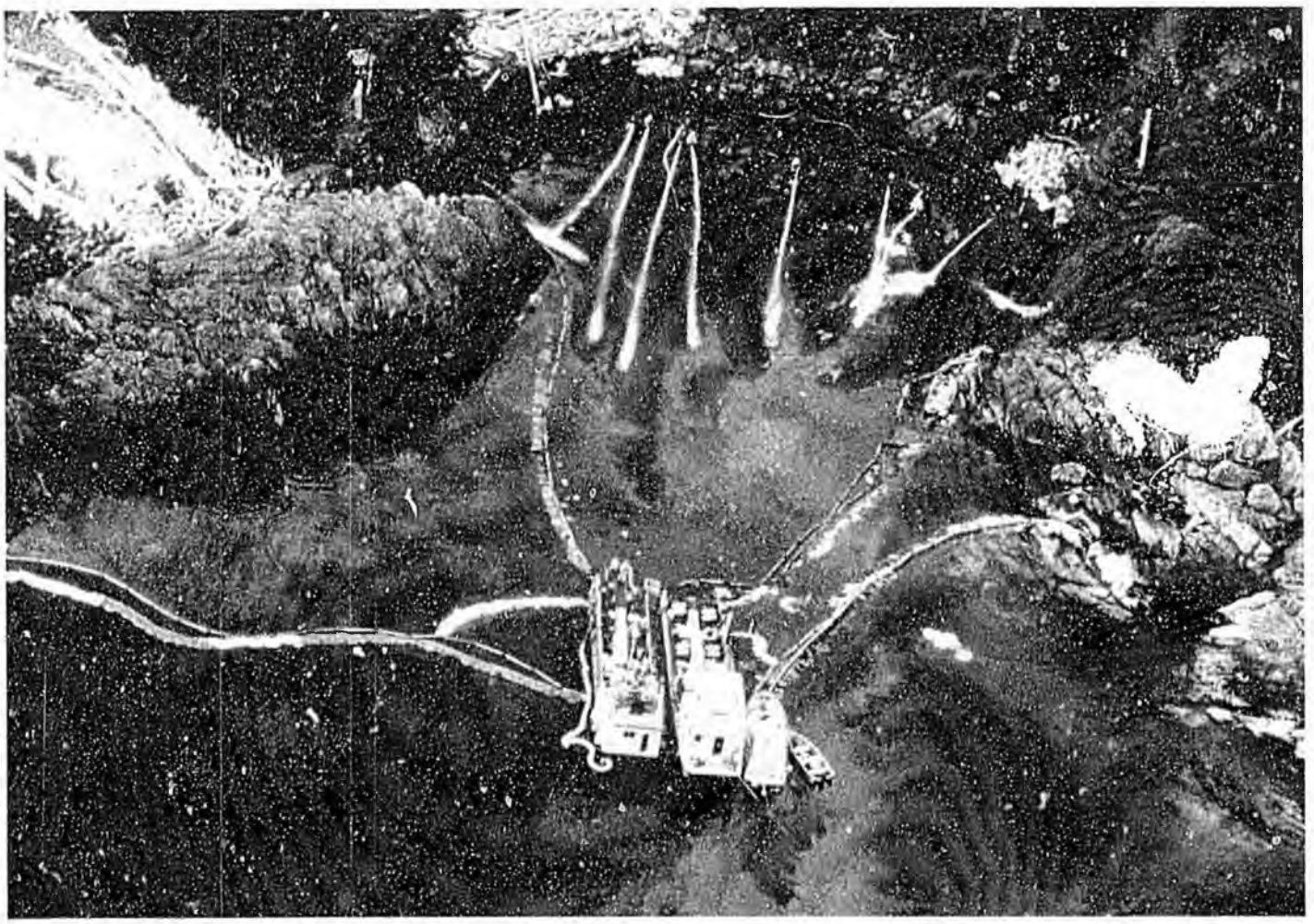
c) Therefore, before choosing such a technique, responders must make sure any damage from the treatment is acceptable based on the potential threat from the oil.

It was well known from the start that hot water and high pressure were a potentially harsh combination for shoreline treatment.

"[T]esting done on Block Island by Exxon and the USCG have demonstrated that water flushing and hydro blasting are both effective removal methods," wrote DEC's main contractor on May 3. "The only thing to determine now is the temperature range of the water. Admiral Yost seems to think that a clean, dead beach (using hot water) is better than a live, semi-oiled beach (using cold water)."[45]

In fairness, Yost, the Coast Guard commandant, was not alone in this assessment. The state's spill officials agreed that hot water flush had a role — perhaps a significant one — in shoreline cleanup. State and federal officials agreed that the potential damage of treatment was acceptable based on the potential threat from the oil.

And here is precisely where opinions separate, not just in this instance, but in the



Aerial view of beach cleaning using hot-water washing, skimmmers and boom. Photo by Rob Schaeffer

larger and more common debate about conducting shoreline treatment after an oil spill: Who defines terms such as "threat" and "harm?" What resources, values, economies, and uses are most important and deserve protection — especially when protection for some may have negative results for others?

For the State of Alaska, the bottom line was that cleanup policy was a complex matter of public policy, not merely a scientific consideration. However, science provided the starting point.

First, the spill was enormous, and the shoreline impacts were unprecedented. The 11 million gallons lost from the tanker washed into hundreds of salmon streams, estuaries, bird-nesting areas, marine mammal haulout and rearing zones, and other critical habitat. The oil was not affecting a limited habitat for a single major species; it was coating tremendously large sections of habitat for a number of important species, some of which do not survive in large numbers outside of Alaska. Nothing in the literature gave clear guidance about what might happen to species that suffered widespread disruption due to oil over massive areas that supported them.

The potential harm to limpets and rockweed from hot water seemed acceptable, based on the potential harm to the region's economies and communities, and to higher trophic species such as fish, seals, and seabirds.

Second, the amount of oil that was spilled — and later, it was determined, the amount of oil that was locked underneath rocky shorelines and buried on other beaches — raised serious questions about the potential for sublethal effects due to long-term , low-level exposure to hydrocarbons.

Third, despite the general impression that Alaska is a rich paradise for wild things, it must be remembered that Alaska's subarctic climate puts most species on a razor's edge of survival. A tropical climate with endless summer has more energy, more diversity, better conditions for recovery, generally speaking. Prince William Sound is rich, compared to other areas, largely because it is not subject to the same barrage of environmental insults as other, more populated and industrialized areas.

However in Alaska, any disruption — natural or man-made — has the potential for driving a given animal population below the levels necessary for survival. Cold water, harsh weather, and limited solar energy at high latitudes can all combine to make recovery in such an area less dependable than recovery in a more temperate climate. This spill was so large, and its initial effects so widespread, anything less than a full-scale attempt at cleanup seemed like a biological gamble.

Last, the timing of the spill, in biological terms, was especially critical. Prince William Sound, the Copper River delta, the Kenai Peninsula Coast, the Barren Islands and the Kodiak Archipelago — all these areas were on the verge of the massive migrations of birds, marine mammals, and fish that begin in April and extend through the northern summer. The beaches and islands of the region are primary stops on migration routes, and preferred sites to nest, give birth, and raise young for many species. The oil, quite literally, was in the way, or on its way to vast stretches of critical habitat.

But biology was only part of the decision. The people and the economies of the region depend on the health of resources, the seasonal abundance of game and fish, clean water, and wilderness islands. Subsistence, commercial fishing tourism, sport hunting and fishing, and recreation are the foundation of the local economies, and the very reasons the communities of the region exist.

Commercial fishing seasons were on the verge of opening, and the concern was not just over the 1989 season, but the 1990 season as well. Not only was it important to clear spawning beds from oil contamination, but it was just as important to clean beaches that held the potential for leaking oil into the bays and coves where fishermen made their living. Alaska tourism at virtually every level is based on pristine wilderness. Subsistence users demanded that oil be removed from their hunting and fishing areas as best as possible. It was simply not acceptable or practical to put these economies on hold for some period of years while oil degraded naturally.

And as a practical matter, a minimal cleanup raised the distinct possibility that oil being lifted off beaches and moved elsewhere would oil and re-oil many areas that had escaped the initial impacts, as described in field reports and overflights by state and federal agencies.

The threat from the oil extended far beyond the intertidal communities of the

affected shorelines; the potential harm to limpets and rockweed from hot water seemed acceptable, based on the potential harm to the region's economies and communities, and to higher trophic species such as fish, seals, and seabirds. Arguments for limited or light cleanup, based on concerns about immediate intertidal impacts, lacked the perspective of both the broader ecological implications and important public policy considerations.

Did the hot water treatment work? Hot water and high pressure did, indeed, remove relatively large amounts of weathered oil from rocky shorelines. It did, however, suffer from serious drawbacks. It was probably harsh on intertidal creatures and plants that survived the oiling itself, and it probably drove some oil at some sites deeper into the fine sediments. In addition, variability in the way crews conducted the treatment caused secondary problems, some of which the NOAA 1991 study points out.

On balance, state officials were willing to accept some of this damage in exchange for removing the heaviest concentrations of oil from shorelines as much as possible, as fast as possible. The benefits to commercial fishing, tourism, and other human uses of the shorelines outweighed the potential damage and disruption caused by the treatment.

The treatment was most effective, and most acceptable, on shorelines that were heavily oiled. As soon as the heaviest oiling — the so-called "gross contamination" — was removed by the hoses and omnibooms, the balance tipped away from high pressure and hot water. By the middle of 1989, it was obvious that some other method would have to be used if the cleanup was to continue past the initial, rough washing program.

Solvents and chemical cleaners

Exxon's first attempt to get past the limitations of hot water washing (and perhaps, some of its harsh effects), was to propose the use of a chemical cleaner called Corexit 9580M2. This was, essentially, kerosene with most of the aromatics (the most toxic components of petroleum products) removed, plus some detergents. The substance was a modification of the dispersant that Exxon had attempted to apply during initial on-the-water response. Exxon said it looked at 40 potential chemical cleaners from several different manufacturers before settling on Corexit, which is manufactured by Exxon.



Test application in 1989 of a chemical cleaner called Corexit, an Exxon product later rejected for beach cleanup. Photo by Rob Schaeffer

Corexit never got past the testing stage, for many of the same reasons that relegated hundreds of other products to the file cabinets during the *Exxon Valdez* response. It had not been tested, scientific data on its toxicity were either thin or incomplete, and it had operational problems. In addition, public acceptance of a new, widespread chemical treatment was lacking. To landowners, fishing groups, and conservation

organizations, the idea of dumping chemicals on hundreds of miles of shorelines that had just been oiled seemed much too risky — especially when there were other alternatives.

Like the earlier public flap over dispersants in April and May, the bitter arguments about Corexit were based, in part, on Exxon's insistence that it had an answer to the oil spill and the government was obstructing progress. A high-ranking Exxon executive bitterly complained to a U.S. Senate subcommittee in July that despite overwhelming evidence of Corexit's effectiveness, the State of Alaska would not allow the chemical to be sprayed. The executive said he wasn't sure Alaska even wanted the spill to be cleaned up quickly,[46] since the DEC wouldn't grant approval to use Corexit.

Again, like the dispersant debate, the issues and facts about Corexit were not as clear and easily defined as any side would have liked.

The public and the governments were uncomfortable with Corexit use because no one could prove that the chemical could be recovered. Crews would have to be retrained, a monitoring program had to be developed and implemented, and a new concern about worker safety would enter the picture.

Exxon's experts stated that the toxicity was low, the cleaning efficiency was high, and their ability to recover the chemical and oil was good. State and federal environmental scientists (including DEC, Fish and Game, and EPA) felt that the toxicity information was limited and incomplete. Both governments agreed that Corexit took oil off the rocks, but neither felt that Corexit was much more efficient or less disruptive than hot water. And most observers had serious questions about the ability of Exxon crews to contain and collect the oil-water-Corexit mixture that washed off the rocks into the water. In most of the 1989 tests, Exxon used more chemical — in at least one case, twice as much chemical — as it could actually recover.

Did Corexit get oil off the rocks? The answer, according to state and federal observers, was yes, although it worked better under dry conditions.[47] Could Exxon recover the mix of water, oil and Corexit once it was in the water? Not so well, the government observers said. "There is little evidence to indicate that an appreciable amount of washed oil (let alone the applied Corexit) was recovered after the test applications," the EPA reported.[48] State and federal observers reported that Corexit tests generated a reddish-brown plume that sneaked outside containment and absorbent booms and was difficult to recover.

Federal and state agency staff, including EPA and the state Department of Fish and Game, were not satisfied with the limited information available on the toxicity of Corexit. The existing tests told regulators something about the acute effects of Corexit, but they were silent on the effects of longer-term exposure — a critical point if Corexit were to be used in large quantities covering hundreds of miles of various wildlife habitat. There was also little firm information about the longer-term effects of a mix of Corexit and oil on wildlife — again, a critical point, considering that Exxon had not demonstrated its ability to contain and recover what it washed off; the elusive reddish-brown plume was troubling.

In short, the public and the governments were uncomfortable with allowing a chemical dispersant to be sprayed throughout hundreds of miles of the spill area because no one could prove that the chemical could be recovered. Crews would have to be retrained, a monitoring program had to be developed and implemented, and a new concern about worker safety would enter the picture.

No one, on either side, could claim that the existing test data in 1989 supported his position without equivocation. But like most major cleanup decisions, this one hinged on more subtle, less technical points. It was part science, part risk assessment, part operational, and part practicality. Test data were just a part of a complicated judgment call.

From the standpoint of operations, Corexit was far from a sure thing. When the chemical-oil-mix came off the beach and went into the water, conventional skimming equipment had difficulty picking it up and absorbent booms didn't necessarily soak it up. On August 28, Exxon applied 73.8 gallons of chemical to a test area and could recover less than 42 gallons of oil-water-Corexit mix; the next day, Exxon applied almost 60 gallons of chemical and could retrieve less than 42 gallons of mix. In both cases, the reddish-brown plume escaped from the testing area, and no one could tell how much of what got free into the ocean was chemical and how much was oil.

"Another disturbing observation was that [Corexit] appeared to carry oil into the water column . . . and we have little assurance about its toxicity and/or knowledge of its ultimate fate in the marine environment," EPA's observers wrote.[49]

And it didn't seem to work well when it was raining — a serious drawback in rainy Prince William Sound.

NOAA maintained that washing with Corexit would be less harmful than washing alone, since the solvent worked at lower water temperatures. It was an interesting theory, but there was nothing in the science that suggested that hitting marine life with a solvent and 100-degree water was significantly less harmful that hitting the animals with 160-degree sea water alone.

And finally, from the standpoint of public policy, allowing a company to introduce many, many thousands of gallons of chemicals over many hundreds of miles of Alaska shorelines — based on limited scientific and public review — seemed irresponsible, especially when there was nothing to suggest the chemicals worked any better than sea water.

The question came down to this: If hot water washing, manual pickup, and other existing methods did an acceptable job of cleaning within an acceptable range of side effects, why gamble the rest of the cleanup on a chemical that hadn't been shown to be much less damaging or much more effective?

Exxon never retreated from its position that Corexit should have been used. The Coast Guard, meanwhile, sent mixed messages. On September 10, 1989, the federal on-scene coordinator told Exxon that he wasn't convinced Corexit was effective,[50] yet within a few months, the Commandant of the Coast Guard would lobby the Alaska Governor directly to approve Corexit in 1990. Federal on-scene coordinator Ciancaglini was also quoted in a March news story urging use of Corexit during 1990 cleanup.[51]

Exxon continued to press its case for using Corexit in 1990. The debate stumbled along on the same legs as before: toxicity and operational efficiency. The toxicity argument against Corexit got somewhat weaker and Exxon's ability to recover the stuff got somewhat stronger.[52] DEC approved limited testing at five sites that summer, with the intent of finding out whether Corexit could be used as a spot washer, rather than a blanket treatment.

The 1990 tests provided little new information to decision-makers. The state's observers of a July 14, 1990 test reported that a Corexit-and-water wash again proved to remove more weathered oil than washing with water alone.

DEC's Judy Kitagawa observed in a memo to her supervisor that "this is the seventh Corexit 9580 demonstration I have observed" since 1989. She reiterated her observations of the chemical's effectiveness in a brief passage that betrays some weariness with the exercise.

"We already learned from the 1989 trials that COREXIT plus hot water removes oil better than hot water alone and that COREXIT/oil mixtures are difficult to contain and collect from water. All agencies agreed with this last year. The demonstrations of spot washing with COREXIT in July, 1990 have reconfirmed this," she wrote.[53]

A second DEC monitor agreed with Kitagawa's evaluation, writing that "Corexit was unquestionably superior in removing oil from the bedrock surface."[54]

But each monitor made additional observations that suggest, once again, that decisions about technology and evaluations of effectiveness in oil spill response are made within the context of conditions and risks existing at a given point in time.

State monitors observed that applying Corexit, followed by a wash with hot water, was certainly a good cleaning combination. However, it took a long time. A Corexit application, followed by a waiting period (the stuff had to soak in to be effective) and a wash, took about 90 minutes; washing alone took 15. Was it worth the wait?

And Kitagawa observed that using Corexit to spot-wash tarry oil took oil off rocks, but it put oil and chemical into the nearshore area — in short, it took a stable environmental problem and made it a mobile environmental problem. Was it worth it, in environmental terms?

There was never much of a doubt that Corexit could remove oil from oiled shore-

lines. There were doubts about whether it could be contained and recovered, and there were doubts about whether it was toxic to marine animals, and if so, to what degree. Given this set of facts, different government observers came to very different conclusions about whether Corexit should be used on the *Exxon Valdez* cleanup.[55]

State agencies shared both operational and ecological concerns. Fish and game officials were wary about introducing the chemical into nearshore areas without a better handle on its short- and long-term effects. DEC had similar concerns, but based its decision primarily on the fact that Exxon used too much chemical to recover too little oil; Corexit didn't appear any better than washing.

Federal government's officials had mixed opinions. The Coast Guard wasn't sure the Corexit was much better than hot water washing, and the EPA was concerned that Exxon's inability to contain Corexit and clean it up could put oil and chemical into the water. NOAA's John Robinson in 1989 vigorously promoted the use of Corexit, which in his judgment would speed up the response. He was concerned that the slow-moving cleanup effort would leave oil to harden and weather over the winter, making it difficult to clean.[56]

In 1989, the public agencies directing the cleanup concluded that Exxon's chemical was not a better alternative than the methods available at the time. In 1990, they reached the same conclusion.

But really, the differing opinions were not really based on whether the chemical was or was not a good cleaner. Rather, each observer was heavily influenced by individual assessments of risks (from the oil as well as the chemical), the range of other choices that were available (hot water and high pressure vs. the chemical), assumptions about time (whether all cleanup would end in September), public accountability (whether the emergency allowed the governments to circumvent their responsibility to consult the public about putting a chemical into the environment), and other public policy issues.

Cleanup decisions have a context beyond science and technology, and the Corexit issue was no different. In 1989, the public agencies directing the cleanup concluded that Exxon's chemical was not a better alternative than the methods available at the time. In 1990, they reached the same conclusion. Nothing in the tests suggested to the state agencies that dousing beaches with a kerosene-based solvent was any better than washing (1989) and mechanical and manual removal (1990). It wasn't any faster, and no one could prove that it was any less harsh than washing. It added something new to the environment, and presented additional containment problems. It raised more questions than it resolved.

Mechanical treatment

Backhoes, tractors, front-end loaders and other small and large mechanized units were used on shorelines primarily in 1990, and to a limited degree in 1991. In most cases, there was nothing especially complicated about the work; it was generally a mechanized magnification of what workers were doing by hand.

Front-end loaders scraped up and removed large tar and asphalt patches (such as at Aialik Glacier Beach on the outer Kenai Peninsula coast); tractors pulled thick, steel tines through concentrations of buried oil to release them (an excellent example was the work at beach segment LA20,[57] in Sleepy Bay, on Latouche Island); backhoes dug up pockets of heavy, buried oil or pulled oiled sediments from high intertidal areas to mid-intertidal areas for either removal or bioremediation (KN405, on Point Helen, on Knight Island and other places).

There was little dispute about the crude effectiveness of mechanical equipment: It moved a lot of material that could not otherwise be moved by hand. The state favored wider use of mechanical equipment based on the risk-benefit analysis that has been discussed throughout this report. The federal government (and to some degree, Exxon) began resisting wider use of mechanical equipment in mid- to late summer of 1990, largely based on the risk-benefit conclusions reached by NOAA.

However, there was some agreement about what the machines could do well, assuming one accepted the short-term disruption the machines caused.

On cobble beaches with moderate slope (such as the LA20 example), a small tractor pulling steel tines of various depths could agitate the sediments and release large amounts of buried oil, particularly if the tilling was done on a rising tide, when water lifted the oil out and made it easier to collect. On beaches dominated by small or mid-size boulders,[58] a backhoe was very effective at pulling back larger rocks so workers could either scoop or shovel mousse into buckets or bags for removal.

Backhoes and other equipment were used to "pull down" oil and oily rocks that were stranded in the high upper intertidal areas where storms and high tides had left berms far up the beach. The method became known as "storm berm relocation," and was generally accepted as a good way to expose oil to weathering or bioremediation [see next section]. The oil had wound up in these upper beach areas largely as a result of high tides and storms that occurred in 1989, when oil was on the water.

Front-end loaders scraped up and removed large tar and asphalt patches; tractors pulled thick, steel tines through concentrations of buried oil to release them; backhoes dug up pockets of heavy, buried oil.

There were ways of increasing the efficiency of a mechanical operation — such as tilling on a rising tide only — but Exxon and the Coast Guard thought this impractical, since staying at a site and waiting for the right tide cycle prevented a crew from moving to a new site. In addition, in some cases, oil was stranded so high on a beach that tilling on a rising tide could only be done during the few times during a month that tides were running higher than average. This, as well, was viewed by Exxon and the Coast Guard as an unacceptable scheduling and logistics problem.

Storm berm relocation, while generally accepted as a legitimate method by all parties, occasionally highlighted differences in approach between the state and federal governments. The state sometimes favored mechanical treatment that removed the oil: As long as one was going to send a piece of heavy equipment to a shoreline, why not make it one that could remove the pollution?

Exxon and the Coast Guard preferred an approach that simply exposed the oiled sediments for limited removal, weathering, bioremediation, or all three. They argued against large-scale removal first because of fears that the removal would promote erosion. When that proved later not to be a problem, they argued against it because it caused logistical and disposal problems they found unacceptable.

And overarching all these operational arguments were the concerns about mobilizing oil into the environment by tilling it with heavy equipment. NOAA, in particular, thought that heavy tilling could take an unacceptable, but relatively stable problem (buried oil stranded below the surface) and turn it into an unacceptable, mobile problem. The concern was that oil could be released into the water where it could, for example, disrupt an area fishery, or cause fine, oily sediments to migrate down into the lower, unoiled intertidal zone.

The state viewed all the counter arguments — logistics, oil mobilization, etc. — as valid concerns, but generally DEC and other state officials felt that quality work and good timing could alleviate some of the more pressing environmental concerns. In some cases, the state and federal government found common ground; in others, it didn't. Generally, everyone viewed mechanical treatment as a high-impact treatment that made sense at some sites based on which risk-benefit conclusion one tended to favor.

Bioremediation[59]

The limitations of large-scale washing and the shortcomings of solvents like Corexit highlighted the emerging fact in 1989 that if an extensive and area-wide cleanup program were to continue, some other technique would be necessary.

The U.S. Environmental Protection Agency (EPA) proposed in May and June of 1989 to try and speed up the natural rate of degradation of the oil by applying fertilizers to rocky shorelines. The general term for this type of cleanup is bioremediation.

The idea of using some kind of artificial stimulus to speed up the natural breakdown of pollutants had been around for some time, although the idea began to have some limited application in the 1960s and early 1970s. In 1967, the famous cruise liner

The *Exxon Valdez* oil spill was hardly the best time to embark on a broad program of research and development of oil spill response technology. However, a targeted program for a specific technique or product was possible.

Queen Mary was permanently moored in Long Beach, California. At the time, it contained about 800,000 gallons of oily waste water in its bilge. Contractors used bioremediation techniques to break down the hydrocarbons in the bilge water, and the owners received approval to discharge the bilge tanks after six weeks of treatment.[40] Other field experiments and trial applications over the course of the next 20 years included efforts to improve the quality of underground water sources and contaminated soils by applying biotechnology.

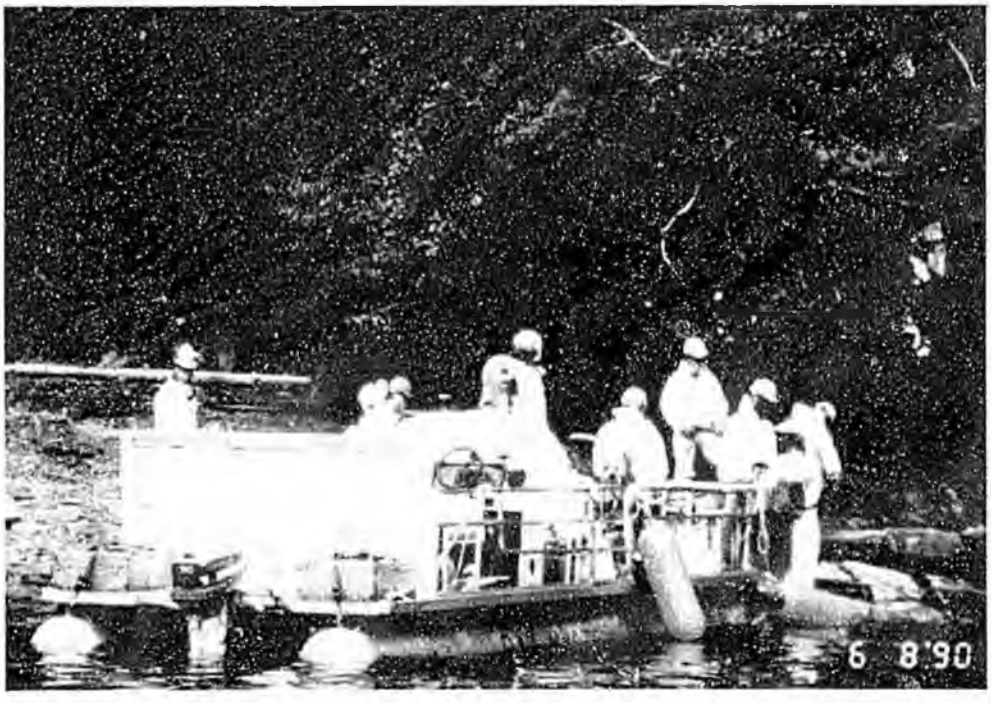
Most of these early efforts had one major thing in common: The work was done largely within the confines of a closed or controlled system. Under those kinds of conditions, a scientist or contractor or engineer could tinker with the variables that optimize the effectiveness of the treatment. Controlling temperature, nutrient levels, and other physical factors can have a tremendous effect on the results.

The *Exxon Valdez* oil spill was a very different matter. Prince William Sound was anything but a controlled system. It was a wild, remote marine environment subject to extreme weather, big seas, 10-foot tidal changes four times a day, and seasonal swings in solar energy, temperature, and nutrient availability. The Alaska Bioremediation Project, as EPA called it, was an unprecedented exercise in applied biotechnological research, even if judged on nothing more than the area that was treated and the amount of fertilizer that was applied.

As noted before, the *Exxon Valdez* oil spill was hardly the best time to embark on a broad program of research and development of oil spill response technology. However, a targeted program for a specific technique or product was possible.

At the EPA's urging, and with funding from Exxon under a special technology development agreement, bioremediation became the focus of the effort.

There is nothing magic about bioremediation, especially in the form it took during the *Exxon Valdez*. Crude oil was a good candidate for bioremediation, primarily because of its chemistry. In terms of volume, about a third of the oil is made up of light, volatile gasses that evaporate fairly quickly; the middle third (or more, in some crudes) is made up hydrocarbons that can be broken down relatively easily by natural forces, and the last third or so is made up of compounds that are more resistant to quick degradation: waxes, asphalts, and so on.



Bioremediation took the form of applying to oiled shorelines fertilizers which added nitrogen and phosphorous, which stimulated the already good population of oil-eating bacteria in Prince William Sound. The compounds were brought in by boat.

Photo by Mike Ebel

Chemically, the oil breaks down naturally for several major reasons. Exposure to sunlight and air causes some degradation, and some is the result of microbial activity. The microbes don't actually "eat" the oil; the image of bugs chewing up chains of molecules and spitting out the leftovers is not quite right. It is more like they make the chains "rust out." The microbes use carbon in various biochemical ways; as they pull carbon out of the chains of molecules that make up the different parts of the oil, the chains fall apart. They break down into their basic elements. So the theory behind bioremediation of crude oil is simple: If you put more microbes to work on this process,

you will get faster degradation.[61]

To test this theory, EPA put up about $5 million, Exxon committed additional funding, and the state threw its staff and support into a high-speed research project.

The project could take one of two basic approaches: a) inoculation, in which vast numbers of oil-degrading bacteria would be introduced into the ecosystem, or b) enhancement, in which the existing microbial population would be boosted by the addition of various nutrients.

The process was neither well-explained nor well-understood, particularly by the public, and particularly at the outset. Most people envisioned a kind of biological warfare, in which new, engineered bacteria would be unleashed on the environment. To the public, this conjured up the image of the Mutant Microbe That Ate Prince William Sound, as out-of-control bacteria overwhelmed an already-stressed environment. Even as late in the spill response as the spring of 1991, a national news reporter would describe the bioremediation effort as a process of spraying millions of oil-eating microbes on the shores of Prince William Sound.[62]

That was not really what was proposed in 1989. Although EPA considered inoculation, researchers rejected the idea primarily because Prince William Sound already seemed to have a good population of oil-eating bacteria. Not all kinds of bacteria are hydrocarbon degraders, but it turned out that Prince William Sound had the right bugs — about five percent of the basic microbial population.[63] This relatively high level of degraders in the "unfertilized" population was there, researchers think, because of natural drips of turpentine-like hydrocarbons coming from the spruce-hemlock evergreen forest of the Sound. It was a fairly good scientific bet that the increase in available carbon — the spilled oil — would cause a jump in the hydrocarbon-degrader population in the area anyway. But if the overall population of bacteria could be multiplied exponentially, then the modest, natural increase in oil-degraders could be turned into a population boom. The EPA-DEC-Exxon project would not use artificial means to put more oil degraders into the existing population. Instead, crews would simply boost the overall bacterial population; five percent of a billion bacteria is much more than five percent of a million.

The alternatives, beyond hot water washing, were limited. The oiling, even after washing, was substantial. Frustration was high, and expectations were low. Suddenly, it appeared someone had found the answer to the problem.

The best way to stimulate microbial growth was to add nitrogen and phosphorus to the available nutrient mix; the best way to put nitrogen and phosphorus out there was to spread fertilizer. The research team narrowed the choices down to Inipol EAP22, a French-manufactured liquid fertilizer, and several kinds of slow-release pellets or briquettes. On July 31, 1989, Exxon began applying fertilizers to oiled beaches at Green Island. By the end of the cleanup season, somewhere between 74 and 110 miles of shoreline had been sprayed or peppered with fertilizers.[64]

The three months from conception to widespread approval and application for a new oil spill cleanup technique was extremely brief — especially one that introduced chemicals and massive doses of additional nutrients to an open environment. EPA started scouting for field test sites in May and conducted lab tests in June. It started a 90-day field test at Snug Harbor, Knight Island, on June 8 — but approval for widespread use of fertilizers came barely halfway through the test to determine whether fertilizers worked.

In fact, when both the state and federal government gave tentative approval to the use of fertilizers, the program stood on a few lab tests, thin field test data, and literature searches that gave only limited evidence about whether the fertilizers were toxic. There was virtually no broader ecological analysis about what the addition of all those nutrients might do. There had been no public hearings and no real opportunities for independent scientific review of the data. On the day Exxon submitted its proposal for area-wide use, there were not even any accepted guidelines for application.

This was an unusual process for approval, to be sure, but the state and federal governments were operating in interesting times. The alternatives, beyond hot water washing, were limited. The oiling, even after washing, was substantial. Frustration was high, and expectations were low. Suddenly, it appeared someone had found the answer to the problem.

In July, after a month or so of treatment at Snug Harbor, the EPA project leaders produced what has become known as the "postage stamp" photo, an aerial shot of a clean rectangle stamped on a black background of oiled beach. While EPA could not conclusively prove that this "striking disappearance" of the oil from the rocks was due to bioremediation, they found 30 to 100 times more microorganisms on the treated plots than on the unfertilized plots.[65]

A second field test was conducted in July at Passage Cove. On July 25, following application of Inipol, EPA toxicologists collected water samples and brought them back to the lab. There, they ran standard acute toxicity tests on several kinds of marine animal larvae (a stage of development at which one would expect animals to be most sensitive to pollution). The preliminary results from the toxicity tests suggested that Inipol could be harmful to small marine animals, but it could be mixed in weaker solutions. So, the conclusion was not that Inipol was "safe," in the broad sense of the word; the conclusion was that one could apply the chemical in solutions weak enough to both accelerate degradation and minimize harm to marine life. In addition, the EPA data suggested the risk to animals would disappear fairly shortly after application — perhaps a day or two. The relative risk was high immediately after application, but dropped off steeply after that.

What decision-makers had, therefore, was another incarnation of the same basic cleanup balancing act: Most methods (including leaving the oil alone) had risks that accompanied the benefits. How badly one wanted or needed results drove one's judgment about how much risk was acceptable.

State and federal scientists on a joint research and development team sat down with Exxon to come up with guidelines for a large-scale field trial of bioremediation. The group decided that fertilizers should be applied only to certain kinds of shorelines, primarily those where beach hydraulics and tidal flush provided a good opportunity for the runoff to be diluted.

The momentum behind bioremediation grew considerably after the 1989 trial application. By January, even without complete reports on 1989 activities, the Coast Guard and NOAA were banking on bioremediation, as was Exxon.

They also made some practical decisions about application methods. The sprinkler system used at Snug Harbor appeared to deliver the best results; the slow, steady, light wetting of the surface by the sprinkler allowed a slow and steady release of nutrients from the solid fertilizers. The group decided, however, that this was impractical on a large scale. They settled on two basic methods. The first was application of Inipol using backpack tanks and spray wands; the second was spreading of Customblen pellets using the kind of hand-held whirler used to spread fertilizer on suburban lawns. These methods would be refined over time, but they stayed basically the same.

The next step was to train supervisors to make sure the Customblen was properly weighed and measured, that Inipol solution was properly mixed and maintained, and that workers knew what they were doing and were properly protected. The Customblen didn't present much of a problem, since the pellets could be easily weighed and workers simply needed to spread the stuff evenly within a specified area (essentially "x" pounds of Customblen over "y" square feet of shoreline). Worker safety was primarily a matter of keeping the pellets from direct contact with the skin, since Customblen, like most garden fertilizers, irritates the skin and can cause a fertilizer "burn."

The Inipol was more of a problem. The solution included more than just a nitrogen- and phosphorus-based fertilizer, because there was more to bioremediation than simply delivering more bugs to the work site. The foundation of the process was the increase in the microbial population, but the additional components of the Inipol were needed to keep the microbes on the oil.[66] These additional components included butoxyethanol, which when fresh can be harmful to both marine life and humans. The butoxyethanol evaporated relatively quickly (within about 24 hours), but it was important to keep wildlife away from it during that period. Workers had to avoid breathing or absorbing the fumes through the skin.

The solution also included the surfactant laurel phosphate, sort of a detergent, that tended to produce a dispersant-like effect if the Inipol were sprayed too heavily or mixed too "rich." When workers applied the Inipol improperly, it would actually wash

oil off the rocks. A telltale sign of this mistake would be clean streaks striping down an otherwise oily rock. During the 1989 trial application program, some poorly trained work crews didn't understand how and why bioremediation was supposed to work, treating the Inipol as a beach cleaner instead of an additive.

Inipol also had to be kept flowing at the right level of viscosity. In the cool climate of Prince William Sound, left to itself the Inipol would get thick. It had to be heated gently and its temperature and mix maintained.

The R&D committee considered these scientific and operational questions, and put the proposal before the Interagency Shoreline Cleanup Committee, the interagency review group that included fishing and conservation public interest groups. The ISCC approved the guidelines, as did the Regional Response Team. Exxon received formal authorization from the Coast Guard to proceed on August 1, although Coast Guard officials had already told Exxon the federal on-scene coordinator would approve bioremediation as quickly as possible.[67]

It is important to note that no one had confirmed that bioremediation was effective on the rocky shorelines of Prince William Sound. Both the state and the federal government expressed their intention to revisit the bioremediation issue in 1990. A decision to put fertilizers "in the toolbox" (to use the response vernacular) would be based on whether the 1989 trial program produced data that supported the hypothesis that fertilizers were both safe and effective. The burden of proof — and the responsibility for collecting the necessary data — would be on Exxon.[68] EPA would also be involved to a large degree, since more complete analysis of the Snug Harbor and Passage Cove studies during the 1989 season would be available over the winter of 1989-90.

However, the momentum behind bioremediation grew considerably after the 1989 trial application. By January, even without complete reports on 1989 activities, the Coast Guard and NOAA were banking on bioremediation, as was Exxon. The materials prepared by all these organizations for the principal winter planning meeting in February, 1990, made strong claims about the effectiveness of bioremediation (Exxon and EPA), dismissed most concerns about the possibility of any adverse ecological effects (Exxon and EPA), or identified bioremediation as the best treatment option because of it was assumed to cause little disruption to shorelines (NOAA).

It was clear that the state and general public had a different understanding than the federal government and Exxon about the status of bioremediation as an approved cleanup technique for widespread use in Prince William Sound.

Exxon's researchers claimed, based on their laboratory studies, that Inipol worked not only on surface oiling, but also on subsurface oiling as deep as one foot into the beach.[69] NOAA recommended that bioremediation be a "primary option" for treatment, especially in sheltered areas that could suffer the most ecological disruption from "overly aggressive" cleanup.[70] Hap Pritchard, one of EPA's lead researchers on the project, concluded from the 1989 field tests that there was only one reason to explain the differences between test plots and (unfertilized) control plots, and the reason was that the added nutrients enhanced degradation.[71] Shortly thereafter, Pritchard and a colleague, Chuck Costa, began a speaking tour of the major communities in the spill area. They expressed their enthusiasm about the 1989 tests and advocated for use of bioremediation in the coming season.

It was clear that the state and general public had a different understanding than the federal government and Exxon about the status of bioremediation as an approved cleanup technique for widespread use in Prince William Sound. The state expected both Exxon and the EPA to produce for review — not only for principal agencies, but also for the Regional Response Team and the public — completed reports on effectiveness and toxicity. At the time that EPA's Pritchard was calling bioremediation "the only reasonable response technique" for the 1990 season,[72] DEC had not received the information it had requested.

This presented a significant communications problem. The public was being presented with bioremediation as a *fait accompli* for 1990, a primary treatment that would be used throughout the spill area. However, DEC insisted that the issue had not yet been resolved. Members of the public, including commercial fishing groups, Alaska Native landowners and subsistence users, local governments, and conservation groups, were confused. Some were outright skeptical. It appeared to them that a decision had

been made with no more information than before, and no consultation with affected resource users.

State agencies became concerned that the bioremediation bandwagon was rolling forward without stopping to properly consider the problems and the questions from 1989.

The state and public concerns about bioremediation could be separated into three categories: procedural problems regarding the approval process, differences in approach to the cleanup, and gaps in the scientific knowledge about bioremediation.

"Whereas NOAA identified bioremediative treatment as a primary option for the 1990 cleanup, the state considers bioremediation as only one option that may be useful and that treatment decisions will have to be made on a site-specific basis," state on-scene coordinator Steve Provant wrote to his federal counterpart on Feb. 15. "NOAA's recommendations should acknowledge that land owners, land managers, resource managers and user groups, including state and federal agencies, do play a legitimate role in making site-specific assessments and decisions on the treatment methods."[73]

The state and public concerns about bioremediation could be separated into three categories: procedural problems regarding the approval process, differences in approach to the cleanup, and gaps in the scientific knowledge about bioremediation.

The state still expected the bioremediation question to come before two important committees: a) the Interagency Shoreline Cleanup Committee, which had reviewed and approved the previous year's bioremediation program, and b) the Alaska Regional Response Team (RRT), which, under the National Contingency Plan, had to be consulted about the use of new technologies by the federal on-scene coordinator. It should also be noted that in the RRT, the state had critical authority regarding the approval and use of chemical cleaners such as dispersants or Inipol, the fertilizer. As plans for the 1990 cleanup season unfolded, the state was concerned that the federal government was, by design or by misunderstanding, going around two critical groups of resource users and owners.

NOAA's recommendation that bioremediation be a "primary treatment" had more to do with the agency's basic approach to cleanup than with any specific claims about the effectiveness of the fertilizers. The agency generally favored a strategy of leaving stranded oil to weather naturally (with some exceptions), but if various parties preferred to go ahead and actively treat a site, the relatively light touch of bioremediation was best. NOAA's 1990 cleanup recommendation specified that fertilizer treatment should cease if it turned out that the boost from fertilizers was no better, or only marginally better, than natural rates of degradation.

This was another example of a basic difference between state and federal responders: Based on its priorities, NOAA felt it acceptable to leave more stranded oil than did the state, based on its priorities.[74]

"It is apparent from this recommendation that NOAA does not support actual oil recovery . . . but instead recommends that oil be merely exposed to microbial degradation or the effects of future storms," the state Fish and Game department wrote in its comments on the NOAA plan. "The state should clearly object to this proposal on the basis that significant quantities of oil still remain, and treatment should continue if technologies exist to allow further recovery without undue harm to the environment."[75]

This position is one of the first hints of what would become a major cleanup disagreement over bioremediation in 1990. The state would insist that bioremediation was a finishing step, the last treatment after all other efforts to *remove* the oil had been exhausted, either because the technology was played out or the removal was becoming too disruptive. By establishing bioremediation as the "primary" treatment throughout the spill area, the spill responders would miss an opportunity to get the pollution out of the environment altogether, the state felt. The state resource agencies agreed unanimously that agreeing to this federal policy would mean agreeing to do less than state regulations required.

As a technical and scientific matter, there were still large gaps in what was known about bioremediation, and major questions that had not been addressed. Both Exxon and EPA said repeatedly that no adverse ecological effects had been "observed," but visual observation was not the same thing as scientific inquiry. Fish and Game noted that the existing data did not even begin to address questions about long-term effects

of dumping thousands of gallons of liquid fertilizer and thousands of pounds of solid fertilizer into the Prince William Sound ecosystem.

Finally, the federal government was assuming approval of bioremediation without considering a detailed set of operational and wildlife protection guidelines. NOAA and Exxon were offering up fertilizers as the treatment of choice, but they hadn't demonstrated that they could get the fertilizers to the oil. The public, particularly commercial fishing groups, were especially concerned about what they considered a high-speed rush to use fertilizers.

Kelso laid out the state's position. No, Alaska did not object to bioremediation; the state merely needed all the available information, it needed time to review it, and it needed to include key public interest groups in the decision.

The state didn't oppose bioremediation, but it certainly favored a more cautious approach. State officials also felt that any major policy choice, such as this one, had to include the fishing groups and subsistence users of the spill area.

Federal officials appeared to construe the state's caution as potential obstruction or opposition. On March 23, Coast Guard Commandant Admiral Paul Yost met with Governor Steve Cowper to press for state approval of both bioremediation and Corexit. Cowper said the state would make its decision by May 1, in time to make plans for the 1990 cleanup.[76]

Misunderstandings had risen to such a level that on March 30, 1990, state and federal officials called a kind of summit meeting in Anchorage to discuss bioremediation policy. The meeting included some of the highest-ranking public officials working on the spill: DEC Commissioner Kelso, Deputy Federal On-scene Coordinator Captain Dave Zawadski, and Dr. John Skinner, deputy assistant EPA administrator. Also present was Jack Lamb, a leader of the Cordova fishermen's union.

Kelso laid out the state's position. No, Alaska did not object to bioremediation; the state merely needed all the available information, it needed time to review it, and it needed to include key public interest groups in the decision.

EPA agreed to provide all its toxicity testing information in time for the state to meet its May 1 decision deadline; one of the most important toxicity analyses was then in progress. Exxon agreed to provide the state with all its study papers; several were not complete at that time. The most important study concerned effectiveness of bioremediation on subsurface oil — a critical piece of the puzzle, since Exxon and the Coast Guard were, at that time, widely assuming that bioremediation would be the treatment of choice for subsurface oiling.[77]

Kelso said that based on what the state knew at that point, he was assuming bioremediation would be in the toolbox for 1990. However, he added, the state would require better operational guidelines — before application started — and it would also require a scientific monitoring program.

During April, DEC, working with the University of Alaska Fairbanks, convened a group of independent reviewers to look at the available information on the Alaska bioremediation project. The reviewers generally felt that the technique was still worth pursuing, and that it could probably go ahead safely with good operational and monitoring controls.

On April 26, Governor Cowper gave the go-ahead for state approval of bioremediation for 1990, but the decision was contingent on the development of the monitoring and operational guidelines DEC had suggested. After six weeks, he said, the state would reassess both the performance of the application teams and any new scientific information that had become available. The state felt this approach balanced the need for new approaches to dealing with the stubborn oiling conditions with the need to assure the public that the product was safe.

At the end of the six-week "conditional" application program, DEC gave approval to continue applications on July 20, 1990. However, the DEC approval was largely a formality, as fertilizers had become a common and accepted part of the treatment program. Bioremediation would, however, remain controversial.

Throughout the 1990 season, state monitors clashed repeatedly with the Coast Guard and Exxon over the issue of when a shoreline was ready for fertilizers. The rule was that bioremediation was primarily a finishing technique, to be applied when conventional removal efforts were complete; the work orders from the federal on-scene

coordinator usually followed that general rule. However, in the field, monitors battled with each other's somewhat subjective assessment of when conventional removal was "complete." This on-going struggle led to higher-level consultations and an aborted effort by the DEC to set a standard that was more scientific and less subjective. The state eventually found a way around this problem, and there were few conflicts about fertilizers in 1991.

But for all the assurances that bioremediation caused no adverse ecological effects, and for all the claims that fertilizers had worked in 1989 and would work on subsurface oil in 1990, both the state and federal governments gave their approvals based on very limited scientific data. It was not until the winter of 1990-91 — nearly two years into the project — that the governments began to assemble more convincing scientific justifications for actions they had already taken.

Fish and Game continued to take a conservative approach to bioremediation near critical habitat and set up buffer zones around streams. Treatment could generally be timed to coincide with the narrow windows of time when fish and fry weren't coming or going.

As time went by and more scientific monitoring was done, the toxicity question would be answered fairly definitively. Dr. James Clark of EPA concluded, based on his field tests, that the acute toxicity of the fertilizers (Inipol, particularly) was limited, and that the pulses of ammonia released by the fertilizers, and mixed in the nearshore waters, were well within established EPA water quality standards. Clark's conclusions were backed up by independent reviewers hired by DEC in 1990-91.[78]

However, the state Fish and Game Department still favored a cautious approach to using bioremediation in and around salmon streams, and other fisheries habitat. The toxicity tests and literature search done by Clark gave a general picture of the problems one might expect, however, they did not (and could not, really) draw an accurate picture of how bioremediation might affect eggs, fry, and so on at different critical times in the growth cycle. They also could not take into account the margin of error presented by variabilities in the training of crews, their efficiency and their accuracy during application. For these and other reasons, Fish and Game continued to take a conservative approach to bioremediation near critical habitat and set up buffer zones around streams. Treatment could generally be timed to coincide with the narrow windows of time when fish and fry weren't coming or going. The department preferred to use those windows to get rid of the oil by removing it, rather than simply spreading fertilizers.[79] Actual removal was, theoretically, the best choice, since it removed one potential toxicity problem (oil) and eliminated the possibility of a second one (Inipol and Customblen).

EPA's Science Advisory Board, in reviewing the data from the Alaska bioremediation project in June 1992, came to similar conclusions regarding environmental safety of the project:

"Given the site-specific conditions of this Alaskan ecosystem, the timing of the onset of bioremediation, the limited areas of application and the limited application rates, adequate field information was gathered to conclude that the bioremediation effort would not negatively impact the Prince William Sound ecosystem."[80]

The next question is, of course: Did the stuff work?

The answer is probably yes, based on the assembled science. There is not widespread agreement, however, on whether it worked everywhere equally, whether it worked equally as well from year to year, and whether the rate of degradation achieved through the use of fertilizers was significantly higher than the natural rate of degradation.

First, let's deal with the general question of whether fertilizers worked, the definition of "worked" being determined by whether the addition of fertilizers accelerated degradation beyond naturally-occurring levels.

Everyone agreed that putting fertilizers on a beach caused a population boom for the microbes who already lived on the beach. The University of Alaska Fairbanks scientists doing the microbiology work on the joint research project were satisfied that boosting the overall population also boosted the population of hydrocarbon degraders. So far, so good.

The next part of the analysis was considerably trickier: Now that you had all these microbes, did they attack and break down the oil, according to the hypothesis?

The most convincing answer to this question would lie in an analysis of the changes in the chemical composition of the oil. If one could show that over the same period of time, oil on an unfertilized beach showed less chemical change than oil on a fertilized beach, one might be able to link the change to the microbes.

This was not so easy to do, for several reasons. First, there was a lot of "noise" to deal with, in terms of collecting and analyzing data. This science was being conducted in the middle of a treatment zone, so while scientists tried to start their analysis using oiling conditions that were similar to each other, there was a certain unavoidable imprecision in making that call. Next, while work crews were supposed to stay away from the bioremediation study sites, it isn't certain that they stayed away completely, or that their treatment of one section of beach didn't stray too close to the study sites. And as a practical matter, the control sites and the study sites were close to each other.

The bottom line in this regard is that any analysis of chemical degradation had to assume that the chemical composition (and concentration of oil) in any given of set of samples might not have exactly the same baseline. This is not a fatal flaw by itself, since all scientific studies have to deal with some assumptions of variability. Scientists get around this by taking enough samples that, based on standard statistical formulas, they have neutralized or minimized the chances that one set of samples will throw the whole thing off.

The researchers generally acknowledged in their monitoring study that, given the variables on the shorelines, a statistically bomb-proof result would have required many, many more samples from the study and control sites. This was judged to be physically impractical, especially given the time constraints under which they were working. It is important to note here that the state-federal-Exxon study was not intended as a research project for publication in a professional journal, but rather as a tool to give reasonable guidance to responders working under time and emergency deadlines.

Next, the laboratory techniques for chemical analysis (primarily gas chromatography) could not pin down the changes in the particular hydrocarbon — hopane — that would be the best "marker" of any true chemical changes.[81] Again, not a fatal flaw, since there are other hydrocarbons that can give reasonable indications of what might have been going on.

Researchers in the joint study, as well as the EPA Snug Harbor and Passage Cove studies, looked at other chemical hints that increased degradation might be taking place.[82] For example, they measured the levels of "by-products" of degradation — such as carbon dioxide — and compared results from test and control sites.

The most optimistic supporters of bioremediation on the *Exxon Valdez* response say the fertilizers speeded up the process at least three-to-five times over naturally-occurring levels. The lower-end estimates put the rate at one-to-two times faster.

As time and analysis went on, scientists added up all the different hints from all the different studies and concluded there was a pretty good chance that fertilizers made more microbes and more microbes meant faster breakdown of the oil. Policy-makers looked at this information at various stages and, given the fact there weren't a lot of other available options, gave the go-ahead for the program.

The most optimistic supporters of bioremediation on the *Exxon Valdez* response say the fertilizers speeded up the process at least three-to-five times over naturally-occurring levels.[83] The lower-end estimates put the rate at one-to-two times faster.[84] And some reviewers looked at the DEC-EPA-Exxon study and said they could find no statistically significant difference between the data collected at fertilized and unfertilized beaches.[85]

An additional, extremely important question from an operational perspective was whether the rate was constant over time. Microbes take the path of least resistance, so to speak; they work first on those hydrocarbon fractions that are most amenable to degradation. As the chemical composition of the weathered oil begins to be dominated by waxes and asphalts, it is more resistant to degradation. That is not to say that it won't eventually break down. However, it is a reasonable hypothesis that since all fractions of the hydrocarbons do not biodegrade at an equal rate (pretty easy to prove, since the ratio of asphalts to total mass is higher in old, weathered oil than in fresh crude), one should not expect bioremediation of old asphalts to go as quickly as

bioremediation of oil with more medium-weight residues.

The testing and research done on bioremediation should not be viewed as a quest to find the silver bullet for oil spills. If judged by that criterion, it fails. What we found is that bioremediation is a realistic option under certain conditions, and within certain windows of chemical opportunity. It has the best chance to give the best results under controlled circumstances, and on hydrocarbons in their fresher states. Interestingly, the research in Alaska also showed that at least in Prince William Sound, natural degradation rates could be higher than we ever suspected, thanks to the relatively large population of resident hydrocarbon-degraders.[86]

The rush to bioremediation in Alaska was a function of the size of the problem and limited availability of options. The EPA, the Coast Guard, and Exxon tended to overstate the results and benefits of bioremediation from time to time. Yet as time passes and reviewers sit back for less hurried analysis of the situation, a more conservative view of the project is taking shape.

The EPA's Scientific Advisory Board, a group of independent scientists from universities and laboratories around the country, takes a view of the Alaska Bioremediation Project that is roughly consistent with that of the state.

The board points out that the project produced a great deal of new knowledge, and provided some confirmation that bioremediation can work. However, the board cited in its report many of the same gaps identified by the state. Specifically, the review board noted the problems in gathering data during the emergency response, the variability of sites and oiling conditions, and the ability to draw firm and broad conclusions.

"A large amount of useful data was collected by the Alaska Oil Spill Bioremediation Project," the reviewers wrote in 1992. "If these data are to be used to their fullest extent, rigorous interpretation is essential. Only in some of the field studies was convincing evidence of bioremediation obtained, yet many of the summaries and conclusions read the same."[87]

The Science Advisory Board concluded, however, that at least two of the four EPA Alaska studies proved that bioremediation worked to some degree. The board noted that it is difficult to pin down actual rates of degradation because the condition of the oil varied from site to site at the beginning of treatment. In addition, it was weathering all the while, and not necessarily at a rate equal among all sites. The EPA review is a cautious endorsement of the potential for bioremediation to work in marine oil spill shoreline cleanup. However, the results of the study do not necessarily prove that adding fertilizers to oiled shorelines speeded up the cleanup.

"The conclusion that bioremediation reduced cleanup time must be qualified in view of the high variability in oil chemistry at the sites, the fact that some beaches were prewashed and the fact that the oil was continuously aging and weathering during the bioremediation period. Moreover, the specific estimates of cleanup time in this report have considerable statistical uncertainty. Quantification of the effect of bioremediation is difficult because of the limited number of sites that received different treatments and the fact that the sites had different geological characteristics."[88]

The board further speculated that bioremediation has, perhaps, more promise as a treatment for subsurface oiling than for surface oiling conditions.

What all this means is that bioremediation was the subject of intense debate, some study, and probably yielded some results at some sites. It did not turn out to be the silver bullet that many hoped it would be.

[1] *The State of Alaska, through DEC, has been one of the principal participants on an EPA-sponsored task force designed to develop a national strategy for testing and approving a class of oil spill response products falling under the loose heading of "bioremediation." See p. 73, this chapter, for a more complete discussion of this technique and its possible future application.*

[2] *Governor Steve Cowper, Testimony before the U.S. Senate Subcommittee on Environmental Protection, Washington, D.C., April 19, 1989.*

[3] *Alaska Oil Spill Commission, "Spill: The Wreck of the Exxon Valdez," January 1990, p. 56.*

[4] *The Alaska Oil Spill Commission recommended in its report that a state research center be established within the University of Alaska system.*

[5] *Alaska Oil Spill Commission report, p. 5.*

[6] *National Response Team report, The Exxon Valdez Oil Spill: A Report to the President, May 1989, pp. 8-9.*

[7] *Mousse is an emulsion of oil and water, the general consistency and color of its chocolate namesake.*

[8] *Noerager, J.A., and Goodman, R.H., "Oil Tracking, Containment, and Recovery During the Exxon Valdez Response," Proceedings of the 1991 International Oil Spill Conference, at pp. 193-203.*

[9] *Hull, R., Northwest EnviroService Inc., Final report, December 1990, p. 25*

[10] *Bayliss, R., Janssen, J.H., Kegler, A., Kendziorek, M., Lawn, D., and Gundlach, E., "Initial State of Alaska Response to the Exxon Valdez Oil Spill, Proceedings of the 1991 International Oil Spill Conference," pp. 321-323. (Hereafter this paper is referred to as "Bayliss and others.")*

[11] *Various state, Coast Guard and Exxon documents.*

[12] *The National Response Team report of May, 1989, relates as an example that a skimmer with a gear box problem had to be towed for 12 hours to Valdez, where it joined two other skimmers in the shop as mechanics worked all night to repair the vessels.*

[13] *Gardner, D., unpublished DEC internal report on cleanup operations, Exxon Valdez Oil Spill Response Center, 1991. Other DEC reports cite shorter waits for off-loading — sometimes five or six hours — but the problem, from most accounts, was endemic.*

[14] *There is widespread agreement among state and Exxon reports on the effectiveness of the Egmopol skimmer.*

[15] *Various state and Exxon estimates say that pom-poms, the shredded plastic absorbents that look like things cheerleaders use, absorbed anywhere from 5 to 20 times their weight in oil and mousse.*

[16] *The RRT is described in Section 1.1, p. 10 of this report.*

[17] *Estimates such as these are not precise, but when properly computed they can give a reasonably accurate figure. To arrive at a figure like this, one first does a series of calculations to determine the area covered by the slick, the thickness of the slick, and the volume of oil contained in the slick. These calculations are based on observation, sampling, and known characteristics of crude oil. Variables can include the freshness of the oil (a third of a fresh crude's volume can be made up by volatile gasses that evaporate quickly), the percentage of the slick that is watery emulsion, and any other physical factor that might affect the volume, area, or composition of the slick. From there, a simple multiplication exercise produces the estimate.*

[18] *National Research Council, "Using Oil Spill Dispersants on the Sea," National Academy Press, 1989, p. 4.*

[19] *ARCO Alaska's Bill Wade, quoted in the April 18 issue of The Anchorage Times.*

[20] *Lawrence Rawl, interviewed in the May 8, 1989 issue of Fortune magazine, pp. 50-51. The magazine appeared on newsstands on April 24-25.*

[21] *Manuel Lujan, interviewed in the April 26, 1989 issue of USA Today, p. 11A. All quotes above come from that article.*

[22] *Governor Steve Cowper letter to Lawrence Rawl, April 28, 1989.*

[23] *Lawrence Rawl letter to Governor Steve Cowper, April 28, 1989.*

[24] *National Research Council, Committee on Effectiveness of Oil Spill Dispersants, Using Oil Spill Dispersants on the Sea, (Washington, D.C: National Academy Press, 1989), p. 4. More detailed discussion of this issue at pp 81-164.*

[25] *Environment Canada, "Acute Lethal Toxicity of Prudhoe Bay Crude Oil and Corexit 9527 to Arctic Marine Fish and Invertebrates," Report EPS 4-EC-82-3.*

[26] *Hahn, B., memorandum to Commissioner Dennis Kelso, May 1, 1989.*

[27] *Lawn quoted in Bridgman, J., unpublished department draft of DEC response history, Feb. 1990.*

[28] *The figures on available dispersant come partly from the National Response Team report to The President in May 1989, and partly from DEC records. Federal and state records agree that no aircraft or equipment were available in Valdez.*

[29] *Hull, p. 24.*

[30] *Hull, p. 30*

[31] *"Valdez Oil Spill Technology: 1989 Operations," Exxon Production Research Company, 1990.*

[32] *Robinson, J., NOAA scientific support coordinator, to members of the Alaska Regional Response Team, July 21, 1989. Robinson wasn't alone. A number of other coastal biologists were expressing informally that they had concerns about it and were getting this infomation back to the State scientists.*

[33] *Juday, G, and Foster, N.., "A preliminary look at effects of the Exxon Valdez oil spill on Green Island Research Natural Area," Argoborealis, University of Alaska Fairbanks, vol. 22, pp. 10-17.*

[34] *Houghton, J., Lees, D., Driskell, W., and Mearns, A., "Impacts of the Exxon Valdez Spill and Subsequent Cleanup on Intertidal Biota — 1 Year Later," Proceedings of the 1991 International Oil Spill Conference, March 1991.*

[35] *Houghton, J., Lees, D., and Ebert, T., "Evaluation of the Condition of Intertidal and Shallow Subtidal Biota in Prince William Sound following the Exxon Valdez Oil Spill and Subsequent Shoreline Treatment," NOAA Report No. HMRB 91-1, March 1991.*

[36] *Anchorage Daily News, April 10, 1991, page B 2, also "Report: Spill cleanup method was harmful," Associated Press report, Anchorage Times, April 10, 1991, page A 10.*

[37] *Houghton, Lees, Ebert, p. ES-5.*

[38] *This is somewhat of a generalization. A lot of factors can affect recovery, such as the relative health of the shorelines before the spill, the amount of oil spilled, the wave and wind action, the weather, and so on. The point, however, is that the extant literature includes a number of reputable sources that suggest an oil spill is not necessarily the ecological equivalent of a nuclear explosion.*

[39] *Gardner, D., and others, "Review of field activities during the Exxon Valdez shoreline treatment operations." Unpublished DEC review, Spring 1992, p. 17. Gardner was the principal author, although all the monitors who worked from 1989 through 1991 provided field notes, observations, and general comments for the review.*

[40] *Gardner and others, p. 18.*

[41] *A massive state-federal coastal habitat damage assessment study ran into the same kinds of problems. In some cases, the researchers on this $19 million study cannot establish whether damage is from oil or oil and treatment together.*

[42] *The most reliable would be the individual field notes of DEC monitors and the Daily Shoreline Assessment reports they filled out.*

[43] *Kuwada, M., Alaska Dept. of Fish and Game Habitat Division, memorandum to Piper, E., Alaska Dept. of Environmental Conservation, Jan. 30, 1991. Kuwada provided his department's comments on a draft of the report reviewed by ADF&G biologists several months before NOAA released the report.*

[44] *Kuwada memorandum, Jan. 30, 1991.*

[45] *Hull, Northwest EnviroServices, p. 35.*

[46] *Testimony of William K. Stevens, Exxon USA president, before the U.S. Senate commerce committee's subcommittee on the environment.*

[47] *Viteri, A., DEC, memorandum to Provant, S., DEC on-scene coordinator, August 12, 1989. Also, Glasser, W. and Gangmark, C., EPA, memorandum to Vice Admiral Clyde Robbins, September 5, 1989.*

[48] *Glasser and Gangmark, ibid.*

[49] *Glasser and Gangmark, Ibid.*

[50] *Vice Admiral Clyde Robbins, letter to Otto Harrison, Exxon, Sept. 10, 1989. Robbins disagreed with the state and other federal agency conclusions that Exxon hadn't shown it could contain and pick up Corexit as it washed off the beach. The language in his letter is interesting because it hints at the way many of these decisions hinged on various thresholds. Robbins wrote that Corexit wasn't a good alternative because, "there are no further heavily oiled beaches in suitable locations" for using the chemical, and that he couldn't tell from the tests whether the chemical was really effective. In other words, under different circumstances — i.e., a more desperate situation of widespread heavy oiling — the uncertainties about Corexit might be outweighed by the magnitude of the problem.*

[51] *Admiral Paul Yost lobbied Governor Cowper in person and in a letter in April 1990. Rear Admiral Ciancaglini was quoted in the Anchorage Daily News, March 31, 1990, supporting use of Corexit, "Beaches May Get Excavated," page A 1.*

[52] *See DEC's June 14, 1990 summary of the issue and discussion of all relevant facets of the debate, signed by state on-scene coordinator Randy Bayliss.*

[53] *Kitagawa, J. memorandum to Kendziorek, M., July 16, 1990.*

[54] *Vincent, J., memorandum to Bauer, J., July 17, 1990.*

[55] *Exxon's position never changed. The company simply maintained that the chemical was safe, that it was effective, and that containment and recovery were not a problem.*

[56] *Robinson, J., memorandum to Vice Admiral Robbins, July 21, 1989.*

[57] *Uniform abbreviations such as this were used for mapping purposes by the participating response agencies. The lengths of beach segments varied but were generally several hundred yards long.*

[58] *For some reason, the accepted unit of measurement for "moderate" boulders was the standard office desk chair.*

[59] *This section looks at bioremediation primarily as it related to critical decisions about the cleanup. Many of the footnotes in this section give the reader some sources of more complete technical analysis of bioremediation.*

[60] *This is a second-hand citation from a federal report on bioremediation: U.S. Congress, Office of Technology Assessment, "Bioremediation for Marine Oil Spills — Background Paper," OTA-BP-O-70, Washington, D.C. 1991. p. 2. The original citation comes from Applied Biotreatment Association, "Case History Compendium," November 1989.*

[61] *This is a grossly simplified statement of the theory, but it suffices as a preliminary introduction to the idea.*

[62] *John Enders, Associated Press, in the Anchorage Times, May 15, 1991, page A 1.*

[63] *Dr. Ed Brown and Jon Lindstrom, University of Alaska Water Research Center, personal*

communication.

[64] *It is extremely hard to come up with an exact "number of miles" treated with fertilizers in 1989, primarily because different mapping and recording systems counted a "mile of beach" in different ways. DEC's number is 74, and probably comes closer to the actual distance covered than the Exxon and EPA number of 110 miles. In any case, it was a field trial of unprecedented proportions.*

[65] *EPA Fact Sheet, Alaska Bioremediation Project, July 6, 1989.*

[66] *A more technical description of this process would be "sequestering nutrients at the oil-water interface," but basically it means using various chemical processes to optimize the effectiveness of the microbes once their population has been stimulated. To use a crude metaphor, Inipol is designed not only to create more microbes, but to make sure they keep their food right in front of them.*

[67] *Letter, U.S. Coast Guard Captain Zawadski to Bob Mastracchio of Exxon, dated July 26, 1989.*

[68] *Vice Admiral Clyde Robbins, letter to Otto Harrision, August 1, 1989. See also Viteri, A., and Kitigawa, J., DEC, "The Development of Policy to Review and Approve Bioremediation Enhancement Methods, etc." June 1990.*

[69] *Exxon workshop materials, Newport Beach treatment workshop, February 1-2, 1990.*

[70] *NOAA, "Recommendation to the Federal On-Scene Coordinator for 1990 Cleanup of the Exxon Valdez Oil Spill" January 25, 1990, p. 9.*

[71] *ADF&G notes, Newport Beach meeting, February 1, 1990.*

[72] *Piper, E., memorandum to Governor Steve Cowper, April 26, 1990. Pritchard made this statement at a briefing for state personnel in mid-February at DEC's Anchorage spill response headquarters.*

[73] *S. Provant, DEC, letter to Rear Admiral D.E. Ciancaglini, Feb. 15, 1990.*

[74] *See section 1.4, pages 30-32 of this report for a better idea of the role of the Interagency Shoreline Cleanup Committee on the cleanup, and on the basic differences in cleanup philosophy between the state and federal governments.*

[75] *Kuwada, M., ADF&G, memorandum to Provant, S., DEC, January 29, 1990. This statement from Fish and game is a good example of the different interpretations of pollution cleanup requirements described in Chapter 1.*

[76] *Cowper did not make any commitments about Corexit. Also, Yost may have misunderstood the Governor's promise about bioremediation. On March 30, Yost wrote a letter to Cowper to recap the conversation between the two men. The Commandant thanked Cowper for agreeing to* authorize *bioremediation by May 1, as opposed to the Governor's actual promise to render a decision by that date.*

[77] *EPA did not deliver the toxicity analysis until May 1; by that time the state had gone ahead and made its decision without the promised information. Exxon did not deliver its third, and last, study paper on the topic until April 26, which was actually the day the issue came before Governor Cowper.*

[78] *Clark's basic conclusions were drawn from standard toxicity tests using water samples in the nearshore area of a bioremediation test site in 1989. His secondary conclusions were based largely on literature searches conducted over the winter of 1989-90. These analyses were not exhaustive, nor were they intended to examine the full range of broader ecological questions. However, for purposes of designing a controlled, conditional program of fertilizer use, state and federal officials felt they had enough information to reasonably make a decision. Dr. Judith Capuzzo of Woods Hole Oceanographic Institute reviewed Clark's data (which appeared in a larger, joint EPA-Exxon-DEC study) and came to the same general conclusions. Capuzzo did her review at DEC's request.*

[79] *On those occasions when Fish and Game felt bioremediation was the best option available, they would sometimes allow fertilizers to be applied right up to stream banks, as long as the application occurred during one of the "open" windows for treatment.*

[80] *EPA Science Advisory Board, "Review of the Alaskan Bioremediation Oil Spill Project," Washington D.C., August 11, 1992.*

[81] *Exxon took the data back to the computer in 1992 and produced what company researchers feel is confirmation that the hopane ratio did change significantly at fertilized sites vs. unfertilized sites. But this information was unavailable at the earlier, critical decision points on bioremediation.*

[82] *Exxon also conducted some laboratory studies using various simulations of beach conditions, which lent some support to field data from other studies.*

[83] *Roger Prince of Exxon and Hap Pritchard of the EPA take this position. At times, each has hypothesized that the rate might have been even higher at certain sites, and under certain conditions.*

[84] *Brown and Lindstrom of UA-Fairbanks generally hold to a more conservative estimate than their colleagues at Exxon and EPA. A number of reviewers we consulted at a 1991 EPA symposium in Las Vegas leaned towards more conservative estimates, as well.*

[85] *Dr. Scott Kellogg of the University of Idaho and Dr. John Farrington of Woods Hole, whom DEC asked to review the study, came to somewhat similar conclusions in this regard. They were not asked, however, to review* all *available data and give DEC a recommendation about whether it was a good idea or bad idea to bioremediate. What we wanted from them was a realistic look at the single study, so that the state could keep its conclusions in perspective, and so that the joint study alone was not presented as definitive "proof" of certain rates of degradation.*

[86] *Lindstrom, of UA-Fairbanks, also suggested that the seasonal fluctuations of nutrient levels in the Sound might be a factor in deciding when to bioremediate. In the spring and early summer, when the flush of mountain snowmelt carries high concentrations of organic nutrients into the system, natural degradation rates might be very high. As an operational issue, that may mean it is an excellent time to bioremediate, or it may mean there's no need to bioremediate; it would depend on the oiling conditions and other factors. In the late summer and fall, when nutrients levels drop, fertilizers might provide an important boost, but one might not expect even a fertilizer-aided rate to be very high.*

[87] *U.S. EPA Science Advisory Board, "Review of the Alaskan Bioremediation Oil Spill Project," June 1992.*

[88] *Ibid., p. 3.*

Chapter 3: Cleanup, 1989-92

The T/V *Exxon Valdez* ran aground on Bligh Reef, about 25 miles from the Trans-Alaska Pipeline terminal at Valdez, on March 24, 1989, at 12:03 a.m. Eight of the 11 cargo tanks were ruptured and Alaska North Slope crude oil began gushing from the tanker into the waters of Prince William Sound. The state and federal governments estimate that 250,000 to 260,000 barrels of North Slope crude oil (11 million U.S. gallons) spilled from the tanker.

The state's response effort began with Dan Lawn, the Valdez District Office manager from the Alaska Department of Environmental Conservation (DEC). Lawn was notified of the spill by Alyeska at 1:05 a.m. He then spoke with the Coast Guard captain of the port, CMDR Steve McCall, and made arrangements to accompany the Coast Guard to the site of the grounding. Before setting off for the high-speed trip to the tanker in a Valdez pilot vessel, Lawn triggered (within state government) a chain reaction of notification that called up responders from Anchorage, Wasilla, and Juneau beginning about 4 a.m. Within 24-30 hours, DEC would have more than 30 people in Valdez setting up the aerial surveillance, general monitoring, computer mapping, and other programs that would function in one form or another for the better part of three years.

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Lawn would remain on the tanker for the next 15 hours, using the ship's satellite telephone to call Anchorage and Valdez with regular updates on the amount of oil lost and the stability of the vessel. He also made regular calls to the Alyeska terminal, asking when the equipment and responders required by the Alyeska contingency plan would arrive. Alyeska officials repeatedly assured Lawn that the gear was on the way, when in some cases it was not even loaded on barges or vessels.

Commissioner Dennis Kelso of the DEC got word of the spill about 6 a.m. from his deputy, Amy Kyle, who had been phoned at home by Anchorage DEC staff at approximately 4 a.m. Kyle and the department's environmental quality staff set up some preliminary plans and arranged a full briefing for the Governor and the commissioner at 8:30 a.m., as the magnitude of the spill began to become clear. Governor Steve Cowper had learned of the spill about an hour earlier, from a reporter who was conducting an early-morning interview with the Governor in his hometown of Fairbanks. At the close of the interview, the focus of which was completely unrelated to oil or the environment, the reporter asked Cowper his thoughts on the spill. When Cowper heard the details, he immediately began making arrangements to get to Valdez. After speaking with Cowper by phone from Juneau, Kelso caught a regularly scheduled flight from Juneau to Cordova, on the southeast rim of Prince William Sound. From there, a U.S. Coast Guard helicopter took him to Valdez, where he met the Governor. About 4 p.m., the Governor and Kelso flew by float plane to the *Exxon Valdez*. On board they met Lawn and DEC investigator Joe LeBeau, who pointed out that equipment was overdue, and that what was on-scene was not working very well.

Two skimmers — which were full at the time — were motoring somewhat aimlessly around the massive slick. There was little or no boom deployed, and what was in the water were tiny strings of boom that were neither containing nor deflecting any significant amount of crude. Cowper was incensed by what he would later call a slow and inadequate response. He was also aware of the possible use of dispersants. Kelso and Lawn gave him a quick briefing on the zones of use and the approval process, and Cowper gave no instructions that would alter or affect the preapproved strategy. He understood, correctly, that the system had been designed to make sure that chemical dispersants were used in a controlled and effective manner, and that critical habitats would not be put at risk by bad targeting or misuse of the chemicals.

Back in Valdez, after visiting the tanker, Cowper appeared at a community meeting and press conference at the Valdez civic center. Exxon's chief executive officer Frank Iarossi had spoken to the group earlier, noting that Exxon would be moving quickly to use dispersants on the growing slick. This made the public, especially the

fishing community, somewhat uncomfortable. The implication of Iarossi's statement was that dispersant use was the response of choice, and that Exxon was moving ahead to do it. This was at odds with the plans in place — which the fishing organizations had reviewed — and it implied that Exxon had some authority to take controversial and potentially risky steps to deal with the oil spill that threatened public health and public resources. Fishermen wanted some assurance that someone other than Exxon was at the switch, someone or some entity that was accountable to the public. They were not eager to hand over to a private company the authority to make critical decisions about public resources — resources that were literally the foundation of the area's economy. And from Iarossi's comments, it seemed the decision was all but made.

When Cowper stepped before the group, he was asked about Iarossi's statements. He replied, "There has been a lot of speculation on the use of dispersants. Everybody realized the risk that that poses to marine life . . . . I want to assure everybody that dispersant is not going to be used in anything other than a carefully targeted way. We want to make sure that we check back with the fishing community, that we check with the [Alaska Department of] Fish and Game, and do as little damage as possible. You can't use dispersants without doing damage to marine life. That's clear. But we want if possible to keep the oil off the beaches."[1]

Cowper had crystalized in his comments exactly the type of discussion the Alaska Regional Response Team and state agencies had gone through in developing the preapproval process for dispersants two weeks before the spill. He was merely assuring the people in the Valdez civic center that there was an established mechanism for making these public policy decisions, and that no one had unilateral authority to circumvent the process or change the rules.

At the time Iarossi made his comments, he was not familiar with the process[2] and was, perhaps, assuming more authority than Exxon actually had. Cowper's comments were not some new state policy; the Governor was, instead, letting people know that the government understood the risks and the benefits of dispersants, and that the protection of the fisheries and the local economy was among the government's central concerns.

Aside from the obvious priorities of public and environmental health and safety raised by the tanker disaster, the first three or four days of the spill were dominated by four principal issues:

a) the inadequacy of the Alyeska response;

b) the confusing and unauthorized "hand-off" of the spill by Alyeska to Exxon;

c) the dispersant disagreement;

d) the gross lack of cleanup resources.

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- the inadequacy of the Alyeska response;
- the confusing and unauthorized "hand-off" of the spill by Alyeska to Exxon;
- the dispersant disagreement;
- the gross lack of cleanup resources.

Alyeska's response was slow and weak; it did not meet the requirements of the contingency plan. It is important to keep in mind that the contingency plan was not so much a set of requirements established by the government, but rather a set of response standards that Alyeska had agreed were reasonable and attainable.

The "hand-off" of response authority by Alyeska to Exxon caused confusion and delays. Exxon assumed for itself a role as chief responder, and comments made by Exxon officials sent a message to the public that the governments were not really in charge of making key decisions and protecting public resources and the public interest.

The dispersant issue was discussed in more detail in chapters one (The Oil Spill Response Organization) and two (Treatment Technology). From the standpoint of the progress of the response, Exxon's insistence on following its own preferred strategy — and its reluctance to concentrate on the strategy preferred by the government, even after the technical results of dispersant drops were inconclusive — compounded a botched response by Alyeska.

All of this, however, is tangential to the real issue, which was becoming increasingly clear to the Alaska public: No one was fully prepared to deal with a spill of this magnitude. There wasn't enough equipment, and technology did not provide deep

redundancy or a broad range of options. The mechanical capabilities were overwhelmed, and the chemical possibilities had severe limitations. Burning worked for a little while, but the window of opportunity closed quickly as the oil slick began to have a higher water content. The conditions were marginal for dispersants, regardless of the risks the chemicals presented.

The public was outraged. The fishing community, especially in Cordova, was suddenly and unexpectedly confronted with the fact that industry and government either didn't know or didn't fully explain the fragility of the safety net underneath the Trans-Alaska Oil Pipeline System and the tankers that cruised almost daily through Prince William Sound.

In any case, the weather put a quick end to the initial response. Late on Easter Sunday, March 26, a severe, late-winter storm was approaching the Sound. Between Sunday and early Monday morning, the wind blew gusts up to a maximum of 73 miles per hour (70 mph is considered "hurricane force"). Flight operations were seriously curtailed, although a National Oceanic and Atmopsheric Administration (NOAA) helicopter got into the air before noon Monday. Observers noted that the oil was no longer in a single, compact slick. Breakaway patches and thick windrows of oil and mousse hit shorelines in the vicinity of Smith, Seal and Naked islands. Oil stretched as far as 40 miles south-southwest of the grounding site. Skimmers and other response vessels had retreated into more sheltered areas, away from the oil, to wait out the weather.

By March 30, a week after the spill, various estimates of oil recovery hovered around 5,000 barrels (about two percent of what was spilled).

By afternoon, the winds had fallen somewhat, but were still high. Within Valdez Arm itself — more protected than the relatively open waters between Bligh Reef and the western islands of the Sound — northeast winds were running a steady 30 knots with gusts to 40; seas were four feet within the arm, higher and choppier and sloppier outside.[3] A few surveillance aircraft got into the air that afternoon. Later reports showed that oil and mousse were already on or near the shores of Eleanor and Knight islands.

If the spill was at first overwhelming, it was now out of control. Throughout the rest of March and most of April, various configurations of skimmers and boom and barges would attempt on-the-water cleanup, but actual recovery of oil was extremely low, compared with the size of the problem. By March 30, a week after the spill, various estimates of recovery hovered around 5,000 barrels (about two percent of what was spilled), and even that figure was somewhat misleading, considering that the total estimate of recovery included water and mousse, not just oil. NOAA estimated that an additional 75,000 - 100,000 barrels had probably evaporated, as the lightest fractions of the crude oil turned to gas and dispersed in the atmosphere.

After the Easter storm, the effectiveness of on-the-water recovery could really not be judged in a cumulative sense. Oil patches were spread widely throughout the western Sound and, as the weeks went by, to the Kenai Peninsula and the Kodiak archipelago. Recovery varied from site to site, and success could most realistically be judged against a specific threat to a specific resource or shoreline. As a whole, on-the-water recovery was hampered by weathering oil, long distances, equipment limitations, storage limitations, and spotting capability. By the first week of May, there was no real effort to contain and collect free-floating oil.

The agencies and responders turned to several major tasks: planning and coordination for shoreline cleanup; defensive booming, especially at the Prince William Sound hatcheries; and stabilizing the *Exxon Valdez* and getting the remaining one million barrels of oil off the ship.

3.1 The *Exxon Valdez*

Oil tankers are designed to be full. The stability, seaworthiness, and structural integrity are all based on the assumption that the vessel will be full (or partly so) with

oil or water most of the time. Storage tanks are designed such that the volume and weight of the fluid in the tanks is balanced among various sections of the vessel. The *Exxon Valdez*, hung up on a rock and spilling its guts rapidly into Prince William Sound, was more than a boat with some holes in it; it was an extremely unstable and unbalanced container exposed to abnormal stress and pressure within and without. It was also still full of about one million barrels of oil, and in danger of breaking up and spilling its entire cargo.

Within a few hours of the grounding, the Coast Guard and DEC authorized an inbound tanker, the Exxon Baton Rouge, to discharge its dirty ballast. The Baton Rouge then steamed for Bligh Reef and its sister ship, and by 9:45 p.m. on March 24 the ships were rafted up. Portable pumps, hoses, line reducers and other equipment were hooked up, and the lightering operation began. It was not a simple matter of pumping oil from one vessel to the next; it would be also a tricky process of maintaining the vessels' stability and balance as oil came off the Valdez and sea water came in.

The first lightering hoses were connected about midnight, and pumping began about 7:30 a.m. on Saturday, March 25. Lightering operations would continue for the next 11 days[1] and include three tankers: the Baton Rouge, the Exxon San Francisco, and the Exxon Baytown. Transfer rates varied from a few thousand to 12,000 gallons per hour. The Baton Rouge took off 460,000 barrels before leaving on March 30; the San Francisco received about 450,000; the Baytown took 120,000 barrels. About 20,000 barrels remained aboard the Valdez at the close of lightering operations April 4. The ship was refloated at high tide on April 5 and moved to an anchorage off Naked Island. The vessel was towed to drydock in San Diego beginning June 20.

Lightering and salvage of the crippled *Exxon Valdez* was one of the few success stories from the first month of the spill response.

3.2 The emergency order

The *Exxon Valdez* oil spill — and the problems with the response — threw into question the entire Valdez-based prevention and response system. Alyeska had shown that even with ideal weather, it could not meet the requirements of the state-approved contingency plan. While the port of Valdez was temporarily closed during the early days of the response, the limited holding capacity at the Valdez terminal meant that at some point — some point relatively soon after the spill — tankers would be again loading oil at Valdez and making the passage through Prince William Sound. The Coast Guard had imposed several emergency restrictions on traffic in and out of the port, but a longer-term and more comprehensive plan was obviously necessary. DEC moved quickly to come up with an order for emergency upgrades in the response capability and the prevention system at the Valdez terminal.



Boom that sits much deeper in the water than that on hand during the initial response to the *Exxon Valdez* spill is now part of Alyeska's response equipment. Alyeska and the 13 oil companies which ship oil from Valdez all have beefed up their reponse equipment, which is deployed in periodic spill drills. Photo by Rob Schaeffer

During the first week of April,

DEC staff began preparing a list of emergency requirements. The list would be presented in the form of an emergency order from DEC that also required a new contingency plan. DEC's director of environmental quality, Larry Dietrick, came up with the list and delivered it to Alyeska on April 7. Dietrick's list had the approval not only of the commissioner, but of the Governor as well.

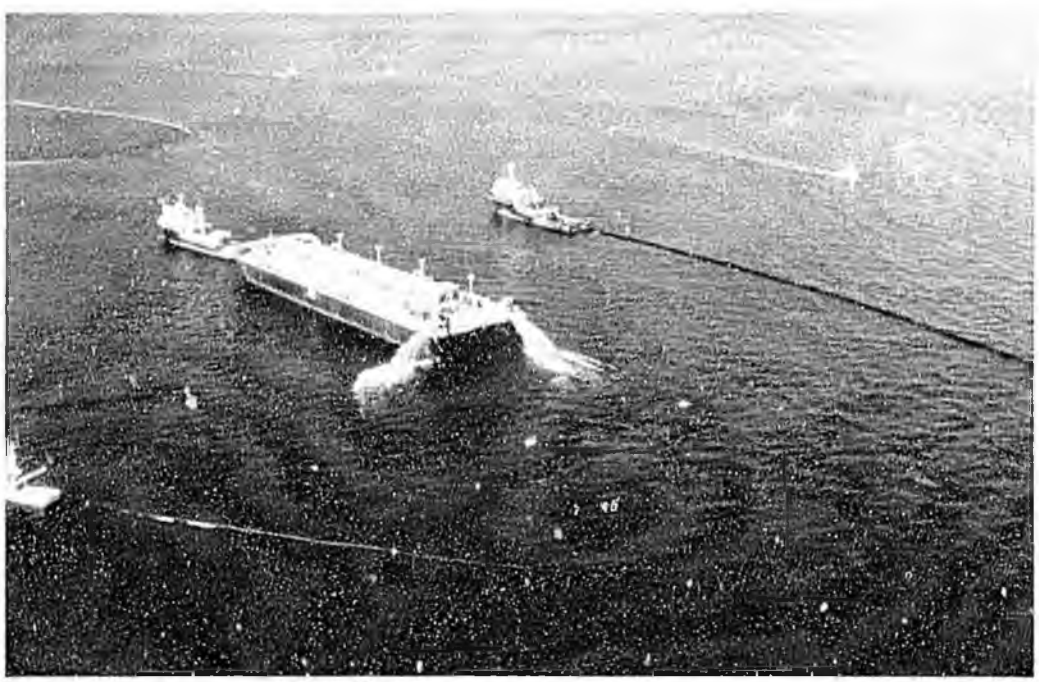
The emergency order requirements included:

- Alyeska had to do a complete inventory of "core" response equipment available *other than what was in use on the Exxon Valdez response.*
- The company must create a fulltime spill response team at the Alyeska terminal.[5]
- At the terminal, tankers were to be boomed immediately upon arrival, with boom inspection to be conducted every hour.
- Outgoing (i.e., loaded) tankers had to have two escort tugs from the terminal to Hinchinbrook Entrance, southeast of Cordova and the Copper River Delta.
- A marine pilot was required to be on the tanker or on the accompanying escort tug all the way to Hinchinbrook; until the *Exxon Valdez* groundings, pilots left the vessel soon after passing through Valdez Narrows and the village of Tatitlek.
- DEC specified a laundry list of new spill response equipment, along with several specific standards for recovering and lightering oil, and new deadlines for deployment of equipment from the Valdez area all the way to Hinchinbrook.
- Alyeska was also required to upgrade both its radio communication capabilities and the procedures for tracking radio messages.

The order included deadlines for compliance, and Governor Cowper said he was ready to shut down the pipeline if the oil companies did not follow through in good faith and in a timely manner.

Alyeska chose not to challenge the order. Instead, in a series of negotiation sessions and meetings with state officials, the government and Alyeska worked out mutually agreeable alternatives to some of the order's provisions. DEC agreed to give Alyeska more time to procure certain equipment, and worked on several solutions to communications problems. Alyeska also outlined a plan that went considerably further than the idea of escort tugs. The company instead committed to the purchase and outfitting of larger escort vessels, which included special dedicated response crews and equipment on board.

This, along with other changes due to the emergency order, became the foundation for Alyeska's upgraded response system and the implementation arm of the new contingency plan. Alyeska now operates the Ship Escort/Response Vessel System (SERVS). The 10-vessel SERVS fleet includes three, 210-foot tanker towing and oil recovery vessels; all outgoing tankers have a two-ship escort.



A barge for recovered oil trails two powerful skimmers, cradled by boom and support vessels during a Chevron test of new response equipment in Prince William Sound, March 1992. The equipment is part of Alyeska's new Ship Escort/Response Vessel System.

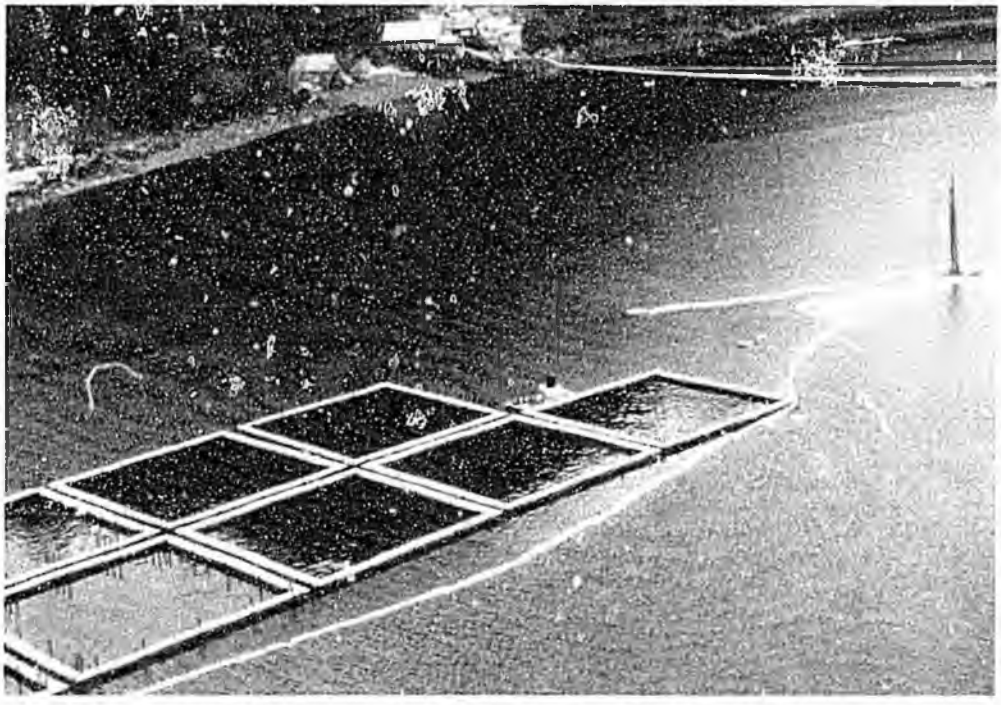
Photo by Patrick Endres

3.3 The Battle of Sawmill Bay

By Sunday, March 26, state officials had decided to expand the state's usual oversight role. Governor Cowper authorized DEC to do whatever was necessary, regardless of cost and regardless of legal strategy.[6] Frustrated by the size of the problem and the holes in the response, DEC began working with the local fishing fleet, primarily from Cordova, on a series of defensive measures and cleanup actions. The Cordova fleet had been trying, without success, to convince Alyeska to include the local vessels and skippers in the response. DEC Commissioner Kelso and environmental quality director Larry Dietrick made a point of including the fishing community in deliberations, discussions, and plans for action. At 10:30 a.m. Sunday, DEC informed the Coast Guard that the state was taking independent action.

The storm that scattered the spill on Sunday and Monday delayed the arrival of the Cordova seiners in Valdez. Upon arriving at the dock in Valdez, the vessels took on fuel and supplies, as well as DEC and contract staff. On Tuesday, March 28, the seiners headed for Disk Island; when they awoke on Wednesday at Disk, oil was already floating around them.

The principal task facing the Cordova fleet was protection of the handful of salmon hatcheries on the west side of the Sound, especially the Armin F. Koernig hatchery at Sawmill Bay, Evans Island, and the town of Chenega. Based on weather, currents, and information provided by the fishermen themselves, DEC estimated that the main body of the floating oil was three days away from Sawmill Bay. There was one DEC oil spill response veteran and an expert on contract , and they began stringing defenses with the help of Chenega residents, using some boom already at the hatchery.



Salmon-rearing pens at the Armin F. Koernig hatchery near the village of Chenega at Sawmill Bay on April 8, 1989. Photo by Erich Gundlach

The original plan called for deploying three strings of boom, 12,000-15,000 feet each, in layers from the entrance of the bay back towards shore and the hatchery. The group needed heavy duty boom, but all they would have for the first few days were various types of relatively light-duty containment and absorbent boom.

A second cluster of Cordova District Fishermen United (CDFU) seine vessels arrived at Sawmill Bay on March 29-30 and began to help string deflection boom. Flying weather was poor (either due to fog at Valdez or low weather in the Sound), which delayed the delivery of boom by helicopter. However, by midday on Thursday, March 30, Alaska Air National Guard helicopters began dropping absorbent and containment boom into the bay, the seiners and skiff operators picking it up and stockpiling or stringing it. While the first flights allowed the Sawmill Bay responders to begin building defensive lines, the material they had was not well suited to the task.

"The water, moving 7-8 knots or faster through here, is faster than the rated performance of the boom," DEC's field supervisor wrote on March 31. "So far we are



Bags of absorbent and containment boom were dropped into Sawmill Bay by Alaska Air National Guard helicopters. The material was picked up by seiner and skiff operators to be stockpiled or stockpiling or put to use. Photo by Geoffrey Orth ©

experimenting with multiple anchoring systems and radical boom angles. Continuing to use lighter duty boom for additional levels of protection between main containment boom and hatchery ...

"[The main containment boom] is really taking a beating where we have it in a deflection mode, and we are replacing several hundred feet of it per day. This boom is nearly ten years old and has spent much of its life stored on the North Slope, being used maybe once or twice a year for spill drills."[7]

The Cordova fishermen and DEC used various creative configurations of absorbent boom, pom-poms, and containment boom to build defensive lines whose strength was the sum of many improvised parts. Onshore, crews rigged cleaning and repair lines for the many hundreds of feet of damaged and soiled boom. On-the-water patrols improvised repairs and connections to the lines with whatever they could scrounge.

"Since we have many different types of boom (most of which have incompatible end connectors), Bryson [Twidwell, DEC], armed with a battery-powered drill and all the spare nuts and bolts from the hatchery and the village he could find, managed to connect the boom together."[8]

Meanwhile, back in Valdez, CDFU leaders and DEC officials realized that the Sawmill Bay defenders needed more logistical and vessel support. Several people suggested that the state send one of its ferries. In a 2 a.m. call to Alaska Department of Transportation commissioner Mark Hickey, DEC commissioner Kelso asked if he could "borrow" one of the state ferries. Hickey's immediate reply was simply, "Which one?"[9] Hickey arranged to divert the M/V Bartlett (which normally works the Valdez-Cordova-Whittier route) to Sawmill Bay; the ferry, which would be used primarily for repairs, supplies, housing and storage, arrived April 2. The Bartlett had fresh workers, fresh water, and supplies, including two dozen aluminum skiffs to augment the 16-skiff CDFU workboat fleet.

During the two weeks of intense operation at Sawmill Bay, most of the oil skimming was done by fishermen, contract workers, and DEC staff, who used simple tools such as five-gallon plastic buckets.

The Bartlett arrived the same day as the oil. Until April 2, most of the oil that had arrived had come in the form of tendrils or patches spun off the main body of the slick. That Sunday, a big tidal surge brought large slugs of oil and mousse to the brink of the defensive lines. Some oil got through, but most of it was deflected or contained by the booms.

Over the next few days, more vessels and equipment arrived at Sawmill Bay. A larger state ferry, the M/V Aurora, replaced the Bartlett; several large work and holding barges arrived, as well as the first of the "Supersucker" vacuum trucks from the North Slope oilfields. The vacuum trucks had been hauled by road from the slope to Valdez, then mounted on barges. The vacuum barges quickly became critical to the skimming and transfer operations at Sawmill Bay, sucking oil and mousse from

containment boom corrals and transferring it to barges for removal.

Yet during the two weeks of intense operation at Sawmill Bay most of the oil skimming was done by fishermen, contract workers, and DEC staff, who used simple tools such as five-gallon plastic buckets. Fishermen were literally scooping oil from the surface by hand, yet DEC reported several days in which the so-called "mosquito fleet" recovered more than 1,000 barrels of oil/water mix.

The "Battle of Sawmill Bay" was a successful partnership of private and government efforts. It was the focus of the efforts to protect the three west side hatcheries and the Eshamy Lagoon, site of one of the areas most important wild stock (red) salmon fisheries. These areas are the foundation of the Prince William Sound commercial fisheries, and therefore the foundation of the local economy.

More than 50 Cordova fishermen, the village of Chenega Bay, The Prince William Sound Aquaculture Association, 60 DEC and contract staff, 40 private vessels, two state ferries, the Alaska National Guard and the Alaska State Troopers played central roles in the operation. At a time when oil was swirling throughout the western Sound and fouling beaches, when skimming and containment in other areas was only occasionally successful, the defense of the hatcheries provided both a substantive and psychological lift to the oil spill response. The state worked hard to bring the Cordova fleet into the response as active partners, but it is important to note that much of the initiative for the effort — from mobilizing vessels to finding the North Slope vacuum trucks — started with the fishermen of the Sound.

3.4 Cleanup operations

April was more a month of planning than cleaning in 1989. There was the brief, almost bizarre effort at individual rock wiping at Naked Island the first week of April, as well as some limited efforts to rake and collect oiled seaweed. On April 12, Coast Guard Commandant Admiral Paul Yost arrived in Alaska and told Exxon to produce a shoreline cleanup plan. During the next few days, Yost made it clear that hot water washing was his preferred method of treatment.



A piece of irony in the spill's aftermath, this huge North Sea drilling platform was used for housing of cleanup workers in Lower Herring Bay.

Photo courtesy of the Exxon Valdez Restoration Office

Within two days of Yost's arrival, Exxon submitted a preliminary shoreline cleanup plan, one most government and public agency representatives considered more of an outline than a plan. The 21-page document stated that Exxon would wash about 300 miles of shoreline with cold water, employ about 4,000 workers, and be done September 15.

The Interagency Shoreline Cleanup Committee, recently formed, said Exxon was not thinking big enough: Aerial surveys and other information put the total amount of oiled dshoreline inside and outside the Sound at more than 1,400 miles. The Coast Guard gave preliminary approval to the plan, but Admiral Yost and others clearly felt they

needed more information, more complete planning, and better assurance of performance. The DEC and other state agencies mentioned similar concerns, but also insisted that Exxon produce a comprehensive plan that included waste management, additional surveys, and other associated activities.

The state also questioned an early plan to put workers in land-based camps, citing, among other things, the problems with human waste and the impact of the camps on the uplands.

As it would turn out, all workers throughout the response would be based on vessels, barges, and other watercraft. The state ferries that appeared on the scene in early April were just the first — and by no means the largest — vessels that joined the cleanup navy. Real U.S. Navy vessels, Coast Guard cutters, commercial cruise ships, barges with portable trailers, and a huge North Sea drilling platform all came into service in Prince William Sound and the Gulf of Alaska.

The decision to house workers offshore in some ways limited actual cleanup operations; housing and transferring workers from vessels to shore, and shore to vessels, cut down on some of the time spent on the beaches. However, it eliminated or minimized several very important potential problems: bear encounters, destruction or disruption of archeological sites, disagreements over land use and land ownership, and others. In April, no one really knew how large the cleanup presence would grow; by August, when thousands of people and support personnel were involved, the decision to base everyone the water seemed, in hindsight, a practical one despite the limitations and challenges it presented. In fact, over time, control of access to shorelines and uplands became a central aspect of the cleanup. Private landowners (almost exclusively Alaska Native corporations) did not want people swarming onto private uplands. Waste disposal and destruction of vegetation were only part of the issue. Protection of archeological or other culturally significant sites was of paramount concern, as was the "discovery" concept. Private landowners were concerned that people would "discover" new areas for hunting, fishing, camping, archeological searches, etc., and return to the sites long after the spill, visits that would amount to trespassing at best, and looting at worst.



Artifacts taken from cleanup bags. Photo by Dave McMahan

In fact, archeological experts for the state noted that archeological disruption in Prince William Sound had been occurring for a number of years before the spill, but it happened primarily on a few established routes.[10] These routes evolved over time and were defined almost exclusively by the fuel tank size of the average recreational or fishing vessel working out of ports such as Whittier, Valdez and Cordova. Because there was no fuel or other service available outside of these ports, most vessels could only go so far, and usually turned around at well-known, common points of reference on the shoreline. A map of sites prone to vandalism or artifact hunting[11] could, until, the *Exxon Valdez*, be drawn entirely within the boundary of an arc defined by one-half a tank of fuel for the average-sized vessel out of a given port. But during the *Exxon Valdez* response, fuel caches were left at various sites around the Sound and Kodiak Island. Vessels could run to the limit of their fuel capability, then refuel far from home. This increased the range of most vessels and

allowed local skippers to "discover" new areas of interest that they otherwise would have never seen.[12]

A second access issue was raised by various wildlife management agencies, primarily the U.S. Fish and Wildlife Service (USFWS) and, to a lesser degree, other state and federal fish and game officials. Federal officials developed, over a few months, special restrictions on shoreline access and activity depending on whether eagles were nesting nearby, or marine mammals regularly hauled out at certain sites, or where shorebirds nested and reared young. The complexity of the ecological system — not to mention the overlapping authorities of government agencies and private landowners — made any long-range planning effort especially difficult. In some cases, special wildlife protection restrictions were established by agencies specifically for the *Exxon Valdez* response, becoming, in a way, *ad hoc* regulations promulgated in response to Exxon cleanup proposals.[13]

The sensitivity of certain kinds of habitats — salmon spawning areas, most often — were part of the cleanup plan from the start. Cleanup was scheduled at most sites during "windows" that were open when animals were away.

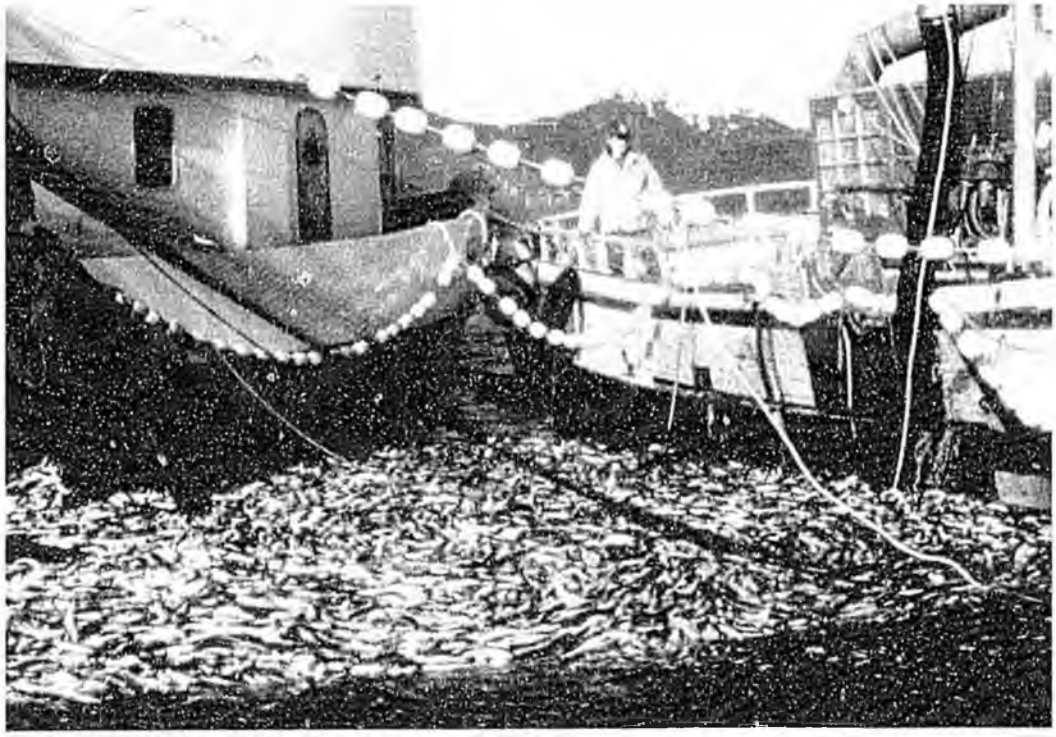
The sensitivity of certain kinds of habitats — salmon spawning areas, most often — were part of the cleanup plan from the start. The state fish and game department was one of the primary planners in the resource assessment effort, and salmon streams remained the single most consistent cleanup priority from start to finish. However, the cleanup schedule and habitat concerns were based primarily on timing, rather than topography or vegetation. Cleanup was scheduled at most sites during "windows" that were open when animals were away, and closed when animals showed up to spawn, give birth to young, or nest.

For this very reason, the state and federal governments pushed Exxon to get crews in the field, doing meaningful cleanup, before May 15. This was the date that biologists expected many animals to show up in large numbers; the biggest immediate concern was to clean seal "haulouts," i.e., the rocky sites where seals come ashore to give birth to their pups. In the northwest part of the oiled area, these pinniped haulouts were concentrated in and around Smith, Little Smith, Green and Seal islands, along with Applegate Rocks, a shoal that is exposed at most low tides and awash at high water. It was at Applegate Rocks where crews experimented with peat as an absorbent, spreading the soil on rocks and on pools of oil. Peat was not used elsewhere, however, as officials decided that cleaning was just as difficult as spreading, collecting, and disposing of the peat.

The cleanup window for pinniped haulouts was opened only narrowly, a biological and logistical problem that was never really solved during the cleanup from 1989-92. Little Smith Island, which had seabird restrictions as well as pinniped haulouts, was neither cleaned nor completely surveyed after the spring of 1989. Seal Island, a small, relatively remote and exposed island, was the site of brief cleanups through 1991, but crews never were able to spend enough time there. In May 1991, the state convinced Exxon to send a crew to Seal Island to work on a heavily contaminated shoreline adjacent to a rocky spit used heavily by the seals. The narrow work window was shortened even more by weather delays, crew changes, and other logistical problems, so the few days of work never really approached the solution that was necessary. Several other sites, including Perl and Elizabeth islands, also got limited cleanup due to wildlife windows; they were not even surveyed in 1991 or 1992.

The point here is not that wildlife restrictions hampered the cleanup; rather, it should be understood that the very sensitivity of the Sound's ecology and habitats often prevented adequate, site-specific cleanup. Whether it was as a result of marine mammal restrictions, seabird colony protection, buffers around eagle nests, or other measures designed to protect migratory or resident species, cleanup was often curtailed or eliminated, even if it was technically possible to remove the oil. Schedules for cleanup were determined not so much by sequential logic — i.e., north to south, inshore to offshore, etc. — but by wildlife windows. In the end, at some places the cleanup ran out of time, not out of oil.

This is a lesson that should not be lost on the people preparing contingency plans and risk assessments not only for Alaska, but other rich wildlife areas: Plans should never assume that damage can be mitigated by cleanup, since cleanup may be impossible.



A herring catch, using seine nets. Photo by John Hyde

Commercial fishing

The next major phase of cleanup planning revolved around the openings of salmon seasons and the return of salmon to spawn in their home streams and coves. At first, state biologists and fishermen assumed that some commercial fishing could take place in the Sound, Cook Inlet and Kodiak. During the 1987 T/V Glacier Bay spill in Cook Inlet — occurring near the peak of the red (sockeye) salmon harvest season — fishermen were allowed to work areas that appeared to be free of oiling.

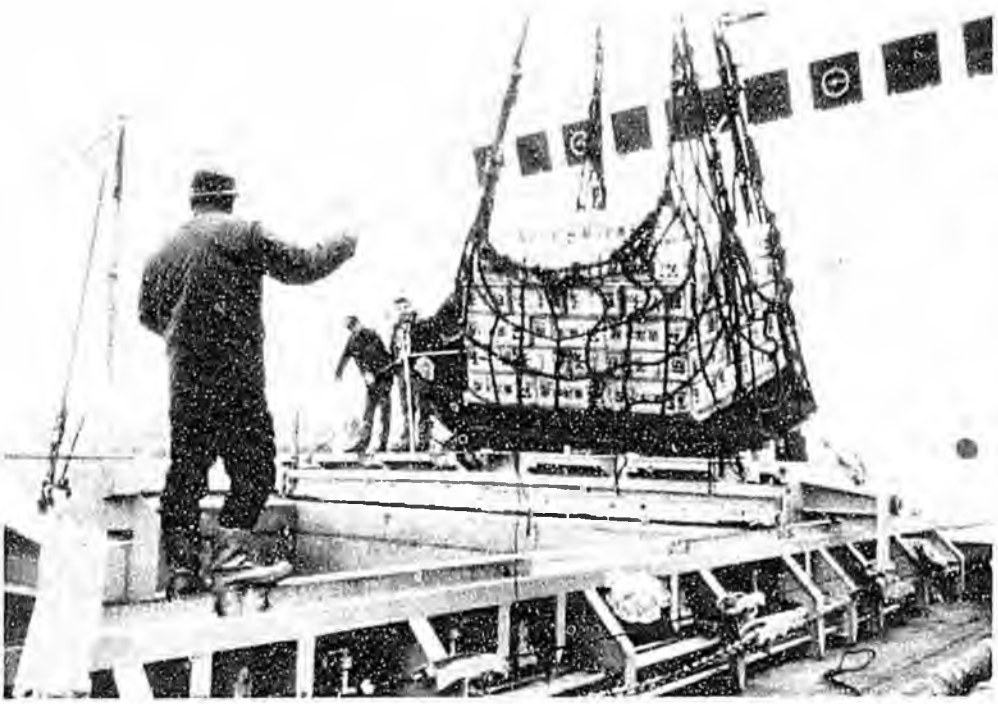
However, the *Exxon Valdez* lost almost 100 times more oil than the Glacier Bay. The oil swirled throughout every fishing district from Prince William Sound to Cook Inlet, Kodiak, and even parts of the Alaska Peninsula. The problem was not with the fish, crab or shrimp — at least not directly. The creatures were below the surface, for the most part, away from the oil and unlikely to be directly tainted.[14]

The oil swirled throughout every fishing district from Prince William Sound to Cook Inlet, Kodiak, and even parts of the Alaska Peninsula.

The problem, instead, lay with the gear and the fishing techniques. Fishermen pulling pots, longlines, nets, and other gear up through the water's surface — and perhaps through oil — raised one potential oiling problem. A second problem could occur on deck or in the holds, if a part of a catch were oiled and stored with unoiled fish in the hold. A third problem could occur in the transfer of fish from the hold of a vessel to a tender (a larger collection vessel), and from the tender to the shoreside processing plant. A fourth potential path for contamination was in the processing plant itself; if any contaminated product inadvertantly moved through the processing line, the machinery and work areas would be fouled for every other fish coming through.

The chain of problems, from net to processing plant, was potentially overwhelming, and the risk was real. Fish and Game considered opening parts and subparts of various districts, but this was judged to be a management nightmare. Managing fisheries cove by cove would have required massive numbers of trained observers working from the air. It also would have required communications and coordination that could shut down a part of an area on a moment's notice, since oil was mobile throughout the fisheries districts.

For the fishermen, the job would be just as difficult. Fishermen were reluctant to gear up their vessels — which requires a substantial, up-front investment in food, gear, fuel, etc. — to show up for a fishery that could be closed on that moment's notice. Further, finding oil from the deck of a vessel was a tricky and frequently imprecise operation. Skimmers, for example, could not properly operate without aerial surveillance support; there was no reason to suspect that fishermen could do better without similar aerial backup.



A South Korean ship loading boxes of herring roe. Photo by Vanessa Vick

And finally, cleanup itself posed problems for commercial fishing. Shoreline cleanup knocked tremendous amounts of oil back into the water, and some crews were sloppy in their recovery efforts and ineffective in setting secondary containment booms at cleanup sites. Areas slated for cleanup were frequently areas that were close to, or "upstream" from, commercial fishery areas. It would have been impossible to conduct cleanup and fisheries at the same time.

Different combinations of these problems forced fisheries closures from Cordova to Chignik Lagoon (on the Alaska Peninsula) in 1989. Alaska officials adopted a "zero tolerance" policy for fishery closures; although regional fish and game department biologists had some latitude in their ability to judge the threat from oiling to a fishery, they were instructed to take a very conservative stance. Alaska's multi-billion dollar commercial fisheries employ more people than any other industry in the state, and Alaska's seafood inspection program is one of the most stringent in the country. Fishery managers, who saw the canned salmon market collapse in 1983 after a (false) botulism scare in Europe,[15] knew well that there was no room for gambling with the freshness and quality of Alaska seafood.

Alaska officials adopted a "zero tolerance" policy for fisheries closures. Alaska's multi-billion dollar commercial fisheries employ more people than any other industry in the state, and Alaska's seafood inspection program is one of the most stringent in the country.

The first closures, for herring fisheries, came April 3, 1989, at the height of the defensive battle for the hatcheries.

The area's herring fishery is for the roe, not the fish themselves. Alaska fishermen from Sitka to Norton Sound sell herring roe to Asian markets, where it is sold salted, pickled, or fresh. It is a very lucrative series of fisheries, but, like many high-value Alaska fisheries, timing is critical and openings are short. For a number of fishermen, the early-season herring roe harvests generate the cash flow that helps them gear up for salmon, halibut, or other fisheries later in the season.

The oil spill occurred almost exactly at the same time herring began spawning in Prince William Sound. Females lay eggs on seaweed, and males release sperm, en masse, in the vicinity. Under certain lighting conditions, the herring spawn on the surface looked like an oil slick.[16] The Sound's vessel-based herring fishermen work with gill and purse seine nets; the roe is eventually sold in its membrane, or sac. Other roe fishermen set floating corrals, or pounds, in which long leaves of kelp hang down; the females lay eggs on the kelp, which is then harvested. Still other fishermen cut wild leaves of kelp, along with the herring eggs. All these types of harvest occur at or near the surface, in nearshore areas, and were therefore most exposed to dangers of oiling —

especially at that point in the spill. The state did not open the fisheries at all in 1989 because of oil on the water.

Other closures followed quickly throughout Prince William Sound: shrimp fisheries (both trawl and pot), king and dungeness crab, and virtually all salmon fisheries, both wild and hatchery-based. Some bottomfish openings were held in the Sound. Halibut opened statewide in June, and there were no reports of oiled gear or fish. Some fishermen who could not work their usual fisheries turned to other deep-water species, such as rockfish; ironically, fish and game reported that rockfish stocks in Prince William Sound may have been seriously overfished in 1989, as more fishermen put more effort into catching a species for which there was little population or harvest data.

The effects of fisheries closures — especially for salmon — reached far beyond individual fishermen and a lost season of fishing income. In Prince William Sound, the closures caused severe financial problems for the non-profit associations that run the hatcheries. The closures also disrupted markets, displaced workers, and (some fishermen argue), drove down prices in subsequent years.

The hatcheries, built in the 1970s and 1980s with state grants and loans, are run by non-profit corporations made up of groups of fishermen. The fishermen pay a tax (about two percent of their gross catch income) to the association to cover costs of operations, and the fishermen then make the bulk of their money on harvests of fish "spawned," reared and released by the association.[17] They concentrate on raising and releasing pink salmon, which is the smallest and least commercially valuable of the five species of the Pacific salmon. However, the pinks spawn and return in two-year cycles, unlike other salmon, which spend anywhere from three to five years at sea before returning to their home streams to spawn. This quick turnover gives fishermen a product they can raise, harvest, and sell in relatively short timeframes. Almost universally, pinks are caught and sold for the canned salmon market, partly because the flesh of the pinks doesn't hold up as well to handling or freezing as does the flesh of other larger, oiler salmon.

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In 1989, this financial and biological cycle was thrown out of whack. The fishermen were obviously closed out by the fisheries shut-downs, and they sought compensation from Exxon. The hatcheries lost their regular source of income (fishermen), so they resorted to "terminal" fisheries — i.e., fisheries close to the hatchery as the fish returned to their "spawning area." Hatcheries hired a handful of local fishermen to fish a tidal wave of returning pink salmon, hoping to sell at least some of the fish to canneries so they could cover their 1989 operating costs.

The terminal fisheries were bizarre for both their abundance and their waste. Fishermen literally dropped their nets into an ocean of fish, and with little or no effort, pulled in the biggest netfuls of pinks anyone had ever seen. But even with fishermen seining as fast as they could, there were too many fish — fish that were scheduled, according to nature's plan, to die immediately after they spawned. The coves in which the hatcheries were located were in danger of being smothered by a putrid and oxygen-burning carpet of pink salmon detritus. Many fish were caught, then hauled farther out to sea, ground up, and dumped overboard.

Meanwhile, the hatchery associations had trouble unloading the fish they intended to sell. All salmon begin to deteriorate physically as they enter their spawning streams and begin the process of reproduction. Because the terminal fisheries caught the fish so close to home, so to speak, the flesh was far past its peak of marketable quality. Buyers were finicky about the quality, and even when the hatchery found a taker for its pinks, the price was down. The associations all ran big losses for 1989, and none could meet its operating costs and debt service without borrowing further or depleting financial reserves.

In addition, the disruption in supply may have triggered changes in the canned salmon market, as buyers turned more to new products and new salmon sources, such as the fish farmers from Canada, Chile, and Norway who raise salmon in nearshore pens. There is some debate about whether the oil spill was a prime or contributing cause to a crash in salmon prices in 1990, and the sharp turn away from canned salmon

as a market staple. Some fisheries economists argue that the change was coming regardless. However, the oil spill certainly accelerated the changes and exacerbated the effects, at least locally. And it is indisputable that local communities and economies were ill-prepared for such a sudden change. In Cordova, for example, the 1989 fisheries closures shut down the three local processing plants for all or part of the season. Instead of the usual 200 - 225 people working in the plants, there were less than 100. Even when fishermen worked other fisheries, such as halibut, the flow of fish to the local processors was sharply reduced, since many fishermen were working on oil spill cleanup rather than fishing. Processors tried to make up their shortfall by flying in fish from other areas of the state, but the extra trip for the fish meant more time between the ocean and the processing plant, with meant a further decline in quality — and price.



Workers in Cordova protest the closure of their cannery. The three local processing plants were closed for all or part of the fishing season in 1989. Photo by Rob Schaeffer

Unfortunately for the local economy, the plants have not reopened, and the salmon markets are not the same. This has caused problems and changes for local workers and fishermen, and it has also affected city tax revenues, services, and rates that local people pay for electricity and city water. The plants were the largest consumers of electricity from the city-owned utility, and therefore the biggest rate-payers. The high volume of revenue coming from the fish plants allowed city managers to charge lower residential rates throughout the city, and the resulting loss of that revenue stream has hit every Cordova rate-payer in the pocketbook.

In Port Graham, a small Alaska Native village on the southern Kenai peninsula, the fisheries closures shut down the local processing plant, which served the local economy as both a market for fishermen and an employer for the village. The plant did not reopen in 1990 for many of the same reasons the Cordova plants stayed closed. Furthermore, the plant was owned by the local village corporation; because the corporation was dealing with relatively small economies and markets, it was, perhaps, more vulnerable to changes and less able to muster the economic and business resources needed to recover.

Lower Cook Inlet (roughly the area around Homer and Kachemak Bay) did have some salmon openings in 1989, but the big-money fishery of Cook Inlet — sockeye salmon harvested by the gillnet fleet in the upper Inlet area — did not. As oil streamed out of Prince William Sound and splattered the outer Kenai coast, tarballs, debris, and weathered oil swung up with the prevailing currents and were sucked into the tiderips of Cook Inlet. The oil was hard to locate and hard to track in the silty, swirling waters whose tides flood to 25 and 30 feet, and whose currents run as fast as many rivers.

The drift gillnet harvest in upper Cook Inlet is the second most important sockeye salmon fishery in Alaska, ranking in run strength and commercial value only behind

the massive Bristol Bay harvest in western Alaska. During the 1980s, the fishery was worth anywhere from $100 million to $200 million at the dock — and this does not count the economic activity generated by the shoreside processing plants and local businesses every year.

Every year, that is, except when there is an oil spill: In 1987, Cook Inlet drifters had their season interrupted by the Glacier Bay spill, which occurred at the peak of the season. Many fishermen were unable to fish their usual areas, and many more lost money as more boats crowding the same areas split the harvest in diminishing shares. Fishermen, like farmers, spend the year betting their debt and capitalization costs against the coming summer's expected cash flow from fish they haven't caught. The 1987 spill disrupted this cycle for much of the Cook Inlet fleet, and the 1989 *Exxon Valdez* closure compounded it. Exxon, unlike the shipping company that owned the Glacier Bay, made partial payments and full settlements with many vessel owners the same season as the spill. However, Cook Inlet fishermen were poorly positioned to absorb another season of lost income or altered cash flow in 1989. Moreover, Cook Inlet fishermen did not have the same options for replacing that income as their counterparts in the Sound and Kodiak. Exxon and its contractors hired fishing vessels to work the cleanup in those areas. But Cook Inlet, where there was little cleanup activity, did not provide the same opportunities.

Finally, Cook Inlet fishermen became more frustrated as attention on improvements to tanker operations and oil spill response were concentrated on Valdez and Prince William Sound. Cook Inlet, unlike the Sound, has more vessel traffic, more older and foreign-flag tankers, more kinds of dangerous products in transit, many oil and fuel pipelines crossing the Inlet, several large tank farms and terminals, more sites where product is transferred, and more than a dozen offshore production platforms handling crude oil or hazardous drilling fluids. Furthermore, the Inlet, unlike the Sound, is a shallow, fast-moving, narrow waterway that presents a number of more difficult challenges to shiphandling and navigation. Taken together, it could be argued that while the risk from a catastrophic spill from a supertanker was lower in Cook Inlet, the risk of smaller, chronic pollution from a variety of sources was much higher than in Prince William Sound. The fishermen and the local borough government lobbied hard for the same kinds of protection DEC had ordered for the Valdez terminal after the *Exxon Valdez* grounding. DEC attempted to meet some of the concerns from Cook Inlet by instituting a task force to work on solutions, but solutions would not be so quickly or easily found.

The number of players in Cook Inlet is much higher than in Prince William Sound. There was no single entity, no major permit holder, to whom DEC could address the kind of sweeping emergency order it issued for Alyeska Pipeline Service Company on April 7. Shipping companies, drilling companies, small oil companies, pipeline consortiums would have to come to the same table. This would take time. It would also take time to build a consensus among them, since different companies were operating on different margins of profit, and Cook Inlet operations meant different things to different companies. On the other hand, the incentive for Alyeska's owner companies to act was powerful — powerful in the companies' own economic terms. Much is made of the fact that the State of Alaska depends on Prudhoe Bay for as much as 80-85 percent of its income. Yet for British Petroleum (BP) and ARCO — the two biggest producers on the North Slope — Alaska reserves and Alaska production are the reason their companies turn the profits they do, and that their stock trades at the prices it does. BP has two big production sites in the world — the North Sea and Alaska's North Slope — and the company would not be the same without one or the other. ARCO's Alaska holdings and production are the envy of other domestic producers. For these companies, the stakes in Alaska are high, and therefore their incentive to make changes in the operation was high.

But perhaps most important, the profits from Prudhoe Bay and Valdez are high. Because the oilfields produce so much cash for the companies, they can afford to invest $150 million up front (the estimated start-up cost of the Ship Escort/Response Vessel



Closures also affected other fisheries: shrimp, king and dungeness crab, shown above.
Photo by Vanessa Vick

System now in place) for new prevention measures, and the state can afford to forgo $10 million a year in extra revenues to help pay for the changes.[18]

Cook Inlet is no longer a high-production, high-profit oil province. Oil production peaked more than a decade ago. Most wells are producing much less oil, and, as in most older fields, the cost of keeping the wells active rises as production goes down. There is less cash available for improvements, and the ratio of benefits to cost — in strict economic terms — is markedly different in Cook Inlet.[19]

By 1992, Cook Inlet would have, like Prince William Sound, a citizen oversight group funded by the industry and a revamped and improved response organization, also funded by the industry. However, the improvements were more incremental than those at Alyeska, and the citizen group has had many more struggles with the industry over funding than its Prince William Sound cousin.

By 1992, Cook Inlet would have, like Prince William Sound, a citizen oversight group funded by the industry and a revamped and improved response organization, also funded by the industry.

For Cook Inlet fishermen, the combined effects of the *Exxon Valdez* oil spill, the fisheries closures, the economic disruption and the frightening realization of the risk the area faces were much more damaging than the sharp and fresh wound in Prince William Sound caused by the spill. This events of 1989 were, to Cook Inlet fishermen, a painful reinjury, another break in a leg that had just started to heal.

Kodiak's fisheries were shut down, with some of the same problems as Cordova and Kenai, but a few different or magnified ones as well. Kodiak, always one of the top three or four U.S. fishing ports, has a fishing economy based not only on local fisheries, but on offshore and remote fisheries as well. A significant portion of the Kodiak fleet works the wild waters of the Aleutians and the Bering Sea for crab and bottomfish, and so, in many respects, a part of the Kodiak economy was insulated from the effects of the closures. However, like Cordova and the changes in the pink salmon markets, Kodiak had its own unrelated problem to deal with: The Bering Sea pollock fishery, which supplied Kodiak's shoreside processors, had been shut down months earlier than anticipated due to overharvest by large processing ships. The row of producers on Kodiak harbor that had invested in new equipment and employed workers on the economic promise of a year-round fishery suddenly found themselves idled. Their secondary, seasonal fisheries — halibut, crab, salmon — were then crippled or curtailed by the *Exxon Valdez* closures. It was a one-two punch that staggered the city's

processors and left hundreds of cannery workers in the unemployment line.

Kodiak's different gear groups for salmon (gillnetters, setnetters, seiners) were largely supportive of the state's decision to close the Kodiak Island salmon fisheries as oil and tarballs hit the archipelago in a shotgun effect. While Prince William Sound fisheries managers had to cope with an ocean of oil, in Kodiak the problem was smaller in volume but almost more difficult to deal with. The oil came in large slugs and isolated windrows; it hit some places hard while leaving other neighboring areas alone; the concept of micromanaging fisheries cove by cove was therefore even tougher to handle. Further, the long distances, open ocean shorelines, and bad weather made any prospect of tight oil-fisheries management a logistical challenge and a question of safety. The salmon season, scheduled to open in the islands June 9, was postponed until June 19, then shut down in nearly every area for the rest of 1989.[20] Some fishermen managed to work herring sac roe fisheries, since 22 of the 56 management areas opened for herring, and some found work on oil spill cleanup. However, oil spill work was not universally available.

Much was written that first year about the fishermen who made money working on the oil spill, and indeed, many people made a lot of money. However, the jobs were not as plentiful nor as equitably spread out as popular folklore would have it.

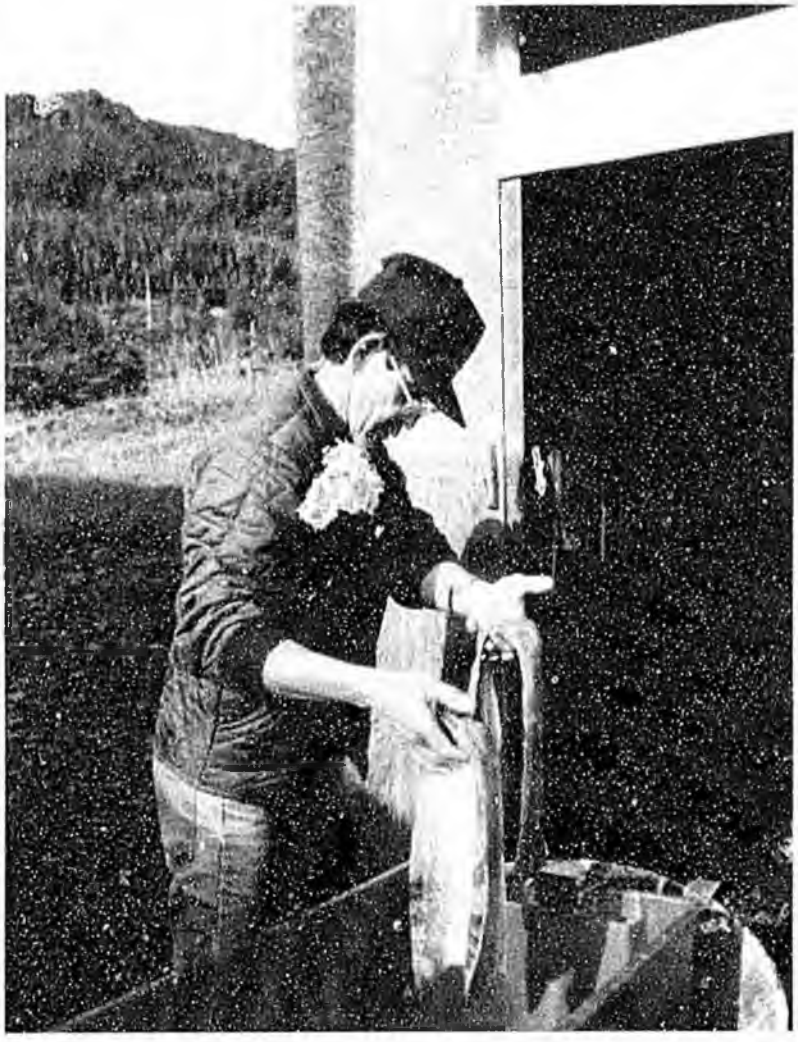
Much was written that first year about the fishermen who made money working on the oil spill, and indeed, many people made a lot of money. A skiff owner could make $20,000 for the season; large vessel owners could make ten times that. However, the jobs were not as plentiful nor as equitably spread out as popular folklore would have it. Kodiak, like Cordova, was the scene of frustration and competition as local fleets tried to handle the job of assigning vessels and dividing up available work among those who needed it. Roughly 300 Kodiak-based vessels normally work the area's fisheries, and the majority did not work on the spill response.

The claims system set up voluntarily by Exxon produced mixed results. While many fishermen opted for up-front payments or partial settlements from Exxon, getting the payments was not always a simple matter.

There were disagreements about whether those who took oil spill work would forfeit any right to recover damages for lost fishing income. Some fishermen were reluctant or unsure whether to accept response contracts because of those questions.

The uncertainty surrounding possible closures in early June also forced fishermen into potentially risky choices. Exxon was paying claims only to those fishermen who were ready to fish at the time the closures occurred. The state was closing areas one by one, based on the absence or presence of oil. Fishermen literally had to be geared up and standing by, ready to fish, when the fisheries were closed by emergency order — even if it was a forgone conclusion that the fishery would probably be closed. This created a ludicrous situation in which fishermen bought fuel, pulled in the crew, bought groceries, and got ready to fish, even though they knew the fishery would be closed. To make matters worse, from an economic standpoint, going through the motions of gearing up for fishing cut off a number of opportunities to get oil spill response charter work. The result was that those who gambled on getting oil spill work — and got it — made more money than they usually make fishing, while those who gambled on the claims system may not have made as much — or anything at all.

Generally, fishermen were able to settle claims with Exxon as long as they could demonstrate from tax statements, receipts from tenders or processors, or state records that they had worked a given fishery in previous years. This was a relatively simply matter for those who had a consistent record as a skipper or vessel owner. However, if someone had missed a year (due to working another fishery, working as a crewman, other economic reasons, etc.) or more, it caused some delay or raised some questions with claims adjusters about whether the individual was a bona fide fishermen. Some people lease permits, and don't always work the same district. In a few cases, people had just purchased vessels and/or limited entry permits, and the 1989 season was going to be their first in the fishery; they had no record on which to base a claim. In addition, the basis for computing claims was the state's projected catch of 15 million salmon for 1989; in fact, the runs turned out to be about 40 percent stronger. Theoretically, fishermen would have caught more fish, and therefore their settlements should have been adjusted upwards. And, of course, no mathematical formula could properly



In mid-September of 1989, a subsistence user in Chenega prepares salmon to dry. Photo by Vanessa Vick

adjust for the fact some fishermen are more skilled than others and some get luckier than others.

Finally, there were the issues of cash flow, crew payments, debt structure, and other components of the commercial fish business that the claims system could not address, regardless of how well-intentioned it may have been. Skippers frequently pay a variety of expenses for long-time or trusted crew members before the season starts. It is a system in which a skipper has people other than his own family depending on him economically. The uncertainties, the disruption of normal cash flow patterns, and the unavoidable inequities of the situation took a heavy toll on the fleet, both financially and emotionally.

But at least the commercial fishermen had a claims system, and many of them had access to alternatives, such as oil spill cleanup work. Subsistence users of wild fish and game — essentially all the Alaska Native families of the spill region — did not have the same kinds of options open to them.

Subsistence

Commercial fishing is the dominant cash economic activity in the spill region, and it commanded high and immediate concern from policy-makers, reporters, and responders. The fishing fleets of Valdez, Cordova, Kodiak, Homer and Seward, tied up at the docks in the busy ports where response forces mobilized, were visible evidence of one of the interests most at risk from the spill. Fishermen from Cordova were at the press conferences and briefings and meetings in Valdez almost from the start; the organized fishermen's unions and marketing cooperatives had the staff, structure, recognition and experience to deal with government agencies and Exxon; reporters (especially those coming from outside Alaska) immediately understood the threat to fisheries and the role commercial fishing plays in coastal communities.

The disruption in the lives of people in the subsistence-based villages was one of the most drastic and damaging of the entire oil spill. These effects are probably among the most lingering — and measurable — of the spill.

It was not the same for the Alaska Natives of the remote coastal villages, where subsistence harvest of fish and game is the dominant — and defining — social and economic activity. Dealing with the concerns and priorities of subsistence users — and explaining the risks from oil contamination — was one of the most frustrating and least successful exercises of the oil spill. The disruption in the lives of people in the subsistence-based villages was one of the most drastic and damaging of the entire oil spill. These effects are probably among the most lingering — and measurable - - of the spill.

Most of the villages learned about the spill on public radio, or from television news. They did not have a well-organized political and economic lobbying group, and were not part of the early discussions among the key organizations planning the response.[21] Subsistence is not only hard to see and touch, but its role in the lives of Alaska Native villages is hard to communicate briefly, forcefully, and completely. It is harder still for people coming from outside Alaska to truly understand quickly.

An example: In May 1989, Vice President Dan Quayle came to Alaska, briefly

visited a beach on Smith Island,[22] then returned to Anchorge's Elmendorf Air Force Base to meet with mayors from the affected communities. A woman representing the village of Eyak, near Cordova, spoke for more than five minutes, concentrating on the meaning of subsistence to her people, the threat they felt from the oil, and the anger and fear among Natives. The vice president listened intently and replied, "All the fishermen will be paid."[23]

His reply missed the point — widely. This was not just a matter of whether the Native community was paid damages, or if they were given money to buy alternative foods. The real fear, especially among village leaders and elders, was that the spill would so damage or disrupt subsistence harvest that yes, a food shortage might result, but more important, that the foundation of the communities would crumble.

Subsistence is part of a rural economy, but it has little or no relation to western views of economic value. Subsistence is about eating, but wild foods can't be simply replaced by a processed substitute. Subsistence is about kinship and social cohesion, but it is not a ritual or ceremony. Subsistence is one of the markers that helps Native people define themselves, but it is neither cosmology nor religion, as western people understand religion and theology.

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The Alaska Department of Fish and Game maintains a fulltime Division of Subsistence that collects harvest data, documents subsistence patterns, and serves as a liaison to many subsistence-based communities. Alaska government officials are used to dealing with subsistence issues in the normal course of land and resource management. However, much of the response structure was staffed by people from outside Alaska, or from agencies that do not normally deal with Native peoples. In addition, at least at the outset, Native villages did not have representatives or advocates in the management and planning centers, such as Valdez and Anchorage. Chugach Alaska Corportation, the regional Native corporation, did have some access, but the villages do not consider Chugach the appropriate representative for all Native issues in the region, and Chugach did not attempt to speak for all the villages. Exxon representatives did not visit most of the villages early on, and when they did, they were either consumed with emergency response tasks (at Chenega Bay, for example) or the overtures were clumsy (at Tatitlek).[24] Villagers reported that the managers from Exxon's contractor, VECO, were especially inept at dealing with the cultural differences and methods of communication in Native villages. Rapid turnover of Exxon personnel meant that it was difficult for villagers to build up a rapport or level of trust with the company.[25]

A certain amount of bitterness also developed among village residents as they learned of the millions of dollars being poured by Exxon into wildlife rescue and rehabilitation. Throughout that summer, Alaska Natives — and other locals, for that matter — spoke with cynical humor or resentment about the amount of attention paid to animals, while the human residents of the spill area struggled to get the kind of attention and support they felt they deserved.

Villagers also pointed out what seemed to them a confusing inconsistency in the state's policy about the safety of seafood. All around the Sound and Kodiak, commercial fisheries were being closed, ostensibly because of the threat of contaminated seafood; yet, subsistence users were told that seafood was safe to eat unless it smelled or looked oily. The difference, of course, was that subsistence takes place on a different scale, with different equipment, and subsistence harvest was not really analogous to commercial harvest with drag, seine, or gillnet gear. Remember, for the commercial fisheries, the problem was with oiled gear, not oiled fish. Certainly a lot of people understood this difference, but acceptance of the explanation was not universal, especially among older Natives.

The uncertainies, communication gaps, cultural gaffes, and mixed messages all combined with the basic upheaval caused by the spill. In the villages, during the early weeks of the spill the seeds of doubt and resentment were sown. As these problems grew, the subsistence issue came to be a focus for all the cynicism, anger, and fear. Communication stalled, even as efforts to open lines of communication and spread

information intensified.

Understanding the role of subsistence in the villages of the spill region helps one understand the reaction to the spill in the villages.[26] Area residents harvested and consumed an average of 200 to 600 pounds of wild fish and game in pre-spill years; by contrast, the average family in the American west buys a little more than 200 pounds of meat per year.[27] Village residents of the spill region have reported that 100 percent of the households used subsistence foods in various years before the spill — and they used many different kinds. The mean number of resources used hovers around 20 per household per year, from large marine mammals such as seals and sea lions, to salmon and halibut, deer and ducks, gull eggs, and even tiny marine invertebrates collected on the seashore. Clearly, subsistence harvest is the foundation of most village diets.[28]

Basically, things didn't look right. Villagers noted strange behavior among animals (seals becoming lethargic or unafraid of people), birds didn't show up the places they usually did, shellfish that normally clung tightly to rocks seemed to fall off easily.

In addition, subsistence harvest is just one link in an extended system of food preparation and sharing that is one of the principal social activities of Native peoples.

"Harvesting and processing groups are generally composed of members of extended families, and subsistence foods are often shared with relatives, elders, and others in need. For example, in English Bay, one harbor seal was shared within a family of eight households and 25 people. Such extensive sharing is commonplace in all 15 villages [of the spill region.]"[29]

And finally, the patterns of village life are dominated by seasonal harvests, and seasons themselves are defined and described in terms of animals. People understand their place in the natural world based on the traditional understanding of how the natural world work . Sur mer is the busiest season, when people catch and preserve salmon for the w . drying, smoking, pickling, or some other method. Fall is the time for hunting ga e. Spring — when the spill occurred — is just when people break out of winter and begin the harvest cycle again, going for herring, birds, and other resources.

The spill and the cleanup threw this pattern of life all wildly and frighteningly out of sync.

Basically, things didn't look right. Villagers noted strange behavior among animals (seals becoming lethargic or unafraid of people), birds didn't show up the places they usually did, shellfish that normally clung tightly to rocks seemed to fall off easily. It is hard to make a scientific determination about whether the observations were actually due to the spill, or even if they were entirely out of the ordinary. Researchers noted that people may have been noticing some things that they had never noticed before because the spill had made them more aware or more likely to observe even subtle changes. Yet regardless of whether all or some of the changes were really due to the spill, the cumulative effect was a kind of disorientation, which produced doubt, which magnified fears.

"Clearly, the oil spill had created conditions that were completely unfamiliar to the hunters and fishermen of these villages," the state's Jim Fall wrote. "Their skills in understanding their environment and making informed decisions had been undermined. Consequently, in many cases they discarded traditional foods or refrained from harvesting entirely for fear that the resources had been poisoned."[30]

And refrain, they did. The state's subsistence division researchers collected harvest data from 1989 and compared it to data collected in previous years. They tried, when possible, to compare 1989 against data from two previous years to get a better sense of the difference.

They found that in Chenega Bay and Tatitlek, within Prince William Sound, the total pounds of food collected dropped by more than half. In Chenega, where residents normally collected 300-400 pounds of subsistence foods per capita, the 1989 total was less than 150 pounds; in Tatitlek, where per capita harvest was as high at 650 pounds per year, the total was just a little over 200 pounds in 1989. The Lower Cook Inlet communities of English Bay and Port Graham showed similar declines. In the six Kodiak Island villages, more distant from the spill and where impacts varied more from place to place, average declines ranged from 12 percent in the extreme south (Ahkiok) to 77 percent in the north (Ouzinkie). Yet all showed substantial and aberrant

declines in overall harvest compared with the previous years.[31]

These declines do not represent something like a voluntary avoidance of a few favorite desserts or delicacies. The subsistence division also found that fears caused by the oil spill led area residents to eliminate a large array of foods from their usual and customary diet. Where the subsistence harvest mix usually included about 22 different components in Tatitlek, in 1989 the figure fell to about 11; in Chenega Bay, the mix dropped from 18 sources to eight. Overall, more than 80 percent of the households in Prince William Sound and Lower Cook Inlet reported that the oil spill caused them to limit or avoid subsistence harvest; the figure was about 40 percent on Kodiak Island.[32]



A woman cuts up seal fat in Port Graham. Photo by Ron Stanek

Exxon provided groceries to replace some of the foods, and cash employment on the oil spill cleanup allowed many people to buy food as well. However, this solution was neither long-term nor entirely acceptable. Residents simply had no idea if foods were subtly contaminated, if animals would continue abnormal migration patterns, if populations would be devastated, or if hunting would exacerbate problems caused by the spill.

"As a Tatitlek hunter explained regarding waterfowl, ' When you hear thousands of them are dying every day, it's tough to harvest them. We didn't know what the number would be coming back this year.' "[33]

But more important, store-bought foods did not replace — either by tradition or by nutritional standards — the fresh and preserved local foods. There is no question that in most Native villages around Alaska, the overall family diet includes a mix of processed grocery-store food and wild fish and game.[34] However, in the villages of the spill region, the "Native" foods are what people prefer, and one can expect subsistence foods to be part of most main meals, or the central dish, at least several days a week. Substituting chicken for seal or clams may be acceptable as a stop-gap, but over time, people want to eat what they are used to eating. Asking Alaska Natives to eat western processed foods on a consistent basis would be no more acceptable to them than asking Texans to get rid of their cattle herds and eat squid everyday.

Or octopus, for that matter. Tatitlek villagers identify octopus as an important food during the winter months, but after the spill, they reported that they were having great difficulty finding octopus in the usual places. This led them to question the health and organization — or reorganization, more precisely — of the natural world around them, which in turn increased their fears and frustrations about foods that once made up the bulk of the villagers' diets. If the octopus aren't there anymore, what happened to them? Did the oil kill them? What about the fish, then, or the birds? What about the seals that eat the fish? If it's all screwed up, what do we do?

In very crude ways, one can begin to understand the disorientation and fear by thinking of the shutdown of subsistence harvest as the shutdown of all the steel mills in Pittsburgh, or all the automobile assembly plants in Detroit. In fact, during the 1970s and 1980s, these rust-belt cities experienced something close to that. There was a

massive outmigration from these areas as people looked for work in California or Texas or other southern manufacturing states. Other people tried to retrain for new jobs in health care or other service industries. For the people who moved, the new states and climate might present some cultural and regional changes, but the basic structure of the society — the markers of the physical, economic, and social world — remain essentially the same from one region of America to another.

But people in Tatitlek don't have the option of moving to Anchorage or Seattle or Sacramento, retraining into some new food manufacturing process, and rebuilding their lives and relationships somewhere else. This gets back to the point that subsistence is not simply about eating, and it can't be truly described as an alternative economic system. There's food and there's an economy involved in subsistence, but those things are just the visible products of a subsistence culture. People of the villages viewed the oil spill as much more than a threat to one or two years of food; they feared it was something more dangerous and more lasting, an additional, crippling assault on a culture that had already been faced with rapid economic and social change in the span or a generation or two.

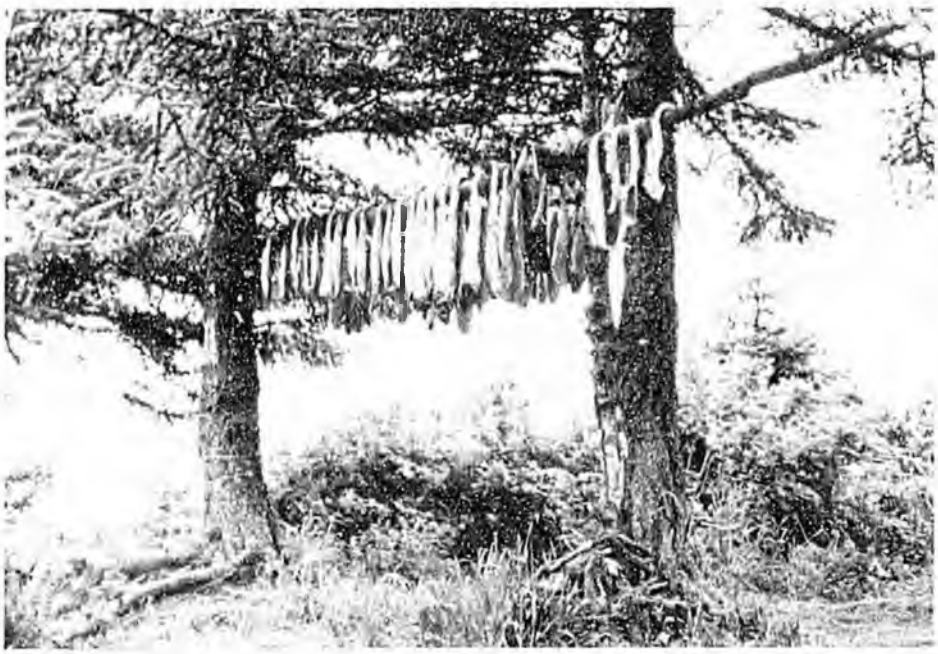
When village residents began asking state officials if seafood were safe to eat, DEC gave the seemingly obvious advice that foods that smelled like oil or looked oily should not be eaten. The technical name for this type of assessment is "organoleptic" testing, and, in fact, it is the basic test employed by state's commercial seafood inspectors. On the whole, it is dependable and rational, especially in the relatively pristine and clean waters of Alaska. A fat, firm-fleshed salmon with bright scales and no fin deterioration[35] is, in Alaska at least, a fresh and safe-to-eat fish. After inspecting a fish visually, an inspector will literally take a good sniff to make sure there is no abnormal odor that indicates the fish has been improperly stored or been out of the water too long. This type of test wouldn't be the perfect and foolproof way to determine the safety of seafood taken from a chronically or heavily polluted waterway, since the organoleptic inspection can't tell you whether the flesh contains abnormal concentrations of heavy metals or other toxins. However, Alaska's oceans are unpolluted and the water is clean.

Village residents tend to eat and use more parts of the animals – livers and other organs, for example – than the average consumer. They wanted to know if oil was getting into the food chain, and whether it would find its way into their own bodies.

In most cases, that is. In the spring of 1989, there were 11 million gallons of crude oil on the water. Throughout the summer, there was oil on more than 1,200 miles of beach. In the fall, a number of shorelines released sheens when the tide came in. Local residents watched all this. They walked the shorelines, ran through oil slicks in their skiffs, and observed changes in animal behavior. They understood the "organoleptic" test because they used their own observation skills and accumulated knowledge to make decisions about the health and safety of certain foods. But what they wanted to know was whether the food was safe to eat, not just now, but well into the future. This was especially important to them, because fish, shellfish, and marine mammals made up a much larger percentage of their diet than the average seafood consumer. In addition, village residents tend to eat and use more parts of the animals — livers and other organs, for example — than the average consumer. They wanted to know if oil was getting into the food chain, and whether it would find its way into their own bodies.

Scientists said generally that they doubted the oil was spreading widely through the food chain, especially in the case of salmon and marine mammals. Residents wanted to know how they could be so sure: Had the scientists done tests? Well, no, said the scientists, but we don't think that kind of contamination is likely. The villagers matched these seemingly vague assertions against what they were seeing — and not seeing, in some cases — in the natural world around them. If the oil wasn't affecting seals, why were they acting so strangely? Where are the ducks? Why is the liver of this deer I shot so white and puffy? Why did the liver of this seal just turn runny instead of staying firm, like normal? If there's oil floating all around this island, what makes you so sure these clams from the beach that looks clean are safe? If I eat these things now, based on your comments instead of a real test, are you going to tell me sometime in the future that my kids and I are going to get cancer?

Within a month of the spill, the Oil Spill Health Task Force came together. It included state and federal agencies, the non-profit social service representatives of the Chugach and Kodiak area Native corporations, and Exxon. The recommendations of this task force formed the basis for an endorsement of the organoleptic test as part of a general health advisory on subsistence foods on May 5. However, it was obvious to everyone involved that the villagers wanted more detailed analysis.



Fish drying in English Bay for subsistence use. Photo by Ron Stanek

What they wanted, of course, is what every American living near an industrial site wants to know: Am I safe? Are my kids safe? Isn't there some more definitive way for you to assure me that my family and I are safe?

In May, the Alaska Department of Fish and Game subsistence division started a pilot study, collecting samples of fish and shellfish that would be taken to the state's testing laboratory in Palmer. Exxon, to its credit, began to grasp that the subsistence foods testing issue needed more money and attention, and the company poured substantial money and support resources into additional, expanded collection and testing beginning in June.[36]

In both collection efforts, biologists and technicians consulted with village leaders, taking samples of the animals identified as important by the villagers from areas chosen by the villagers. The samples from the state's pilot study were analyzed by the U.S. Food and Drug Administration; the Exxon-funded tests were conducted by the Northwest Fisheries Center under the direction of a nationally known leader in seafood safety and toxicology. The Exxon-funded study included extremely sensitive (and expensive) measurements that could detect polyaromatic hydrocarbons (PAHs) down to one part per billion.

Exxon, to its credit, began to grasp that the subsistence foods testing issue needed more money and attention, and the company poured substantial money and support resources into additional, expanded collection and testing beginning in June.

These tests — and subsequent testing from 1990 and 1991 — backed up the general advice that seafood was safe to eat as long as it didn't look or smell oily. The flesh and organs of fish analyzed in the tests detected neglible levels of PAHs. Some clams showed high levels of contamination, but they had come from areas of obvious oiling. A panel of scientific experts pulled together by the National Oceanic and Atmospheric Administration (NOAA) discussed the results of the tests and came to a unanimous conclusion: In short, subsistence foods were safe to eat, and common sense and observation were the best guide of which areas and animals should be avoided.

There was one principal problem with this whole effort: The results weren't available in preliminary form until August, and the expert panel did not deliver its opinion until September. This was probably unavoidable; the group had enough money and resources to collect samples and get them to labs as quickly as possible. However, science — especially science including very delicate tests that require expert interpretation — does not occur overnight. The results of the fish and shellfish tests were not truly made final until February 1990, and test results from marine mammals, birds and deer did not appear until June 1990[37] — in other words, far into the next season's subsistence harvest cycle.

In practical terms, the fast-track of science was slower-moving than the problem. Throughout the summer, village residents consistently asked if there were some middle ground between organoleptic testing and the lab work being done in Seattle.

On the request of some village leaders, NOAA investigated the use of four different kinds of devices that use fluorescent light and special instrumentation to screen fish for contamination. The Oil Spill Health Task Force concluded that this solution wasn't the one the villages were seeking. For one thing, the testing involved special technical training and analysis, and, like the organoleptic testing, some of the conclusions were based on qualitative assessment. The machines were not necessarily easy to set up and maintain in a village setting, either.

NOAA attempted to use another conventional scientific screen — the literature search — to give villagers some sense of why scientists had come to the preliminary conclusion that oil was probably not contaminating fish and getting into the food chain. Unfortunately, the language of science is tinged with caution; researchers never stretch their conclusions beyond their data, and extrapolation is never off-the-cuff. One of the sources cited in the NOAA literature search noted that eating PAH-contaminated food does not appear to lead to cancer or other diseases. However, it cautioned, "Exceptions to these conclusions may arise in localized areas, as in the case of isolated fishing villages where seafood constitutes a major portion of the annual diet. No data are available, however, for these cases."[38]

By the time more detailed scientific, quantitative information became available in September and October 1989, the main subsistence harvest season was over. Doubts had solidified into firm skepticism.

This was hardly reassuring to these Alaskans who lived in isolated fishing villages where seafood constitutes a major portion of the annual diet. The literature search reinforced more doubts than it relieved.

By the time more detailed scientific, quantitative information became available in September and October 1989, the main subsistence harvest season was over. Doubts had solidified into firm skepticism. The skepticism was magnified by the fact that Exxon played a central and visible role in the operation. The company not only funded the results, but it produced high-quality brochures and sent its company representatives to the villages with the scientists. Exxon can certainly claim credit for a vigorous effort to address the questions of villagers about subsistence foods, but in hindsight, its involvement should have been limited to writing the checks. At town meetings in the fall and early winter of 1989-90, a number of villagers felt that Exxon-sponsored studies were not independent, since the company had a vested interest in positive news about safe seafood.[39]

This skepticism about Exxon's involvement brings us back to a basic structural and management problem that cropped up at nearly every stage of the response: People could not understand why Exxon was running a public health and public safety operation. Exxon was actually paying for it, not necessarily running it, but the perception was that the company was taking charge of the public interest. This, coupled with Exxon's public relations stance that tended to minimize the magnitude of the problem, made people in the villages wary of Exxon's participation.

As with other aspects of the "spiller-running-the-response" issue, this happened largely because of the inadequacies of the various national and state strategies and plans for pollution control: "Since there were no specific provisions in the [National Contingency Plan] for addressing fisheries and human health effects, the issue is not raised automatically and thus tends to be ignored until fishermen, fishery management agencies, or the public calls attention to it," NOAA's health researchers concluded in 1991.[40]

Further, since the issue comes up as a result of public pressure rather than government initiative, the perception is that the government doesn't care, or doesn't understand the scope of the problems. Then, even if the government moves quickly to deal with the problem or fill an information gap, its actions are viewed with some skepticism. Walker and Field of NOAA note that the Food and Drug Administration had no established guidelines for seafood safety based on polyaromatic hydrocarbon contamination at the time of the spill. While the agency eventually produced a risk analysis for PAHs in the summer of 1990, it was too late: People had already established, in their own minds, that any level of contamination was unsafe. The FDA's advisory, however scientifically or statistically valid it may have been, was viewed, in part, as an attempt to play catch-up, to cover up a previous oversight.

All of this — governments without firm information, the public perceiving that its problem was initially overlooked, the involvement of the vested interest (Exxon) — combined to present the Oil Spill Health Task Force with a daunting communications problem. While certain segments of the operation may have been viewed as caring and credible — an individual agency, an individual staff person — as a whole, the public (i.e., Alaska Native villagers) did not have a great deal of confidence in the information they were getting.

The depth of the doubt in the villages can be measured, in part, by the persistence of the disruption in subsistence harvest and consumption patterns into 1991 and 1992 in some of the villages.

The Department of Fish and Game's Jim Fall followed up in 1990 and 1991 on the 1989 surveys done by subsistence division staff. He found, "During the second year [after the spill], subsistence harvests were up for all but Chenega Bay and Tatitlek, but generally remained below pre-spill averages."[41]

While people say their subsistence harvests may have gone up, some said it was *in spite* of their fears, not because their fears had been resolved or alleviated.

Specifically, as in 1989, both the range of resources and the total volume of resources used were lower when compared to years before the spill. While the number of households that participated in subsistence harvest in Chenega Bay in 1990 matched a pre-spill year, the percentage using marine invertebrates and birds remained low. Moreover, although the number of households engaged in subsistance activities had returned to normal, all but one of those households reported that their harvest was still below pre-spill levels. Results from Tatitlek were similar.

As in previous years, the numbers generally went up the further one went from Prince William Sound. However, more than 80 percent of Lower Cook Inlet households said their harvests were still depressed, and half of the Kodiak Island households reported lower harvest levels.

While numbers have been coming up, the attitudes have not changed markedly, according to the state study. People continue to note changes in animal behavior and abundance, and they still express doubt about the long-term safety of eating subsistence foods at their previous levels of consumption. And while people say their subsistence harvests may have gone up, some said it was *in spite* of their fears, not because their fears had been resolved or alleviated. The desire to eat traditional foods and to participate in subsistence activities — hunting, fishing, food preparation, sharing — "outweighed their caution or fears of contamination."[42]

Fall quotes one Tatitlek resident on this subject: "We started craving seal meat. We could only go so long without it. We get tired of eating beef and chicken. We wouldn't touch seal that first year after the spill [1989]. Now subsistence food is on our table at least twice a week."[43]

It is important to note here that a gradual return to subsistence harvests in these villages was probably inevitable, regardless of the absence or presence of oil. One factor, noted above, is that as time passes from the event, the "cravings" for the foods people are used to started to overcome or overwhelm some fears. But more important, these villages have no other realistic option for replacing the foods they gather from the ocean and the shorelines. Cash income for the villages is limited and jobs are nearly non-existent; some people have commercial fishing permits, but they generally are for lower-value, lower-volume fisheries than the big income generators of Cook Inlet and Kodiak. As in the rest of rural Alaska, so-called "transfer payments" — Social Security, the state old-age pension, the Alaska Permanent Fund dividends, federal nutrition supports, etc. -- make up the bulk of the cash that comes into the villages. Putting cultural imperatives and tradition aside for a moment, the basic fact about subsistence in coastal villages is that subsistence is how people eat. Cash income, more likely, goes to buying processed foods that supplement the regular diet — coffee, powdered milk, flour, etc. — as well as clothing, heating oil, gasoline, ammunition, and so on.

When subsistence harvest was threatened and uncertainty about the future was the highest, people in the villages felt remote and occasionally excluded from the process and the people who made the decisions about cleanup. This is why many of the village residents — people with a keen understanding and appreciation for the day-to-day

workings of nature — were embittered when millions of dollars were immediately poured into wildlife rescue, while subsistence users had to work extra hard to get the attention of decision-makers.

Even almost four years after the oil spill, the disruption of the spill and the cleanup persists in the coastal villages of the spill region. Some villages are faring better than others, because people and regions are different, oiling impacts were different, and the ability of local leaders to influence the process differed as well. However, just as subtle changes in wildlife behavior give a clue that nature has not yet readjusted, the lingering problems with subsistence harvest are a clue that villages have not entirely readjusted to the post-spill realities. To many village residents, things still just don't look right.

"For a people whose survival has long relied on their observations of the natural environment, such signs continue to warn of danger," writes Jim Fall. "And people have continued to respond in a culturally appropriate manner — with caution. Our analysis of data about subsistence uses in Alaska Native communities following the *Exxon Valdez* oil spill suggests that while these signs have persisted, certain traditional foods have been avoided by many households. Until such signs disappear and people are able to place confidence in their own abilities to again interpret and understand their environment, recovery from the *Exxon Valdez* disaster will likely remain incomplete."[44]

Trailers and portable housing were rolling into town on trucks, temporary buildings and modifications were going up without safety and building inspections; the mayor and the city council felt they had lost control of their town.

The invasion

The towns and villages of the oil spill region were turned upside down by the staging, logistics, and politics of the response. In the summer of 1989, the regular business of fishing and tourism was completely overwhelmed by the business of oil spill cleanup. Town by town, from Valdez to Kodiak and everywhere in between, normal patterns were either disrupted, interrupted, or completely wiped out. It would be a surreal summer, marked by wide swings in economic and social activity.

Some people made a lot of money. Businesses that supplied gear — everything from groceries to raingear, rakes, and outboard engines — boomed. Hotels were full, all the time. In Valdez, national news organizations rented hotel rooms like apartments, paying the daily rate even when the room was empty, because they would be unable to get a room if they left it. People rented basements, spare bedrooms, garages, tent space — anywhere you could park a visitor for the night.

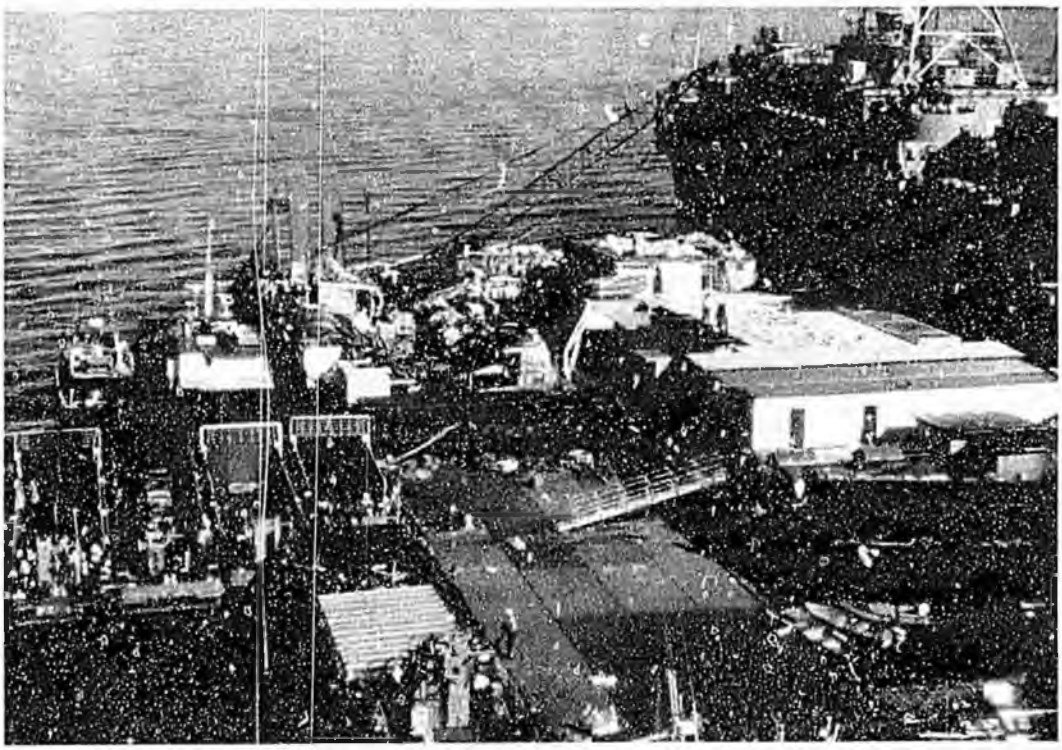
The lines at local restaurants were so long, and housing was in such short supply, that the state began providing meals and housing (both transient and seasonal) for its workers in Valdez. The catered meals (similar to the operations at North Slope oilfield bases) kept nutrition and morale up, while limiting the time wasted by people standing in line.

The Valdez airport, which usually handled no more than 20-30 flights a day, handled hundreds of flights every day, all day, all summer. The Federal Aviation Administration added Valdez tower staff, and for a time, a U.S. Coast Guard cutter served as an air traffic control center in the Sound itself.

Across from the airport in Valdez, Exxon and its contractor brought in portable housing, some of which had last seen duty during the construction of the Trans-Alaska Pipeline more than a decade before. The "man-camp," as it was called, was the dormitory for more than 1,000 people at various times. Outside of the housing centers, transients seeking cleanup jobs parked their cars and pickup trucks and campers in informal camps along the highway leading north out of town. These shanty towns were clustered in gravel pits, on sand bars of the braided glacial rivers that flowed out of the mountains, in the alders and cottonwood groves off the highway, and in the unofficial campground behind the city's softball fields. The presence was so overwhelming, in fact, that Valdez — a city that built a special complex to accommodate its famous softball tournaments attracting teams from around the state and northern

Canada — played no softball that summer of 1989. The season was canceled.

Estimates vary, but even the most conservative figures place Valdez's 1989 summer population at more than 10,000 people. The town has about 2,500 year-round residents, and an influx of summer visitors, cannery workers, and other seasonal traffic usually adds 1,000 or so people to the total. But this was a massive invasion, and it caused everything from a boom in various entrepreneurial circles to a fear of infectious disease spread by uncontrolled human waste dumping and disposal. Trailers and portable housing were rolling into town on trucks; temporary buildings and modifications were going up without safety and building inspections; the mayor and the city council felt they had lost control of their town.[45]



Just a small part of the tremendous influx of supplies, housing units and cleanup equipment.
Photo by Pamela Bergman

The other coastal towns on the highway system — Seward and Homer — had similar experiences, although the influx was generally smaller than in Valdez. The command centers for government were in Valdez, so more people — and more people who wanted to talk to or sell things to those people — gravitated to Valdez. Valdez was also the dateline for most news stories, so people drifting north for work or intrigue tended to wind up in Valdez more than Seward or Homer. Still, Seward's population more than doubled, and Homer — always a magnet in summer for transient fisheries workers and adventurers — was, literally, up all night every night. It was several orders of magnitude above the normal summertime activity.

Kodiak and Cordova fared somewhat better than their highway neighbors, simply because those towns are harder to get to. The transient problem was somewhat reduced, although various cleanup command stations brought a high number of Exxon, VECO (Exxon's cleanup contractor), federal and state government people to towns whose housing, service industries, and government services were not prepared to handle either the increase in demands, or the speed with which the increase happened. Services, tempers, and budgets were stretched to their limits — and, in many cases, they snapped.

However, as Governor Steve Cowper once observed wryly, environmental disaster is a poor economic development strategy.

There were some positive economic aspects to the influx of people and cash. Service companies, such as those that provided catering and other support to the Exxon-VECO offshore cleanup forces, had a prosperous season. Retail sales in all towns were generally high. The state's unemployment rate dropped, and economists generally agree that the mini-boom of the cleanup years (especially 1989-90) provided Alaska with a brief respite from several consecutive years of economic stagnation caused by falling world oil prices.

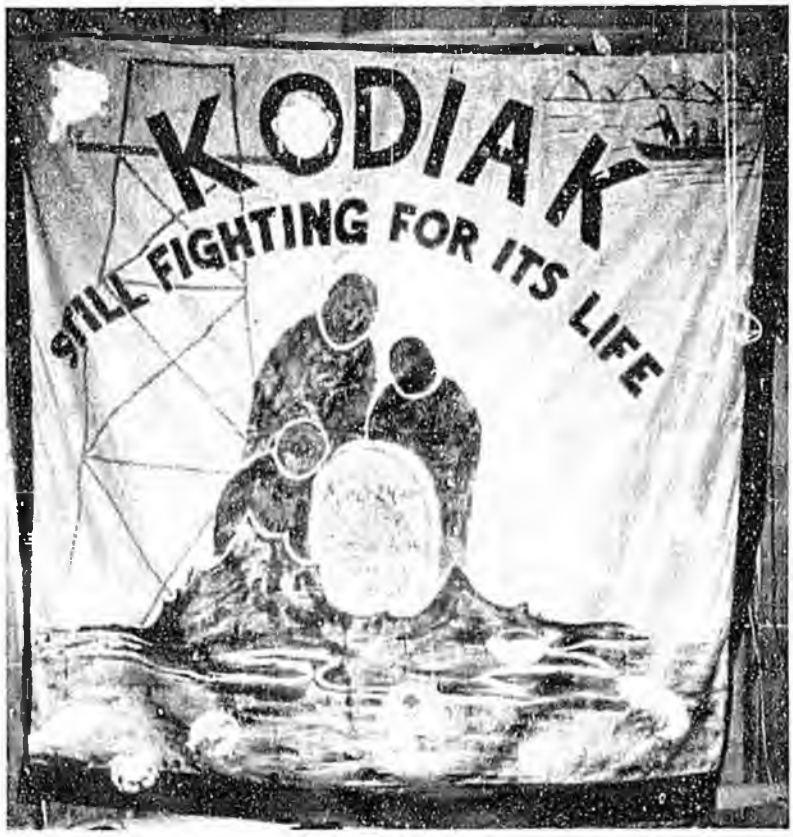
However, as Governor Steve Cowper once observed wryly, environmental disaster is a poor economic development strategy.

The stress levels, the sudden flow of money, the influx of transients with no obligations or connections to the communities, all helped make day-to-day life in the spill towns in 1989 a bizarre, unsettling, and occasionally dangerous experience.

Much of the summer, many small retail businesses were rich on paper, but desperately short of cash flow. A critical problem reported throughout the major towns in June and July was the backlog of unpaid invoives by Exxon and, more commonly, by its contractor, VECO.[46] The system was simply buried in purchase orders, delivery orders, receipts, invoices and bills, and many people were not getting paid. Especially in the smaller towns, retail businesses had limited cash reserves available and could not carry inventory and large amounts in receivables at the same time. One contractor — the computer provider to the Kodiak offices of Exxon and VECO — shut down the system in protest of slow payment; when VECO tried to log on its computers one day, all it got on the screen was a message from the contractor demanding payment. Eventually, payments caught up with bills, but things were in some disarray for several months.

A good deal of Exxon's $2 billion[47] stayed in Alaska, but much of it went outside with people who left the state after the summer jobs ended. The jobs themselves were transient and largely unskilled positions, hardly the kind of jobs that build economic stability. And with the sudden influx of unskilled workers seeking high-wage jobs came the petty crime and social disruption normal to frontier boomtowns.

Fights, thefts, domestic violence and drunkeness all rose substantially in all the towns of the spill area. In Seward the city manager reported that crime went up 100 percent. In one month late in the fall, there were 134 drunken driving cases on the local court calendar; this was, in raw numbers, as if seven percent of the whole town — men, women, schoolkids and babies — were up on DWI charges at the same time.



Protests such as this one in Kodiak mourned the loss of more than sea life – the social disruption made life in many communities chaotic.
Photo by Rob Schaeffer

Mental health suffered, and so did the service providers. In Kodiak, mental health admissions were up 72 percent; in Homer, the increase was 177 percent, with a 200 percent increase in demand for substance abuse treatment; in Cordova, mental health workers handled a 28 percent increase in drug and alcohol abuse referrals; in Valdez, court-ordered substance abuse treatment for convicted drunk drivers rose from an average of five per month to 15 per month that summer.[48] Domestic violence reports on the Kenai Peninsula rose steeply, and the local women's shelters in Kenai-Soldotna and Homer were full.

Child care was a particular problem. For one thing, normal work patterns were completely altered by the spill. Mothers and fathers were gone longer, working odd or inconsistent hours, and worn out when they got home. This caused both a problem in scheduling and a problem in behavior; stress worked on the children as well, making things harder on care-givers. In addition, there was a severe shortage of child care workers and home care-givers. The high wages of oil spill cleanup pulled workers from the traditionally lower paying child care jobs, so there were simply fewer people available to work in the child care centers. All small businesses suffered from a similar problem in the spill area. Grocery stockers, retail clerks, mechanics, and all kinds of wage workers left their regular jobs for oil spill work, leaving the business owners either working continuous shifts, or losing business because of staff and service shortages. But this problem was especially acute for child care centers, since workers must not only be

certified as qualified by the state, but also deemed safe and dependable by the parents. Exxon offered, at one point, to bring in transient workers from Valdez to serve as child care givers in Cordova, a prospect that was not only impossible under state rules, but troubling to parents.

The stress levels, the sudden flow of money, the influx of transients with no obligations or connections to the communities, all helped make day-to-day life in the spill towns in 1989 a bizarre, unsettling, and occasionally dangerous experience.

The smaller towns — Seldovia and the villages — had their own kinds of problems. They, too, had to accommodate a relatively sharp increase in strangers. Native villages tend to be somewhat closed societies. There are few really public spaces, in the American sense. Villages are more a series of private places, and the streets are more like the hallways between the rooms of a private family home. Visitors roaming around at will, using the airstrip, storing materials, or using the community hall or the school without getting full permission or consulting with village leadership, are all viewed as rude or inappropriate behavior.

As in the bigger towns, good mixed with the bad. Employment, in the form of $16.69-per-hour beach cleaning jobs, provided significant floods of cash into towns where money is usually in short supply. People were able to buy all-terrain vehicles, diesel heaters (to supplement wood heaters), and luxuries such as video cassette recorders; there were scattered reports of people investing oil spill earnings into satellite dishes for their televisions. Several of the villages (English Bay and Chenega Bay, for example) rented community-owned facilities such as docks, bunk houses and heavy machinery to Exxon or VECO, giving the local government or village corporation unexpected income.

Like in the bigger towns, however, drug and alcohol abuse rose, sharply in some cases. Alcohol abuse is probably the biggest social and health problem in rural Alaska, and villages struggle with it and against it on a regular basis. Ahkiok, at the southern end of Kodiak Island, had in previous years developed a growing sobriety movement. Where alcoholism had once affected 90 percent of the population, community efforts had nearly reversed that number by 1988, as 85 percent of the population of 100 people were considered sober. Yet by mid-October 1989, after a season of cash employment and a disruption of the local support network, sobriety had dropped to 55 percent. Crime rose with the drinking. The village had to hire a village public safety officer to handle night calls and accidents.[49]

The details of the spill response — where equipment was stored, where transients slept, how garbage and human waste were handled, how local cops dealt with the population explosion — fell to local elected officials, most of whom are volunteers or part-timers.

Local governments found themselves on the front lines more than they wanted to be. The details of the spill response — where equipment was stored, where transients slept, how garbage and human waste were handled, how local cops dealt with the population explosion — fell to local elected officials, most of whom were volunteers or part-timers.[50] City administration in most places was swamped with spill-related work: processing bills, chasing repayment from the state and from Exxon, handling extraordinary payroll and accounting duties, providing staff support to the explosion of official activities — the multi-agency coordinating committees, the "oiled mayors" group, town meetings, etc. City service workers — the police, fire department, parks managers, garbage collectors, road and street maintenance workers, dock managers and harbor masters — were working seven-day weeks. City facilities — landfills, sewage treatment plants or lagoons, community halls, schools, docks — were being filled up, overworked and under-maintained. It sounds a bit petty to stack these problems against the pollution washing up on the beaches and the animals dying, but it was a problem nonetheless. These were the details of the oil spill response system, and if the details weren't handled, the whole thing would have collapsed, stalled, or caused collateral damage.

It cost money. Some governments had good cash flow or cash reserves (Valdez, which gets most of its revenue from property taxes on the Alyeska pipeline terminal), while others did not (Cordova and Kodiak depend on sales taxes, personal property taxes, and raw fish tax shared with the state). Every extra expenditure required some kind of official approval by elected officials, and elected officials were nervous about

the fact that they were authorizing extraordinary expenditures without a guarantee they would be repaid.

Politically also, the mayors and city councils were also right on the front lines. They were, in every case, dealing with an unsettled, angry, and frustrated population with a wide variety of complaints and problems: The business owner who wasn't getting paid by VECO, the property owner complaining about the transients cutting down his trees for wood or defecating in the creek near his house, the local activists demanding more action on the beaches, the vessel owner who wasn't getting called for spill work, the taxpayers wondering who was going to cover the extra response costs if Exxon didn't.

In May, a handful of mayors from the spill-area communities coalesced into a group that came to be known as the Oiled Mayors Committee, which was loosely connected to the Alaska Conference of Mayors. The mayors met frequently throughout the summer of 1989, mostly to exchange notes, information, problems and solutions. The core membership included the mayors of Kodiak (city and borough), Valdez, Cordova, Whittier, Seward and Homer; the Kenai Borough mayor joined the group for key discussions, and some village mayors were gradually included. Attendance was flexible, depending on the issue at hand, the fatigue level of certain mayors, the patience of others, the cash available for travel, and the mood of the applicable city council or electorate in a given town.

The first issue that drew the group together in May and June was money: specifically, repayment for incremental city or borough expenses due to the oil spill response.

Some of the communities had managed to get commitments or cash from Exxon, the state government, or both. The state, through DEC, set up repayment agreements with some of the principal governments — the Kenai borough, Valdez, and Cordova — and eventually nearly all the communities were covered by agreements at one time or another. These repayment agreements were based on a provision of state law that allows the commissioner of the DEC to use the state's response fund to reimburse communities for spill-related expenses. However, the law and its prevailing interpretations at the time defined spill-related expenses fairly technically (or narrowly, as the mayors saw it). DEC, with its specific responsibility for technical aspects of spill response, traditionally paid for things with oil on them, so to speak: money for boom or supplies or wages paid directly for cleaning oil. The mayors were interested in repayment for a broader range of costs, more like emergency disaster funding than oil spill response.

In May, a handful of mayors from the spill-area communities coalesced into a group that came to be known as the Oiled Mayors Committee, which was loosely connected to the Alaska Conference of Mayors.

The mayors turned to Exxon, which had already expressed a willingness to repay out-of-pocket expenses. In some cases, the company had already made up-front payments or made commitments for specific amounts to certain communities.[51] However, the mayors were concerned because there was no equitable distribution or pattern for distributing impact funds or reimbursements. Governments with quick-thinking officials, those who had people in the right place at the right time, or those with the money and people required to travel and get access to the right Exxon officials, were able to secure commitments early. Others were not.

The mayors proposed to develop a standard community agreement that would guarantee repayment to all affected communities under the same terms, schedules, and rates. In late May, they asked Exxon officials to meet with them in the Anchorage office of Governor Steve Cowper.

The meeting went badly. The mayors had sent a draft agreement to Exxon and expected a negotiating session; Exxon sent, instead, two public relations officials who appeared to have neither the authority nor the information necessary for negotiation. The mayors, already frustrated and already under pressure from their constituents to alleviate problems at home, were left empty-handed and angry. Negotiations never got much better. Exxon eventually sent over a proposal that would have turned the cities into Exxon contractors, a prospect the mayors either found politically distasteful or contractually inappropriate. The effort to establish community agreements with Exxon fell apart in a blaze of publicity and bad feelings.

In fact, the agreement the mayors was seeking was little more than a written,

contractual expression of what Exxon was doing already. The company had already told communities it would repay them for legitimate spill-related expenses, and, even without the agreements, it paid almost $10 million in reimbursements to affected local governments in 1989. And according to one of the most influential mayors, Exxon tended to reimburse promptly.[52] The main problems, from the mayors' standpoint, were that the *ad hoc* reimbursement policy favored larger, better-staffed communities over smaller ones (since bigger cities had accounting staff or could hire lawyers and accountants to handle the issue), cities were put in the uncomfortable position of making emergency expenditures without a guarantee Exxon would accept it as legitimate, and cities were spending their own taxpayers money — up front — on a problem the taxpayers didn't cause.

"Some local jurisdictions did have reserves that could accommodate such expenditures, but others did not," a summary report commissioned by the Oiled Mayors' group reads. "There were instances where Exxon advanced funds for expected expenditures. However, there was no consistent policy or mechanism to advance funds to communities. Thus, it was the quality of individual relationships with Exxon officials, chance, political leverage, or the negotiation resources of communities that assisted with getting reimbursement or cash advances."[53]

Government officials burned out. Several mayors did not seek reelection in the fall. The turnover on city councils was unusually high (most of Seldovia's city council just resigned in the middle of the summer). The towns were a mess.

Rebuffed by Exxon in early June, the mayors then turned to the state for relief. The state, while sympathetic, did not have exactly what the cities wanted, either. The rules about use of the state reponse fund were strict; it was not a disaster relief fund, and it would probably be illegal to use those public monies on many of the things for which the cities sought payment (legal fees, for instance). The money the state Legislature had given to the Governor for emergency expenses carried a similar requirement. And in neither case could the state legally give communities up-front grants, for unspecified expenses, from response funds. As long as Exxon was willing to make reimbursements — and it was indeed writing the checks — state officials did not feel it was appropriate or necessary to stretch the rules governing the use of response funds.

All this would be little more than a discussion of intergovernment wrangling and accounting minutiae if it were not a symptom of a larger problem. There were, indeed, legitimate concerns and accounting gaps in the system the cities had to deal with. However, in a larger sense, the apparent inability of local government leaders to make Exxon do what the locals wanted done contributed to the sense of powerlessness and frustration in the towns. Government officials burned out. Several mayors did not seek reelection in the fall. The turnover on city councils was unusually high (most of Seldovia's city council just resigned in the middle of the summer). With a few notable exceptions, local governments were in upheaval. Some local taxpayers were stuck with unpaid bills. The towns were a mess.

When September rolled around and Exxon pulled out of the spill towns for the winter, there was a mix of sadness and relief. People generally didn't feel Exxon had finished the job, but they were happy to be left alone again. The summer of 1989 had presented lots of opportunities for some people to make money, but it came at a high price in the coastal towns. Local governments fell apart, friendships and relationships were stretched and broken, nerves were scraped raw, and normally small towns were confronted with big-city problems and stress.[54]

Miles of beach

The shoreline cleanup of Prince William Sound and the Gulf of Alaska began in early April, as a few work crews comprised of a handful of people each came ashore at Naked and Eleanor islands. What started on April 2 as a cluster of people wiping rocks with absorbent pads would, within six weeks, turn into the largest single private project (in terms of employment) in Alaska since the construction of the trans-Alaska pipeline.

At the height of the summer season, Exxon and its two prime contractors[55] had

more than 10,000 people working on the project. The skippers and crews of contract vessels providing support services and transportation pushed the total of the private workforce over 11,000. Exxon coordinated a military-style flight command center in Valdez that provided helicopters and fixed wing aircraft to all parties, almost on demand.

Exxon's first attempts at shoreline cleanup were limited to manual wiping and pickup of seaweed and debris, beginning at Naked Island. That project was quickly abandoned as impractical, and by April 15, a consensus had developed on the use of hot- and cold-water flush systems. Exxon and the military began bringing in barges, boilers, hoses, and portable pumps to support beach-cleaning crews, and by the first week of May, shoreline cleanup was the focus of the entire operation.

The principal complaint about the "miles of beach" standard, from the state's viewpoint, was that it had little or nothing to do with the quality of work, or even the state of the shoreline at the close of the work.

There was a considerable amount of debate and discussion in the first few weeks about Exxon's cleanup plans, the amount of shoreline targeted for treatment, and the schedules for getting it all done. Exxon would list a number of beaches, often using miles or yards as a measurement; the public and the governments usually said it wasn't enough; Exxon would expand its targets, and the process would begin all over again. The paper trail of cleanup frequently led to Exxon's daily reports, which reported in exquisite detail the number of vessels deployed, number of workers involved, number and types of various skimmers and boilers — and, finally, miles of beach treated per day, per scheduled period, and total.



Aerial view of a stretch of shoreline cleanup.
Photo by Peter Montesano

The miles of beach became the standard measurement of cleanup progress. Not surprisingly, when Exxon's final day of scheduled cleanup came around, crews were reportedly hitting that last 0.7 mile of beach scheduled to be cleaned in 1989. The schedules and numbers became their own, closed reality. If you're counting, Exxon says it treated 1,088 miles of beach in Alaska in the summer of 1989.[56]

There were several basic problems with the "miles of beach" measurement and the way it was generally perceived outside of the actual reality of the shorelines.

First, no one agreed on what constituted a "mile of beach" treated. The state had one measurement, the Coast Guard occasionally had its own, and Exxon had a third measurement that didn't match either of the first two. Shorelines were divided into segments and subdivisions, which were generally defined by natural shoreline features — headland to headland, large outcrop to small bight, and so on. Oiling was not always continuous. State monitors claimed that Exxon would count an entire segment (sometimes they were more than a mile in length), even if only a small part of the segment were actually treated, in an effort to inflate progress

reports. Monitors reported instances in which crews concentrated on working light- or moderately-oiled segments, rather than the heavily oiled spots, because they could cover more "miles of beach" and again, inflate progress reports. Competition among VECO and Exxon workcrews was sometimes intense; state monitors reported that workcrew supervisors were often more interested in meeting their schedule than doing a thorough job because they didn't want to appear to be lagging behind competing crews.

The principal complaint about the "miles of beach" standard, from the state's viewpoint, was that it had little or nothing to do with the quality of work, or even the state of the shoreline at the close of the work. A shoreline segment reported as treated, and rolled into progress figures, could easily be recoiled on a subsequent tide change — but it would not be deleted from the total.

Viewed from a perspective that brings the whole, three-year cleanup effort into the picture, the miles of beach issue becomes almost inconsequential. It disappeared from the oil spill stage after 1989, and cleanup began to be viewed more as a site-by-site operation. However, in 1989, the issue of cleanup progress was central to planning, strategy, perceptions and politics.

Exxon's first cleanup plans listed September 15 as the close of cleanup operations — not the close of operations for the winter, or the close of operations for 1989, but simply, the close of operations. Exxon's top management told its shareholders, meeting in mid-May, that the shoreline cleanup would be complete September 15.

Moreover, the oil was mobile; while Exxon's May 8 shoreline cleanup plan had listed a little more than 350 miles of beach to be treated, by June the official mileage of oiled shoreline had doubled to 700.

There were no guarantees Exxon would continue the work, and no assurances that the Coast Guard would require Exxon to continue work if the state felt it were necessary. State officials did not know if they would be left with oiled shorelines at the end of the summer, and if so, whether anyone else would be there to conduct cleanup.

By mid-summer, Exxon continued to march towards its statistical goal, dutifully adding more "miles of beach" to cleanup totals each day. Meanwhile, its top officials were pointedly vague on the issue of whether they would continue cleanup if the shorelines needed it — and it was clear to many, especially at the state level, that knocking the surface oil off the beaches was not getting most of the oil at many sites. Moreover, the oil was mobile; while Exxon's May 8 shoreline cleanup plan had listed a little more than 350 miles of beach to be treated, by June the official mileage of oiled shoreline had doubled to 700, including large stretches in the Gulf of Alaska and Kodiak. Exxon was forced to revise its plan to deal with that new reality.

Unfortunately, Exxon was not revising its ultimate target — September 15 — nor was the company altering its position that cleanup would cease on that date. However, the language of the cleanup was changing. Exxon's promise to clean the beaches had been officially downgraded to making beaches "environmentally stable." The operative term became "treating" beaches rather than "cleaning" them.[57] Moreover, the newest problems were those occurring "downstream" from the sound, along the Kenai Peninsula and Kodiak beaches. Yet, Exxon was slow to make commitments for extensive cleanup outside the sound. In the state's eyes that summer of 1989, Exxon appeared to be basing its plans primarily on what the company wanted to do, not on what the state and the public wanted. Instead of altering its overall target to match the changing state of the problem, Exxon was changing the problem to match the original goal. It was also beginning to mount a public relations campaign that portrayed the conditions in Alaska as vastly improved, and the cleanup as an orderly and effective operation. In a pamphlet sent to the company's seven million credit card holders and handed out at Exxon gas stations in June, the company claimed that the oil was "essentially" gone from the water by mid-May, and that the company was following its comprehensive plan for cleaning shorelines "to meet our mid-September target completion date."[58] It did not mention the extent of the shoreline oiling, surface or subsurface, and it made no reference to the fact that shoreline cleaning was a messy and difficult operation in which oil was lost into the water with regularity. To state officials, it appeared Exxon was gearing up for an exit that would allow the company "to declare victory and go home."[59]

On July 15, 1989, DEC commissioner Dennis Kelso wrote a letter to Coast Guard Commandant Paul Yost, requesting that the Coast Guard secure a commitment from Exxon to continue work past September, if necessary. Kelso's letter didn't have much of an effect.

Then, four days later, news reporters obtained a memorandum from Exxon's general manager in Alaska, Otto Harrison, to other key managers in the operation. Harrison informed his staff that the September 15 date was firm, that no one should commit to anything more than a survey in 1990, and, finally, that the pull-out decision was "not negotiable." At a special Congressional hearing less than a week later, Exxon officials again stopped short of committing to continue work in 1990. This further amplified the doubts state officials had about Exxon's willingness to follow through on its earlier promises to bring the project to completion — completion to state and federal standards, that is.

The most common operating problem, reported widely and frequently in daily shoreline assessment reports from state monitors, was poor containment and minimal recovery of oil that was washed off the beaches.

From the state's perspective, all this was troubling news. The state had committed to a cleanup structure in which the spiller controlled the operation, not government, and now the spiller was claiming that the company would take unilateral action regardless of what the government wanted. As a practical matter, a unilateral departure could leave the state and federal government with the unexpected job of taking over the cleanup machinery — procurement and deployment of equipment, hiring people and contractors, collecting and disposing of the tons of waste — or actually rebuilding it from scratch. That posed the obvious threat of delays and more confusion.

Exxon's position also put the "miles of beach" issue in a new and troubling perspective: If Exxon left the cleanup and the state attempted to force the company to return, the effort would probably involve some kind of court order. And if the issue came before a judge, would Exxon contest the state's request by trotting out its charts showing that it had actually treated the requisite number of miles of beach? Was this really a measure of progress or was it part of some legal strategy? For all the company's commitments to follow through and its stated desire to have a cooperative response, Exxon had now made it clear that it felt bound by no requirements other than its own, and that its position was "not negotiable."

In reading through the popular literature surrounding the spill response in 1989, one can tell that Exxon had some doubts of its own. Top Exxon officials speculated that the state was trying to keep the cleanup going because it helped the state's legal position, or because it put jobs in Alaska and money into the economy.[60] These were preposterous assumptions, but clearly they affected how Exxon viewed the situation and expressed its position.

Looking back, this whole tempest can be viewed as occurring in a time of heightened emotions and serious uncertainty about the fate of the environment. In the longer view, the value of discussing this incident lies in its effect on the shoreline operations, not on the relations and debate among public figures.

The state's monitors on the shorelines were watching a cleanup effort that did not match the smiles of the progress reports back at headquarters. Exxon's contractor, VECO, was moving too fast and not getting satisfactory results. Those "miles of beach" showing up on the progress reports were not necessarily cleaned, and the oil coming off the beaches wasn't necessarily being picked up.

The most common operating problem, reported widely and frequently in daily shoreline assessment reports from state monitors, was poor containment and minimal recovery of oil that was washed off the beaches.[61] Among other problems, VECO crews put boom in the wrong places, took boom away before the oil inside was recovered, and left boom "gates" open too long, allowing oil to escape. It was not until July that VECO and Exxon began leaving boom at cleaned sites until adjacent areas had been cleaned; this was designed to prevent cleaned spots from being recoiled by "rogue" slicks, or by oil released because of sloppy containment at nearby areas.

However, oil containment and recovery was not as high a priority as simply washing oil off the beaches. At Snug Harbor (Knight Island) in mid-July, the state's chief contractor reported, "The same basic problems exist. They knock more oil off [the

beaches] than they can either contain or skim." He reported that as oil washed free, away from the boomed areas, "Work boats are racing through the slicks trying to disperse them with propwash."[62]

A week later, DEC monitors observed another crew at Block Island, to the northeast. "We observed a crew set up, blast oil off, pull their boom, and leave, letting all the oil go. There was not even a skimmer in the area. The same thing is happening at Ingot Island."[63]

State monitors would not "sign off" beaches when they felt work was incomplete or new oiling had been found. They were wary of signing off shorelines because they did not want to imply that this particular "mile of beach" was clean.

The skimmers deployed at many work sites were either inefficient, the wrong models, or even inoperative on occasion. One type of skimmer, the rope-mop variety, was so inefficient that Exxon supervisors sometimes refused to use them.[64]

On one occasion, state monitors reported that a cleanup supervisor had ordered skimmers into the water, even though they weren't working, so that observers passing over by air would be fooled: "Since we have gotten good at finding where they stash equipment on barges instead of using them they are now putting some of these things in the water whether they work or not. I've found three mini-skimmers this week that were put in the water even though the crew said they were not operational. They said that the foreman told them to do it because it looked good if someone flew over and everything was out on display."[65]

The real problem with skimming and recovery was that it took time to do it properly. With speed and "miles of beach" as the operating goal, it was easy for some crew chiefs to get lazy and concentrate on washing rather than collecting.

In addition, there was virtually no effort to address the problem of oil beneath the surface of the beach — a problem that had not necessarily been anticipated, and which was becoming increasingly obvious to state monitors. The problems appeared to be running ahead of the plans, and the people making the plans seemed unwilling to acknowledge this fact. When state monitors raised these issues — incomplete work, sloppy containment, an emphasis on speed rather than quality — it led to daily confrontations on the shorelines. Generally, Coast Guard monitors were willing to leave behind more oil than the state monitors. When state monitors refused to certify a beach had been completed — or, "signed off," since the federal-Exxon work order had a spot for the three officials to sign on completion — it led to constant and daily reports of conflict.



Ultimately, the decision to end cleanup of one area and move on came down to two sets of eyes: The Exxon or VECO supervisor, and the Coast Guard monitor on the scene. The state was somewhat isolated, as its status was viewed as diminished in authority to that of the Coast Guard. Photo by the U.S. Coast Guard

State monitors would not "sign off" beaches when they felt work was incomplete or new oiling had been found. They were wary of signing off shorelines because they did not want to imply that this particular "mile of beach" was clean, and they didn't want it to show up that way in the official progress reports. They didn't know if Exxon would ever be back, so they did whatever they could to get the VECO crews to get as much oil as possible whenever possible. When they saw crews moved because of schedules, rather than oiling, they saw work delayed or not done unnecessarily.

"Perhaps these delays and deferrals of treatment would not have been so controversial if time had not been a factor as well," one of the state's chief monitors wrote in a

1992 summary of cleanup actions. "Time factored into the situation in two ways. First, there was a limited season in which to accomplish all the cleanup work that was necessary before foul weather and winter storms prohibited further work. Many felt that it made sense to concentrate energy toward treating the more heavily oiled areas as completely as possible rather than spreading out the resources in order to nominally attend to all the areas."[66]

Trying to hit everywhere, rather than hitting heavily oiled beaches and staying there until the work was done, had an effect on recovery rates at the heavily oiled beaches. The longer the oil sat there, the tougher it was to remove, and the more it was able to soak into the beaches. From the perspective of the monitors working the beaches, Exxon or VECO's apparent desire to increase tallies for reporting purposes had a negative effect on the recovery effort at the heavily oiled and damaged beaches.

The deterioration of relationships or the lack of real cooperation should be considered as something more than petty bickering or intergovernment turf battles, or as subjective judgments about who was the good guy and who was the bad guy.

Much of this shoreline trouble can be attributed, perhaps, to differing subjective interpretations of general instructions and goals. The first year's mission was to remove the "gross contamination," and while headquarters tried hard to put some kind of consistent, less subjective standards to that instruction, ultimately, the decision about moving came down to two sets of eyes: the Exxon or VECO supervisor, and the Coast Guard monitor on the scene. The state was somewhat isolated, as its status was viewed as diminished in authority to that of the Coast Guard. If the Coast Guardsman went along with the Exxon man's call, the state monitor either had to use persuasive powers to keep the crew on site, work out some kind of compromise, or make a protest back to the home office.

Additionally, Exxon mounted, for much of the summer, an aggressive campaign to gain approval of its kerosene-based solvent, Corexit.[67] Exxon lobbied for test after test, each time insisting — over the observations of state and federal monitors — that the test was a success. The people in the field, who observed in test after test the inability of crews to contain and recover the solvent mix that washed off the beaches, grew more skeptical of Exxon's motives with each successive, unsuccessful test. It did not help when, during one test, DEC caught Exxon contractors racing around outside the boomed-off test area, using the propwash from their skiffs to break up or disguise any Corexit-oil-water mix that got away.[68] Many DEC staff viewed the Corexit campaign as an attempt by Exxon to take a cheaper, easier cleanup route. The solvent would get oil off the surface and get the pressure off Exxon to really clean all those "miles of beach."

The "miles of beach" figure was a hollow statistic. Monitors in the field saw how hard VECO and Exxon (and, to some degree, the Coast Guard) tried to fulfill quotas, satisfy schedules, and rack up miles, sometimes to the point of putting the quotas above results.

It is hard to ignore the fact that relations among the various representatives on the shoreline were poor more often than they were good. While some crews were better than others, some supervisors were more helpful than others, some Coast Guard monitors were more cooperative than others, and some state monitors were more skillful and better-trained than others, down on the beaches, mistrust and misunderstanding were more common than cooperation and mutual support. It is hard to quantify what effect, if any, this had on the effectiveness of the cleanup, but it certainly led to short nerves and high stress.

State monitors tended to have disagreements with Coast Guard monitors, but the most frequent and most troublesome often included Coast Guard reservists, rather than fulltime active duty officers and non-commissioned officers. The Coast Guard also tended to rotate people in and out after fairly short stints. This meant that every two weeks, there was a new person's personality to gauge, a new bridge of trust that had to be built; any spoken or unspoken agreements with the previous "Coastie" were rendered moot, and any lessons the previous one learned had to be relearned by the next one.

The deterioration of relationships or the lack of real cooperation should be considered as something more than petty bickering or intergovernment turf battles, or as subjective judgments about who was the good guy and who was the bad guy.

First, from an organizational standpoint, entities such as the Interagency Shoreline Cleanup Committee (ISCC) and the Technical Advisory Group (TAG)[69] were fertile ground for misunderstandings. The rules were developed over time, and at times the intent, authority, and the procedures of the joint response were somewhat fluid. There was no commonly developed set of administrative procedures, no manual, and little precedent. Indeed, the roles of Exxon, the public, and some government agencies themselves were alternately unclear, unprecedented, or truncated.

In addition, training of field staff was not consistent or always complete. Definitions used in making decisions were sometimes subjective. Field procedures (such as the "signing off" of treated segments) were not clearly understood or defined, especially in terms of what effect the action would have on future cleanup efforts.



Exxon burned some of the waste from cleanup at an empty gravel pit near Valdez. The waste before separation was a mix of oiled seaweed and debris, oil-soaked absorbent pads, oil-soaked plastic stringers (pom-poms), oil-soaked absorbent boom, rocks, sand, wood, and garbage generated by the cleanup crews.

Photo by Rob Schaeffer

Dispute resolution was not good, especially in the field; it nearly always involved someone losing face or being embarrassed. A DEC monitor could get a Coast Guardsman or VECO or Exxon supervisor overruled, but that meant an appeal to a higher-ranking officer or supervisor at DEC and the Coast Guard and Exxon. Someone was bound to lose — and lose out in the open for everyone to see — under this system. And given the high stress, the pressure, and the importance of the operation, there were frequently poor losers and ungracious winners. This caused more stress and further broke down trust and working relationships. Making up the rules and the structure as one goes along simply will not work in an emergency.[69]

Similarly, the lack of an established procedure for testing, certifying the safety, and approving of new techniques or products — rapidly — also helped exacerbate whatever bad feelings existed. The first real problem was with Corexit, the second was over bioremediation. The state and public felt Exxon and the federal government were pushing the products too hard and too fast; Exxon (and sometimes some federal agencies) felt the state and the public were too cautious or had ulterior motives for opposing the product or requesting more testing.

A third major dispute, this one about waste disposal, flared and subsided several times through September. Exxon wanted to burn most of the tons of oily waste coming back from the work crews. The waste was a mix of oiled seaweed and debris, oil-soaked absorbent pads, oil-soaked plastic stringers (pom-poms), oil-soaked absorbent boom, rocks, sand, wood, and garbage generated by the cleanup crews. The primary storage site was an empty gravel pit at at the base of a mountain off the Dayville Road in Valdez, about halfway between town and the Alyeska terminal. At the site, workers took the waste from plastic bags, separated organics and plastics, rebagged the separated waste and stored it in separate piles building up in lined pits. The main pile was about 100 yards long, a bit smaller across, and by July the waste was more than 30 feet high.[70]

Exxon was burning some of the waste in three small, gas-fired incinerators brought to the site. The company got an air quality permit for the burning from DEC with relative ease. The problem arose when Exxon proposed to bring in one or more larger

incinerators that could handle more volume — and would, most likely, generate much greater air emissions with much greater concentrations of particles, carbon monoxide, and other noxious gases and compounds. The public, alerted in part by an environmental group that warned (somewhat specutively) of emissions of the dangerous carcinogen dioxin, wanted to be included in any decision to consider where the incinertor would go and what levels of emissions were safe. In essence, the public wanted the kind of access to the decision-making process that they are entitled to have under state environmental regulations and public meeting laws.

As noted in chapter one, the state had insisted from the start that regardless of the cleanup command structure, its public agencies would retain their usual authority to consider and issue permits for land use, waste disposal, and so on. The permitting process was, in fact, one of the few points of direct access and control the general public had over the cleanup. In this case, the public wanted to be considered in any decision that could transform shoreline pollution into air pollution.

But ultimately, the problems with the incinerator – like Corexit, like bioremediation, like the shoreline disputes and clashes of authority – were rooted in the fact that people were trying to deal with complex public policy and technical problems under crisis conditions.

Exxon applied for air quality permits in June, even though the incinerator wasn't yet in Alaska, and even though it had not been decided which type of incinerator would be used. There were several options, including at least one device that didn't actually exist yet. The permits went to public hearing.

Anyone who has worked on a siting process for an industrial facility or a landfill would recognize the kinds of questions and issue raised at the meetings. Naturally, no one wants to have an industrial site for a new and unexpected neighbor, and everyone wants full assurance that if the plans go through, that they won't get sick and their kids won't get sick from the emissions. This type of process usually takes a fair amount of time, involving at least two sets of information and interpretation (one from the government, one from the permitee). The resolution of these issues generally has less to do with technical issues than with a general issue of trust: The public will not oppose, or will limit its stipulations to a permit, based largely on whether it trusts the permittee to be careful and it trusts the government to keep an eye on the situation. This always takes time, and it always demands good communication and negotiation skills.

The process is not well-suited to an emergency, especially an emergency that had generated so much fear, uncertainty, and mistrust in the communities. Exxon's first visits to communities in the early days of the spill were difficult, partly because people were angry, partly because Exxon didn't get representatives to a number of places quickly, and partly because they didn't always respond well to the situation once they got there. Generally, people in the communities did not trust Exxon.

In addition, the public was unsure about the state's ability to take control of the situation. They saw Exxon running some things, the Coast Guard running others, and the state without a direct way to make Exxon or the federal government do what the people wanted done. They didn't trust the system to work for them.

Not surprisingly, these attitudes — coupled with the usual and well-documented process involving environmental health permitting — made Exxon's proposal rather unpopular. By August, Exxon had an incinerator, and the site it wanted — a sheltered area of Viekoda Bay on the west side of Kodiak Island. The site was, however, "upstream" from the village of Port Lions, and the people didn't want to have the incinerator emissions blowing into town or passing over the village's drinking water source, a lake in the mountains between the bay and the village. The opposition was exacerbated by the dioxin issue raised by the environmental organization earlier in the summer. The group said that burning seawater-soaked waste would probably cause chemical changes that would create dioxins, which would come out the smokestack. It wasn't a completely solid argument, but it wasn't so far-fetched, either.

However, "dioxin" is synonymous in the public mind with the town of Times Beach, Missouri, the little southern hamlet whose soil and waters were so contaminated with dioxins that the federal government moved everyone out and started a highly publicized, enormously expensive Superfund cleanup. In the public mind, dioxin *plus* people *equals* cancer. Port Lions wanted nothing to do with Exxon's incinerator. The people in the village did not want to be the victims of a second pollution

problem caused by the Exxon spill.

After much debate and public discussion, DEC granted Exxon an air quality permit for the incinerator on August 28. However, the Kodiak Island Borough, citing certain provisions of the federal Coastal Zone Management Act, said the permit was flawed because the state had failed to determine whether the permit was consistent with Kodiak's local coastal management plan. The state did not contest Kodiak's claim, but the issue became suddenly moot on September 9, when Exxon decided to cancel the incinerator plan and ship the waste instead to a hazardous waste disposal site in Oregon. The company was bitter about the whole issue, and sent out a stinging press release, complaining that state roadblocks and bad faith had killed a logical and local solution to the waste disposal problem.[71]

On Sept. 15, the day the Governor announced the state's winter plans, the Coast Guard resolved the issue of whether Exxon would return for cleanup in the spring.

The reality of the situation was considerably short of what Exxon claimed. For one thing, Exxon had a lot of trouble getting the Kodiak incinerator to burn hot enough and completely enough. Mechanical problems plagued the burner, and it was not clear whether the thing would have worked anyway. For another, Viekoda Bay was not Exxon's only option. The company could have tried to take the incinerator to another, more remote site, but the most logical alternatives were primarily in or near national park and preserve lands. Air quality permits in those types of areas carry an additional set of requirements designed to protect the wilderness qualities of the federal parklands. Exxon apparently didn't want to test that system.

But ultimately, the problems with the incinerator — like Corexit, like bioremediation, like the shoreline disputes and clashes of authority — were rooted in the fact that people were trying to deal with complex public policy and technical problems under crisis conditions.

Had the industry done effective research and development on shoreline cleaners such as Corexit years before, there would have been no reason to shoehorn several years of research and regulatory activity into a few weeks or months during an emergency. Had large-scale solid waste disposal been a part of the area's oil spill contingency plan, the battle over the incinerator might not have turned so bitter. Had the governments and industry worked out a better unified command system for spill response before the spill — and drilled it many times — issue management and decision-making might have been smoother and less confrontational. Had the public been presented a more realistic picture of the relative effectiveness of oil spill response during the building of the pipeline, perhaps citizens would not have been so outraged when the response efforts failed so completely, so quickly.

3.5 Transition, 1989-90

The scheduled date for "demobilization" was September 15, but Exxon began scaling back operations on Kodiak and in the Kenai Peninsula zones as early as August 2, citing safety and logistical demands. Exxon's plan was to pull back to Prince William sound's relatively sheltered areas before the onset of fall and winter storms, then phase out the Sound's cleanup by the September 15 deadline.

The Coast Guard had expressed some support for the state's position that Exxon should finish the job, even if it took longer than the 1989 season. But the issue of whether Exxon would return in 1990 remained unanswered right up through the final days of the 1989 season. Exxon had submitted a "winter plan" on August 15, which was limited largely to overflights and some beach monitoring to track changing conditions.

The state felt that there was still time to conduct shoreline cleanup past September 15, using smaller, more mobile crews and sticking to sheltered areas. Exxon flatly disagreed, saying it was unsafe to be on the water during fall and early winter. The Coast Guard remained neutral, although its commanders went along with the Exxon demobilization and gave a stamp of approval to the company's winter monitoring

plan.

State officials began preparing the government's own winter plan, a modest, $21 million effort that would include some shoreline monitoring, overflights of some problem areas, scientific analysis of the fate of the spilled oil, and a small cleanup effort conducted by individual communities. The winter plan also included $960,000 in grants to mental health providers in the region who would use the funds for counseling, crisis intervention, and treatment for depression, substance abuse, and domestic violence.

On Sept. 15, the day the Governor announced the state's winter plans, the Coast Guard resolved the issue of whether Exxon would return for cleanup in the spring. Commandant Paul Yost, speaking at one of the many press conferences held in Valdez that day, praised Exxon's effort to put together the cleanup army and navy. However, he added, "They didn't finish the job. There is more work to be done and Exxon will have to come back in the spring to do it." The Coast Guard also added that Exxon had made a commitment to both Yost and U.S. Secretary of Transportation Samuel Skinner that the company would return for cleanup.[72]

That issue settled, each of the main parties to the response settled back to plan for the coming year.

The "walk-a-thon," winter surveys, and evaluation of conditions



DEC employees conducting the first comprehensive shoreline survey at the end of August of 1989, Cape Douglass, Alaskan Peninsula. The survey was conducted on foot and covered what the agency had identified as all oiled areas from Prince William Sound to the Alaska Peninsula. Photo by Vanessa Vick

During most of the first season, different entities carried out shoreline and resource surveys, sometimes on their own and sometimes together. The first resource assessment teams included state and federal officials working with Exxon, while the first shoreline cleanup assessment teams were hired and staffed by Exxon.

At the close of the 1989 cleanup season, DEC launched the first comprehensive shoreline survey, covering what the agency had identified as all oiled areas from Prince William Sound to the Alaska Peninsula. Unlike earlier surveys, which sometimes included visual inspection of surface conditions from the air, the DEC "walk-a-thon" covered all areas on foot; cliffs or other steep, exposed rocky faces were inspected at close range from skiffs.

The result of the survey was 1,100 pages of maps and oiling data that DEC staff used to evaluate several important kinds of conditions.[73] The maps described where the oil was, the state of the oil (asphalt, tarmat, mousse, etc.), and the extent of the oiling (heavy, moderate or light). The survey located debris and forgotten caches of used pom-poms and boom, other garbage, and even gear such as hardhats and shovels left behind from the 1989 cleanup season. DEC noted trash or debris at 421 locations in the spill area, and picked up what they could given the limitations of manpower, transportation, and storage.

Teams identified 117 miles of shoreline[74] that remained heavily or moderately oiled. Of that total, more than 30 miles of serious oiling was located in sheltered areas, where wave and weather energy was limited. These were the areas that would rise to

the top of cleanup priority lists, not only because of the oiling conditions, but because the sheltered areas were, naturally, the places animals and people tended to use heavily.

The survey also showed that even shorelines exposed to heavy weather and wave action were holding oil; 85 miles of heavy and moderate oiling were in relatively exposed areas. This was interesting from the standpoint of persistence of oiling, or as a partial judgment of the effectiveness of cleaning over the summer. As a practical matter, these shorelines were not likely to be high-priority cleanup sites six or seven months later; the winter storms and high-energy pounding at exposed sites were expected to reduce the surface oiling considerably. And indeed, that is what happened, for the most part. As early as November, some of the most exposed beaches — Point Helen at Knight Island's southern tip — were already fairly clean-looking on the surface. The pounding of the waves, and the grinding of the large cobbles were scouring even tough, tarry coat off much of the shorelines. Mid-winter surveys in January conducted by state, federal and Exxon teams confirmed that high-energy shorelines were losing surface oiling fairly quickly.



The 1989 DEC "walk-a-thon" shoreline survey discovered 224 locations where subsurface oiling was significant enough to note. In some places, oiling began five or six inches below the surface; in a few places, it was as deep as 28 inches. The problem persists, as shown here during another survey in Northeast Herring Bay in 1991.
Photo by Patrick Endres

The walk-a-thon teams and the mid-winter surveyors also began to confirm known problems and discover some new ones as well. The most frustrating problem was the widespread presence of oil underneath the beach surface.

The DEC walk-a-thon discovered 224 locations where subsurface oiling was significant enough to note. It varied in both depth, character and distribution. In some places, oiling began five or six inches below the surface; in a few places, it was as deep as 28 inches.

Teams identified 117 miles of shoreline that remained heavily or moderately oiled, more than 30 miles of serious oiling was located in sheltered areas, where wave and weather energy was limited.

It got into beach sediments several different ways. In some cases, it was a combination of heavy oiling and slow cleanup progress. Oil sat on the beaches so long that it began to seep down between boulders and cobbles and saturate the fine sediments underlying the rocky "armor" of the surface. In other cases, the oil was pounded into the sediments by wave action, high-pressure hoses, or some combination of the two. And in still other cases, wave energy threw clean cobbles and gravel from one part of a beach on top of oiled gravel, literally burying the problem. This occurred primarily during storms, high tide cycles, or a combination of the two. This particular subsurface oiling problem would be among the most persistent of the entire spill response period, since the oiling was pushed into the uppermost stretch of the beach. This area, generally referred to as the "storm berm," was the least morphologically active zone, and therefore the oiling was not subject to the frequent pounding, grinding, or washing action in the lower, more active beach zones.

In the summer of 1989, oiling was initially described simply as heavy, medium or light.[75] But during the walk-a-thon, oiling characteristics became just as important. Oil

weathered at different rates and took on different forms. Surface oil (especially as weather turned colder) became less mobile, stickier, and tended towards a tarry crust, coat or stain that was hardened on the rocks. In other places with finer sediments near the surface, oil and mousse consolidated with beach material into patches of asphalt and tar, not unlike what happens to a dirt road where oil has been sprayed as a dust control technique. These asphalt patches and tarry mats, where they occurred, were scattered across the beach surfaces like islands, although in some cases the patch could be tens of meters wide and long. In boulder fields, and on beaches with bigger cobbles, tarmats and asphalt formed in the cracks and niches between the rocks.

The subsurface oiling ranged from fine sediments with traces of oil to others that were completely saturated with oil or mousse. Occasionally, where larger cobbles had been buried under layers of clean rocks thrown up by wave action, one could dig and scrape through a foot or more of bigger rocks before reaching the oil-coated layers now deep in the beach.

Figuring out the distribution of the oiling — especially in the subsurface areas — was very difficult, not only in terms of observation but in terms of physical effort. The standard tool used in the analysis was a short-handled clam shovel, which has a longer, thinner blade than the usual garden spade. Survey crews used previous oiling information, practical knowledge of oil movement, strong backs and arms and the clam shovels to dig deliniation pits all over a shoreline segment. Ironically, this process — geomorphological analysis, knowledge of what kinds of sediments or formation tend to hold oil, drilling of discovery and delineation "wells" — was just a manual, small-scale variation of how oil companies look for oil when they are trying to find some to sell. And, as in discoveries of oil in commercial fields, the survey crews found that subsurface oiling was frequently scattered and discontinuous. It was often hard to truly "map" a subsurface deposit because of the amount of physical labor involved. A surveyor might start following a lens or streak of oil-saturated sediment, but he or she might be limited by the amount of gravel that had to be moved, or the amount of time allocated for the survey itself. The result, however, was remarkably useful and fairly dependable, especially considering the level of the technology.

The DEC walk-a-thon was significant for both strategic and technical reasons.

The state's survey became its baseline for analyzing information gathered in subsequent surveys. It also gave some definition to the subsurface oiling problem that had been generally anticipated, but not fully described, during the 1989 cleanup season. The techniques, terms, and operational goals set and achieved by the survey also became, more or less, the basis for a standard survey methodology. There were more exact ways to figure out where the oil was and what it was like — rigid transects and chemical analysis, for example — but for the purposes of figuring out cleanup plans, the survey was the right mix of common sense observation and technical accuracy.

After the log boom construction of Exxon and the hatchery defense of the state and the Cordova fleet, area citizens were largely relegated to the sidelines.

Strategically, the survey was especially important for both the state agencies and the Alaska public. The walk-a-thon was the first and last comprehensive, truly independent government survey conducted on the shorelines. It helped set the agenda for the spring 1990 survey and cleanup process.

However, each subsequent area-wide survey through 1992 would become a "joint" operation, planned by a state-federal-Exxon planning team and orchestrated logistically by Exxon. The areas to be visited, the schedule and timing of the surveys, the description of the problems, the definition of the threat, the setting of cleanup goals based on the survey — all these would become a "joint" process.

There were some obvious benefits to this. The logistical demands of an area-wide survey and the enormous amount of data interpretation that followed would be difficult for a relatively small state organization to handle consistently. Also, there was the issue of duplication of surveys by various organizations, which was neither cost-efficient nor likely to produce consensus. Subsequent surveys were designed such that all the organizations were looking at a given problem at the same moment in time, so the information generated was as close to standard as possible.

However, the "joint" survey system, like the "joint" cleanup command and management structure, had disadvantages for the state. On all subsequent surveys, shoreline crews would debate definitions, argue over scheduling and progress, and disagree about how many pits should be dug or how far they ought to follow a lens of buried oil. The state's fall 1989 walk-a-thon, however, gave state shoreline monitors extensive information and practical experience that would allow them to work within the "joint" system from a position of technical strength and confidence.



In July of 1989, a group of volunteers calling itself the Homer Area Recovery Coalition raised money from private donations and headed for Mars Cove, a heavily oiled area in the Kachemak Bay State Wilderness Park on the Kenai Peninsula.

Photo by Vanessa Vick

Local response

Not surprisingly, the people the of the spill area wanted to be involved in the response. There was a general sense that the oil spill was threatening not just the economy and resources of the year, but the very existence of the coastal communities themselves.

Unfortunately, people weren't sure where they fit in the response system. DEC was largely a technical agency and its primary role was oversight and monitoring, not independent cleanup action. And in any case, no part of state government was prepared to organize and deploy volunteers. The Coast Guard is a military organization; nothing in the National Contingency Plan, which defined the Coast Guard's mission, was aimed at community response. Other federal agencies had specific, resource-based responsibilities — national forest or parklands, marine mammals, etc. — so their focus was away from communities as well. And, of course, there was Exxon, a private corporation building its response plans and organization from the top down, not from the communities up.

DEC and the Cordova fishing fleet did work successfully together on a volunteer response effort at the Sawmill Bay hatchery site, where local Chenega Bay residents also went to work for wages or as volunteers with the state. However, this effort turned out to be unique, and the arrangement short-lived; Exxon took over contracting, planning, and logistics in May.

Exxon did realize that it made sense to include local people in the response, even if it were little more than an expression of good faith or an act of good public relations. The company did put some locals to work in both Kodiak and Homer, where people built improvised booming systems made from felled logs bound together with cable. However, while some log boom made it into the water, far more was left on the docks and in boatyards, and what was used proved only marginally useful. After the log boom construction of Exxon and the hatchery defense of the state and the Cordova fleet, area citizens were largely relegated to the sidelines.

Many found employment as shoreline cleanup workers or rented their vessels and services to Exxon and VECO. In many Native villages, everyone who wanted to work, could work — for VECO or Exxon — but this was not quite the same thing as true

community-based response. The plans were made by the remote response leaders, and the orders came from Exxon or VECO supervisors. People couldn't dictate where the crews went, and couldn't establish cleanup standards for the areas near their towns. They couldn't direct VECO to do something differently and couldn't implement innovations or better ideas about cleanup. In some cases, they couldn't even have the tools they wanted — even something as simple as shovels.[76] Many felt alienated and used rather than involved.[77]

Throughout that first summer, state representatives from DEC and Fish and Game, right up to the Governor's office, reported repeated requests for a state-based response from community activists and leaders. Finally, in July, a group of volunteers calling itself the Homer Area Recovery Coalition (HARC) raised money from private donations and headed for Mars Cove, a heavily oiled area in the Kachemak Bay State Wilderness Park on the Kenai Peninsula. The stated intention was to clean every rock, and to show that community-based cleanup was a real alternative to Exxon's corporate cleanup. HARC's leaders also intended to demonstrate a small rock-washing device developed by local residents.

In March and April of 1990 more than 150 people from Kodiak Island, Cordova, Whittier, Chenega Bay, Valdez, and Chignik picked up 128,000 pounds of oily waste – 15,000 pounds of it oily debris left behind by workers in 1989.

The idea caught on with Governor Cowper, who was sympathetic to the idea of community-based cleanup and a believer in home-grown technological innovation. DEC, with Cowper's approval, came up with a modest grant program designed to provide incentives to organizations that had better ideas about how to conduct shoreline cleanup. HARC received about $40,000 in support from the state, and Kodiak residents got a small grant to help them expand a home-grown testing program that used an absorbent fabric called "geotextile" in several different cleanup configurations. Neither technique got much further than testing and limited application; HARC's Mars Cove project ran through early September, and fell somewhat short of its goal to clean all of the cove's shoreline. If community-based response were to happen on a larger scale, it would require more funding and wider planning and logistical support.

In August, during an annual strategy session between the Governor and his Cabinet, Steve Cowper asked DEC commissioner Kelso to come up with a plan for community-based cleanup. Kelso and DEC management staff used the tools — and the funding — they had at hand: Under the statutes governing the state's response fund, DEC could execute memoranda of agreement with local governments under which communities could undertake response actions on behalf of the state. The statute allows the DEC to reimburse communities for the cost of response actions.

The Governor announced the program on September 15. However, it took six weeks and considerable drafting and redrafting of work plans and agreements before the program firmed up. On October 31, DEC announced that it would spend $6 million on community-based response through the spring of 1990. The bulk of the money was slated for shoreline cleanup, ranging from $2.1 million to the Kodiak Island Borough to $172,000 to the village of Tatitlek. Local coordinators, working under the umbrella of the city or borough government, would hire and train workers and put them in the field.[78] Unfortunately, the workers didn't make it to the shorelines until late winter and early spring of 1990.

The Local Response Program was, at first, plagued by the same kinds of problems experienced by the Oiled Mayors in their search for "impact funding" or some other broadly defined support from the state and/or Exxon.

Ideally, the communities wanted to put crews in the field to do the cleanup they wanted, the way they wanted, without interference from Exxon, the Coast Guard, or, to a certain extent, the state too. Cordova, for example, wanted to use its grant, in part, to implement an idea that had been floating around since the early days of the spill: Locals would put to sea, collect oil, and return it to Cordova where they would be paid a "bounty" based on how much they collected. While that may have worked to some degree had the bounty program been instituted when oil was fresh and on the water, it was less practical in fall and early winter, when the problem was on the shorelines. It raised the question of judging the "worth," for the purposes of a bounty payment, of oil or mousse with varying concentrations of weathered oil and water and sand. It

raised questions about management and liability, handling and disposal of oily waste, safety of people going out for the bounty, and other problems. DEC felt the bounty proposal was less effective than other methods — i.e., conventional manual shoreline cleanup by vessel-based work crews — and not as safe. DEC turned down the Cordova cleanup plan and asked the locals to come up with something else.

Eventually, Cordova came up with a plan that concentrated on picking up spill-related trash and cleaning certain high-priority shoreline, and, in fact, it got good results. But Cordovans didn't like the fact that DEC had, in effect, overruled popular will about cleanup. Similar planning problems occurred in other spill-area communities on the program.

The problems were a result of high expectations on each end: The locals had high expectations about what they could do and how they could do it; the DEC had high expectations about safety of the workers, effectiveness of the program, and accountability for spending public money. If the government were going to pay for a shoreline cleanup program, the government had to make sure that its cleanup crews complied with federal and state labor safety laws, state waste disposal regulations and land use permits, and so on. The DEC also had to make sure that any public money spent on cleanup was spent on something that produced good results for the money invested. More specifically, since the money was coming from the state's response fund, any cleanup had to meet the standards governing how the fund is used. By law, DEC has to try to recover any expenditures from its response fund from a third party — the federal cleanup fund or a spiller, primarily. To certify that local response was recoverable, DEC had to make sure the local cleanup met some basic standards for need and for effectiveness. To make sure of all this, the DEC required that communities submit a work plan, and that they do only work that was approved by DEC. Communities didn't necessarily like this, and the preapproval was one of the stumbling blocks to speedy implementation of the Local Response Program.

A bigger stumbling block, from the local governments' standpoint, was the cost. There were some minor financial and administrative problems — most communities had to buy additional insurance to meet the increased liability of putting workers on remote shorelines, example — but the biggest problem was the reimbursement provision. Under the law governing the state's response fund, the DEC commissioner can *reimburse* communities. But the communities wanted *grants* — money up front. They argued, probably correctly, that most communities didn't have the ability to finance million-dollar cleanup programs — which they hadn't budgeted for — from existing cash flow or cash reserves. They also complained that the reimbursement process would require them to do more paperwork, and that it would take too long to get their money back. The work plan requirement would eventually work itself out, but the financing problems were more fundamental and would take even longer to resolve.

In December, long after everyone had concluded there would be no local response in 1989, the state and the communities each swallowed their concerns and the program went ahead in March and April of 1990. More than 150 people from Kodiak Island, Cordova, Whittier, Chenega Bay, Valdez, and Chignik picked up 128,000 pounds of oily waste — 15,000 pounds of it oily debris left behind by workers in 1989. Communities mounted a similar effort in October 1990, after the close of the Exxon summer cleanup.

The local response model — small crews, small vessels, flexible workplans — was more like what the state thought was appropriate and effective on the cleanup after the big summer of 1989. The crews demonstrated that cleanup did not have to always be on the same large scale mounted by Exxon, and that shoreline cleanup could proceed safely and effectively before and beyond the limits set by Exxon.

Newport Beach

The basic strategy for the 1990 summer cleanup was developed and discussed at a

meeting during the first week of February in Newport Beach, California. Exxon sponsored the technology workshop, which was attended by state and federal resource agencies, consultants to both Exxon and the state government, and the Coast Guard. Several follow-up sessions, some held solely among state agencies, were held in Anchorage over the second and third weeks of February.

Bioremediation gained state approval for cleanup in 1990. Mechanical equipment was used much more widely that summer. Tons of oily sediment were actually removed, rather than simply exposed.

These meetings largely determined what techniques would be used in 1990 and what the process would be for making cleanup decisions. In a more indirect way, the participants framed several important policy and technical issues, such as establishing the risk from the remaining oil, and determining in a general way what types of cleanup would prove more harmful than leaving the oil in place.

The first document used for planning purposes was a summary of expected field conditions and draft cleanup recommendations prepared by National Oceanic and Atmospheric Administration (NOAA) staff, who served as science advisors to the federal on-scene coordinator.

NOAA staff suggested that based on experience from other spills in similar environments, high energy beaches would probably be "relatively free of oil." Sheltered areas probably would not have changed much over the winter, NOAA suggested, and subsurface oiling would still be present. The cleanup strategy, the agency felt, should tend towards less activity rather than more, with an emphasis on manual work with hand tools or bioremediation. The exceptions to this general rule would probably occur in sheltered areas covered by large tarmats or asphalt stretches, or where subsurface oiling was very heavy. In those cases, the mechanical equipment would be acceptable, but only under close supervision. Further, NOAA said, tilling should be delayed until fall, when commercial fishing seasons were mostly over. The rationale was that tilling would release oil into the water and could jeopardize fishing activity. Where heavy subsurface oiling threatened shellfish beds, bioremediation should be used to reduce the threat.[79] The Coast Guard staff elaborated slightly on the NOAA draft, adding, in a recommendation to the federal on-scene coordinator, that bioremediation be considered a "primary" treatment.[80]

The state agreed in very general terms with the NOAA strategy; it was, of course, important to be prudent about the use of mechanical equipment, and careful that cleanup not unduly disrupt sheltered environments. Bioremediation would, indeed, be a good way to address these concerns, but only if certain questions about its effectiveness and toxicity were answered — which, at the time of the NOAA draft, they had not. And, of course, protecting commercial fishing openings was, as usual, among the state's highest priorities.

However, the state had several concerns about the NOAA/Coast Guard approach. The first was the assumption that bioremediation was a treatment of choice at that point; it was not. The second was that bioremediation would work well on subsurface oil; the only data to support the assumption came from limited Exxon laboratory tests.

The third, and perhaps most difficult for the state to accept, was the overall implication that oil should only be broken up and exposed to sun and wave action; this apparently ruled out actual removal of oiled sediments, or actually cleaning beaches with water, a rock-washing machine, or some other technique. It also appeared to limit or exclude the possibility that work crews could boom off work sites, as they were supposed to do in 1989. Although there had been serious problems with proper worksite booming by crews the previous summer, there was no reason to believe that the effectiveness could not be improved by better supervision and more care.

"The state should clearly object to this proposal on the basis that significant quantities of oil still remain, and treatment should continue if technologies exist to allow further recovery without undue harm to the environment," the state Department of Fish and Game wrote in its comments on the recommendations.[81]

Also on the table at Newport Beach was discussion of a "decision key," which

was essentially a flow chart that would serve, ostensibly, as a guide to determine which oiling conditions would trigger which cleanup technique. As part of the decision key, the terms describing oiling conditions, which would become standard *Exxon Valdez* lexicon, were introduced formally.

The decision key would be used in the Technical Advisory Group (TAG), a new working group that would prepare site-specific cleanup recommendations for the federal on-scene coordinator's review and approval.

Underlying the standard terms, the decision key, and the TAG was the premise (really a paraphrase of both state and federal cleanup requirements) that cleanup should never do more harm than good, or, as it was later phrased, that it should achieve a "net environmental benefit."

Areas of disagreement over 1990 cleanup plans

- **Throughout 1990, survey crews and work supervisors clashed over definitions of oiling conditions;** one monitor's OP – which triggered more aggressive cleanup – was another organization's HOR – which triggered a less aggressive or easier-to-accomplish technique.
- **Decision-makers and field monitors fought about the decision key**; one organization's "guideline" was another monitor's "requirement." One of the most prominent disputes revolved around the issue of when it was appropriate to go beyond the "least intrusive" technique available.
- **Exxon's role and state authority over cleanup were never properly or satisfactorily defined in the Technical Advisory Group,** which replaced the Interagency Shoreline Cleanup Committee. It was not made entirely clear whether work orders represented the practical limit of cleanup under both state and federal standards. The "sign-off" process was not well understood at all levels and generated disputes on the shorelines.
- **Bioremediation became the goal for Exxon and federal cleanup supervisors, while the state was skeptical of its effectiveness under all conditions,** especially heavier and subsurface oiling. Proper site preparation before bioremediation became a major shoreline issue.
- **Newport Beach proceedings placed a high priority on all parties reaching consensus about cleanup decisions.** As time passed, consensus was treated by both Exxon and the federal government more as an institutional requirement and less as simply a desirable working goal. The state's officials would become increasingly uncomfortable with a system that seemed to place consensus equal to, or even above, the state's authority to enforce its environmental standards.
- **The concept of "net environmental benefit" emerged as a de facto cleanup standard,** with its own sets of definitions and its own administrative procedures. State officials were concerned about the flexibility of the definitions, the vagueness of the standard, and its potential effects on existing state environmental standards and practices.
- **The premise behind the Newport Beach meeting was that it was possible to develop a single, consensus cleanup strategy.** State officials felt it was, indeed, a valid concept, but only if federal and state cleanup goals and requirements were harmonized, and any special state requirements were included in the federal-directed program.

Some of the areas of disagreement worked themselves out because actual conditions in the summer proved different than assumptions made over the previous winter. Bioremediation gained state approval. Mechanical equipment was used much more widely in the summer of 1990 than NOAA suggested; tons of oily sediment were actually removed, rather than simply exposed; worksites were tilled all summer, not just in the fall, and crews did a much better job of booming off work areas. At many sites, nearly everyone was surprised at how much subsurface oil remained, or how much certain beaches "bled" when warm weather liquified oil and mousse. Surveys during the cold weather months of November, January, February, March and April often did not detect or properly gauge the seriousness of some oiling conditions because ice, snow, and cold temperatures obscured or "locked up" oil concentrations.

The disagreements that persisted, however, were over policy and procedural issues, all of which affected decisions

about where, why, and how cleanup should proceed. All of these had their roots in the documents and charts presented at Newport Beach. (See figure on preveious page.)

Yet even within the state's organization, there were few hard and fast policies about how far cleanup should proceed. The state's basic regulation guiding cleanup states simply that cleanup shall continue until the parties reach the limit of the cleanup technology, or until removing the pollution is more environmentally harmful than leaving it in place. This regulation is designed to deal with every possible cleanup, from the fuel tank leak in Quinhagak to the drilling mud disposal pit in Soldotna. There is nothing in the regulations that addresses, in a specific manner, the questions on everyone's minds that winter and spring of 1989-90: How clean is "clean" in Prince William Sound?

Do we leave asphalt to break down slowly? Do we bleach stained rocks? Is subsurface oil acceptable on a beach outside a state park, but unacceptable at a beach inside a park? There was substantial internal debate on this issue among state agencies throughout 1989-90. The state Fish and Game and the Natural Resources departments argued for a written policy that spelled out the details, to the extent it was possible. For example, areas around salmon streams, or in state parks, would carry a more stringent standard than other sites.

DEC argued instead that the existing statute was flexible enough to deal with those considerations, and that being too specific might limit the state's options on a site-by-site basis. State officials wound up sticking with the basic regulatory standard, although they agreed to seek more intensive or complete cleanup at certain high-priority sites. Left unanswered was the question of what to do should the federal government choose not to honor the state's stricter standard. DEC officials told their fellow agency managers that the state could resort to court action to force Exxon to do the cleanup to state requirements, however, there was some question about whether that was an efficient way to go about it, or whether the courts would agree to such an order.[82] While the internal debate continued at various levels and various times over the winter, resolution was difficult because there was much uncertainty — among all parties, not just at the state level — about what conditions would be like in the spring, how effective cleanup techniques might be, or even which cleanup techniques would be approved.

The "how clean is 'clean' " issue went dormant for the rest of the winter, although it would emerge again in the spring after the surveys ended and cleanup started.

FASST and SSAT surveys

Between January 28 and February 18, state-federal-Exxon survey teams began getting a picture of what would confront them when cleanup began in May and June. Six teams of surveyors fanned out, in three stages, to survey selected sites in both the Sound and the Gulf of Alaska during the Fast Assessment Shoreline Survey Team (FASST) program.[83] They found that the scouring of high energy beaches observed by the DEC teams three months before had continued, while sheltered beaches and subsurface oiling did not appear to have changed much. Asphalt and other hardened, tarry residue predominated.

Where 53.3 total miles were described as heavily oiled by DEC in the walkathon of fall '89, only 14.8 miles, nearly all of it in Prince William Sound, were described as "heavily" oiled in spring 1990.

"The vast majority of the free oil left on the shorelines is below the surface and cannot be removed with the techniques used last year," a DEC survey leader concluded.[84]

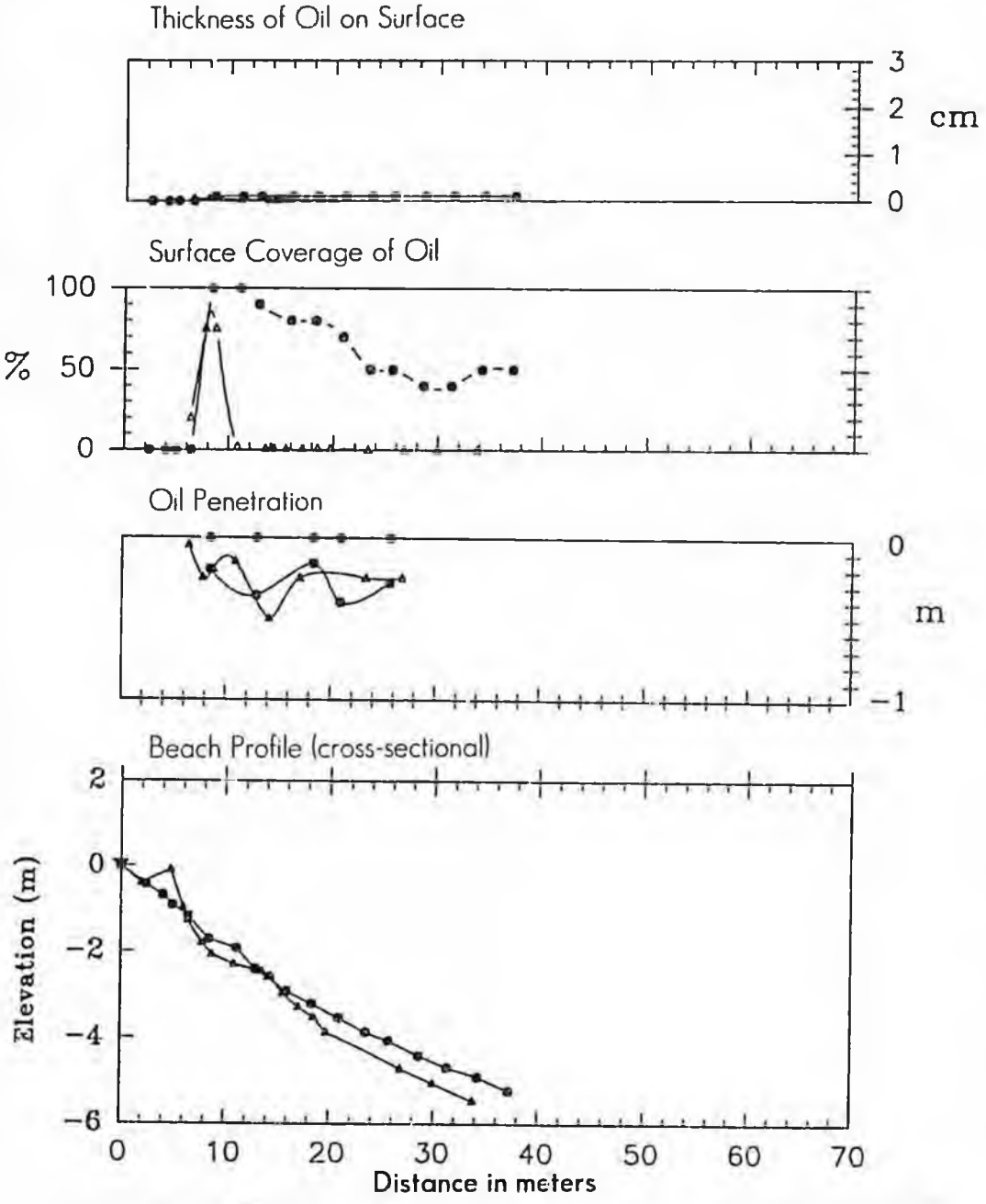
In late March, 20 more teams launched a more comprehensive shoreline survey, the Spring Shoreline Assessment Team program (SSAT). Indeed, the winter weather had made a substantial impact on the surface oiling conditions. Overall, oiling was reduced by almost 20 percent from October 1989 to May 1990, from 490 miles oiled to 396. And, perhaps more significant, oiling designated as "heavy" had decreased most dramatically. Where 53.3 total miles were described as heavily oiled by DEC in the walkathon of fall '89, only 14.8 miles, nearly all of it in Prince William Sound, were described as "heavily" oiled in spring 1990. This was still a massive pollution problem,

Pre- and Post-Winter Shoreline Oiling

Meares Point, Perry Island, Prince William Sound

Segment PRO16 Station 094

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION



● December 5, 1989 △ March 20, 1990

A comparison of shoreline oiling before and after the first winter post-*Exxon Valdez* spill. Note in the second table that surface oil is virtually gone after the winter. But the third table shows that oil remains under the surface. The fourth table simply shows the dynamic changes in beach profile due to a combination of factors, including storm berm formation, and beach erosion from storms and/or the washing away of fines during beach cleaning.

of course, but measured against the enormity of March and April of 1989, conditions were substantially improved a year later.[85]

Again, however, such an assessment was merely relative. The SSAT teams surveyed 784 shoreline segments or specific 1989 worksites, and 702 contained some oil. The bulk of it — about 65 percent of the sites — were recorded as "lightly" oiled, a general term that included everything from a patchy pattern of small asphalt mats to hardened mousse around boulders and to stain and crust on large rocks. Although the joint SSAT project did not survey subsurface oiling, state surveyors dug as many delineation pits as they could in search of buried oil. They recorded subsurface oiling conditions at 232 of the 784 SSAT sites. Again, this number covers a wide range of conditions, from thick, saturated sediments at a few sites to the dull gray colored sand that betrayed light or moderate oil residue.

The survey teams sent their results to the Technical Advisory Group members, all of whom had spent considerable time on the shorelines. The TAG was the forum for the negotiated cleanup work orders, some of which represented a clear consensus and some that were merely the best settlement possible for one dissenting agency or another. More often than not, Alaska officials found themselves attempting to convince Exxon and the federal officials that more aggressive techniques — mechanical tilling and/or removal of oiled sediments — undertaken in a short and intense 1990 program, were more practical and more desirable than a passive approach. This was not another visit to the high-pressure, hot-water debate; rather, state wildlife managers and environmental officials felt that it was important to get as much as oil out of the system as possible, as fast as possible. If that meant using a small trackhoe instead of shovels and rakes, that was acceptable to the state. The federal government, however, was wary of such efforts. This fundamental strategic difference ran through negotiations on nearly every issue of the 1990 summer season cleanup.

State officials began to get a hint that the TAG reduced state influence over some key decisions. One of the principal reasons was that in the TAG, the state lacked an important ally: the Alaska and American public. Unlike the deliberations of the Interagency Shoreline Clean Committee, the TAG talks were closed to public scrutiny. The federal on-scene coordinator would not allow the public to observe, let alone participate. This caused a brief confrontation between the new state on-scene coordinator and the Coast Guard admiral serving as federal coordinator in April and May 1990. When state officials pressed the Coast Guard on the issue, the admiral flatly refused to allow public access, arguing that federal law did not require him to open the meetings. The new Coast Guard commandant, Admiral William Kime, backed up his on-scene coordinator when state officials appealed the closed meeting decision.

Public pressure had played a key role in pushing certain cleanup issues in 1989, often those that the state felt were important. The isolation of the TAG, however, meant that state wildlife managers and environmental officials were usually in the minority during TAG deliberations. This caused some friction during the first months of the TAG operation, but as state officials began to get a better sense of the decision-making dynamic, they were able to work out acceptable compromises with their counterparts from Exxon and the federal government, in most cases. The cleanup program laid out by the TAG after the spring survey was generally less aggressive than the state preferred, but the differences were probably measured in degrees rather than by orders of magnitude. Again, as in other cases on the cleanup, the *ad hoc* nature of the *Exxon Valdez* response system probably had a greater effect on working relationships than actual decisions and technical positions.

The impressions of the TAG and the decision-making system formed in these early weeks of the organization's existence in 1990 were the ones that obtained right through to the end of the response in 1992, even though the TAG gradually began to work more smoothly as personal working relationships both lengthened and improved. And for the state, the lasting impressions were of an organization stacked against it: the company and the federal government reps held one position, the state held another, but the

final arbiter of the TAG recommendations was a federal official, the Coast Guard admiral serving as federal on-scene coordinator.[86] Moreover, the public, which had helped the state apply pressure on important points in 1989, was pointedly excluded from the discussions.

3.6 1990 Cleanup

The federal on-scene coordinator approved Exxon's proposed cleanup plan the first week of April. The company's plan detailed a much smaller operation than the army and navy of the previous season; where there had once been several thousand workers on the shorelines, there would probably be no more than 200, total. The high-pressure hoses and omnibooms were gone, and workers would rely mostly on hand tools and fertilizers. The plan leaned away from mechanical treatment, and labeled removal with loaded terms such as "placer mining."

Although the plan had federal approval, it would be another month before fertilizers received approval for use by the state. The federal approval also left unanswered an issue critical to the state: subsurface oiling. The state wanted to know how Exxon



In the 1990 cleanup the high-pressure hoses and omnibooms were gone, and workers relied mostly on hand tools and fertilizers. Exxon's plan detailed a much smaller operation than the army and navy of the previous season; where there had once been several thousand workers on the shorelines, there would probably be no more than 200. Photo by Richard Newman

proposed to deal with subsurface oiling. Specifically, state officials wanted to know if Exxon and the federal government were going to work on development of a rock-washing device of some kind.

Based on the NOAA recommendations of January 1990, federal officials were wary of aggressive cleanup. Exxon did not appear to want to move ahead on rock-washing

technology or excavation of oiled sediments, regardless of the state's wishes, without firm direction from the Coast Guard.

However, the intensive TAG review of the information gathered during the SSAT survey produced a cleanup program that targeted more than 400 specific oiled sites, most of them in Prince William Sound. By far, manual pickup was the most often prescribed treatment, supplemented by fertilizers. The TAG wrote 78 work orders that called for tilling, and 14 more that called for aggressive excavation and removal.

Frequently, a backhoe crew would discover a new lens of buried oil at a worksite, and find that the small lens marked on the survey map and work order was really three times as big as the survey team had thought.

The cleanup began in May. It was a very different kind of operation, from the standpoint of technology, than in 1989. The first summer, cleanup centered on washing relatively mobile oil and mousse into containment pens, where it could be skimmed or absorbed. The second summer, cleanup was more site-specific, with crews targeting specific patches of hardened materials or oil-saturated sediments. Workers used shovels and trowels to scrape mousse from between boulders during what became known as "rock and roll" operations, as crews pulled back the rocky beach armor to get at mousse and asphalt trapped underneath.

Throughout the summer, but especially as weather got warmer and oil began to become more mobile, it became obvious that the spring surveys had not fully discovered or described the extent of the problems.

As crews pulled back beach armor, they began to discover that oiling was frequently more serious than originally thought. Warmer temperatures and ground water moving through beach sediments frequently worked more oil towards the surface. Asphalt patches that were scraped away often exposed more liquid mousse underneath; unless that newly exposed mousse (and the sediments a few centimeters down) were removed, it would simply form another "scab" and create another asphalt mat where the last one was. The firm, tarry residue around the base of large rocks turned out to be just the tip of the problem at many sites. Boulder fields, where surveyors couldn't dig pits to determine the extent of subsurface oiling, often turned out to have more serious hidden oiling than originally thought; no matter how many times workers scraped away the accummulations around the big rocks, more oil seeped out to harden in the same place.



DEC's 1990 surveys included an underwater study. Photo by Sandy Wiley-Echeverria

The tilling and excavation operations often exposed even bigger hidden problems. A backhoe could, of course, dig more, deeper, wider pits than people could using hand tools. Frequently, a backhoe crew would discover a new lens of buried oil at a worksite, and find that the small lens of "OP" (the heaviest, oil-saturated sediments) marked on the survey map and work order was really three times as big as the survey team had thought.

The surveys had missed these problems for a variety of reasons. The winter of 1989-90 was relatively snowy, so when some of the crews hit the beaches in the spring, some of the oiling conditions were hidden below snow and ice crust, especially in shaded and/or north-facing areas. The cold weather kept oil immobile; late winter lighting sometimes obscured telltale

colorations; cold and rainy weather sometimes caused crews to move more quickly. And, because of the demands of the survey schedule, crews simply could not take the time to do the kind of painstaking excavation necessary to "follow" every lens of oil, or roll back large sections of beach armor.

The *Exxon Valdez* cleanup management system was not well suited in early 1990 to dealing with the problem of the oil "discoveries" after the survey. The survey was the basis for the work orders developed by the TAG. Coast Guard and Exxon supervisors were reluctant to do work not specified on the work order, often insisting on a literal and strict interpretation.

"As a result, necessary treatment was sometimes neglected. In the first few weeks [of 1990 cleanup], it was not uncommon to have an area of oiling that matched the description for removal on the work order, but since it was 5 to 10 meters outside the circled area on the map, it was restricted from cleanup work," state monitors wrote in their cleanup summary in 1992.[87]

A secondary, but related problem developed over the use of fertilizers. Bioremediation was not authorized unless the site had been properly prepared, i.e, mobile oil, heavier oiling concentrations, and asphalt scabs were removed. The point, from the state's perspective, was that oiling that could be easily removed should be taken away, not left to slow decomposition. Many of the work order disputes revolved around whether the site had been properly prepared; one side would argue that it hadn't, often because of "discovered" oiling, while the other would say that the site was ready because the work specified on the work order had been completed.

After a particularly acrimonious incident over bioremediation site preparation at the Bay of Isles on Knight Island in May, the *Exxon Valdez* organization created a kind of appeals process.

These disputes were handled one of several ways, some formal, some informal. After a particularly acrimonious incident over bioremediation site preparation at the Bay of Isles on Knight Island in May, the *Exxon Valdez* organization created a kind of appeals process. Under this plan, state monitors could seek an amendment to any work order if new oiling were discovered. Sometimes the amendment was done in the field, either officially, by a Coast Guard area supervisor, or unofficially by agreement of all parties right on the shoreline. If agreement wasn't possible at these lower levels, the dispute could be elevated to the TAG, which would make a site visit and new determination.

As in other disputes over authority and jurisdiction, lines of authority were often blurred and procedures not always well established or well understood. Some Coast Guard shoreline monitors deferred to Exxon, while some insisted on firm control on decisions. Some DEC and Fish and Game monitors went around the Coast Guard and worked directly with Exxon. Depending on the personalities involved, Exxon sometimes did extra work without a work order amendment, or sometimes the Exxon supervisor read the work order like the Bible. Further complicating the situation was the matter of time. Theoretically, a state monitor could appeal every decision, every day; however, tides, weather, and a limited summer season meant that monitors did not have an unlimited amount of time to pursue appeals and amendments.

As June turned to July, state officials became increasingly concerned that the system of "joint" response proposed conceptually in 1989 was turning into a strictly federal response. The state members of the TAG felt that they were forced into endless compromise; state monitors felt that cleanup was falling far short of what was needed and what was possible; bioremediation, they felt, was being misused and overused; the work order system was rigid and the amendment process impractical.

Swirling around just above the field level was a developing jurisdictional dispute over state and federal authority to require cleanup, and over whose standards should apply. The TAG was increasingly being billed by Exxon and the Coast Guard as an arbiter of technical issues, not as a forum in which compromises and consensus developed based on practical considerations. State officials became concerned that Coast Guard and other federal decisions could be portrayed as tacit state approval or agreement with all federal actions. Field monitors were unsure what their signature really meant when they "signed off" a work order: Did it imply agreement with federal actions? Did it imply that the state felt the site was as clean as it could get? Or did it

mean simply that the federal work order was complete, even though there was oil left over?

Federal field monitors weren't always clear on the concept either. They frequently insisted that DEC monitors sign the work order, even if they weren't satisfied with the job; they objected when DEC monitors would make notes on the sign-off sheets about other oiling problems.

There were a lot of hard feelings on the shorelines. However, beyond the personal conflicts and general questions about who was in charge, the evolving *Exxon Valdez* administrative system was raising some potentially serious short- and long-term problems for the State of Alaska.

What did shoreline "sign-off" mean? If the state tried to impose additional cleanup requirements on Exxon at the completion of the Coast Guard-directed effort, did these sign-off sheets imply some agreement, and could Exxon use them in their arguments to avoid further work? Could Exxon use the administrative record of the TAG to argue that the best technical solution for cleanup had already been addressed, and therefore the state's additional requirements lacked technical support? Was the state's participation in the TAG — with its supposedly "consensus" decisions — tacit acceptance of the cleanup standards championed by NOAA or even Exxon?

Whether the issue was bioremediation, "net environmental benefit," or the authority of the TAG, the state was merely an advisor to the federal government's authorities, with no more standing than Exxon. State officials found this arrangement dangerous and unacceptable.

In mid-July, DEC commissioner Dennis Kelso and federal on-scene coordinator Rear Admiral D.E. Ciancaglini exchanged various correspondence that attempted to assert, explain, dispute, or define state and federal authorities. They didn't get very far. Ciancaglini took the state's letters to mean that Alaska was attempting to overrule federal authority, a misapprehension that was as preposterous as it was unconstitutional. The state took Ciancaglini's statements to mean that the federal government would accept some state requirements for cleanup, but not necessarily others.

On a technical level, the state's cleanup managers were concerned that bioremediation was being used as an alternative to active removal, even when removal was possible and not any more disruptive than spraying the beach with fertilizers. The fertilizers had been billed as benign and natural cleanup enhancers that protected fragile plants and animals from disruption. This seemingly less "intrusive" approach would better help the cleanup achieve a "net environmental benefit." But in fact, the operation was not quite so low-key. The fertilizer solution included some noxious elements that stressed animals and plants nearly as much, if not more, than physical disruption with hand tools or even a backhoe. And the whole idea of "net environmental benefit" minimized the importance of human uses and values of the shorelines.[87]

Additionally, state monitors frequently reported that Exxon was doing incomplete and/or improper site preparation before applying the fertilizers, and often with the concurrence of the Coast Guard monitor, and over the objections of the state's representative. The emphasis on bioremediation, rather than removal, meant that the federal government's cleanup policy was becoming the *de facto* standard. As mentioned elsewhere in this report, NOAA and the Coast Guard were more tolerant of leaving stranded oil behind to be degraded over time, even when removal was possible and practical. Theoretically, the state could order the material removed under its own authority; of course, it was silly to order removal of material that the federal government had just authorized to be sprayed with fertilizers. But when the fertilizers went on the beach, as a practical matter it meant the end of cleanup for 1990 at the site, especially as July turned to August. bioremediation was, in the state's view, being used more as a primary cleanup technique and not as the "finishing" or "polishing" technique stipulated in the state's guidelines for using fertilizers. And because determining whether the site was ready for "polishing" often depended on subjective judgments by the Coast Guard or strict readings of an incomplete work order by Exxon, bioremediation was being used more frequently, more extensively, and on types of oiling conditions for which the technique was neither intended nor appropriate.

During this period of high-level jousting in July, the state tried to get a handle on the technical application of fertilizers. DEC technicians calculated roughly how much oil the fertilizers might be able to degrade over the course of a year — about five grams

of oil per kilogram (2.2 pounds) of beach material — and proposed that the figure serve as the trigger for authorizing fertilizers at a given site. Rather than relying on subjective eyeballing of the conditions, selected testing would help calibrate monitors' eyes to a more objective standard.

Rather than helping the debate or the disputes, the 5g/kg number caused the Coast Guard to harden its positions concerning state and federal authority. The Coast Guard interpreted the numbers to mean that DEC was trying to impose a "numerical standard" on the "how clean is clean" question. The Coast Guard doesn't have a numerical standard, the federal on-scene coordinator wrote to Kelso, and the state had no authority to try and impose one on Coast Guard operations.

At its root, this high-level conflict was really about just what the "joint" response was supposed to mean. The state thought that "joint" response meant that the federal government would direct things, as a matter of practicality, but that it would include all relevant state cleanup requirements in its directions to Exxon. The Coast Guard apparently felt the "joint" response meant something different. In all but name only, the *Exxon Valdez* response had become federalized, in the sense that Exxon did what the Coast Guard said and federal direction took precedence over any state actions or requirements. The state was providing "input," as the Coast Guard liked to say, but in fact, the state had no legal standing to impose its own requirements on Exxon through the Coast Guard. Whether this was all a result of a misunderstanding or some active strategy at some higher level, what it meant to the state is that the State of Alaska had limited authority to influence the cleanup of a massive oil spill on the shorelines of the state. Whether the issue was bioremediation, "net environmental benefit," or the authority of the TAG, the state was merely an advisor to the federal government's authorities, with no more standing than Exxon. State officials found this arrangement dangerous and unacceptable.

Under federal law, the state had the right to require more extensive cleanup, as long as its requirements were not in conflict with federal law or its efforts did not impede the federally-directed response. Under the law, the Coast Guard also had the option of including all state requirements in its orders to Exxon.

It was clear, however, that the Coast Guard would not necessarily agree to order Exxon to meet state requirements. Moreover, the *Exxon Valdez* cleanup administrative system — improvised during an emergency and institutionalized over time — gave the state less power than it would normally have, and threatened to shut off options normally available to it. The final straw, for state officials, came in late August 1990, when the federal government allowed Exxon to bulldoze thousands of pounds of heavily saturated sediments into the active tidal zone on Ushagat Island in the Barren Island group, just north of Kodiak and part of a maritime wildlife refuge. The state objected strongly, going so far as to send the Coast Guard a letter signed by all three of the state's resource commissioners. The federal on-scene coordinator went ahead with the order, and within a week high tides pulled the oil into the ocean.

The 1990 cleanup season had been a tedious and frustrating exercise for the State of Alaska. Fertilizers and natural weathering — accelerated by techniques such as plowing oiled sediments into areas where waves and sun could get at them — were gradually taking the place of actual cleanup. The state neither accepted this approach nor felt it appropriate. At the very least, state officials wanted to make sure that Alaska's ability to protect and clean its own shorelines were not washed away as well.

When the Coast Guard commandant announced that Exxon would return for more work in 1991, state managers decided to ride out the season and make their adjustments the following spring.

3.7 The state response plan

State spill managers in late 1990 judged that the problems encountered with Exxon

and the Coast Guard lay in the system, not with individuals or specific organizations. Where there was uncertainty and a lack of clarity, misunderstandings and hard feelings were sure to follow. To be sure, some people just didn't get along, and some people pursued agendas separate from the agenda dictated by a common desire to clean up the shorelines. Turf battles, political intrigue, and hints of legal manuevering surfaced from time to time, as one might expect in a highly charged, highly public, high stakes operation that included two governments and one of the world's largest corporations. However, these machinations were symptoms, not causes in themselves.

At the close of the 1990 season, state managers boiled the situation down to these fundamental questions:

1. How can we make sure that cleanup is completed to state standards?
2. How can we avoid a situation in which other entities — federal or corporate — set *de facto* state standards that may become poor precedents for future cleanups?
3. How can we reduce the stress on the shorelines for all workers, not just ours?
4. How can we better involve the Alaska public in the decision process?

The answers to all the questions came down to two basic points:

1. The state must clarify its positions and explain them more completely before the start-up of 1991 cleanup.
2. The state must make clear that it is ready to exercise its option to conduct or order cleanup on its own.

The result was the 1991 State Response Plan, a relatively brief document that explained what the state wanted done, why it wanted it done, where it wanted it done, how the work was to be done, and where the state got the authority to require that it be done just so. The document concluded with a section that stated plainly that the state would carry out the details of the workplan if the federal government was unable to, or chose not to. Finally, the state spill response office released the document for public comment and held a series of public meetings to further gauge community wishes.[89]

The goal of the plan was to take every vague issue and make it specific. The intent was to remove doubt about state intentions or standards from the minds of Exxon and Coast Guard officials. As a practical matter, the state plan was a way to match up disagreements and personality conflicts with actual issues; as long as people were discussing issues, working from a written set of standards and policies, they were less likely to become sidetracked by personal or procedural disputes.

For the most part, the plan worked. The state set its goals independently, but worked cooperatively. Where the state took independent action, it did so as a supplement to federal-directed activities, not as a challenge or a substitute to federal authority or action. In short, the state did exactly what it was entitled to under the law. The Coast Guard, no longer viewing state actions or requirements as a challenge to its authority, helped the state accomplish its goals more often than not.

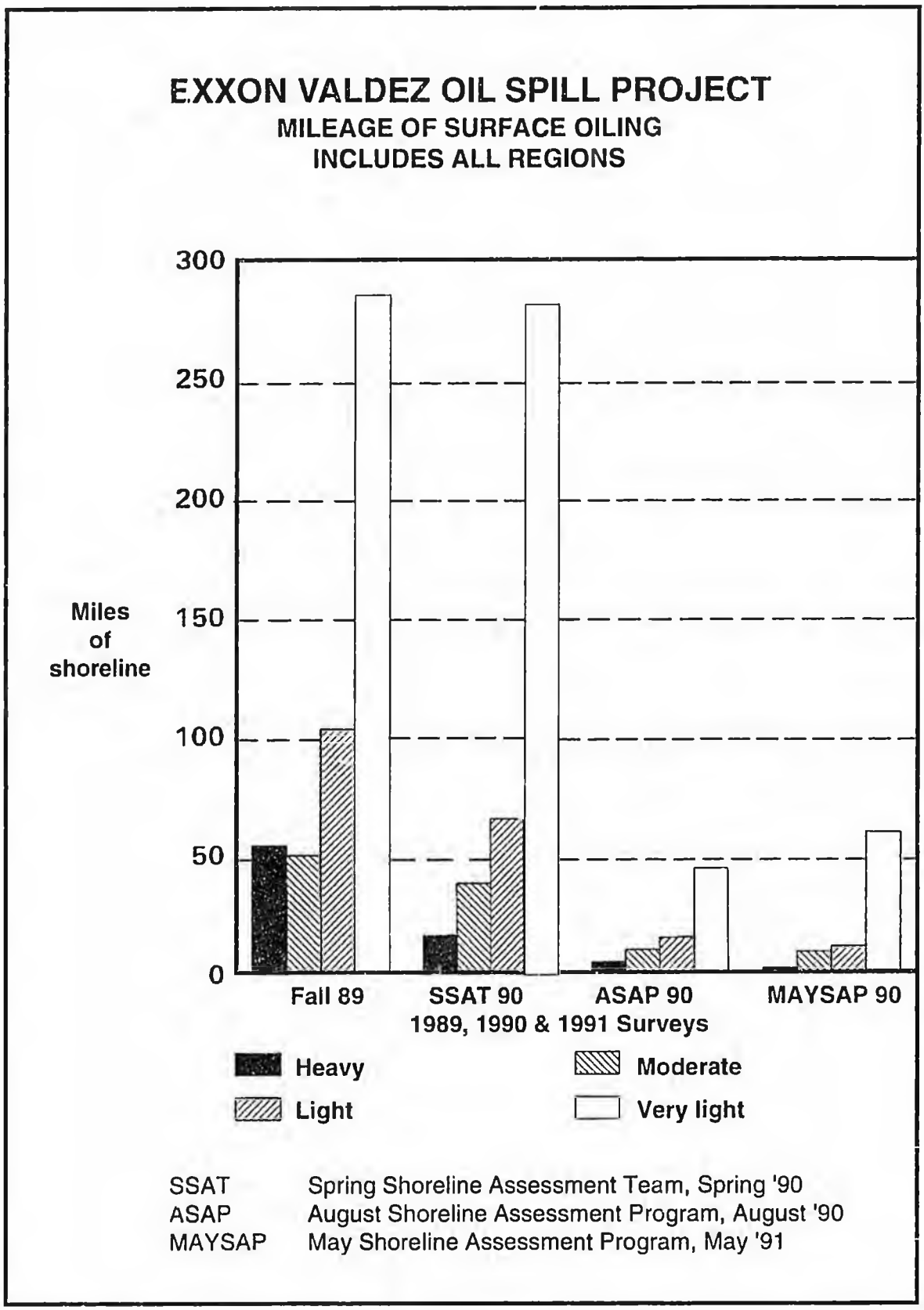
The state plan, released in November 1990, helped set the stage for an efficient and reasonably cooperative effort during the remaining two seasons of cleanup. Ironically, the state plan was little more than a formalized version of what the state attempts to do on every spill: be cooperative, protect state interests, exercise its full range of jurisdictional powers.

3.8 Cleanup, 1991-92

In conjunction with the state response plan of November 1990, state spill managers produced a list of nearly 600 shoreline segments and subdivisions that it intended to survey in the spring of 1991. This list underwent a few additions and a few deletions

during planning meetings with Exxon and the Coast Guard over the winter, but essentially it formed the basis for the spring survey.

The survey, called MAYSAP, or the May Shoreline Assessment Program, started later in the spring than the 1990 survey. The later start was intended to avoid some of



the problems of the previous year, when shorelines and oiling conditions were covered by snow or stiff from the cold. The MAYSAP teams also included one or two laborers, who picked up debris or broke up and removed simple oiling conditions encountered during the beachwalks. The goal was to get a jump on cleanup, or to finish cleanup altogether at sites where oiling was limited; there was no reason to make a separate visit for cleanup later on. The workers picked up debris or oiling at more than 200 sites during the MAYSAP.

Conditions were similar to those encountered during the 1990 survey, only on a smaller scale. As in 1990, oiling tended to be likely at sites that were sheltered from wave energy, or behind large rocks and outcrops. Surface oiling was generally discontinuous and made up of asphalts and tar that were heavily weathered. A few sites that were among the most heavily oiled in 1989 still showed significant patches of surface oiling, as well as thick lenses of subsurface oiling.

In fact, subsurface oiling appeared in a few cases not to have weathered or changed much from 1989 or 1990.

In fact, subsurface oiling appeared in a few cases not to have weathered or changed much from 1989 or 1990. The northern tip of Latouche Island and the southern tip of Knight Island, both of which were deluged with oil in 1989, still showed widespread and chemically fresh subsurface oiling. The state's monitors attempted to get a better handle on the extent of subsurface oiling at the survey sites, and even deployed a separate, state-only vessel that did follow-up work as part of a subsurface mapping project. Although the subsurface survey was not as extensive as the surface survey with Exxon and the Coast Guard, the state found significant subsurface oiling at dozens of sites in the Prince William Sound spill zone. Cumulatively, the disparate patches of buried oil came to more than 17 miles of shoreline. Like all the "miles of beach" figures, this one was statistically weak in terms of precision, however, it did give a sense of how persistent subsurface oiling can be under Alaska conditions.

Of the 588 shoreline subdivisions surveyed in 1991 (most in Prince William Sound), the TAG recommended no treatment at 486. The remaining sites were treated primarily with hand tools such as shovels and rakes. From May through mid-July, cleanup crews removed about 700 tons of oily sediment from the shorelines. A dozen sites, all within the Sound, were treated with mechanical equipment. Backhoes tilled, turned over, or removed oiled sediments at these subdivisions.

State workers did additional cleanup with hand tools at 25-50 sites around the Sound. At 26 sites where the state had decided to conduct cleanup to a stricter standard than the federal government, Exxon eventually went in and did the work. The Coast Guard officially added the state's work orders to the federal program, which made the supplemental state cleanup proceed quickly and in conjunction with federal-directed operations.

At most of the sites (with the execption of fish spawning streams), Exxon added fertilizers when manual cleanup was deemed complete. In addition, the company requested that it be allowed to add fertilizers to more than 50 sites after July 15, which was the end of the 1991 cleanup. Bioremediation played a minor role in the 1991 cleanup operation, largely because the oil had weathered so much that biodegradation could not be enhanced significantly. Based on independent scientific review over the winter of 1990-91, the state decided that it would not allow bioremediation to substitute for the simpler, more definitive technique of removal of oil with hand tools. Alaska did not object to fertilizers, but the state saw no reason to depend on them; most scientists concurred.[90]

Over the winter of 1991-92, state environmental and wildlife officials targeted about 60 sites for observation and survey in the spring. The federal on-scene coordinator decided to participate as well, dubbing the 1992 survey the FINSAP, or Final Shoreline Assessment Program. A handful of state, federal and Exxon cleanup supervisors went into the field in late May and the month of June, wielding shovels and plastic bags. They removed some sediment, but for the most part, the teams broke up or scattered heavily weathered, small patches of asphalt at a few dozen sites. The state and federal coordinators declared the cleanup complete on June 12, 1992.[91]

The decision to end the cleanup was based on federal and state regulations and

guidelines that give managers some parameters for making such a call. Determining the cleanup "complete" does not mean that there was no longer any oil in the area. Much of the spill area was, indeed, free of oil by that time. However, some areas showed persistent oiling — underneath boulder fields, buried in cobble beaches, trapped under the thick mats of "hair" and sediment that underlie mussel beds. The oil that remains is either heavily weathered at or near the surface — literally, like asphalt that goes into making highways — or packed in sediments that get little or no oxygen or sunshine that would help degrade the oil naturally. The large boulders or bedrock outcrops that help make up the rugged coastline also help to deflect wave energy that might also break up or turn over oiled sediments. Based on observation and sampling, most of the persistent oiling at various sites is either mixed heavily with water, creating a mousse, or made up of the asphaltic fractions whose molecular construction tend to make these compunds slow to degrade. The asphalts are probably close to inert, biologically, but it is hard to say what toxic fractions remain in the mousse or buried sediments until more sampling and analysis is complete.

The state and federal agencies charged with managing restoration efforts have put a survey operation into the field in 1993 to help get a better sense of the character and extent of persistent oiling conditions in the spill area.

Notes, Chapter 3

[1] *Transcript of Valdez press conference, March 24, 1989.*

[2] *Iarossi, F., Deposition taken August 5, 1992, at various points.*

[3] *From the standpoint of sea conditions and seamanship, wind-driven waves and chop are more difficult to deal with than much larger, open ocean waves; the former is irregular in both wave heighth and rhythmic frequency, while the latter tends to be rolling and more regular. The relatively small vessels (especially shallow-draft skimmers and seine skiffs and barges) involved in the response were at significant risk attempting to operate in such disturbed seas.*

[4] *The storm of March 26-27 interrupted the operation briefly. During that time, the wind was so strong that the* Exxon Valdez *twisted 12 degrees on its perch upon the reef.*

[5] *Actually, this was more of a restoration than creation; Alyeska had maintained spill response crews in the first several years of terminal operations. These crews were phased out in the early 1980s and the personnel reassigned to regular terminal duties as a labor-saving and cost-cutting measure.*

[6] *Governor Steve Cowper, personal communication, May-June 1989. See also Cowper's interview with the Alaska Oil Spill Commission, the summary of which is dated Nov. 28, 1989. Cowper acknowledged that direct state intervention could have some affect on the state's ability to prove full liability for damages against Exxon or Alyeska, but he was not especially concerned about it.*

[7] *Hull, R. Exxon Valdez Report, Northwest EnviroServices, Inc., 1989, p. 6.*

[8] *Ibid., p. 6.*

[9] *Dennis Kelso, personal communication, May 1989.*

[10] *Judy Bittner, State Archeologist, Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation, personal communication, September 1992. Bittner said the problem of looting and disruption was actually more acute in the Kodiak area, partly because of increased access, but primarily because the Kodiak archipelago has a longer history of extensive human habitation and use, and is therefore culturally "richer" than most areas inside Prince William Sound.*

[11] *Artifact hunting and collecting is actually against the law on Alaska public lands, and it is universally banned by Native corporations on their land.*

[12] *This has obvious implications for archeological disruption, but it also has implications for sport hunting, sport fishing, and unauthorized use of private lands.*

[13] *The best example were USFWS restrictions on activities near active (and in some cases, inactive) bald eagle nests. Air traffic, especially by helicopters, was central to nearly every government or Exxon effort; every day, on every approach to a shoreline site, pilots had to consult a specially created map that identified every eagle nest in the Sound. If there were a question of whether a nest were active or inactive, USFWS biologists made a special trip to the site to make a determination. Pilots sometimes had to seek special clearance for a landing at a questioned site, which occasionally involved a radio call from Prince William Sound to Anchorage, then a phone call to USFWS, and finally a call back on the radio to the pilot circling the shoreline. Anyone violating the buffers could have, theoretically, been charged with a violation of federal wildlife protection law. This issue was so sensitive (and its implications so cumbersome on field visits) that the Coast Guard sought and received high-level federal absolution for any accidental disruption — known as a "taking" under the federal terminology — caused because of cleanup activity. And even then, the federal variance only guaranteed that the unintentional offender would not be charged with a crime or other violation; USFWS was stern and clear in its explanation that it was not* authorizing *disruptions, but rather, it was protecting innocent offenders from prosecution or a citation.*

[14] *An exception may be herring, which spawn relatively close to the surface and against certain kinds of shorelines.*

[15] *A Belgian man allegedly died from botulism poisoning after eating Alaska canned salmon. The death, while real enough, turned out to be the result of other causes. However, the canned market — a staple of the Alaska industry, especially for pink salmon — was briefly but devastatingly undermined.*

[16] *The spring bloom of the plankton caused a similar phenomenon. There were several reports of oil that turned out to be plankton.*

[17] *There is some mixing of wild and hatchery-raised stock, but fisheries managers try to keep them separate by strategically opening and closing various fisheries in different areas.*

[18] *Through a variety of complex formulae, the oil companies can deduct costs such as prevention and response investments from the taxes and royalties they pay the State of Alaska. The Alaska Governor's Office estimated in 1990 that the mandated improvements at Alyeska would mean, for the state, a drop of about $10 million a year in expected oil revenue.*

[19] *This theoretical ratio came to economic life in 1990, when a volcanic eruption and the threat of lava and flood loomed over a large tank farm at the Drift River on the west side of Cook Inlet. As the state contemplated an emergency shutdown of the facility, which served as storage for wells just offshore, producers pointed out that closing the terminal would mean shutting in wells. And the wells, they emphasized, weren't so easy to start up again: An extended shutdown would drop the pressure in the reservoir, making start-up problematic at best and impossible at worst. The bottom line — literally — was that the old wells were already marginal producers, and they may not be economical to operate at lowered production levels caused by a shut-in. Ultimately, the threat passed and an extended shutdown of the terminal was not necessary. However, the state, the local government and the industry were faced with a decision, for a time, about the known value of oilfield jobs vs. the unmeasurable threat from an oil spill.*

[20] *A setnet fishery in the Alitak District opened, and 87 fishermen worked a total of 114 days there. A seine fishery also opened in Karluk Lagoon in mid-September; five boats took part and caught less than 5,000 fish, according to the Department of Fish and Game.*

[21] *This is somewhat of a generalization, and applies more to Chenega Bay, Tatitlek, Port Graham, Seldovia and English Bay — the villages of the Sound and Lower Cook Inlet — than to the villages on Kodiak Island. Kodiak had a somewhat different set-up than other areas. The city government of Kodiak could deal with one set of immediate issues, while the borough government — with staff and a strong, established network of village contacts — could put more energy into coordinating island-wide issues. Further, the Kodiak borough had an emergency response network already in place when the spill happened. The system may not have been perfect, but village issues were a regular part of the deliberations of the Kodiak emergency committee.*

[22] *This beach segment, SM005, was immediately dubbed "Quayle Beach," and the name was used interchangeably with its official designation throughout the response.*

[23] *Author's note: The author of this report was at the meeting.*

[24] *DEC officials were in Tatitlek shortly after the spill to meet with villagers. In the middle of the meeting, a helicopter landed in the village, unannounced and unexpected. High-ranking Exxon officials came to the meeting, spoke briefly, did not answer questions, and left quickly. The visit, however well-intentioned, involved very little real communication or interaction, and probably hurt Exxon's outreach effort more than helping it.*

[25] *These problems are cited throughout the staff papers prepared for the Alaska Oil Spill Commission on the effects on the local communities.*

[26] *The ADF&G's subsistence division had, fortunately, a solid pre-spill set of data on subsistence harvest and patterns of use in the spill region. The division has, over the past 15 years, developed and supplemented a region-by-region, village-by-village survey of subsistence use in Alaska.*

[27] *ADF&G, Division of Subsistence, various papers, 1985-92.*

[28] *Division of Subsistence, various papers, 1986-91.*

[29] *Fall, J.A., "Subsistence Uses of Fish and Wildlife and the Exxon Valdez Oil Spill," Arctic Issues Digest, (University of Alaska Fairbanks, October 1991). Fall is the regional manager for the subsistence division of ADF&G in Anchorage. The example of sharing of the harbor seal in English Bay comes from a 1985 paper by Ron Stanek, ADF&G, Division of Subsistence.*

[30] *Fall, ibid.*

[31] *Fall, ibid.*

[32] *Fall, ibid.*

[33] *Fall, ibid.*

[34] *Or, in some cases, processed food products have been integrated into a traditional food. In some western Alaska Yupik villages, sweet leaves or berries that were once served with whipped seal oil are more frequently mixed with Crisco shortening instead. Crisco has not entirely replaced seal oil, of course — residents may drizzle some of the pungent oil on the Crisco mix — but the shortening is an acceptable everyday substitute for seal oil. The point here is that subsistence is not static or ritualistic.*

[35] *Abnormal fin development, frayed or thin fins, etc., are strong visual clues to biologists that a fish is not healthy.*

[36] *It has been noted that Exxon's first overtures to village residents were often clumsy, and in many respects, Exxon's community relations efforts either did not improve much, or were not accepted well throughout the spill. However, the state's subsistence officials interviewed for this report said Exxon, once it realized the magnitude of the issue, was extremely helpful.*

[37] *Fall, op. cit. See also Walker, A., and Field, L., "Subsistence Fisheries and the Exxon Valdez:*

Human Health Concerns," Proceedings of the 1991 International Oil Spill Conference, American Petroleum Institute, March 1991.

[38] *National Research Council, Steering Committee for Petroleum in the Marine Environment Update. "Oil in the Sea: Inputs, Fates and Effects." (National Academy Press, Washington, D.C., 1985.) (Cited in Walker and Field, 1991.)*

[39] *Fall, op. cit.*

[40] *Walker and Field, op. cit.*

[41] *Fall, J., "An Update on Subsistence Uses in Alaska Native Villages following the Exxon Valdez Oil Spill." Alaska Dept. of Fish and Game, Division of Subsistence, Anchorage, March 1992.*

[42] *Fall, 1992 update.*

[43] *Quoted in Fall's 1992 update.*

[44] *Fall, October 1991 article.*

[45] *Minutes of "Oiled Mayors" meeting, June 8, 1989. Seward's city manager also noted that, as in Valdez, VECO and Exxon were setting up operations in town without properly consulting local government authorities or following city permitting requirements.*

[46] *Exxon tended to be a good deal more efficient and timely in its financial dealings than its contractors.*

[47] *The company's estimate of what it spent on the cleanup in 1989.*

[48] *State of Alaska, Office of the Governor, September 1989.*

[49] *Alaska Oil Spill Commission, staff reports, February 1990. It is unclear from the reports whether the original figures citing 90 percent of the people "affected" by alcoholism counted sober children of drinking parents, or whether it meant 9 of every 10 people actually drank. In any case, Ahkiok's struggle with alcohol is not drastically unlike the situation in many Alaska villages. Alaska State Troopers estimate that nearly 100 percent of all rural crime — murder, domestic violence, assaults, etc. — is alcohol-related. Alcohol is also cited as the principal contributing factor in a majority of boating accidents, suicides and other non-criminal death and injury. Communities that are successful in reversing alcoholism problems generally do so by relying on traditional activities, such as subsistence, local tribal government, and community-based support networks, rather than outside law enforcement or treatment programs.*

[50] *It is probably no coincidence that the governments with fulltime, paid mayors often got better results with Exxon and the state and federal governments. These mayors, such as in the Kodiak and Kenai boroughs, had the legitimacy of authority (they were elected) and the time and management structure to stay on issues (they were supposed to do that, since it was their paid job).*

[51] *The Kenai borough mayor, Don Gilman, successfully lobbied Exxon and got a commitment for $2 million in response funding. Kodiak got a commitment for $500,000.*

[52] *Ernest Piper, field memoranda, 1989.*

[53] *Alaska Conference of Mayors, Oiled Mayors Committee, "Economic, Social, and Psychological Impact Assessment of the Exxon Valdez Oil Spill." November 15, 1990.*

[54] *There is little hard or coordinated data to accurately measure the extent of these social problems and disruptions against pre-spill conditions in the affected communities. The Oiled Mayors used a state grant to commission a broad study of social and economic impacts, but this was one of the few efforts to quantify the problems. Reading the study, it is obvious that the spill created some problems and exacerbated others. However, the survey methods and the lack of a clear baseline in most cases limited the researchers' ability to pinpoint conclusions. They could, for example, compare reports of substance abuse or treatment against pre-spill years, or measure the increase in visits of individuals to mental health facilities. It was easy to conclude that stress increased on children and families and individual adults, but difficult to conclude how much. As general reading, it is a good source of more detailed information about the trends of social disruption in the towns. Also*

see: J. Steven Picou and Duane A. Gill, "Long-term Social Psychological Impacts of the Exxon Valdez Oil Spill," Exxon Valdez Oil Spill Symposium Abstract Book, February 1993, Anchorage, sponsored by the Exxon Valdez Oil Spill Trustee Council, University of Alaska Sea Grant Program, and the American Fisheries Society, Alaska Chapter. See also Symposium Proceedings, slated to be published in 1994. See also other papers by Dr. Picou on this subject.

[55] *Shoreline cleanup crews were hired and managed by VECO International, an oilfield services and construction company, and Norcon, a VECO affiliate that employed a union labor force. On some of the early beach-cleaning forays, union and non-union crews worked the same stretch of shoreline, separated — literally — by brightly colored ropes laid along the cobbles of the remote beaches.*

[56] *Exxon Daily Report, Sept. 16, 1989.*

[57] *Exxon received a fair amount of criticism, especially from Congress, for using the term "treated" instead of "cleaned." In fact, the state had originally insisted on this change in terminology because DEC felt "cleaned" was misleading, as in " x miles of beach have been cleaned to date." The change in terms was important, the state felt, so that people would understand that the cleanup was not as effective as the verb "to clean" implied.*

[58] *Exxon pamphlet, "The Valdez Cleanup: A Progress Report from Exxon," summer, 1989.*

[59] *Governor Steve Cowper, press release, July 24, 1989.*

[60] *See Art Davidson's In the Wake of the Exxon Valdez, Sierra Club Books, 1989, pp. 211-212. Also, Exxon's W.D. Stevens, appearing before a Senate committee in Washington, D.C. after the Otto Harrison memo appeared, said he doubted whether Dennis Kelso, the state's chief cleanup official, really wanted to make sure the oil was cleaned up.*

[61] *Gardner, D. and others, unpublished DEC review of cleanup activities, June 1992. This report lists improper deployment and maintenance of boom around washing sites as an operating problem listed "more often than any other" in a review of approximately 1,000 instances of operating violations or errors in 1989.*

[62] *Hull, R. Northwest Environservices, Exxon Valdez final report, December 1990, p. 54.*

[63] *Hull, ibid, p. 57.*

[64] *Gardner and others, op. cit.*

[65] *Hull, op cit, p. 47. It was not clear whether the foreman was from VECO or Exxon.*

[66] *Gardner and others, op. cit.*

[67] *The technical debate about Corexit is discussed in chapter 2, p. 69.*

[68] *Hull, ibid., pp. 64-65.*

[69] *The roles of the ISCC and the TAG are described in Chapter 1 of this report; see pages 30-43.*

[69] *The disputes continued into 1990, but the adversarial roles were defined a little differently, and were indications of a slightly different problem. This is discussed later in this section.*

[70] *E. Piper, State of Alaska, Office of the Governor, site visit, July 1989.*

[71] *Exxon did use one of its barge-mounted incinerators at Herring Bay on Knight Island from Sept. 11 to Sept. 17, burning about 2 tons of oily waste before shutdown for the season.*

[72] *Yost quoted in the state's "Oil Spill Chronicle" newsletter, vol. 1, no. 11, September 19, 1989. The DEC published this newsletter weekly, then later monthly, from July 1989 through June 1992. It had replaced "Soundings," a newsletter and fact sheet published by a team of public information specialists from the Alaska National Guard. The small group of Guard personnel, on active duty, compiled the fact sheet from various sources and sent it by mail and facsimile machine to villages, news organizations, and other parties every day from May through the middle of July 1989. It was frequently the only daily source of information that went out area-wide. As the summer wore on, more state organizations started preparing their own newsletters and sending them into the facsimile machine network. The Governor's press office consolidated the effort into the Oil Spill Chronicle in an attempt to make sure that information given by the state was cross-referenced with*

others and the positions expressed in the newsletters were consistent throughout state government.

[73] *ADEC, "Impact Maps and Summary Survey of the* Exxon Valdez *Spill Site," September 11- October 19, 1989. Five volumes (2PWS, 1 Seward, 1 Homer, 1 Kodiak).*

[74] *Regardless whether "miles of shoreline" was the most accurate way to describe the extent of oiling, it became the standard unit of measurement. DEC's data report from the 1989 fall survey included a statistical disclaimer acknowledging that even its miles of shoreline number had a wide possible margin of error. However, although it became less symbolically significant than it was in the 1989 season, mappers never got away from using miles of shoreline in one way or another. The Coast Guard actually attempted in 1989 to come up with a better way to describe progress than "miles of beach." Admiral Clyde Robbins toyed with a measurement unit that was based, in part, on what kind of beach was cleaned (heavy oiling, light, etc.) and what kind of results were coming in; his staff dubbed the unit a "clyde." However, it was hard to describe, reporters didn't pick up on it, and it passed unnoticed into history.*

[75] *Exxon used the terms "wide, medium and narrow," instead, but that terminology never caught on with the rest of the organizations.*

[76] *Cleanup was classified by Exxon as either Type A — manual pickup and washing — or Type B — which was mechanical or involved removal of beach material. Some areas and crews were designated for Type A cleanup only (especially in the Homer and Kodiak zones); VECO and Exxon would not allow some work crews to have shovels because digging would, in their view, constitute Type B cleanup.*

[77] *See especially the staff reports done for the Alaska Oil Spill Commission about the impacts of the spill on communities. They are contained in appendix N to the commission's final report in February 1990.*

[78] *Most communities also intended to use the state money to pay extra administrative costs associated with spill response, and to maintain staff who handled spill-related planning, questions, and contact with the state, Coast Guard and Exxon.*

[79] *NOAA Recommendation for 1990 Cleanup of the* Exxon Valdez *Oil Spill, Draft, January 4, 1990. This was the draft circulated to state agencies for comment.*

[80] *Captain D.E. Bedron, memorandum to the Alaska Regional Response Team members, January 2, 1990.*

[81] *Kuwada, M., Alaska Dept. of Fish and Game, memorandum to Steve Provant, DEC, state on-scene coordinator, January 29, 1990.*

[82] *Kuwada, M., ADF&G, notes from Feb. 16, 1990 meeting of state agency cleanup teams.*

[83] *Each of the joint surveys after 1989 carried its own acronym based on the status of the cleanup or the stated goal. The FASST surveys were intended to be a fast snapshot on selected shoreline changes. The SSAT was the Spring Shoreline Assessment Team program in 1990. It was followed by the ASAP, which referred not only to its actual name — the August Shoreline Assessment Program — but to the fact that it was supposed to be done quickly before the weather changed from summer to winter. The spring 1991 survey, done in May, was called MAYSAP, and the last joint survey in 1992 was dubbed FINSAP, or the Final Shoreline Assessment Program. There were a multitude of acronyms for programs, equipment, or institutions, but many were not planned to "read" quite as well as the joint survey designations. One of the most humorous configurations was for the 1989-90 Winter Interagency Monitoring Program, known, of course, as WIMP.*

[84] *Clay Robinson, ADEC, quoted in the state's Oil Spill Chronicle, Vol. 2, No. 7, Feb. 13, 1990.*

[85] *The reader should take these figures, like all other oiling statistics, with a grain or two of salt. The numbers, despite the specificity implied by the presence of decimal points, are somewhat imprecise. For one thing, the total sample changed from year to year: Surveyors did not walk every mile every year, but rather, returned only to to those places where oil was reported during the visit immediately previous (survey or cleanup). So, each data set was based on a sample smaller than, and selected differently from, the data set recorded before*

it. It was a practical approach for targeting cleanup, of course, but the methodology isn't exactly rigorous, from a statistical standpoint. In addition, data reports were significantly affected from year to year by factors such as weather (surveys done in the rain almost always disclosed less oil than surveys done in nice weather), the experience of surveyors (some people were more skillful at finding oil than others), and whose hand was on the pencil recording the data in the field (one person's "heavy" was another person's "moderate." Finally, and most important, the joint survey figures do not include subsurface oiling.

[86] *See Chapter 1 for a more complete examination of this issue and for citations from state documents supporting this general description of the state's perceptions.*

[87] *Gardner, D., and others, unpublished DEC summary of shoreline cleanup titled "Shoreline Treatment/Cleanup Monitoring: Review of Field Activities During the Exxon Valdez Oil Spill Treatment Operation," June, 1992. This problem of disputes about "exceeding the work order" were numerous; some were probably honest differences in interpretation, but other disagreements were over blatant refusal by Exxon or the Coast Guard field monitor to remove obvious oiling. The DEC and Fish and Game monitors began sending in reports of these, which were later compiled in a June 21, 1990 DEC memorandum.*

[88] *See Chapter 1, page 33, on the role of the TAG and the "net environmental benefit" debate. See also Chapter 2, page 73, on bioremediation.*

[89] *State of Alaska, Exxon Valdez Oil Spill Response Center, "1991 State Response Plan: Policies, Requirements, Guidelines," April, 1991.*

[90] *Exxon's did not.*

[91] *Joint U.S. Coast Guard/ADEC Press release, June 12, 1992.*

Chapter 4: Legal, Regulatory and Administrative Changes

The grounding of the *Exxon Valdez* prompted both the state and federal governments to significantly alter the laws, regulations and strategies relating to oil pollution. At the state level, between April 1989 and May 1990 the Alaska Legislature passed a dozen new laws dealing with prevention, response and oversight. Among the most significant was a law boosting the state's emergency oil and hazardous substance response fund to $50 million — 50 times what the fund contained at the time of the Exxon spill. The Legislature also mandated a complete rewrite of the state's oil spill prevention, response, and contingency planning regulations, and increased both liability and penalties for polluters. The fund has since become the state's primary source for spill response planning and development, including funding for a new, special division of the Department of Environmental Conservation (DEC) dedicated solely to oil and hazardous substance spill issues.

The changes at the federal level were rolled together in the Oil Pollution Act (OPA) of 1990, which became law less than 18 months after the initial grounding of the Exxon tanker. This was especially significant, since the legislation that became the foundation of OPA '90 had been languishing in various Congressional committees for nearly 15 years. Like the state measures, the federal act raised liability limits, mandated new prevention measures, and set up a new federal response fund.

Neither the state nor federal measures sailed unimpeded through a newly "greened" political system. It took considerable pressure from a variety of sources to free the federal bill from the House of Representatives subcommittee presided over by the late Walter Jones of North Carolina, who had sided with the wisdom of the shipping industry for a decade and a half. And while there was an initial burst of activity in the Alaska Legislature in the spring of 1989, by 1990 the remaining cluster of oil spill bills were being held in Senate committees almost until the brink of the 120-day session.

In the end, the various legislative factions at both the state and federal government level worked out their differences and produced the new laws that are now the foundation of the spill response planning and prevention system in Alaska and the rest of the nation.

4.1 State legislation

The *Exxon Valdez* hit Bligh Reef on March 24, when there were about 40 days left in the state legislative session. In that short span, the state Legislature and the Governor introduced a brace of new spill bills, and seven were considered and passed in little more than a month. This was a remarkably short time for any group of related bills, but even more remarkable because one of the seven was a major tax bill.

But before the Legislature got to the new tax bill directly related to the spill, it considered an old tax bill that was completely unrelated. This was the extremely controversial measure that proposed to roll back a tax incentive given to Alaska oil producers in 1980. The incentive was known as the Economic Limit Factor (ELF), which was designed to lower severance taxes on oil produced from the so-called "marginal fields," a generic term that included basically everything other than the lucrative and high-production Prudhoe Bay unit.

Oil tax analysts and economists in the administrations of both Governor Bill Sheffield and Governor Steve Cowper argued that by the mid-1980s, the ELF was providing a generous and unintended tax break to producers on what had turned out to be high-production, high-profit fields such as the Kuparuk field next door to Prudhoe. They suggested that the tax code be amended so that fields such as Kuparuk would be taxed at the Prudhoe Bay rate, while the ELF would apply to a number of

smaller fields that had either not been yet developed, or were in the early stages of development. Cowper made repeal of the ELF one of his highest resource management priorities.

The oil industry said that the Cowper tax analysts had it all wrong and that the incentive was working as intended, as oil companies drilled more wells, which in turn helped put more oil field service workers on the job. Oil companies also objected to yet another change — this time a potential flip-flop — to the tax system in less than a decade. Oil exploration and development plans are based on long-term projections, the industry argued, and constant instability hurt their ability to look and plan ahead properly. The industry, along with trade and commerce associations, made the stability of the tax system one of their highest legislative priorities. The vote, whenever it came, would certainly be close.

The vote came shortly after the tanker had run aground, and the ELF was repealed by a narrow vote in the Alaska State Senate. Several legislators who were usually supportive of the industry on key issues voted against this one. It was not an "oil spill bill," but it marked the beginning of a decisive period for the Legislature. In short order, both houses approved in 1989:

- revised contingency plan requirements;
- creation of volunteer response corps in coastal communities;
- an increase in civil penalties for oil spills;
- a sharper definition of liability for oil and hazardous substance spills;
- creation of the Alaska Oil Spill Commission;
- a change in tax law that prevented Alyeska and Exxon from deducting any cleanup costs from state severance taxes; and
- a major revision in the funding and operation of the state response fund.

A second oil tax bill was debated and approved within a few weeks of the ELF repeal in 1989. This was the "nickel-a-barrel" bill that swelled the state's oil spill response fund to a maximum of $50 million.

In the 1990 session, the Legislature followed up with several, more detailed bills that:

- revised or specified response standards;
- strengthened DEC's ability to enforce contingency plans
- gave DEC authority to inspect tankers;
- broadened the Governor's authority to use the spill response fund in a disaster;
- clarified the roles and responsibilities of DEC and the state emergency services division in a declared disaster;
- created the Citizen's Oversight Council on Oil and Other Hazardous Substances; and
- defined and set up penalties for certain environmental crimes.

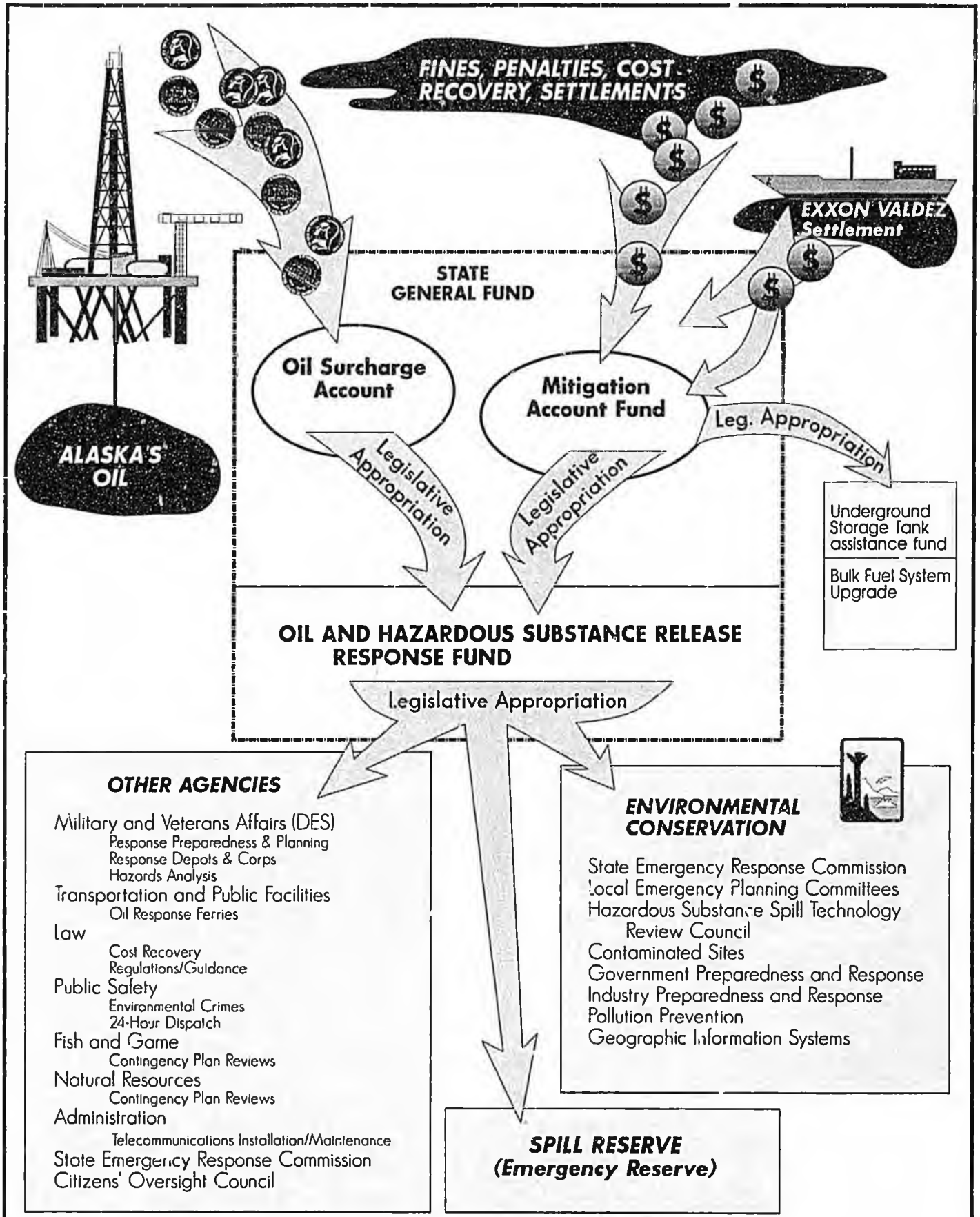
Oil and Hazardous Substances Release Response Fund

It would have been considered unusual for one major tax bill to pass in a session (especially the first year of the two-year session, since historically the legislature deals with its biggest issues in the second year), but a second oil tax bill was debated and approved within a few weeks of the ELF repeal in 1989.

This was the "nickel-a-barrel" bill that swelled the state's oil spill response fund to a maximum of $50 million. Senator. Jay Kerttula sponsored the move to impose a "conservation surcharge" of five cents per barrel on all oil coming down the pipeline. The money would be earmarked for the state Oil and Hazardous Substance Spill Response Fund (known in government vernacular as the "470 Fund," named so because of the number of an earlier piece of legislation dealing with the fund).[1]

The response fund had been around for some time, but it had never contained much more than a million dollars at any one time.

In the case of the Exxon spill, DEC had a responsible party that would reimburse the state for cleanup-related expenses. However, the scale of the response and the extraordinary amounts of money involved were galloping far ahead of conventional spending and reimbursement procedures. Most spills are small enough that out-of-pocket expenses can be covered either by reserves in the response fund, or by borrow-



Alaska's Oil and Hazardous Substance Release Response Fund — Prepared by ADEC 4/93

ing from other parts of the regular budget, a fiscal practice allowed under emergency circumstances. However, the government can only spend what the Legislature gives it. In the case of the *Exxon Valdez* response, the regular agency pockets were not so deep that agencies could keep spending cash on hand without starving other, unrelated operations.[2]

In the case of the *Exxon Valdez* spill, DEC's out-of-pocket expenses for the response were quickly adding up to as much as $1 million per month. Without a source of funding for state response, DEC would quickly run out of legal ways to pay for the work it was supposed to do. In each of the three major seasons of cleanup, DEC's *Exxon Valdez* budget (which included money it passed through to other agencies) ranged from a high of $18 million to about $4 million. Without the cash flow from the beefed-up response fund, paying for state oversight and cleanup activities would have been much more complicated.

Lawmakers modified the response fund rules so that the $50 million account could be used as a source of cash for a wide variety of emergency response expenses during a major oil spill.

The 1989 session also saw an additional change, allowing the state to use the fund to pay for spill planning, prevention and response measures, a landmark change in state fiscal policy. In the past, the Legislature approved a DEC budget in which all programs competed for a piece of a common appropriation. Since the expansion of the response fund, spill planning, prevention and response activities have their own source of funding; theoretically, they do not have to compete with general water quality programs, or solid waste disposal, and so on.

A 1990 law further broadened the allowable uses of the response fund, allowing the Governor to use the response fund as a general disaster relief fund in a declared disaster *related to an oil or hazardous substance spill.* This seemingly minor change in procedure was the focus of a major internal struggle over the roles and responsibilities of the DEC and the state emergency services division within the Department of Military and Veterans Affairs.

The debate really went back to May of 1989, when the initial rush to response was settling into something that could best be described as a sustained emergency. Once the oil was on the shorelines, the job was not really to respond to an emergency, but to manage a large contaminated site cleanup. Until that time, the state Division of Emergency Services (DES) under the Department of Military and Veterans Affairs had played a high-profile, central role in the state response. But in May, when the 30-day disaster declaration bringing DES into the picture expired, the Governor appointed Dr. Robert LeResche as the state's executive branch oil spill coordinator and assigned all other major response duties to DEC.[3] The directors of the emergency services division vigorously opposed this reassignment, and over the next year and a half the division made its case with the Legislature and the Alaska Oil Spill Commission, arguing that the state's emergency management experts needed a stronger role and better access to cash during a catastrophic oil spill.

The oil spill commission and the Legislature agreed, to a certain degree. The spill commission found that DEC had neither the expertise nor authority to handle all aspects of a catastrophic emergency, and recommended a stronger role for DES. Following that recommendation, the Legislature in 1990 turned over the responsibility for the volunteer response corps and depots to DES. In addition, lawmakers modified the response fund rules so that the $50 million account could be used as a source of cash for a wide variety of emergency response expenses during a major oil spill.

This was the last of the major changes to the state's oil spill response fund, which until 1989 had been extremely limited in both funding and application. Before the *Exxon Valdez* spill, the "470 Fund" was strictly a petty cash account that paid for direct DEC cleanup of oil and fuel spills large and small. By 1992, it had, literally, a tax and a budget of its own, and it funded nearly half the activities of a major state agency.[4] The Legislature had a renewed interest in the fund's oversight and appropriations, and other executive branch agencies had managed to get at least a finger on a fund that had always lived entirely at DEC. Where once the fund was solely under the administration of DEC's commissioner, it now was elevated to an emergency response fund to which the Governor had direct access.

Levels of Contingency Planning

PLAN	PURPOSE	IMPLEMENTOR	AUTHORITY
National Contingency Plan	Details how federal agencies will respond to spills and sets up a mechanism for the federal government to take over and manage response to large spills; state participation through Regional Response Teams	National Reponse Team chaired by the Environmental Protection Agency and U.S. Coast Guard.	Sect. 105 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)
State Emergency Plan	To prevent and minimize injury and damage caused by natural and man-made disasters. State Master Plan is an annex to this plan.	Division of Emergency Services, Alaska Dept. of Military and Veterans Affairs.	Governor of Alaska and A.S. 26.23.040 requires DES to prepare.
State Master Plan (Statewide Mater Oil and Hazardous Substance Discharge Prevention and Contingency Plan)	Provides coordination of state resources during a spill of oil or hazardous substances, and is an annex to the State Emergency Plan.	Alaska Dept. of Environmental Conservation (DEC) in coordination with all state agencies.	In 1989, Senate Bill 261 amended Alaska Statute 46.040.200 to require DEC to prepare and annually review and revise.
Regional Master Plans (Regional Master Oil and Haz. Substance Discharge & Prevention Contingency Plans)	Define the response resources for each of ten regions, local spill notification, local response equipment, and information on the Local Emergency Planning Committees.	Alaska DEC.	A.S. 46.040.200
Local contingency Plans	Local Emergency Planning Committees (LEPCs) must conduct local planning for hazardous materials emergencies.	Local governments and State Emergency Response Commission approve the plans.	SARA Title III (Federal Emergency Planning and Right-to-Know Act) 42 USC 11001 - 11005
Vessel & Facility Spill Plans (Oil Discharge Prevention and Contingency Plans)	Vessels that transport oil as cargo or certain facilities that store and transfer large quantities of oil must have plans that describe how they will prevent spills and organize and use their resources to contain and cleanup their potential spills.	Operators have primary responsibility to submit plans. DEC has lead responsibility to review and approve or disapprove.	A.S. 46.04.30

Source: Alaska Department of Environmental Conservation

New Standards for Contingency Plans

(Alaska Statute 46.04.030)

OIL TERMINAL FACILITIES:
Must plan to contain or control and clean up a discharge equal to the capacity of the largest tank at the facility within 72 hours.

CRUDE OIL TANK VESSELS OR BARGES:

- Vessels smaller than 500,000 barrels of oil storage capacity must plan to contain or control and clean up a 50,000 barrel discharge and have the equipment within the region of operation within 72 hours.
- Vessels with more than 500,000 barrel capacity must plan to contain or control and clean up a 300,000 barrel discharge and have the equipment within the region of operation within 72 hours.
- All crude oil tank vessels or barges must demonstrate access to other equipment outside of the region of operation to clean up a realistic maximum discharge, and the ability to have that equipment deployed and operating at the discharge site within 72 hours.

NON-CRUDE TANK VESSELS OR BARGES—

- Must plan to contain or control the greater of 15% of the total oil storage capacity of the vessel or the realistic maximum discharge within 48 hours.
- Must clean up the discharge within the shortest possible time consistent with minimizing damage to the environment.

Contingency plans and response standards

Two pieces of legislation, one each of 1989 and 1990, set the stage for a revision of the state's oil spill prevention and response rules, which Alaska officials say in 1992 are the toughest in the United States.

The 1989 legislation was largely aimed at DEC's review and update of contingency plans. The agency is now required to update all regional and statewide plans every year. The 1990 legislation was more sweeping and directed at contingency plan holders. The measure, introduced by Governor Cowper as House Bill 567, wound up setting specific standards for cleanup for various types of products, at various types of facilities and vessels. It elevated contingency plans to a status closer to a requirement than a set of general guidelines. It eliminated some of the blurry lines of responsibility, better pinpointing who was responsible to act and who would be liable for costs. It gave DEC more authority to inspect facilities such as tank farms, vessels, and barges, so the agency could better judge compliance with contingency plans. It also added a "good Samaritan" clause designed to limit the liability of responders who made a mistake while attempting to implement an approved plan.[5]

This bill had a good deal of support, but it also raised a lot of questions. Many businesses, such as remote-site fuel suppliers, argued that the increased cost associated with increased liability and response requirements — typically, insurance or some other bonding — would be prohibitive for smaller businesses. Ultimately, opponents and proponents worked out a series of compromises that led to final passage of the bill. A similar working group helped develop the regulations to implement House Bill (HB) 567 between 1990-92.

The major highlights of HB 567 were the specific response performance criteria and the increased levels of financial responsibility.

Under the new law, smaller tankers (under 500,000 barrels capacity) must be able to contain and clean up a 50,000 barrel spill within 72 hours, while vessels carrying over 500,000 barrels (most of the fleet that calls at the Alyeska terminal), must demonstrate two levels of control and cleanup ability: 1) They must have access within the region to equipment necessary to deal with a 300,000 barrel spill (the *Exxon Valdez* dumped about 240,000-260,000 barrels), and 2) they have to show that they have access to enough equipment elsewhere to control and clean up the maximum realistic discharge, and that they can get that equipment to the site within 72 hours.

The term "realistic maximum discharge" was the focus of considerable debate during both the legislative and regulation-writing periods. Some lawmakers and interest groups argued that the word "realistic" was a loophole, and that facilities and vessel-owners ought to be able to handle what came to be called "the full bucket," i.e., an amount equal to the total capacity. When the legislation passed without the "full bucket" provision, proponents argued during the regulation-writing process that the "realistic maximum discharge" was, in fact, the "full bucket;" they pointed to the reality of the *Exxon Valdez* spill as an example. Opponents of the "full bucket" provisions said the *Exxon Valdez* spill was an anomaly, and that current technology simply was not able to control and clean up a spill of, say, a million barrels within the 72 hours required under the law. Such a provision was an impossible standard, they said.

Based on oil spill histories and risk modeling, DEC concluded that *Exxon Valdez* spills, though devastating, are in the upper one percent of all spills. The regulations on which the department and the working group settled are, the department says, tough enough to require cleanup of 99 percent of all oil

spills within the 72 hour standard. And, DEC argued additionally, even without the "full bucket" provision, the Alaska standards are the highest and most specific of the 50 states.

Liability, penalties, fines

Just as the response structure had not fully recognized what it would take to handle a spill the size of the *Exxon Valdez*, the civil and criminal liabilities and penalties were dwarfed as well. The Governor decided relatively early in 1989 that the state would not even bother to apply the civil and criminal penalties and fines on the Alaska

Proof of Financial Responsibility

(Alaska Statute 46.04.040)

Type of Facility	Before June 1, 1991	After June 1, 1991
OIL TERMINALS		
Oil Terminals/Crude (5,000 barrel (bbl.) and up)	$10 per bbl. of storage capacity or $1,000,000., whichever is greater, $50,000,000 maximum	$ 0,000,000 per incident
Oil Terminals/Non-Crude (10,000 bbl. and up)	Same as above	$25 per bbl. of storage capacity or $1,000,000., whichever is greater, $50,000,000 maximum
Oil Terminals/Crude and Non-Crude combined	Same as above	If mostly crude - $50,000,000 per incident. If mostly non-crude - $25 per bbl. of total capacity
PIPELINES & EXPLORATION FACILITIES		
Pipelines and Offshore Exploration or Production	$35,000,000 per incident	$50,000,000 per incident
Onshore Production	EXEMPT	$20,000,000 per incident
Onshore Exploration	EXEMPT	$5,000,000 per incident
VESSELS & BARGES		
Tank Vessel & Oil Barge/Crude	Trans-Alaska Pipeline related: $14,000,000. Other tankers: per Clean Water Act or $20,000,000, whichever is greater. Other barges: per or CWA or $1,000,000.	$300 per bbl. per incident storage capacity or $100,000,000, whichever is greater
Tank Vessel & Barge/ Non-Crude	Same as above	$100 per bbl. storage capacity per incident or $1,000,000., whichever is greater, $35,000,000 maximum

books. Part of the reason lay in the fact that most of the possible civil and criminal penalties seemed puny in relation to the event. After the spill both the Governor and the Legislature introduced various measures to put another order of magnitude on the civil and criminal scale.

In the 1989 session, lawmakers concentrated on a measure that raised the maximum civil fine from $100 million to $500 million. It also raised the assessments based on how many gallons were spilled. Now, the fine stands at $8 per gallon for spills under 420,000 gallons and $12.50 per gallon for spills above that. Under both the old and new laws, the fine can be multiplied several times if the spill were intentional, or due to an act of gross negligence. The 1989 law also added an additional, significant definition of negligent behavior that would trigger the multiplier: failure to respond in accordance with an approved oil discharge contingency plan. This clause, coupled with other provisions in other new laws, re-enforced the point — both legally and practically — that contingency plans are performance plans, not just guidelines.

Governor Cowper felt that criminal law at the time of the spill did not sufficiently address the range of criminal responsibility that could be involved in environmental crimes involving corporations. As part of Cowper's oil spill package introduced in 1989, the Governor included two bills that would have:

- Raised the stakes for some environmental crimes — reclassifying several as felony offenses;
- Made corporate officers criminally responsible for environmental crimes;
- Given the state courts the discretion to fine environmental criminals up to twice the amount of the damage caused by the act.

Both bills made it through the Legislature in 1990, although the Legislature dropped or amended several of Cowper's more vigorous provisions. Lawmakers made only one crime a felony (reckless operation of a tanker), dropped the proposal to hold corporate officers criminally responsible for their company's actions, and approved several more modest increases in criminal fines.

Access, enforcement, and oversight

The most controversial of all the oil spill bills was one that did not pass. HB 409 was a measure that would have strengthened the DEC's inspection and administrative authorities.

The most controversial of all the oil spill bills was one that did not pass. HB 409, originally introduced by Rep. Mike Davis (D-Fairbanks), was a measure that would have strengthened the DEC's inspection and administrative authorities. Specifically, Davis sought to give DEC the authority to make unannounced inspections of major facilities, such as the Alyeska terminal. It also would have given the department the authority to assess administrative penalties against violators of environmental laws, and to require environmental "audits" of facilities.

In many ways, DEC would have assumed similar kinds of authorities as the U.S. Environmental Protection Agency (EPA). EPA (and some state environmental regulators around the country) do not need to get a warrant or any special permission to inspect a facility to make sure it is complying with its permits. EPA also has the authority to assess fines of "x" dollars per day against violators who are reluctant or unwilling to bring their operations into compliance. As a practical matter, the threat of the administrative fine is used more than the fine itself; however, Davis and the Cowper administration felt that DEC needed this leverage.

More important, the bill would have given DEC other options for enforcement. Former DEC commissioner Bill Ross, who had presided over the revamping of the Alyeska contingency plan from 1984-86, pointed out to the Alaska Oil Spill Commission that DEC's options in dealing with Alyeska were limited to negotiation, court proceedings, and the "nuclear" weapon of shutting down the pipeline. If Alyeska were out of compliance with its air or water discharge permits, DEC would first suggest a compliance schedule. If Alyeska resisted (which it had repeatedly over the years), DEC had the option of asking the courts to intervene. In either case, the process was likely to

be compromising or time-consuming; meanwhile, the pollution violations would continue. The last option was to shut down the pipeline by emergency order. This, to Ross, seemed like a much bigger hammer than was justified in most situations.

"If there is an enforcement policy that has as its only option the nuclear one, it's not a very good enforcement policy," Ross told commission staff.

HB 409's provisions giving DEC the ability to levy administrative fines through the agency — as opposed to seeking a court order — were an attempt to give the agency an enforcement option that had some weight, could be implemented quickly, and was not so drastic as shutting down the source of a quarter of America's domestic oil production. Not everyone saw HB 409 in this light.

"This bill," reads the department's official summary of legislation," was very controversial." This was a substantial understatement.

The Anchorage Times dubbed the measure "the Gestapo Bill" in one of its editorials. Less colorful opponents of the measure simply said the heavy-handed approach to enforcement was anti-business, and that it put too much environmental policing power into the hands of regulators. Industry officials said the measure did not properly take into account that disagreements over permit provisions are frequently technical in nature and not black-and-white assessments; the administrative penalty provision, they argued, gave the government too much power at the expense of the rights of private companies. It raised the stakes, but also eliminated the chance for facility operators and the government to find a middle ground, they said.

The bill barely passed the House of Representatives and died in the Senate.

In both 1989 and 1990, the Legislature acted to increase the access and oversight of citizens in the regulatory process. In 1989, lawmakers approved creation of the Alaska Oil Spill Commission, which produced a multi-volume report and specific recommendations for action based on the *Exxon Valdez* experience. One of the commission's major recommendations was the creation of a permanent, government-funded citizen's oversight group. Led by the House Resources Committee in 1990, lawmakers created the Citizen's Oversight Council on Oil and Other Hazardous Substances. The five-member council has broad powers to investigate and analyze the transportation, storage, and regulatory systems relating to oil and other hazardous substances.

The council played a significant role in identifying in 1992 gaps in the Prince William Sound and Alyeska terminal spill response system. Partly as a result of the council's report, the Legislature clarified in law the responsibility of Alyeska Pipeline Service Company to respond to oil spills from both the terminal operations as well as tankers calling at the terminal.[6]

4.2 The Oil Pollution Act of 1990

The Oil Pollution Act requires that the federal government "consult" with the state before determining whether a cleanup is complete.

The Oil Pollution Act of 1990 does, at the federal level, the same kinds of things accomplished by the brace of state legislation passed during1989 and 1990. The federal act increases liability and financial responsibility for oil owners and shippers, sets up a new oil pollution response fund that provides money for prevention and research as well, and requires stronger prevention measures for both the government and private parties.

The State of Alaska took an immediate and active interest in the development of the new act, because for the state the stakes were high on several fronts.

First, the state wanted to make sure that federal law cleared up the blurry lines of responsibility that created the confusing "who's in charge" issue that persisted throughout the *Exxon Valdez* spill response. The 1990 federal act did that by strengthening the ability of the Coast Guard to take over a response at any time. Up through the *Exxon Valdez* response, the Coast Guard could not "federalize" a spill unless the spiller was unwilling or unable to perform, and more important, once federalized, the spill response costs came from the federal treasury.

The Oil Pollution Act allows the Coast Guard to actually direct all federal, state, and private party actions when the on-scene coordinator thinks it is time for the Coast Guard to step in. But it also allows the kind of cooperative funding arrangement worked out in the *Exxon Valdez* response (i.e., the Coast Guard directs; spiller writes the checks), without the necessity of the Coast Guard maintaining a passive role.

Further, the Oil Pollution Act requires the Coast Guard to take over direction of the response during what has come to be termed "a spill of national significance.," i.e., a really big and complex spill like the *Exxon Valdez*.

But in calling for the increased federal role, the state's principal concern was to make sure that the new federal law did not preempt any applicable state laws regarding prevention, response, or determination when cleanup is "complete" to state requirements. This was somewhat of a sore point for Alaska, which in 1978 attempted to pass stricter state regulations on tanker safety than those of the federal government. The oil companies sued, claiming successfully that the tanker trade was interstate commerce, and therefore Alaska's stricter tanker rules infringed on the federal government's superior authority to regulate such commerce.

The Oil Pollution Act of 1990 includes a specific disclaimer regarding preemption, one strong enough that it has led states (including Alaska and California) to begin taking steps to insure tanker safety beyond what the federal government requires. Alaska now claims authority to inspect and regulate some safety aspects of tankers operating in state waters. California's comprehensive prevention and response act (also passed in 1990) takes a more aggressive approach to attaching specific state requirements for navigation and other technical safety improvements on tankers. This non-preemption clause is not quite so clear-cut, however; the Congressional conference committee that hashed out the final version of the Oil Pollution Act specifically noted in its statement of intent that the new bill was not meant to address or otherwise alter the 1978 Supreme Court decision that struck down the Alaska tanker rules.

In terms of cleanup, the Oil Pollution Act at several points preserves the rights of states to impose stricter removal requirements than the federal government, as long as those requirements do not conflict with federal law or requirements. The Act requires that the federal government "consult" with the state before determining whether a cleanup is complete; while this does not give the states a veto power over a Coast Guard decision to end a cleanup, it raises the profile of the states in the decision and gives states a bit more public and legal leverage. The act also preserves the right of a state to require the spiller to continue removal to any stricter state requirements after the end of the federal cleanup.[7]

Congress also included in the Oil Pollution Act authorization for two "demonstration" oversight programs in Prince William Sound and Cook Inlet. This led to the creation of the Prince William Sound and Cook Inlet Regional Citizens Advisory Councils, funded through cooperative agreements with oil shippers and storage facility owners in each area.

The Oil Pollution Act also makes available up to $1 billion (per spill) available for response and removal costs. Congress also authorized the Coast Guard to spend up to $50 million a year for planning, preparedness and prevention costs, and makes available up to $27 million a year for oil spill-related research.

Two major sets of new federal regulations are currently being prepared as a result of the Oil Pollution Act. The first is a revision of federal natural resource damage assessment rules, the second is the set of regulations implementing the new prevention and response requirements.

Notes, Chapter 4

[1] *Under the Alaska Constitution, revenues cannot be collected and dedicated to a specific purpose automatically. (The lone exception is the state savings account, the Permanent Fund, which was added by constitutional amendment in 1976.) To get around the constitutional prohibition against dedicated funds, the nickel-a-barrel was technically added to the existing severance taxes, and the Legislature makes a pro forma appropriation to the response fund in an amount equal to whatever the surcharge added up to in a given year.*

[2] *In the early days of the defense at the Sawmill Bay on Evans Island, the Alaska Department of Fish and Game kept asking Exxon to buy more boom for the hatchery. Exxon's field people told Fish and game to buy it themselves and "back-charge" Exxon to recover the costs. However, the response came at the opening of the last quarter of the fiscal year, and Fish and Game — which was coming into its busiest and most cash-consuming seasons of spring and summer — could not buy boom without pulling large amounts of money out of its regular program budget.*

[3] *This was a reflection of Governor Cowper's general view of the response structure. As early as the first week of the spill, Cowper expressed the opinion that although he wanted a stronger federal role in directing the response, he did not think the Federal Emergency Management Agency (DES's federal counterpart) was the right organization to handle the job. Cowper said FEMA was "a logistics outfit" that did not have broad enough authority or expertise to take over this kind of an operation. (Governor Steve Cowper, personal communication, April 1989. Also, Persily, L., interview with Governor Cowper for the Alaska Oil Spill Commission, summarized in a memorandum to Havelock, J., Nov. 28, 1989.)*

[4] *Under the law, the state collects the conservation surcharge until the fund reaches $50 million. As a practical matter, the Legislature's allocation of some response funds to operations and some to unallocated emergency response means that the fund has not, in its first two years, actually ever reached a $50 million balance.*

[5] *Previously, a responder who botched a response, even if acting in good faith, was exposed to a high standard of liability for the mistake. The standard now is that a responder following an approved plan must show gross negligence, as opposed to simply negligence, to be held liable for damages.*

[6] *This provision originally appeared in a different bill introduced by Representative Mike Davis (D-Fairbanks), but was added to Cowper's bill with the consent of the sponsor.*

[7] *This clause deals with a little bomb that was quietly ticking in the corner throughout the Exxon Valdez spill response. Exxon pointedly excluded state requirements from any statements of intent or promises for conducting cleanup, saying only that the company would "do what the* Coast Guard *requires (Editor's emphasis)." The first official acknowledgment that Exxon would follow through on state requirements was in the civil and criminal claims settlement reached between the governments and Exxon in March 1990. Although that settlement fell through, the subsequent agreement of October 8, 1990, contained the same language.*

Chapter 5: Restoration

It was, perhaps, inevitable that the *Exxon Valdez* oil spill would trigger lawsuits and other legal action. However, a fairly large volume of claims never made it as far as court; Exxon and many claimants (commercial fishermen, cannery workers, some local governments) chose to make their accord out of court. Exxon paid about $130 million to commercial fishermen for the loss of the 1989 commercial fishing seasons in the spill area, with the bulk of the payments coming within a few months — or less — of the spill. This form of out-of-court dispute resolution was in sharp contrast to the events following the 1967 *T/V Glacier Bay* spill in Cook Inlet, when most of the fishermen who suffered damages did not collect any compensation until — ironically — long after they had been compensated for *Exxon Valdez* losses. However, a number of private lawsuits remain in the courts and, at this writing in the spring of 1993, are awaiting trial in state Superior Court in the spring of 1994.

The State of Alaska had several options for legal action before it in the spring of 1989. The state tried the master of the *Exxon Valdez*, Joseph Hazelwood, on criminal negligence and several smaller charges; an Anchorage jury eventually acquitted Hazelwood on all but one minor misdemeanor, and the acquittal was reaffirmed on appeal. Governor Steve Cowper considered filing criminal negligence charges against the Exxon Corporation in 1989, but he decided that the maximum penalty under existing law — a $100,000 fine — was not worth the time and effort it would take to prepare and try such a case. Cowper instead instructed his attorney general, Douglas Baily, to concentrate on civil action that would produce compensation for damages. On August 14, 1989, Alaska sued both Exxon and Alyeska Pipeline Service Company, claiming that negligent operations and a botched response caused unspecified damages to the environment; Exxon filed a counter-suit on October 24, claiming that the state interfered with Exxon's ability to do what needed to be done.

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Cowper felt the people of Alaska were owed damages by Exxon, but the Governor did not think a long, drawn-out litigation effort would be productive. He said many times, both publicly and privately, that he expected to settle the case with Exxon, and that he preferred to do it sooner rather than later. Cowper, himself an attorney familiar with maritime law, felt that pursuing protracted litigation extending over many years was bad public policy.[1] Cowper, attorney general Baily, and chief of staff Garrey Peska all contacted Exxon upper management during the summer of 1990 in an effort to move negotiations along.

In August 1990, Baily and Cowper learned that the U.S. Department of Justice, which had filed criminal charges against Exxon, was nearing agreement with the company on a negotiated plea agreement. The state had not been consulted on the matter, and the federal government's plan included provisions that could seriously affect Alaska's ability (and the ability of third-party, private plaintiffs) to pursue their claims against Exxon. Under the proposed deal, the federal government would agree not to press any civil damage claims against Exxon for four years; moreover, the federal government agreed that it would not provide information or assistance to those who had filed civil claims. This, of course, included the State of Alaska. There were other provisions the state found unwise or objectionable; among them were clauses that gave Exxon the right to sue the government if it disagreed with how the federal government spent claims funds, and provided Exxon the opportunity to recover any federal claims money that went unspent over time. But the biggest problem, from the state's perspective, was that the plea agreement would make it more difficult for the state and private plaintiffs to recover damages.

Beyond the fact that Cowper and Baily felt the state should have been consulted, the Governor feared that the plea agreement was raising the chances that the state would become mired in the protracted litigation he wanted to avoid. The state's legal costs were running about $1 million a month at that point, and again, regardless of the

state's likelihood of recovering damages somewhere in the future, Cowper saw years of legal work on the case as a poor use of public funds.

The Governor wanted what was termed a "global" settlement — ideally, a settlement of all public and private claims at one time. His next preferred choice was settlement of all government claims — criminal and civil — at one time. And the reality of the situation was that the state and federal civil damage claims were joined at many critical points.

The state and federal governments were seeking compensation for damage to natural resources owned by the public. However, the specific resources were under a mix of federal and state control: bald eagles and otters under the U.S. Fish and Wildlife Service, spawning salmon under the Alaska Department of Fish and Game, national parkland under the National Park Service, state parkland under the Alaska Department of Natural Resources' parks division, and so on. If the state and federal government were going to pursue their natural resource damage claims separately, each would have to make sure that the right government pressed the individual claims for the right species or resource.

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There were several major problems with this kind of approach. Jurisdiction of certain public resources is pretty clear in some cases (otters, for instance), but it isn't so clear in others (tidelands, for instance). The state and federal governments could go ahead with pressing separate claims against Exxon only if they agreed beforehand who owned what. There loomed the possibility that the state and federal governments would first become mired in jurisdictional disputes for some period before any actual damages could be settled with Exxon. Those disputes could almost certainly include litigation between the two governments; Alaska and the United States, even now, have not fully resolved the issue of who owns the land and resources under certain bodies of water. This issue has been addressed piecemeal in one case, then another and another, all of which has taken more than a decade. And considering that the intertidal areas — sometimes submerged, sometimes not — were among the areas of Prince William Sound most affected by the spill, the prospect of tangled state-federal-private litigation over intertidal damage was enough to give everyone a headache. And even if federal and state jurisdictions over management of a given species was initially clear, the *relationships among different resources* might not be clear.

Let's take sea lions and salmon, just as a hypothetical example. The health and welfare of sea lions, as a public resource, falls to the National Marine Fisheries Service under the guidance of the federal Marine Mammals Protection Act of 1973. Salmon fall under the management of the Alaska Department of Fish and Game.[2] Therefore, the U.S. would collect on any damages caused to sea lions, and the State of Alaska gets the check for salmon damage, right?

Not necessarily. Sea lions eat salmon. If the state collected damages on behalf of the salmon, could the United States claim a piece of the salmon compensation because Uncle Sam's sea lions have lost a food source? Government lawyers could argue this one — and others — for some time. That's before they even talked to Exxon's lawyers.

As a practical matter, the state and federal government agreed early on to seek damages jointly, rather than raise the specter of a long, public court battle while the public waited to recover damages to begin restoration of the public resources damaged by the spill. Arguments over resource ownership might have made for interesting law, but the potential delays made for bad public policy. And, as a matter of legal policy, it made more sense to deal with Exxon jointly on the civil claims.[3]

The collapse of the Exxon-federal plea agreement on the criminal charges in the summer of 1990 caused a flurry of media attention (and some hard feelings between the state and the Justice Department), but it helped set the stage for something approaching the "global" state-federal settlement Governor Cowper sought.

Cowper left office at the end of his term in December, 1990.[4] His successor, Governor Walter J. Hickel, made settlement of the *Exxon Valdez* claims one of his most immediate priorities. Within a few weeks of his inauguration, Hickel telephoned Exxon's chief executive officer, Lawrence Rawl, and asked him to come to Juneau for

initial talks. Rawl and Hickel met for about 45 minutes on January 15, 1991, in Hickel's office, the men speaking in general terms.[5] The circle expanded in later meetings in Washington, D.C., with federal and state officials and additional Exxon executives. On March 13, 1991, the governments announced agreements with Exxon on both criminal charges and civil damage claims.

Under the agreements, Exxon was first to pay a $100 million criminal fine to the U.S. government; the federal government would then pass $50 million of the fine to the State of Alaska as restitution. Then, over 10 years, Exxon would pay $900 million into a court-administered fund to be used for restoration projects. A panel of six government officials — three state, three federal — would decide what projects to pursue and how much to spend.

The governments and Exxon each retained escape clauses in the agreement, however. Included in the agreements was a 30-day public comment period. At the end of the 30 days, the governments had 15 additional days to consider the public comments. During that 15-day stretch, each government retained the right to withdraw from the agreements if public comment demonstrated that the agreement was not in the public interest. Exxon retained the right to withdraw if the package was altered by the court.

The agreements went to U.S. District Judge H. Russel Holland in Anchorage for review and eventual approval.

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In the public and political arena, the Hickel settlement met with mixed reviews.

Opponents had various, sometimes unrelated problems with the proposed settlement. The first problem was a generic one that tends to crop up whenever the state reaches a large out-of-court settlement.[6] Settlement negotiations are nearly always private, and the public and the Legislature have no way of judging independently whether the state "got a good deal." So, these large settlements are often met initially with some skepticism by members of the public and the Legislature. In this case, the problem was exacerbated by the object of the negotiations. Usually, the state's large out-of-court settlements are based on the arcana of government tax codes, and only a trained legal mind could ascertain whether the state "got a good deal." But the object of settlement in the Exxon case were the publicly owned natural resources. Damage assessment to that time had been kept shielded from public view; members of the public and the Legislature wanted to see the results of the damage studies so that they could judge for themselves whether the $1 billion dollars was a fair sum.

"If someone owed you a bunch of money and you wanted me to negotiate a settlement, wouldn't you want to know what the range of values were?" said Representative Mike Navarre, D-Kenai, during a Alaska House of Representatives hearing on April 16.[7]

However, the attorney general decided that releasing the damage assessment studies was poor legal strategy, both for the state and for the private parties seeking additional damages from Exxon. Releasing the data could, on the one hand, expose the state to liability claims by private parties seeking damages; it also would almost certainly give Exxon an unfair advantage over the private plaintiffs with outstanding claims. If one assumes that the legal issue of damages turned on a judge's or a jury's interpretation of competing sets of damage assessment studies, giving Exxon the government's information in advance would have given the oil company an opportunity to build its defense or its attacks long in advance — without having to divulge the results of its own studies to its opponents.

Regardless of the legal wisdom of this policy decision, there was substantial criticism of the governments — specifically the State of Alaska — because they continued to hold "secret" the results of publicly funded research done to assess damage to publicly owned resources.

On April 8, 1991, the federal government released an 18-page "Summary of Injury" in an attempt to provide some public information on the damage, but the public and lawmakers continued to press for full release of the data. On April 17, Exxon answered by filing with the court — and releasing to the public — 20 company studies that showed, according to Exxon's claim, that "the recovery of Prince William Sound is well on the way - water is clean, fish are abundant and safe to eat, and wildlife is likewise abundant and thriving, and the beaches have been effectively cleaned."[8]

But still, the public did not have the complete picture, and some of the responses sent to Judge Holland connected criticism of the settlement to the lack of full scientific disclosure. Some commenters speculated that government damage studies would show that the damages were far beyond $1 billion.

A second criticism raised by the public was that the settlement seemed too favorable to Exxon. They argued that the criminal fines were too light, and that the payment schedule for civil damages was too long. Allowing Exxon to stretch payment over a decade was too convenient to be considered a sufficient penalty, they said, and the extended-payment plan for Exxon exposed the state and federal government shares to erosion by inflation.

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The state Legislature has its own specific set of criticisms of the settlement. They shared the concerns about lack of information, but the Legislature had serious constitutional problems with the settlement terms as well. Members of the Legislature, led by the House Judiciary Committee, felt that parts of the settlement infringed on their constitutional prerogative to appropriate public funds for specific public purposes. The March '91 settlement — and the October '91 settlement, for that matter — both provide that a group of six executive branch trustees decides how the trust fund money is to be spent. Under the Alaska Constitution, only the Legislature can decide how much money shall be dedicated to a certain public purpose. Lawmakers argued that decisions made by the state-federal trustee council amounted to appropriations, and were therefore subject to Legislative approval.

For this combination of reasons, the March settlement unraveled. On April 24, 1991, Judge Holland threw out the criminal plea agreement, saying in court that the $100 million fine was too low. While the Alaska Legislature never voted as a whole on the settlement, and Exxon ultimately exercised its option to pull out of the civil agreements on May 3, Judge Holland's ruling of April 24 effectively killed the deal reached among Exxon and the two governments.

On October 8, 1991, a new, slightly revised settlement agreement was announced. The total amount remained at $1 billion, but it was divided somewhat differently. The agreements included a larger criminal fine and a provision for formally including the public in the decisions about how to spend civil settlement funds for restoration. After a 60-day period for consideration of any appeals, the settlement was approved by Judge Holland on December 9, 1991.

The civil agreement stipulated that Exxon would pay $900 million to the state and federal governments over a 10-year period to settle civil litigation for natural resource damages brought by the governments which would have been costly and lengthy to prosecute for both sides. This was the largest dollar settlement of its type in U.S. history. Like the previous agreement, this one put the money into a trust held in U.S. District Court. A state-federal Trustee Council would decide how the money should be spent, and the court would then release funds according to the Trustees' plan.

The most significant changes in the settlement came in the criminal plea agreement. As before, Exxon and Exxon Shipping Company pled guilty to violating provisions of the Clean Water Act, the Migratory Bird Treaty Act and the Rivers and Harbors Act. Judge Holland set the criminal fine at $150 million, an increase of $50 million over the March agreement. However, only $25 million of the $150 million criminal fine was actually paid. Of the $25 million, $12 million was paid to the North American Wetlands Conservation Fund, and $13 million into the Victims of Crime Act account. The remaining $125 million was "remitted," or forgiven by the federal government due to Exxon's "cooperation with the governments during the cleanup, timely payment of

Terms of the *Exxon Valdez* Settlement

Total $1 billion

Criminal Penalties

– For violation of provisions of Clean Water Act, Migratory Bird Treaty Act and Rivers and Harbors Act: **Fine $150 million**

Paid: $25 million paid:
$12 million to North American Wetlands Conservation Fund
$13 million to Victimes of Crime Act account

Remitted: by the court due to Exxon's cooperation [$125 million remitted]

– Criminal restitution: **Restitution $100 million**

$50 million to state government
$50 million to federal government

Total paid for criminal libility: $125 million

Civil Penalties

To state and federal governments over 10 years for natural resource damages **Total $900 million**

(The largest dollar settlement of its type in United States history. The money goes into a trust held in U.S. District Court. A state-federal Trustee Council decides how the money is spent, then the court releases funds according to plan.)

Within 10 days of acceptance of settlement terms in 1991	$90 million
December 1, 1992	$150 million
September 1, 1993	$100 million
September 1, 1994	$70 million
September 1, 1995	$70 million
September 1, 1996	$70 million
September 1, 1997	$70 million
September 1, 1998	$70 million
September 1, 1999	$70 million
September 1, 2000	$70 million
September 1, 2001	$70 million

many private claims, and environmental precautions taken since the spill.""

While Judge Holland forgave $125 million of the criminal fine, he took back $100 million and placed it in a different criminal category. Under the new agreement, Exxon was to pay $50 million each to the state and federal governments in "criminal restitution." So, putting aside the legal differences between a fine and restitution, Exxon paid a total of $125 million to the state and federal governments for its criminal liability. This represented an increase of $25 million, in actual payments, over the original criminal plea agreement. See chart above for the terms of the civil settlement.

From the initial $90 million in civil penalities paid in December 1991, the state and federal governments repaid themselves for spill-related expenses they had not recovered from Exxon at the time of the settlement. The state recovered $29 million and the

federal government replaced $24.5 million for cleanup monitoring, natural resource damage assessment study costs, and litigation support expenses.

In December 1992, Exxon deducted $39.9 million in expenses for cleanup work undertaken during the 1991 and 1992 cleanup seasons. At the time of the March, 1991 settlement, the cleanup was far from complete. In a provision of the agreement that appeared in the March document and remained unchanged in the final settlement, Exxon was required to continue cleanup until released by both the state and federal governments; however, the company could deduct its expenses for cleanup from its civil claims liability.

The state recovered $29 million and the federal government replaced $24.5 million for cleanup monitoring, natural resource damage assessment study costs, and litigation support expenses.

This provision raised a number of issues for the governments. At the time of the March settlement, Exxon and the state and federal on-scene coordinators had — just five days before — made final their plans for the 1991 cleanup. Until the date of the settlement, Exxon was conducting the cleanup under government direction; it didn't matter to the governments how much Exxon was spending, as long as the work was being done. With Exxon able to deduct its cleanup costs from what it owed the government, essentially, the government was paying for the cleanup. And if the government was paying for the cleanup, the government's managers were obligated, as always, to make sure public money was being spent efficiently and effectively.

One option was to take over the cleanup entirely, releasing Exxon and hiring contractors retained through competitive government bidding procedures. The state and federal coordinators considered this option impractical. After two full field seasons of working together, the governments and Exxon had established procedures for logistics, procurement, communications support, and so on; regardless of whether everyone got along all the time, the fact was, everyone knew the system. For reasons of efficiency and safety, the state and federal on-scene coordinators chose not to hire new contractors.[10]

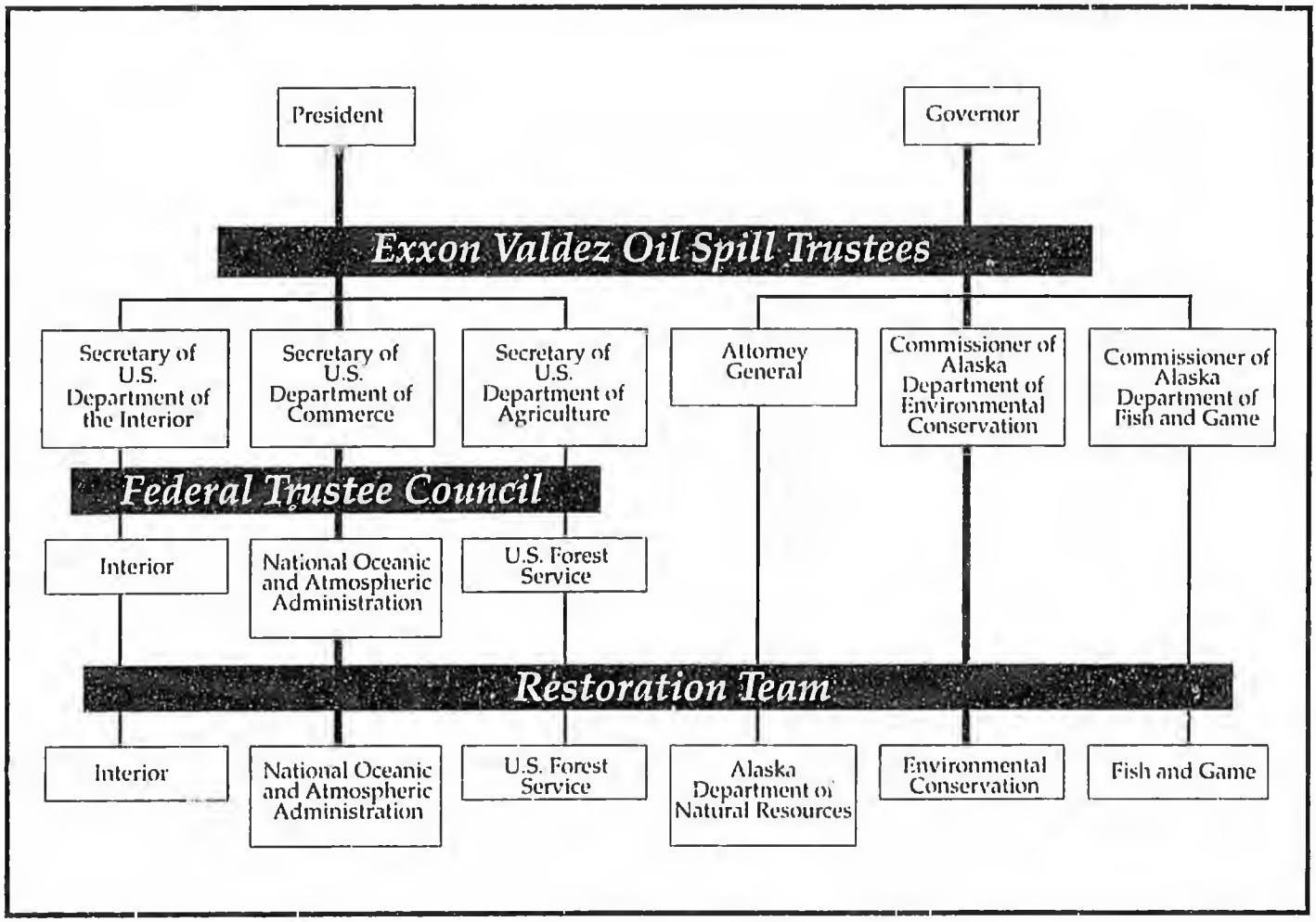
Instead, they set up a system of review and approval of Exxon workplans and cost estimates. The Coast Guard handled the accounting and oversight, and the federal on-scene coordinator retained the prime authority for approving or rejecting Exxon expenditures. Exxon, however, made its cost estimates equally available to both state and federal spill managers. Exxon became, in other words, a sole contractor to the federal and state on-scene coordinators. Expenses in the 1991 field season came to about $40-$45 million,[11] with 1992 expenditures less than half that.[12]

At the close of the 1992 field season in July, 1992, the federal and state on-scene coordinators declared the response phase complete, and Exxon was released from further cleanup responsibility. Any further removal would fall under the general heading of restoration, for reasons based in restoration or damage assessment studies

5.1 Restoration structure and funding

The term "restoration" is defined in both federal law and in the court order approving the settlement. It is important to keep in mind that the agreement between Exxon and the governments was to settle *damages to publicly owned natural resources affected by the spill.* This settlement did not include various claims from private parties, including — and especially — Alaska Natives and Alaska Native corporations, which own nearly all of the private land in the spill area. These private plaintiffs are pressing their own claims in court, as well as with the Trans-Alaska Pipeline Fund, a $100 million, privately-administered fund.

Therefore, the entire state-federal restoration structure is designed to deal exclusively with resources that were damaged by the spill, or damages to services directly dependent on those resources. The settlement court order defines the mission this way: "[R]estoration includes restoration, replacement and enhancement of affected resources, acquisition of equivalent resources and services; and long-term environmental monitoring and research programs directed to the prevention, containment, cleanup



and amelioration of oil spills."

The second major leg of the restoration effort rests on the agreement between the state and federal governments to undertake restoration efforts together. The governments "shall jointly use such monies for purposes of restoring, replacing, enhancing, rehabilitating or acquiring the equivalent of natural resources injured as a result of the *Exxon Valdez* oil spill and the reduced or lost services provided by such resources," according to the state-federal memorandum of understanding. Neither government, in other words, has free access to the restoration fund. In fact, any expenditure or project in the restoration effort must have the unanimous approval of all six trustees.

The third basic leg of the settlement is an agreement that all funds must be spent on projects within Alaska, unless the trustees agree unanimously that a specific task cannot be performed within the state.

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Organization

There are six trustees. The federal trustees are the Secretary of the U.S. Department of the Interior, the Secretary of the U.S. Department of Agriculture, and the Secretary of the U.S. Department of Commerce.[13] The State of Alaska Trustees are the Commissioners of the Department of Environmental Conservation and of the Department of Fish and Game, and the Alaska Attorney General.

Each Trustee has designated a representative to serve on the Restoration Team,[14] a management and administrative group which carries out the programs and projects approved by the Trustees. The Restoration Team has formed a series of working

Allocations of *Exxon Valdez* Civil Settlement Funds

as of June 1993

Civil settlement funds received	$240,000,000
Civil settlement funds allocated and/or expended	$220,308,000
Unxpended balance	$19,692,000
1992 funds budgeted but not expended, to be returned to trust account	$6,500,000*

*Includes $1,500,000 in administrative costs

Categories of Expenditures

Negotiated in the Settlement:

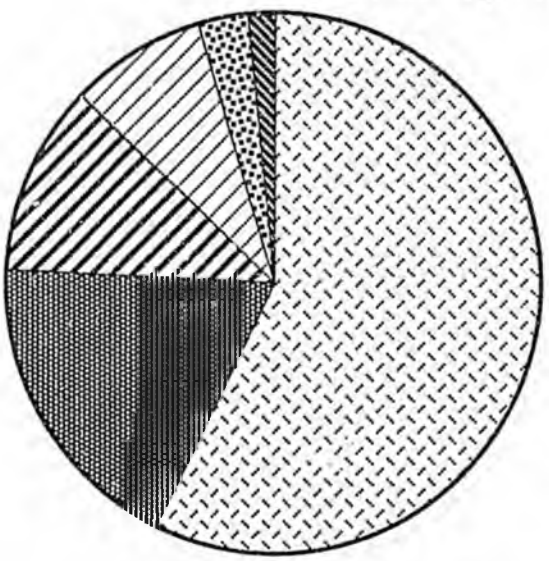
Reimbursements to State and Federal governments	$107,500,000
(for cleanup, damage assessment, and litigation costs)	
Federal	$49,200,000
State	$58,300,000
Credits to Exxon for cleanup costs in 1991 and 1992	$39,900,000

1992 and 1993 Work Plan Expenditures Budgeted by Category:

Category	*Budgeted*	*Percent*
Habitat Protection	$107,500,000*	57.2%
Restoration Projects	$13,464,000	18.7%
Damage Assessment	$8,122,000	11.3%
Administration	$5,841,630	8.1%
Public Participation	$2,204,570	3.1%
Independent Scientific review	$1,165,800	1.6%

*Includes $29,950,000 the Trustee Council has tentatively authorized for acquisition of Seal Bay.

Work Plan Expenditures by Category



Habitat Protection	57.2%
Restoration Projects	18.7%
Damage Assessment	11.3%
Administration	8.1%
Public Participation	3.1%
Independent Scientific review	1.6%

Note that amount shown here for Public Participation does not include salary allocations for personnel involved in public participation activites except for Oil Spill Public Information Center staff, Public Advisory Group support and the Public Information Office.

Source: 1992 and 1993 Trustee Council Budgets

groups to handle planning, implement programs and oversee projects. The working groups presently consist of: Finance, Restoration Planning, Public Participation, Habitat Protection, 1992/93 Work Plan, Budget and Process, Geographic Information System, and Archaeology.

Public Advisory Group

The settlement requires that the Trustee Council ensure the decision-making process includes "meaningful public participation;" the settlement also specifies that there shall be a public advisory group.

After a call for nominations was issued on May 6, the Public Advisory Group (PAG) members were selected at Trustee Council meetings in August and September 1992. The PAG comes under the Federal Advisory Committee Act, and certain federal regulations apply which are designed to keep the PAG in line with similar organizations as far as reporting requirements and authority. PAG members are nominated by the Trustees, but actual appointments must be made by the Secretary of the Interior.

The original charter called for the PAG to consist of 15 official members and two ex-officio members, one each from the Alaska Senate and House of Representatives. The 15 members were to be drawn from a variety of interest groups, including the public at large and these principal interests: aquaculture, commercial fishing, commercial tourism, environmental, conservation, forest products, local government, Native landowners, recreational users, sport hunting and fishing, subsistence, and science/academic.

At their September 14, 1992 meeting, the Trustees revised the PAG charter to allow five representatives for the Public At Large category. Nominations were once again opened, and on September 21 final selections were made. The PAG is formed only to advise the Trustees; in the charter as drawn up by the Trustees they have no power to take action independently.

5.2 Restoration timetable

In April 1992, the trustees released three documents to the public: Restoration Framework, the Draft 1992 Work Plan, and the Response to Public Comment on the 1991 State/Federal Natural Resource Damage Assessment and Restoration Plan for the *Exxon Valdez* Oil Spill.

The Restoration Framework provides information about restoration planning to date, a summary of injuries to natural resources, proposed injury criteria, and proposed criteria for evaluating restoration options and alternatives. It also initiates a process for public input into developing the Restoration Plan and an Environmental Impact Statement. In August a Restoration Framework Supplement on Habitat Protection and Acquisition was released which outlines options the Trustees could pursue to protect habitat injured by the spill. The Supplement contains a description of the process and a discussion of alternative criteria for habitat protection or acquisition.

The 1992 Draft Work Plan details damage assessment and restoration activities proposed for 1992. The Framework is intended to be a scoping document as part of the process required under the National Environmental Policy Act.

The Framework has been reviewed by the public, and the Trustees intend to release an actual restoration plan in 1994 which will be further refined during public review and comment. Once final, this document will guide the restoration process through the year 2002.

Natural resource damage assessment studies began within days of the grounding of the *Exxon Valdez* and continued through 1993. It was the largest and most extensive damage assessment program in U.S. history, with more than $100 million devoted to 164 separate and related studies.[15] The damage assessment efforts were challenged from the start by two major scientific problems, one man-made, and one natural.

Scientists working in Prince William Sound in 1989 were initially challenged by the fact that relatively little was known about the region's ecosystem as a whole. The availability of baseline data for biological communities was determined largely by the forces of commercial interest and the creativity of certain researchers. Biologists knew a lot about commercial fish species (especially pink salmon and herring) relative to other kinds of animals because commercial fisheries management requires constant analysis of fish stocks, migration and spawning patterns, predation, climate, etc. Some other kinds of scientists had information about prevailing ocean currents because they were able to piggy-back research on other, unrelated projects in the past.[16] Some others had pieces of the puzzle, especially regarding intertidal biology, but generally speaking, there had been no comprehensive research effort in Prince William Sound before the spill.

This issue would crop up not just in 1989, but long after the spill, in 1992 and 1993, when scientists proposed various new studies (or extensions of studies) that had more to do with baseline information than active restoration. Researchers have argued that it is impossible to develop an effective restoration program without a better understanding of was injured in the first place. Nearly all of the damage assessment studies weΣre scheduled for "close-out" in the 1992 work plan. However, while scientists know more about Prince William Sound now than in 1988, they still do not have the comprehensive picture of the ecosystem that they would have liked to have before the spill hit.

"The extent of injury to certain species, including loons, cormorants and gulls, will never be known; pre-spill population estimates for these species in the spill area are not available," the restoration team reports.[17]

Natural resource damage assessment studies began within days of the grounding of the *Exxon Valdez* and continued through 1993. It was the largest and most extensive damage assessment program in U.S. history.

A second challenge facing the damage assessment was biological timing. Speaking in seasonal terms, the spill hit on the eve of the most biologically active season in the region. The spring migrations and spawning activities were set to begin as daylight hours increased, nutrients flooded the Sound from snowmelt, and temperatures warmed. Researchers had to put together a detailed program of study overnight.

A third challenge to researchers was legal. Scientists complained throughout the program that lawyers were dictating the direction of some research programs, since the state and federal litigation efforts depended on accurate and compelling damage assessment information. In addition, the scientists were taken out of the mainstream of scientific inquiry and debate; the studies were secret, and therefore were not available for publication or discussion in the usual scientific circles. Researchers depend on the formal and informal open network of peer review and discussion that is the heart of the scientific process.

Summary of injury

The obvious damage to animals that occurred in the first few months of the spill was a result of oiling on the animals themselves. Birds and marine mammals were injured because oil covered their fur or feathers and they could no longer keep warm or dry; some were poisoned or died by ingesting oil as the animals preened or tried to lick the oil off themselves; others died or were poisoned by ingesting oil during feeding.

A second cluster of injuries occurred as a result of residual oiling at feeding sites. Damage assessment scientists believe that several different species — river otters and harlequin ducks, for example — continue to suffer the effects of oiling because of

contaminated food sources. Mussel beds, in particular, were intentionally left alone by cleanup crews on the theory that cleanup would harm the mussels more than it would help them. Researchers in 1991 and 1992 discovered that mussel beds heavily oiled in 1989 still contained significant concentrations of oil, and that animals were foraging and eating in these areas.



Direct oiling of animals injured or killed them through poisoning or ingesting oil or because with oil covering their fur or feathers they could no longer remain warm or dry. This oiled duck was found on Green Island, March 30, 1989.

Photo by John Lough

A third class of injury due to displacement by oiling or cleanup activity also enters into the analysis. Scientists have noticed a troubling patterns of mortality among sea otter populations in the Sound since the spill; mature "middle-aged" animals — usually the healthiest and least likely to die — are dying during what should be the prime of their lives. Researchers think the unusual mortality could be tied directly to contaminated food sources (such as the mussel beds), or indirectly due to displacement: The otters may be avoiding usual feeding areas because of oil (or because of activity from cleanup in those areas), which may force them to feed at less desirable sites (less availability of food, or father away), which in turn may lead to lower body weights, thinner fat layers, and less resistance to disease and weather.

Various bird species — marbled murrelets and, again, the harlequin ducks — suffered wholesale reproductive failure during the spill years, which may be directly attributable to oil, or to a combination of oiling and cleanup activity. The spill did not "measurably" affect the Sound's bald eagle populations[18], but researchers noted that nests near heavily and moderately oiled beaches in 1989 suffered a "failure rate" of 85 percent, as opposed to 55 percent at lightly oiled or non-oiled sites. Again, while the injury to bald eagles can be tied to direct and indirect oiling effects, eagles may also have been affected by the heavy and intrusive presence of cleanup crews at the heavily oiled sites in 1989.

Larger marine mammals, such as harbor seals, showed some fairly obvious effects. Crews retrieved the carcasses of 19 dead, oiled harbor seals in 1989, but death counts are open to speculation since seals sink when they die. Other seals in the spill area showed abnormal activity (sluggishness, wariness), and some showed abnormal lesions on their brains. But underlying these obvious problems was the fact that seal populations in the spill area were probably already at a low point, and therefore less able to withstand additional environmental assault or stress.[19] Other marine mammals, such as killer whales, also have some post-spill population fluctuations that researchers suspect are attributable to the oil spill.

Salmon stocks suffered two kinds of damage. The first was at oiled streams, where eggs and fry showed striking patterns of abnormal development or mortality in the spawning cycles immediately following the spill. The problem is not that fish were oiled; fish swim under the surface and it is highly unlikely any suffered significant effects of direct oiling. The problem for Prince William Sound's most abundant salmon

species — pink or humpback salmon — were the conditions at oiled streams. Roughly 75 percent of the wild pinks spawn in the intertidal areas, laying their eggs in the gravel beds of streams that are completely covered by salt water at high tide, but subject to regular fresh stream flows when the tide is out. Oil came in on the waxing tide and settled in the mid-and lower intertidal areas on the ebb. In the oiled streams sampled during damage assessment, egg mortality was as much as 50 percent, compared to the 18 percent of unoiled streams.[20]



A number of oiled sea otters were taken to otter recovery centers in Valdez and Seward to be cleaned. The ones which recovered were released. Otters also suffered through oiling of feeding sites or the necessity of finding other sites. Photo by Rob Schaeffer

Exxon frequently cited record pink harvests, especially in 1990 and 1991, as an indication that salmon stocks were not damaged by the spill. What is not well understood is that those harvests were of fish spawned in hatcheries, which were protected from the oil by booms and skimmers. Moreover, the catch was so far above levels of previous years simply because the hatcheries had just started producing fish; comparing wild harvests from 1988 with hatchery-dominated harvests is useful only from the standpoint of fisheries economics. As a matter of biology, the hatchery fish have nothing to do with the ability of wild fish to spawn — and eggs to survive — in the streambeds.

Other fish species suffered indirectly from the spill. In Prince William Sound, fishermen shut off from commercial salmon harvest due to oil on the water turned to unoiled areas of the Sound, and to different kinds of fish for harvest. Certain bottom fish, such as rockfish, were overfished that year as a formerly incidental commercial fishery turned into a significant one. But by far, the biggest indirect effect of the oil spill on fish occurred in Cook Inlet.

In Cook Inlet, red, or sockeye, salmon plugged the river systems because commercial fisheries in the inlet had been shut down due to oil on the water. The surfeit of salmon was a nightmare, in spawning terms. Reds spawn in lakes, and in 1989, so many reds made it to the lake to spawn that when eggs hatched to fry, there was a population explosion. There simply wasn't enough food to go around, and a massive die-off of fry resulted. Complicating the situation was the fact that over-escapement had been a problem in several of the previous years. So while the 1989 over-escapement might have been an isolated phenomenon of the oil spill, the results of the over-escapement exacerbated a developing problem in the Cook Inlet system.

The biological systems of Prince William Sound and the rest of the spill area were significantly upset by the initial oiling, continuing sublethal effects, and the disruption and displacement caused by cleanup.

And even natural weathering — billed as a passive alternative to cleanup — has its own negative effects. The mussel beds, once again, are the dominant example.

"In 1991 relatively high concentrations of oil were found in mussels and in the dense underlying mat (abyssal substrate) of certain oiled mussel beds. These beds were not cleaned or removed after the spill and are potential sources of fresh oil for harlequin ducks, black oystercatchers, river otters and juvenile sea otters — all of which feed

on mussels and show signs of continuing biological injury," the state and federal scientists reported in 1992.[21]

Researchers collecting soil samples from shallow subtidal areas in the spill area found that even in 1991, hydrocarbons were being mobilized off the beaches and winding up in the sediments. While the sediment samples do not suggest any specific damage to a certain species, the results of the study suggest that hydrocarbons can be moved to, and persist at, places that were not originally oiled. And as a federal study suggested in the spring of 1991, cleanup — especially high-pressure and hot water hoses used in 1989 — caused significant damage to intertidal plants and animals at various sites.[22]

Damage to other resources and services

While the focus of settlement agreements was damage to natural resources, services or activities directly tied to a damaged resource are eligible for restoration projects.



The problem for Prince William Sounds' naturally spawning salmon stocks lay with conditions at oiled streams. Eggs are laid in the gravel of intertidal areas. Damage assessment studies showed egg mortality was very high in oiled streams. Hatchery fish were not affected in the same way.

Photo by John Hyde

The most important activity to the residents of Prince William Sound and the Gulf of Alaska is the subsistence harvest of wild fish, game, and plants and animals that live along the shorelines. While virtually all of Alaska's residents are part of the cash economy, different people and villages participate to varying degrees. Subsistence patterns and habits are not static. They vary from village to village, and even season to season, depending on the availability of wild resources, the weather, commercial fishing success, the cultural cohesiveness of a community, and other factors. However, subsistence harvest and distribution of food remains, throughout the spill area, one of the dominant features of the local economy. From Tatitlek and Chenega Bay within the Sound, Port Graham and English Bay and Seldovia along the Kenai coast, and down to the handful of villages spread widely along the Kodiak Island and Alaska Peninsula coasts, subsistence harvest is an integral part of the diet, economy, and culture of the local residents.

The Alaska Department of Fish and Game's Division of Subsistence documented a substantial decline in both the overall subsistence harvest and the variety of plants and animals harvested in subsistence communities after the oil spill. The oil spill year, 1989, showed the most significant alterations or interruptions of subsistence harvests. However, subsequent surveys showed variances from normal subsistence patterns in 1990 and 1991 as well in some villages; residents continue to avoid certain kinds of foods, such as shellfish and other marine invertebrates.[23]

There has been displacement, as cleanup activities shouldered subsistence activities out of the way. And, of course, damage to intertidal communities, shellfish, and species higher on the trophic scale — harbor seals, for example — have disrupted certain aspects of subsistence harvest as well. However, the lingering damage, in many cases, is based on a perception of risk rather than an actual risk. The disruption in traditional subsistence patterns is a difficult problem to address, in terms of restoration, since a solution does not necessarily depend solely on wildlife or habitat management.

Archeological sites were another non-wildlife resource that suffered both damage and disruption from the spill and the cleanup. The entire spill region has been continu-

ally inhabited by Alaska Native peoples for at least hundreds of years, and probably considerably longer, depending on the specific area. Homesites, burial sites, and traditional camps are located throughout the area, and artifacts such as stone lamps and tools are common on state, federal, and private lands. The damage assessment teams have documented 35 historically significant sites that were damaged by oil,[24] but the greatest collateral damage to archeological resources might have occurred during the cleanup itself.

The disruption in traditional subsistence patterns is a difficult problem to address, in terms of restoration, since a solution does not necessarily depend solely on wildlife or habitat management.

State and federal agencies are extremely protective of archeological sites. In fact, in a departure from Alaska's general statutory policy of open government and availability of records, the commissioner of the Department of Natural Resources is allowed by law to keep archeological information confidential. The goal is to maintain the historical integrity of sites; by keeping site information confidential, looters or casual artifact "hunters" cannot target key sites.

Yet the presence of thousands of "visitors" in the region during the cleanup revealed, unintentionally, the location of many archeological sites. Exxon and the governments took active and preemptive measures to protect archeological sites, but in many cases, workers literally stumbled on archeological sites that had been previously undiscovered. In fact, the vast majority of documented archeological sites on Kodiak Island and the Alaska Peninsula were discovered and recorded due to shoreline cleanup surveys or work details. Like subsistence, some of the damage caused to archeological resources is measured in less tangible ways than damage to fish or birds; at many archeological sites, the damage is actually an increased threat of disruption due to wider public knowledge of the sites. The National Park Service has addressed this problem by adding rangers to oversee activity along the Katmai National Monument and Kenai Fjords National Park shores, but it is unclear if other steps can be taken through the Trustee Council.[25]

The Trustee Council has also identified damage to recreational sites or activities, either due to actual oiling or displacement. A final category of damage assessment involves damage to "intrinsic" values of state and federal lands with special designations, primarily wilderness. Both state and federal law set higher standards for habitat conservation and preservation within wilderness areas, such as Kachemak Bay State Wilderness Park, portions of which adjoin the Kenai Fjords National Park along the outer Kenai Peninsula coast. In addition to obvious sources of damage — residual oiling — the governments argue that the simple presence of cleanup crews within wilderness areas diminished, in some way, the special values society places on wild lands.

5.4 Criteria and restoration options

The Trustee Council has identified six general categories of restoration options:

a) No action;
b) Management of human uses;
c) Manipulation of resources;
d) Habitat protection and acquisition;
e) Acquisition of equivalent resources;
f) Various combinations of all five.

The "no action" option is self-explanatory. The Trustees would allow recovery to take place on its own, and a scientific monitoring program would track the progress over time.

Management of human uses would include actions such as better monitoring of archeological sites, changing harvest regulations for an injured species, keeping tour ships away from key nesting or rearing habitat at critical times of the year, and so on. The goal would be to minimize the usual range of human disruption so the injured resource has a better chance to recover, or so that the resource doesn't suffer further injury.

Manipulation of resources might include site-specific projects such as improving spawning habitat for sea-run trout or salmon, or making a damaged site more amenable to colonization by the kinds of plants removed or damaged by cleanup.

Habitat protection and acquisition could range from purchases of private lands to land management agreements with private parties or other government agencies. The goal, as in the management of human uses option, would be to optimize the chances for target species to recover by leaving their most important habitats undisturbed. Under this option, the purchase or acquisition of the land would be directly related to the recovery of an injured species. This differs from the acquisition of equivalent resources, which would be the simple replacement of a lost of damaged resource with land that provided "substantially similar services as the injured resource."[26]

From "no action" to land or habitat acquisition, the decisions facing the trustees fall partly within the realm of science and partly within the realm of public policy.

The first-year state-federal restoration budget of approximately $19 million was met with frustration from a spill-area public eager for some kind of action.

In some cases, no action may be the preferred option. The decision may be based largely on a scientific projection that shows recovery occurring naturally at a relatively acceptable rate. Or, no action may be the option because the incremental increase in recovery promised by a particular project is out of proportion to the amount of money and effort required to carry it off.[27]

The other four principal options will also be subject to a similar suite of somewhat subjective considerations. Does a project help more than one injured resource? Will a project that helps one resource hurt another? Does the public feel specific targets of restoration are more important than others? Is the remedy for a given injury within the realm of technical feasibility?

In short, the decisions before the trustees are very similar to the kinds of decisions cleanup officials had before them. Science provides the basis for analysis by identifying the injury and its extent, but public policy provides much of the basis for deciding how, when, and if money is spent on restoration. Public policy will also dictate how money is allocated among possible candidates for restoration.

The Trustees have thus far taken a conservative approach to approving expenditures from the trust fund. Much of staff and trustee time in the first few months after the October 1991 settlement was spent in discussion about the fate of continuing studies, and the need to do more or less. The Trustees generally came down on the side of spending less, directing the restoration staff to weed out studies that were not likely to produce strong proposals for action, reduce previously approved or expected budgets, and close out existing damage assessment projects.

Still, the first-year state-federal restoration budget of approximately $19 million was met with frustration from a spill-area public eager for some kind of action. The Trustees received criticism from local governments, Alaska Native residents, conservation groups and others who said the restoration money was being bled into the bureaucracy, or wasted on studies instead of action. Scientists outside the state-federal system complained that government researchers were stacking the program with their own studies, and not allowing fair access to restoration funds.

These criticisms are attributable, at least in part, to the fact the sudden settlement on October 8, 1991, thrust a little-known and somewhat speculative government planning operation into the public eye, and launched the program unexpectedly on the fast track. The schedule for completing damage assessment, to that time, was determined by the sequential progress of the science and the litigation plans of the attorneys. There was no deadline, other than the fact that the work had to be done in time for a court date somewhere in the future.

With the settlement, there was an immediate and intense expectation from the public that restoration was ready to begin. The damage assessment program deadline was now dictated by the expectations of the public and the policy decisions of the six trustees. Regardless of whether the science was progressing too slowly or too quickly, regardless of whether science managed by legal demands was better or worse than science driven by public policy, and regardless of whether the cost of the studies was too high, too low, or just about right — regardless of all this, the program had sud-

denly been presented with new management with new goals, and a new finish deadline set somewhat arbitrarily.

Faced with this new situation, the restoration staff and the Trustees set out a schedule for closing out the $100 million damage assessment program by spending $16.5 million on science in 1991-92, nearly all of it to pay for final reports from principal researchers. The Trustees set aside $1.7 million to pay for administration and planning, and another $700,000 for a public symposium in February, 1993, at which all the damage assessment information would be presented.

The approach of the first anniversary of the settlement in 1992 prompted a small protest outside the restoration offices in Anchorage and a media blast from a national conservation group, which charged the restoration was "mired in a tar pit of bureaucracy."[28] The stated reason for the negative publicity was the perceived unwillingness or reluctance of the Trustees to act on a general restoration strategy dominated by the purchase or acquisition of management rights on private lands within the spill area.

Habitat acquisition of some kind is, by far, the most popular proposal that has come before the Trustees. The Trustees set up a special working group to determine draft criteria for habitat acquisition, target areas for possible action, and so on.

The logic behind such a strategy was that by purchasing the land or the management rights to the land, critical habitats could be best protected. Most of the private land in the spill area had been selected by Alaska Native corporations for potential timber harvest; proponents of the land acquisition program argued that logging the region would slow recovery from the spill.

The proponents of timber rights or land acquisition have made their arguments both to the Trustees and to the state and federal governments directly. The first major set of acquisition proposals was included in House Bill 411, passed by the Alaska Legislature in May 1992. The Legislature proposed to spend the state's $50 million in criminal restitution money on a variety of spill-area projects, including timber buybacks in Prince William Sound, Kachemak Bay, and Afognak Island, the second largest island in the Kodiak archipelago. Governor Hickel vetoed the bill when it reached his desk on July 15, arguing that some of the projects were not directly related to damage caused by the spill. A similar measure worked its way through the Legislature in 1993, this time including funding for research on oil spill cleanup, habitat acquisition, and other restoration functions. The Governor signed this bill into law.

At the federal level, the proponents of timber buy-backs inserted into federal energy legislation a provision that would have required as much as 80 percent of the $900 million state-federal trust fund to be used for habitat acquisition. That provision was stripped from the bill in conference committee.

Habitat acquisition of some kind is, by far, the most popular proposal that has come before the Trustees. The Trustees set up a special working group to determine draft criteria for habitat acquisition, target areas for possible action, and so on. The team's efforts have resulted by 1993 in two major land purchases, one in Katchemak Bay, the other on Afognak Island in the Kodiak archipelago.

The first purchase was a 20,000-acre private inholding in Kachemak Bay State Park, a wilderness park at the tip of the Kenai Peninsula, and adjacent to Kenai Fjords National Park. The purchase used some settlement trust money and some from the state itself. The bulk of the more than $20 million came from the state's share of the Exxon criminal restitution, and money recovered by the state from Alyeska Pipeline Service Company, which settled its liability case with the state out of court. The Kachemak Bay buy-out had been on the table for more than 15 years, and involved a complex mix of surface rights, subsurface rights, and timber rights spread among two Alaska Native corporations, and a timber company comprised of several Alaska Native village corporations. The purchase ended speculation that large tracts of shoreside timber would be harvested in clear cuts directly across Kachemak Bay from Homer, a major tourism center.

The second major purchase involves nearly $40 million in settlement trust funds and 42,000 acres at Seal Bay and Tonki Cape on Afognak Island. The land, owned by a consortium of Alaska Native corporations, had been scheduled to be logged, as much of the commercial timber had already been at other locations on the island. The sites in question hold considerable intrinsic value, in terms of natural beauty, but the area also

contained high value nesting and rearing habitat for birds and other species that were injured by the oil spill. Purchasing the land is intended to preserve that habitat and allow injured species to recover more quickly, or at least without further major disruptions.

Habitat acquisition may also include conservation easements and other alternative land management agreements that do not necessarily result in fee-simply purchase of private land by the government.

Notes, Chapter 5

[1] *Governor Steve Cowper, personal communication, May-August 1989, June 1990.*

[2] *At least while they're in state waters, but that's another jurisdictional issue entirely.*

[3] *The governments made this approach formal on Aug. 28, 1991, in the Memorandum of Agreement and Consent Decree, filed in the US. District Court. The MOA settled claims the governments had against each other, and they agreed to act as "co-trustees in the collection and joint use of all natural resource damage recoveries resulting from the Exxon Valdez oil spill."*

[4] *Interestingly he announced publicly his intention not to seek a second term just minutes before he learned of the Exxon Valdez oil spill. Cowper was in Fairbanks on the morning of March 24, 1989, and shortly after 7 a.m. he told a reporter of his plans. It was then that the reporter asked him his thoughts about the oil spill. Cowper left almost immediately for Valdez.*

[5] *Deposition of Lawrence Rawl, June, 1992.*

[6] *The state has been involved in litigation with oil companies for more than a decade on a number of oil tax and transportation tariff disputes. These settle from time to time, such as the $72 million Trans-Alaska Pipeline tariff settlement of 1985 and a $243 million tax settlement with Arco Alaska in 1986. Because of the amount of money involved, these cases usually attract a good deal of public attention.*

[7] *Quoted in The Anchorage Times, April 17, 1991.*

[8] *Exxon press release, April 17, 1991.*

[9] *Exxon Valdez Oil Spill Trustees, "Restoration Framework," April 1992, p. 5.*

[10] *Regardless of the changes in funding for the cleanup dictated by the settlement, the "old "(i.e., pre-Oil Spill Pollution Act) system of response management still obtained: Exxon was the responsible party, working under federal and state oversight. Technically, the only way the federal government could release Exxon was if the federal on-scene coordinator determined Exxon was unwilling or unable to respond any further. This would have resulted in federalizing the spill, a move for which the federal on-scene coordinator saw little need or justification. The state was less concerned with this legal consideration, but saw no reason to make an issue of it at that point in the response.*

[11] *Piper, E., DEC, memorandum to Tillery, C., Alaska Dept. of Law, November 21, 1991. For a more complete discussion of the development and execution of this arrangement with Exxon, see Piper, and others, "Third Year Report," DEC, February 15, 1992.*

[12] *Precise figures for either year will not be available until Exxon actually submits its December 1992 payment, with full supporting documentation. The 1992 field estimate comes from the U.S. Coast Guard deputy on-scene coordinator in September 1992.*

[13] *The federal trustees have designated representatives, based in Alaska, who preside in their stead. The Alaska Regional Forester for the U.S. Forest Service represents Agriculture, a special assistant to the secretary represents Interior, and the Regional Director of the*

National Marine Fisheries Service represents the Department of Commerce.

[14] *The state attorney general sits on the Trustee Council, but staff work on the restoration team has been delegated to the Alaska Department of Natural Resources.*

[15] *Exxon Valdez Oil Spill Trustees, 1992 Draft Work Plan, April 1992 p.4.*

[16] *Some of what turned out to be the most beneficial and accurate predictions of oil movement after the spill were provided by a University of Alaska Fairbanks scientist who had been studying ocean currents in the Sound off and on over the years. He obtained much of his data through weather and perseverance: Whenever the university's research vessel was driven by weather into the Sound while on unrelated research, this scientists would turn the trip into an added research opportunity and collect data while waiting out the storm.*

[17] *Exxon Valdez Oil Spill Trustees, Restoration Framework, April 1992, p. 30.*

[18] *Ibid, p. 27.*

[19] *And underlying any of these points is the fact that seals are one of the species for which baseline population data was thin before the spill. The first full count of harbor seals in the area was done in 1991, two years after the spill.*

[20] *Trustees, Framework, p. 31.*

[21] *Ibid., p. 35.*

[22] *See Chapter 2, p. 63, Hot Water and High Pressure*

[23] *Fall, J. "The Exxon Valdez Oil Spill: Impacts on Subsistence Uses of Fish and Wildlife," Arctic Issues Digest, University of Alaska Fairbanks, October 1991. Fall and the subsistence division have updated some of this data in a draft paper of March 27, 1992.*

[24] *Trustees, Framework, p. 37.*

[25] *The extra rangers were funded through the federal Archeological Preservation Act, not through the Exxon Valdez restoration trust fund.*

[26] *Federal Register, March 1, 1991.*

[27] *The Framework document cautions that this is not intended to be "a straight cost-benefit analysis," but cost clearly can be a consideration.*

[28] *Sierra Club, press release, October 8, 1992, Washington, D.C.*

AS 46.08.030

Says:

It is the intent of the legislature and declared to be the public policy of the state that funds for the abatement of a release of oil or a hazardous substance will always be available. (§ 1 ch 59 SLA 1986)

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Sec. 46.08.040. Purposes of the fund. (a) The commissioner may use money from the fund to

(1) investigate and evaluate the release or threatened release of oil or a hazardous substance, and contain, clean up, and take other necessary action, such as monitoring and assessing, to address a release or threatened release of oil or a hazardous substance that poses an imminent and substantial threat to the public health or welfare, or to the environment;

(2) pay all costs incurred to

(A) establish and maintain the oil and hazardous substance response office;

(B) review oil discharge prevention and contingency plans submitted under AS 46.04.030;

(C) conduct training, response exercises, inspections, and tests, in order to verify equipment inventories and ability to prevent and respond to oil and hazardous substance release emergencies, and to undertake other activities intended to verify or establish the preparedness of the state, a municipality, or a party required by AS 46.04.030 to have an approved contingency plan to act in accordance with that plan; and

(D) verify or establish proof of financial responsibility required by AS 46.04.040;

(3) pay the expenses incurred by the Alaska division of emergency services for the oil and hazardous substance response corps and the oil and hazardous substance response depots when presented with appropriate documentation by the division;

(4) provide matching funds for participation in federal oil discharge cleanup activities and under 42 U.S.C. 9601 — 9657 (Comprehensive Environmental Response, Compensation, and Liability Act of 1980);

(5) recover the cost to the state or to a municipality of a containment and cleanup resulting from the release or the threatened release of oil or a hazardous substance;

(6) prepare, review, and revise

(A) the state's master oil and hazardous substance discharge prevention and contingency plan required by AS 46.04.200; and

(B) a regional master oil and hazardous substance discharge prevention and contingency plan required by AS 46.04.210; and

(7) restore the environment by addressing the effects of an oil or hazardous substance release.

(b) When the governor declares a disaster related to an oil or hazardous substance discharge emergency under AS 26.23.020(c), the governor may, during the effective period of the disaster emergency, use money from the fund to respond to the disaster emergency.

(c) Notwithstanding other provisions of this section, money from the fund may not be used for a purpose specified in (a)(2)-(7) of this section unless funds are available from an appropriation made specifically for that purpose.

(d) Upon a request from the Alaska Legislative Council, the commissioner shall use money from the fund to reimburse the Alaska Legislative Council for expenditures that it makes for the operation of the Citizens' Oversight Council on Oil and Other Hazardous Substances; established under AS 24.20.600. (§ 1 ch 59 SLA 1986; am § 3 ch 90 SLA 1989; am § 2 ch 113 SLA 1989; am §§ 14, 15 ch 190 SLA 1990; am § 28 ch 191 SLA 1990; am § 3 ch 199 SLA 1990)

Funding History - Division of Spill Prevention and Response

Prior to Fiscal Year 91 no permanent staff of DEC were charged directly to the Oil andd Hazardous Substance Release Response Fund (Response Fund). In FY90 and 91 DEC experienced large staff growth bringing existing programs to core level and adding additional staff associated with new legislation.
Beginning in FY 91 and continuing to present, general funding of the Spill Prevention and Response functions has been gradually elliminated. In addition, regional staff have been shifted from other projects to the Spill Prevention and Response projects commensurate with the work load in the respective regions.

STAFFING - FISCAL YEAR 89

FY 89 (est)	FTEs	Gen Fund	Resp Fund	Other Funds
SPPM	19.5	758.5	0.0	226.2
Csites	24.8	1,213.8	0.0	1,457.1
Total	44.3	1,972.3	0.0	1,683.3

LEGISLATION ENACTED 89 SESSION

SLA89 Chapter 29 SB256

Required Department of Law to seek cost recovery at the request of DEC.
Clarified Municipal reimbursements from Response Fund.

SLA 89 Chapter 39 HB68

Authorized DEC to use liens against property as security for State expenditures.

SLA 89 Chapter 112 SB260

Established nickel a barrel surcharge on regulated industry production.

SLA 89 Chapter 90 SB261

Required DEC to prepare and annually revise State Master Plan and Regional Plans.
Authorized DEC to use Response Fund to pay costs of State Master Plan and Regional Plans.
Expanded the uses of the Response Fund to include restoration of the environment by addressing the effects of a release or threatened release.

SLA 89 Chapter 113 SB264

Established Response Office in DEC for catastrophic or declared emergency spills.
Established emergency response equipment depots in DEC's response office.
Established emergency response volunteer corps in DEC's response office.
Expanded uses of Response Fund to pay for Response Office and Depot and Corps.

SLA 89 Chapter 41 SB271

Clarified civil penalty for the unpermitted discharge of oil and the failure to implement an oil discharge contingency plan.

STAFFING - FISCAL YEAR 90

FY 90 (est)	FTEs	Gen Fund	Resp Fund	Other Funds
SPPM	25.0	1,013.3	0.0	235.6
Csites	36.3	876.4	0.0	1,863.5
Total	61.3	1,889.7	0.0	2,099.1

Analysis of Staffing Change from FY 89 to FY 90

The FY90 operating budget request included a structural change from multiple components for individual programs such as Air, Oil, Water to the large single component Environmental Quality (EQ) Projects. The SPPM and Csites projects were included in the EQ Projects component.

Staff increased in the SPPM project in FY 90 due to DEC implementation of a multi year plan to increase staffing to core level necessary to meet statutory, regulatory and legislative intent requirements. Prior to these increases, DEC was not meeting those requirements. The FY 90 increment established a small capacity for spill response and seasonal positions to inspect tankers and facilities for compliance with contingency plan requirements.

Contaminated Sites staff increased in FY 90 due to inclusion of Kenai cleanup project staff previously funded as non permanent or in the CIP budget in the operating budget request. These staff identify and cleanup existing contaminated sites on the Kenai Peninsula which pose a threat to public health.

LEGISLATION ENACTED 90 SESSION

SLA90 Chapter 141 HB315

Categorized environmental crimes and determined appropriate level of criminal behavior for each.

SLA90 Chapter 142 HB316

Established the level of criminal damages to be assessed in fines against organizations for damages caused by environmental crimes.

SLA90 Chapter 190 HB566

Added incident command system requirement to State and Regional Plans.
Required DEC to use the State plan to designate depot and response corps locations .
Required DEC to submit the State master and Regional plans and revisions to the State Emergency Response Commission for review and approval.

Transferred responsibility to establish depots and corps to Division of Emergency Services.
Expanded uses of Response Fund to include DES reimbursement for depots and corps.
Established State Emergency Response Commission (SERC).
Established Local Emergrency Planning Committees(LEPCs).
Established Hazardous Substance Spill Technology Review Council (HSSTRC).

SLA90 Chapter 191 HB567

Required industry contingency plans to include prevention measures.
Added certification requirement for approved contingency plans.
Clarified proof of financial responsibility and limits liability for tank vessel or oil barge operations.
Clarified DEC inspections of regulated industries.
Established DEC participation in structural integrity of vessels, barges, pipelines and facilities.
Expanded uses of Response Fund to include:

Review of oil discharge prevention and contingency plans
Conduct training, response exercises, inspections and tests to verifiy inventories and ability of state, municipality or parties required to have an approved contingency plan
Verification of financial responsibility

SLA90 Chapter 199 HB578

Established Citizen's Oversight Council
Expanded uses of Response Fund to include Oversight Council costs.

STAFFING - FISCAL YEAR 91

FY 91 (est)	FTEs	Gen Fund	Resp Fund.	Other Funds
SPPM	72.0	1,860.1	3,203.6	0.0
SRO	14.0	0.0	2,703.5	0.0
Csites	41.0	457.8	715.1	1,804.3
Stg Tank Program	11.0	6,009.2	0.0	0.0
Total	138.0	8,327.1	6,622.2	1,804.3

Analysis of Staffing Change from FY 90 to FY 91

FY 91 was the final year of increments to bring the Spill Prevention and Response projects to core level funding. An increment was requested and approved for both the SPPM and Contaminated Sites projects.

The Spill Response Office and Storage Tank Assistance Program were identified as separate projects.

Funding was requested and approved for the Environmental Investigation and Enforcement unit. This unit is responsible for the specialized investigatory and legal resources associated with determination of responsible parties for a release or a contaminated site.

Fiscal notes were attached to HB 566 and HB 567 increasing staffing an additional 22 FTEs to provide resources to perform the additional work necessary to meet the statutory obligations enacted in HB 566 and HB 567.

Additiional staff were approved for the Prince William Sound District Office.

LEGISLATION ENACTED 91 SESSION

SLA91 Chapter 48 SB165

Expanded uses of Response Fund to include refurbishment or construction of marine response vessels.

SLA91 Chapter 83 SB25

Expanded uses of Response Fund to municipal grants.

SLA91 Chapter 31 HB194

Required the Board of Marine Pilots to cooperate with DEC in the review and approval of training programs for pilots of tanker vessels.

SLA91 Chapter 92 HB196

Required the Citizen's Oversight Council to submit a report on whether State laws for response action contractor civil liability and vessel contingency plan requirements should be amended.

SLA91 Chapter 09 SB263

Provided a one-year delay to June 1, 1992 for compliance of non crude oil operations with the financial responsibilities in AS 46.04.040.

Authorized DEC to issue interim approval for contingency plan amendments that substantially comply with the requirements of Chapter 191, SLA90.

STAFFING - FISCAL YEAR 92

FY 92 (est)	FTEs	Gen Fund	Resp Fund	Other Funds
Director	6.0	248.7	182.1	0.0
SPPM	69.0	981.8	4,661.5	77.0
SRO	14.0	0.0	1,107.5	0.0
Csites	40.0	414.8	1,182.4	1,949.4
Stg Tank Program	9.0	0.0	0.0	6,700.0
Total	138.0	1,645.3	7,133.5	8,726.4

Analysis of Staffing Change from FY 91 to FY 92

FY 92 budget structure recognized the creation of the Division of Spill Prevention and Response. The Director's Office and Storage Tank Program were separate components in the FY 92 budget request, but, the projects (SPPM, SRO and Csites) continued as a part of the EQ projects budget request.

Overall staffing levels did not increase, but, were re-aligned commensurate with the needed level of effort in the two components and three projects. The process of shifting funding for Spill Prevention and Response work from General Funds to Response Funds began in FY 92 with central office staff.

LEGISLATION ENACTED 92 SESSION

SLA92 Chapter 83 SB540

Required DEC to develop regulations governing the registration and approval of oil spill primary action contractors.

Required DEC to collect fees in the amount necessary to cover the costs of this program.

STAFFING - FISCAL YEAR 93

FY 93 (actual)	FTEs	Gen Fund	Resp Fund	Other Funds
Director	12.0	115.6	1,459.2	0.0
SPPM	72.5	90.8	9,027.5	0.0
Csites	53.5	351.8	4,717.1	2,582.7
Stg Tank Program	7.0	0.0	0.0	3,822.7
Total	145.0	558.2	15,203.8	6,405.4

Analysis of Staffing Change from FY 92 to FY 93

The FY 93 budget structure established the Division of Spill Prevention and Response as a separate BRU with the projects above as separate components. The Spill Response Office was decentralized with expert spill responders in each region. Administrative Support, Safety and Data Management were transferred from the programs to the Director's Office.

Staff were added for Response Fund Management (1), the Department of Defense cooperative agreement (2), Geographic Information Systems (1 - non perm) and the Leaking Underground Storage Tank program (1 - non perm).

Conversion of the Spill Prevention and Response effort from General Funds to Response Funds continued focusing on regional efforts leaving the Division with 393.0 in General Funds and 165.2 in General Fund Match.

STAFFING - FISCAL YEAR 94

FY 94 (request)	FTEs	Gen Fund	Resp Fund	Other Funds
Director	13.0	0.0	1,296.7	36.4
SPPM	75.2	0.0	8,105.2	225.0
CSites	57.2	165.2	3,727.5	2,225.0
Stg Tank Program	10.0	0.0	0.0	6,621.9
Total	155.4	165.2	13,129.4	9,108.3

Analysis of Staffing Change from FY 93 to FY 94

Non permanent staff previously off budget were included in the FY 94 budget request. Historically the department had not included those positions in budget requests and requested revised programs to move monies from contractual to personal services to pay for non perms.

Non permanent staff are included in the FY 94 operating budget request as follows:

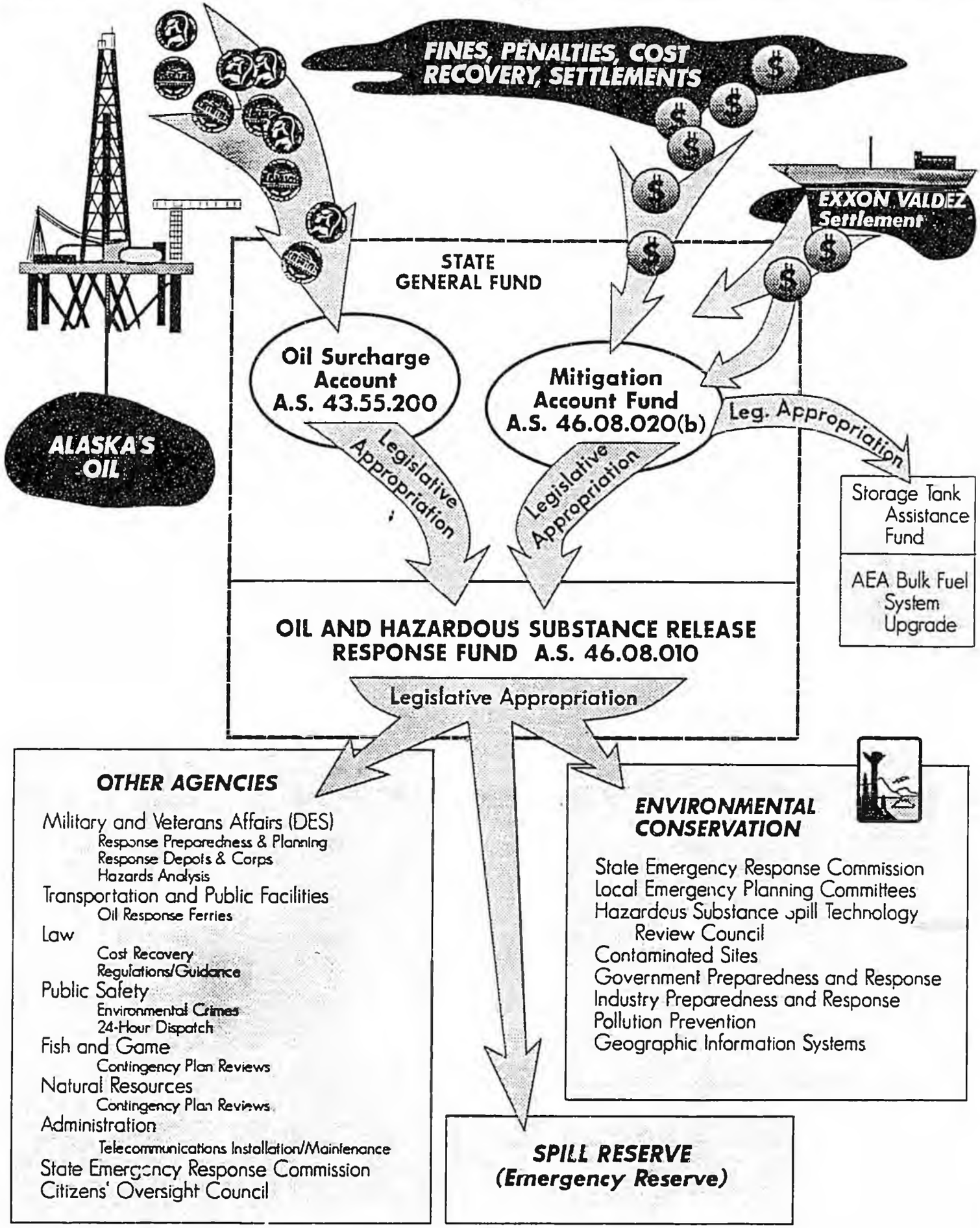
Director's Office - 1 Non Perm Student Intern
Spill Prevention Planning and Management - 1 Non Perm Environmental Specialist
Contaminated Sites - 3 Non Permanent Environmental Specialists
Storage Tank Program - 2 Environmental Specialists (seasonal) and 1 Clerk Typist (seasonal)

A permanent position was added in the Contaminated Sites Program (Site Discovery) and a long term non permanent position in the Underground Storage Tank Program was brought on budget as a permanent part time position.

Regional budgets included an additional .4 FTEs not previously assigned to Spill Prevention and Response projects.

All general funds were eliminated leaving 165.2 in general fund match in the budget request.

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Alaska's Oil and Hazardous Substance Release Response Fund

Prepared by ADEC 4/93

SPILL RESERVE EXPENDITURES BY FISCAL YEAR

(in thousands)

	FY 90	245.5
	FY 91	256.8
	FY 92	71.4
	FY 93	299.3
(to date 11/22)	FY 94	272.5
	TOTAL	1,145.5

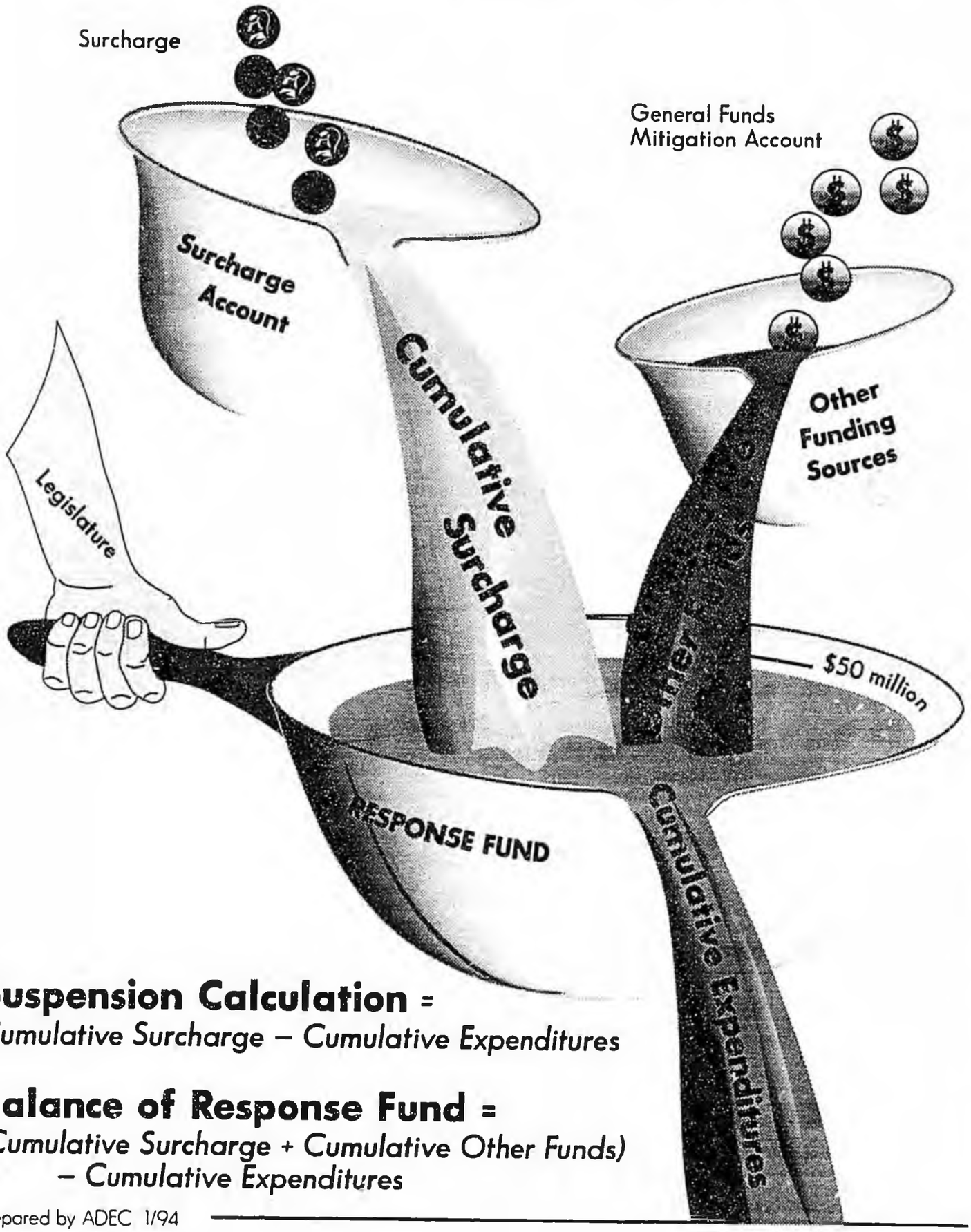
*note: Expenditures for FY 94 include 156.7 for Project Chariot which will be reimbursed by a federal grant.

SPILL RESERVE AS A PERCENTAGE OF TOTAL RESPONSE FUND EXPENDITURES

0.9 %

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SURCHARGE SUSPENSION vs. RESPONSE FUND BALANCE



Suspension Calculation =
Cumulative Surcharge – Cumulative Expenditures

Balance of Response Fund =
(Cumulative Surcharge + Cumulative Other Funds)
– Cumulative Expenditures

Prepared by ADEC 1/94

Response Fund Summary as of November 5, 1883

	AS 43.55.230(b) Calculation	Response Fund
Cummulative Surcharge Collected	112,085,145	109,200,000
Cummulative Expenditures	-127,190,873	-127,190,873
Difference	-15,105,728	-17,990,873
Cummulative Other Deposits		
General Fund	0	44,447,000
Program Receipts	0	30,000,000
Mitigation Account	0	5,007,800
Miscellanous/Accounts Receivable	0	-3,049,952
Reserve For Encumbrances	0	-8,690,862
Reserve For Capital Appropriations	0	-3,181,125
Reserve for FY 84 Operating Appropriations (Excluding Spill Reserve Appropriation)	0	-9,302,318
Balance or Spill Reserve	-15,105,728	37,229,869

OIL AND HAZARDOUS SUBSTANCE RELEASE RESPONSE FUND

Calculation of Current Available Balance of Spill Reserve (in thousands)

June 30, 1993 Balance Forward of the Unreserved/Unobligated Spill Reserve (This number reflects the amount of spill reserve available that is not encumbered or reserved for prior year authorizations. This amount lapsed at the end of FY93 to the Response Fund and was available for appropriation in FY94.)	27,084.1	
FY94 Appropriation of 5 Cent Surcharge to the Response Fund	+ 26,700.0	
FY94 Appropriation of Mitigation Account to the Response Fund	+ 661.2	
TOTAL AVAILABLE FOR FY94 APPROPRIATION		54,445.3
FY94 Appropriation DEC Budget	+ 11,513.6	
FY94 Appropriation DEC - Other Agencies	+ 2,569.4	
FY94 Capital Budget Appropriations	+ 2,774.0	
TOTAL FY94 APPROPRIATIONS		16,857.0
SPILL RESERVE AVAILABLE DURING FY94 (This number reflects the balance of the Response Fund after FY94 Appropriations are made by the Legislature.)		37,588.3
FY94 EXPENDITURES FROM SPILL RESERVE (This represents year-to-date (11/17/93) expenditures for emergency response to sites which pose an imminent and substantial threat to human health or the environment. A detailed listing of these sites is available. Please note that these are the only DEC expenditures made without legislative approval. Authority to expend funds from the spill reserve for emergency responses is found under AS 46.08.040(a)(1).)	-	155.2
SPILL RESERVE BALANCE AS OF 11/17/93		37,433.1

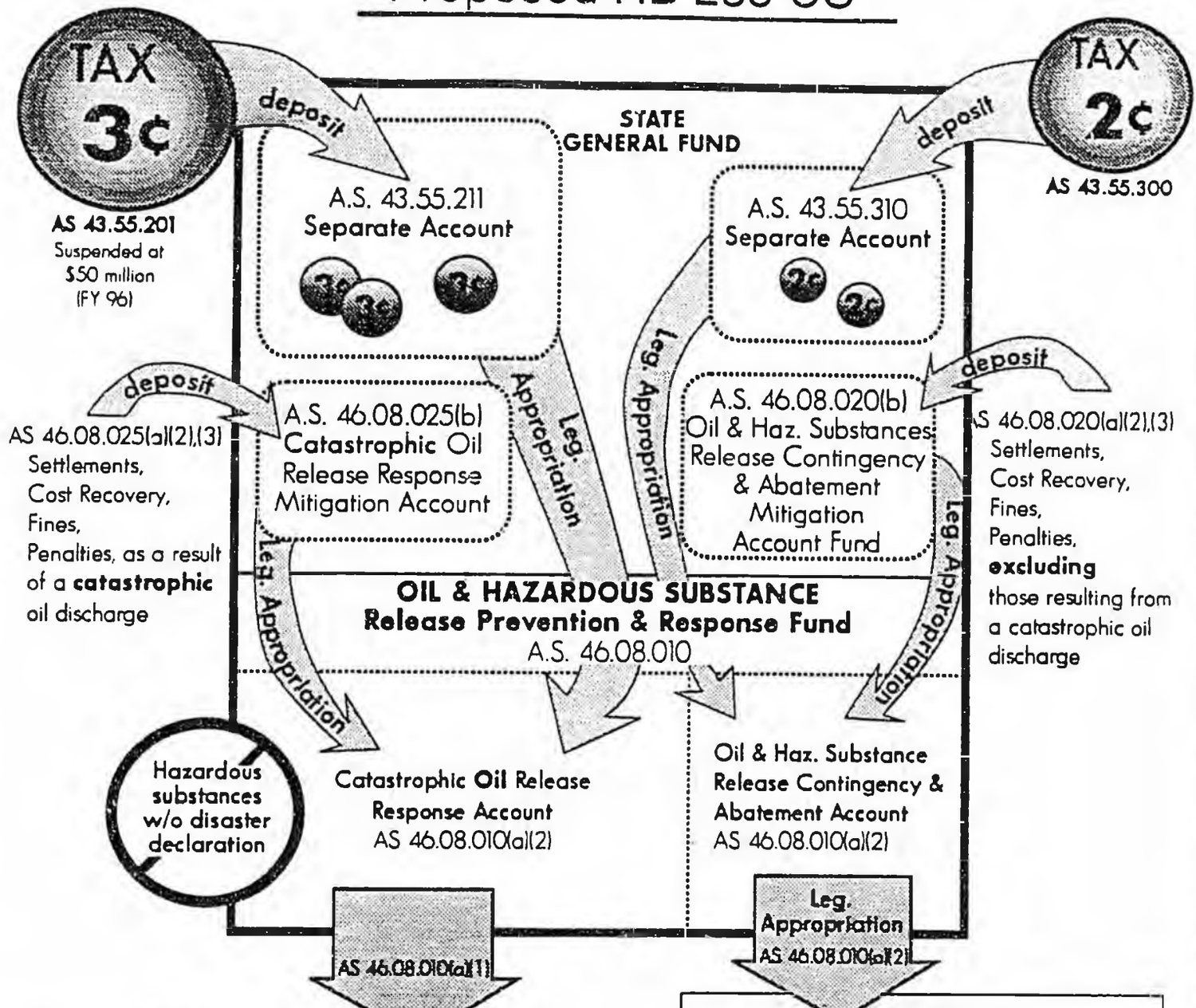
Response Fund Summary as of November 5, 1993

Surcharge Calculation Per AS 43.55.230(b)	-15,105,729
Excess Collected over Appropriated	-2,885,145
General Fund	44,447,000 1
Program Receipts	30,000,000 2
Mitigation Account	5,007,800
Miscellenous/Accounts Receivable	-3,049,952
Encumbrances	-6,690,882
Unobligated Capital Appropriations	-3,191,125
FY 94 Unobligated Operating Appropriations (Excluding Spill Reserve Appropriation)	-9,302,318
Spill Reserve	37,229,663

1 General Fund Deposit 1989 $42,600,000
General Fund Deposit 1988 $600,000
General Fund Deposit 1987 $825,000
General Fund Deposit 1986 $300,000
Beginning Fund Balance 1986 $222,000

2 Exxon Reimbursements 1989 and 1990

Proposed HB 238 CS



4,200,000 gallons!

30 day max. w/o concurrent resolution; may require special session

Accessed ONLY in the event of a catastrophic oil spill - over 100,000 barrels AS 46.04.900(2)(a)

OR

Declaration of a disaster emergency by the Governor - oil and hazardous substances AS 46.04.900(2)(b)

RESTORATION ???

~~RESEARCH & DEVELOPMENT~~

- Investigate and evaluate release or threatened release of oil or a hazardous substance (non-catastrophic)
- Cost recovery
- State master plan
- Oil and Hazardous Substance Response Office
- Contingency plan review
- Response preparedness and training
- Depots & corps DMVA/DES

RESTORATION ???

~~RESEARCH & DEVELOPMENT~~

Prepdred by ADEC 4/93

FY95 Response Fund Reauests				revised 12/14/93		
				h:\home\chrisu\all95rf.xls		
Calculation of Estimated FY95 Balance for Appropriation						
FY93 Unreserved Spill Reserve Balance (per balance sheet)					27,084.1	
FY94 $.05/barrel surcharge appropriation					26,700.0	
FY94 Mitigation Fund transfer to Response Fund					661.2	
AVAILABLE FOR FY94 APPROPRIATION					54,445.3	
LESS FY94 APPROPRIATIONS:						
FY94 CIP Authorized (Ch 79 SLA 93, sec. 19) (DOT/PF,DNR,UA,DMVA)					2,774.0	
FY94 Operating Budget (Ch65 SLA 93)					13,936.9	
ESTIMATED BALANCE FOR FY94 SPILL RESERVE					37,734.4	
LESS:						
Estimated FY94 Spill Reserve Use					325.0	
EST. FY95 UNRESERVED SPILL RESERVE BALANCE					37,409.4	
Estimated FY95 $.05/barrel Surcharge Appropriation					25,800.0	
EST. AVAILABLE FOR FY95 APPROPRIATION					63,209.4	
			FY95	FY95	FY94	Difference
			DEC to	Original	Budget	DEC/OMB
FY95 RESPONSE FUND BUDGET REQUESTS:			OMB	Request		vs. FY94
DEC - Spill Prevention and Response						
Director			980.7	976.3	976.3	4.4
Government Preparedness			4,067.4	4,082.3	4,082.3	-14.9
Industry Preparedness			2,351.9	2,445.1	2,311.1	40.8
Contaminated Sites			2,747.3	2,737.7	2,839.7	-92.4
Underground Storage Tanks			108.3	108.0	108.0	0.3
Subtotal - SPAR			10,255.6	10,349.4	10,317.4	-61.8
DEC - Administrative Services						
Fund Administration & Support			746.5	740.6	740.6	5.9
Subtotal - Admin Services			746.5	740.6	740.6	5.9
DEC - Environmental Quality						
Director's Office			123.0	0.0	0.0	123.0
Laboratory Operations & Maintenance			186.5	239.9	186.5	0.0
Program Development - Pollution Prevention			0.0	123.0	123.0	-123.0
Air Quality - Insitu Burning Support			0.0	74.0		0.0
Air Quality - Government Hill			0.0	312.6		0.0
Air Quality Emergency Response Monitoring			0.0	380.0		0.0
Subtotal - Environmental Quality			309.5	1,129.5	309.5	0.0
SUBTOTAL DEC			11,311.6	12,219.5	11,367.5	-55.9

	To OMB	FY95 Or.	FY94 Bu.	Diff.
DCRA - SERC	13.5	13.5	13.5	0.0
DMVA/DES - SERC	11.0	11.0	11.0	0.0
DMVA/DES - Response Preparedness & Planning	210.0	624.4	600.0	-390.0
DMVA - FY94 Capital Budget			1,078.0	-1,078.0
SUBTOTAL - DMVA	221.0	635.4	1,689.0	-1,468.0
DOA - PWS Communication System Maintenance	40.0	40.0		40.0
DOA - Two-way Radio Equipment Maintenance	20.0	20.0		20.0
SUBTOTAL - DOA	60.0	60.0		60.0
DOT/PF - SERC	6.5	6.5	6.5	0.0
DOT/PF - Anch. International North Airpark - Ball Brothers	0.0	309.8		0.0
DOT/PF - Bettles Airport "Old Shop"	0.0	36.5		0.0
DOT/PF - Northway Maintenance Station Site Assessmen	0.0	28.0		0.0
DOT/PF - FY94 Capital Budget			742.0	-742.0
SUBTOTAL - DOT/PF	6.5	380.8	748.5	-742.0
DF&G - SERC	6.5	2.5	6.5	0.0
DF&G - Industry Contingency Plan Reviews	45.4	45.4	62.9	-17.5
DF&G - State and Regional Master Plan	140.2	142.8	121.3	18.9
SUBTOTAL - DF&G	192.1	190.7	190.7	1.4
DH&SS - SERC	12.0	8.0	12.0	0.0
DH&SS - Response Training	50.0	105.0		50.0
SUBTOTAL - DH&SS	62.0	113.0	12.0	50.0
LABOR - SERC	9.5	9.5	9.5	0.0
LAW - Regional & Central Office	330.0	330.0	330.0	0.0
LAW - SERC Guidance	25.0	25.0	25.0	0.0
LAW - Exxon Valdez Project Litigation/Private Plaintiffs	151.6	350.0	350.0	-198.4
LAW - RP Identification, Enforcement & Cost Recovery	655.2	655.2	655.2	0.0
SUBTOTAL - LAW	1,161.8	1,360.2	1,360.2	-198.4

	To OMB	FY95 Or.	FY94 Bu.	Diff.
DNR - SERC	9.5	9.5	8.0	1.5
DNR - Industry Contingency Plan Reviews	92.5	92.5	54.3	38.2
DNR - State and Regional Master Plan	124.6	124.6	45.7	78.9
DNR - Isabel Pass Site	0.0	240.0		0.0
DNR - McGrath Airport Ramp	0.0	43.0		0.0
DNR - Goose Bay Site	0.0	371.1		0.0
DNR - Contingency Sites	0.0	233.0		0.0
DNR - FY94 Capital Budget			654.0	-654.0
SUBTOTAL - DNR	226.6	1,113.7	762.0	-535.4
DPS - Environmental Crimes	50.0		50.0	0.0
DPS - SERC	8.0		8.0	0.0
SUBTOTAL - DPS	58.0	0.0	58.0	0.0
U of A - Research	200.0		200.0	0.0
U of A - CIP			300.0	-300.0
SUBTOTAL - U of A	200.0	0.0	500.0	-300.0
Total DEC Response Fund Requests	11,311.6	12,219.5	11,367.5	-55.9
Total Other Agency Response Fund Requests	2,211.0	3,876.8	5,343.4	-3,132.4
GRAND TOTAL REQUESTS	13,522.6	16,096.3	16,710.9	-3,188.3
PROJECTED FY95 SPILL RESERVE	49,686.8	47,113.1		

Alaska's Oil and Hazardous Substance Release Response Fund

Legislative History, Operational Policies, Program Management and Use

Prepared for

Prince William Sound Regional Citizens' Advisory Council
Oil Spill Prevention and Response Committee

December, 1992

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EXECUTIVE SUMMARY

Alaska's Oil and Hazardous Substance Release Response Fund

Legislative History, Operational Policies, Program Management and Use

History of the Response Fund

The Alaska Legislature established the Oil and Hazardous Substance Release Response Fund (OHSRRF) in 1986 with passage of House Bill 470 (commonly referred to as the "470 Fund" or the "Response Fund").

The fundamental purposes of the original HB 470 legislation was to provide funding for:

1) the clean up of contaminated hazardous waste sites; and

2) prompt response to oil and hazardous substance spills.

Since the *Exxon Valdez* oil spill, the purposes and scope of the Response Fund have been substantially broadened. The most significant change was due to the passage of SB 260 (1989), legislation that established a five-cent-per-barrel conservation surcharge for every barrel of oil that is produced in Alaska. This resulted in a large increase in funding for available oil and hazardous substance response and strengthening the state's oil spill prevention and response programs. Since 1989, tens of millions of dollars have been expended annually through the OHSRRF.

Operational Policies

Policies governing use of the OHSRRF have evolved over the past several years in the form of policy memorandum and guidance documents. For an extended period following creation of the OHSRRF, there were very few written policies regarding access to, and use of, the OHSRRF. Over time the Response Fund balance grew, as did its proposed uses. This precipitated a need for formal written policies and procedures. There are presently five formal policy statements regarding the use of the OHSRRF:

- DEC Emergency Access
- Research
- Municipal and Village Reimbursement Advances and Grants
- Other State Agency Access; and
- State Emergency Response Commission Expenditures.

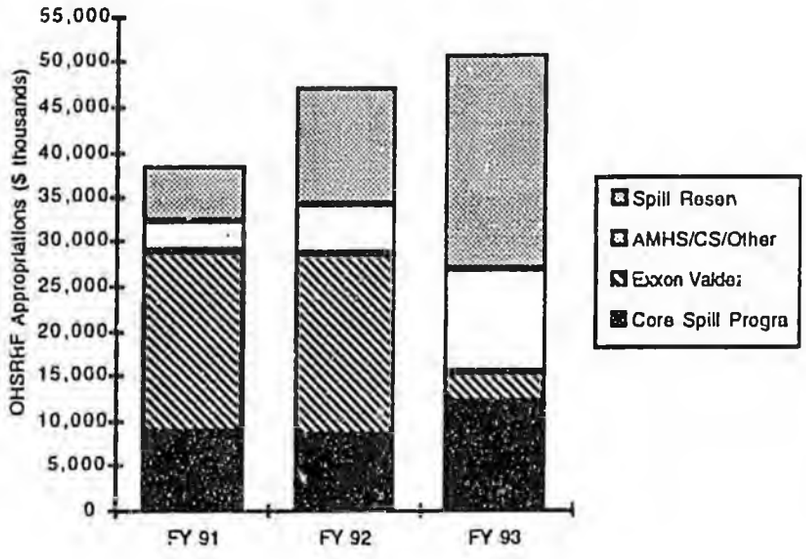
DEC has never developed containment and clean up guidelines as required by HB 470. In addition, guidelines involving cost recovery have not yet been developed.

Oil Spill Program Funding

Over the past several fiscal years, the Oil and Hazardous Substance Release Response Fund (OHSRRF) has become the primary source of funding for the state's oil pollution prevention and response programs.

As illustrated below, OHSRRF funding for the state's oil spill prevention and response programs has increased from approximately $8 million to $12 million between FY 91 and FY 93. (It should be noted that the actual funding and staffing levels for DEC's oil spill programs have remained relatively constant FY 91 - 93. The increased funding from the OHSRRF reflects the replacement of general fund dollars with Response Fund dollars as well as increased oil spill program funding for agencies other than DEC.) The size of the spill reserve has also increased.

Annual OHSRRF Appropriations FY 9



In addition to DEC, twelve state agencies have been funded with monies from the OHSRRF. These agencies have taken on roles in spill prevention and response since the *Exxon Valdez* spill, particularly in the area of contingency plan review, State Master and Regional Contingency Planning, and involvement with the State Emergency Response Commission (SERC). These program costs are reflected in the bar chart above.

Although substantial sums of money have been authorized for the response depots and corps program, very little progress has actually been made in implementing the program.

Comparison of annual expenditures for the state's core oil and hazardous substance response program is extremely difficult as a result of two major organizational and budgetary reorganizations undertaken during the Hickel Administration. Quantitative program performance objectives (such as number of annual spill drills, contingency plan reviews, vessel inspections, etc.) provide an essential measure by which to assess program performance. These performance objectives are critical to ensure that the state's oil spill prevention and response programs are adequate.

OHSRRF Funded Position Vacancies

A significant number of OHSRRF funded positions in the Spill Prevention and Response (SPAR) Division of DEC remain vacant. As of June 8, 1992, 213 DEC positions were eligible for funding, in part or whole, with OHSRRF monies. The vacancy factor has been especially high (14%) in the case of authorized full-time positions where 9 of 65 positions were not filled. As a budget matter, these vacancies are unnecessary because DEC's oil programs are funded through the OHSRRF dollars, rather than with general funds. (Because of statutory provisions governing use of the OHSRRF, reductions in expenditures from the OHSRRF will *not* result in increased general fund revenue for other state programs or projects.)

Audits and Fund Management Issues

In the past 18 months, two major audits of the OHSRRF have been prepared, one by DEC (May 1991) and a second by the Division of Legislative Audit (March 1992). Both audits documented substantial concerns regarding financial administration and control of the OHSRRF.

Department of Environmental Conservation's internal management audit concluded that "DEC needs to better manage the Response Fund." Major concerns identified by DEC internal audit included:

- Divided management authority over use of the OHSRRF
- Lack of an adequate cost recovery effort
- Lack of policy regarding OHSRRF equipment purchase and inventory

Approximately 10 months after the release of DEC's internal audit, the Legislature's Division of Legislative Audit (Legislative Audit) published a special audit on the DMVA/ADES Response Depots and Corps Program (March 1992). While this audit focused primarily on the depots and corps program, its findings reinforced some of DEC's own conclusions. In general, Legislative Audit found that budgetary information and accounting for the OHSRRF was "at best obscure, not readily accessible and not reliable without detailed analysis and audit." Although RSAs were executed between DMVA and DEC for both FY 91 and FY 92, Legislative Audit documented substantial deficiencies in the administration of these RSAs.

OHSRRF Use and Expenditure Issues

The present administration has indicated support for reducing expenditures from the Response Fund and increasing the size of the spill reserve. Substantial budget and staffing cuts to the state's core oil spill prevention and response programs have been recommended by the Hickel Administration.

The FY 93 Policy Budget (September 1991) initially proposed by DEC to the Governor's Office of Management and Budget called for total reductions of $898,000 by FY 95 and elimination of 14 PFT positions. In the case of each proposed reduction, the budget and staff cuts would have reduced expenditures from the OHSRRF. The final FY 93 DEC oil spill prevention and response program budgets adopted by the legislature differed substantially from the DEC FY 93 Policy Budget. Although substantial program cuts to the DEC FY 93 oil program budget were not adopted by the legislature, these same issues are certain to be revisited by the legislature during the 1993 legislative session.

The oil industry (subject to the $.05/barrel surcharge) has also advocated limiting expenditures from the OHSRRF in order to build the balance to $50 million and thereby suspend the surcharge.

Three case studies in the report demonstrate inconsistencies on the part of the DEC as it relates to providing funds to other agencies or projects from the OHSRRF. DEC has resisted use of OHSRRF monies for the Government Hill hydrocarbon monitoring project and for the Department of Fish and Game's participation in the state's oil spill programs. In contrast, OHSRRF funding has been transferred to the Alaska Division of Emergency Services for the response depots and corps program with little regard to detail about how funds will be used. These case studies illustrate the need for more involved legislative oversight of OHSRRF appropriations and uses.

What expenditures are appropriate from the OHSRRF and how quickly the OHSRRF balance should grow to $50 million are issues of continuing legislative debate. In the face of declining state general fund revenues, it is important to recognize that reductions in expenditures from the OHSRRF will *not* result in increased general fund revenue available for other state programs or projects.

Response Fund Revenue Projections

Future revenues from the $.05/barrel surcharge are essentially a function of future petroleum production. OHSRRF revenues from the surcharge are projected to decline from the current level of approximately $27 million per year to about $3.3 million per year by FY 2015. In addition to this revenue source, DEC estimates that an enhance cost recovery effort could yield an additional $4.5 million per year by FY 96 that would potentially be available to support OHSRRF programs. These revenue projections indicate that the OHSRRF should be able to support the state's core oil spill prevention and response programs to at least the year 2000.

Table 2
FY 90 Appropriations from the OHSRRF
(thousands $)

Oil Spill Prevention/Response — Program Funding		
SB 261/Master and Regional Contingency Plans		$ 461.9
SB 264/Response Depots and Corps		3,909.9
Oil Spill Programs - Subtotal:	$ 4,371.8	
Other OHSRRF Appropriations		
SB 247/*Exxon Valdez* oil spill (general funds)		10,000.0
SB 247/*Exxon Valdez* oil spill (program receipts)		10,000.0
Other Appropriations – Subtotal:	$ 20,000.0	
TOTAL FY 90 APPRORIATIONS		**$ 24,371.8**

Source: Chapter 116, SLA 89

Table 3
FY 91 Appropriations from the OHSRRF
(thousands $)

Oil Spill Prevention/Response — Program Funding		
State and regional contingency planning		$ 461.9
Response office, depots and corps		3,169.9
Spill response drills		740.0
Spill response, containment, safety, clean up & cost recovery		1,920.0
HB 566 fiscal note		550.0
HB 567 fiscal note (ADF&G)		156.5
HB 567 fiscal note (DEC)		1,371.0
HB 578 fiscal note		236.7
Oil Spill Programs - Subtotal:	$ 8,606.0	
Other OHSRRF Appropriations		
Site investigation safety, cleanup and cost rec v		$ 2,632.9
Kenai clean up project		940.0
Exxon Valdez project		8,707.3
Natural resource damage assessment		11,402.0
Other Appropriations – Subtotal:	$ 23,682.2	
Total FY 91 Program & Project Appropriations		$ 32,288.2
Spill Reserve Appropriation		6,026.0
TOTAL FY 91 APPROPRIATIONS		$ 38,314.2

Source: Chapter 209, SLA 90

Table 4
FY 92 Appropriations from the OHSRRF
(thousands $)

Oil Spill Prevention/Response — Program Funding	
DEC state and regional contingency planning	$ 395.9
DEC spill prevention, response, planning, safety cleanup and cost recovery	3,934.3
State Emergency Response Commission	299.9
Local emergency planning committees	600.0
DEC/DMVA response office depots and corps	2,911.4
Hazardous Substance Spill Technology Council	296.0
Oil Spill Programs - Subtotal: $ 8,437.5	
Other OHSRRF Appropriations	
Site investigation safety, cleanup and cost recovery	$ 3,655.0
Kenai clean up project	807.0
Exxon Valdez — spill clean up	4,126.0
Exxon Valdez — assessment and restoration	12,474.4
Exxon Valdez — litigation	3,653.1
Arctic Marine Resources Commission	100.0
AMHS oil response capable ferry (SB 165)	500.0
Citizens' Oversight Council	237.3
Alyeska ballast water treatment study	175.0
Other Appropriations - Subtotal: $ 25,727.8	
Total FY 92 Program & Project Appropriations	$ 34,165.3
Spill Reserve Appropriation	12,881.0
TOTAL FY 92 APPRORIATIONS	**$ 47,046.3**

Source: Chapter 73, SLA 91

Table 5
FY 93 Appropriations from the OHSRRF
(thousands $)

Oil Spill Prevention/Response — Program Funding		
DEC spill prevention planning and management		$ 6,021.2
State Emergency Response Commission		350.8
Local emergency planning committees		1,200.0
DEC spill response office		1,318.1
Hazards analysis		177.3
Geographic information system		689.3
Nearshore strike team demonstration project		1,200.0
Hazardous Substance Spill Technology Council		420.0
DMVA/response depots and corps		800.0
Oil Spill Programs - Subtotal:	$ 12,176.7	
Other OHSRRF Appropriations		
DEC contaminated sites program		$ 3,528.6
Exxon Valdez litigation		2,968.0
Exxon Valdez clean up and cost recovery		350.0
Arctic Marine Resources Commission		100.0
AMHS oil response capable ferry		7,500.0
Citizen's Oversight Council		237.3
Other Appropriations – Subtotal:	$ 14,683.9	
Total FY 93 Program & Project Appropriations		$ 26,860.6
Spill Reserve Appropriation		$ 23,656.7
TOTAL FY 93 APPRORIATIONS		**$ 50,517.3**

Source: Chapter 136, SLA 92

Table 6
DEC Oil Spill Prevention & Response Programs
Budget & Staffing Levels: FY 91 - 93

Program/Budget Component	FY 91 Auth.	FY 92 Auth.(*)	FY 93 Policy Budget(*)	FY 93 Approved
SPAR Director				
Funding ($000s)	n/a	430.8	570.0	484.7
Staffing (PFT)	n/a	6 PFT	6 PFT	7 PFT
Spill Response Office				
Funding ($000s)	2,703.5	1,037.0	2,950.0	1,025.6
Staffing (PFT)	14 PFT	13 PFT	26 PFT	11 PFT
Spill Prevention, Planning & Management				
Funding ($000s)	5,063.7	5,688.9	4,205.0	5,448.2
Staffing (PFT)	72 PFT	69 PFT	55 PFT	70 PFT
TOTAL	7,767.2	7,156.7	7,725.0	6,958.5
	86 PFT	88 PFT	87 PFT	88 PFT

(*) As documented in FY 93 Policy Budget (October 15, 1991) transmitted from J. Sandor to S. Stastny.
n/a SPAR Director's Office not established in FY 91.

Sources:
J. Sandor to S. Stastny, "FY 93 - 95 Policy Budget" (October 15, 1991).
FY 93 Conference Committee close out Short Form (computer run dated 5/15/92).
FY 92 P1 and P2 Project Detail Forms

Table 7
Oil & Hazardous Substance Release Response Fund
DEC Staff Position Funding
(as of June 8, 1992)

OHSRRF Funded (%)	No. Pos.	Pos. Vacant	Vacancy (%)
100% OHSRRF	65	9	14%
75-99% OHSRRF	13	1	8%
50-74% OHSRRF	14	0	0%
25-49% OHSRRF	33	2	6%
< 25% OHRSSF	88	4	5%
TOTAL	213	16	7.5%

Source: DEC spreadsheet "SPAR FY 93 Positions Funded by OHSRRF" June 8, 1992

Table 8
Oil Spill Prevention and Response Program
Performance Objectives

Performance Objective	FY 90 Actual	FY 91 Actual	FY 92 Actual	FY 93 Request
Spill Drills	7 (a)	71 (b)	101 (c)	106 (c)
C-Plan Review/Approval*	53 (a)	97 (d)	79 (e)	183 (c)
Facility Inspections	n/a	112 (d)	139 (e)	142 (c)
Vessel Inspections	n/a	75 (d)	98 (e)	73 (c)
Financial Responsibility	450 (a)	475 (d)	350 (e)	475 (c)
Respond Oil/HazMat Spills	300 (a)	450 (d)	701 (e)	875 (c)
Enforcement Actions (for spills greater than 10,000 gal)	24 (a)	15 (d)	87 (e)**	15 (c)

(a) FY 92 B3/B4 BRU Environmental Quality Projects Strategy and Performance Plans.

(b) OHSRRF Annual Report for Fiscal Year 1991. The level of drills varied ranging from "tabletop" or telephone drills to actual deployment and operation of response equipment.

(c) FY 93 Spill Prevention and Response B3/B4 "BRU Strategy Performance Plans" (11/15/91).

(d) Estimated from FY 91 "current year plan" as reported in FY 92 B3/B4 BRU Environmental Quality Projects Strategy and Performance Plans

(e) Larry Deittrick/DEC Government Preparedness and Response , personal commmunication.

* Includes C-plan reviews for OCS facilities.

** The apparent increase in enforcement actions is attibutable to a broad definition of "enforcement" to include all types of enforcement activity ranging from Notice of Violation to actual enforcement.

n/a Not available.

Sources:

OHSRRF Annual Report for Fiscal Year 1991.
FY 92 B3/B4 BRU Environmental Quality Projects Strategy and Performance Plans
FY 93 Spill Prevention and Response B3/B4 "BRU Strategy Performance Plans" (11/15/91).

Table 9
FY 93 OHSRRF Agency RSAs

Agency	FY 93 Request	Actual FY 93 RSA
Military & Veterans Affairs	$ 5,000,000	$ 800,000
Fish & Game	258,000	202,200
Health & Social Services	161,500	7,500
Natural Resources	108,704	28,900
Law	3,653,100	3,383,000
Labor	4,000	5,000
Community & Regional Affairs	11,000	5,000
TOTAL	$ 9,196,304	$ 4,431,600

Table 10
Emergency Response Depots & Corps
OHSRRF Appropriation History

Fiscal Year	Appropriation	DEC Response Office Expend/Encumb	DMVA Depots & Corps Expend/Encumb	Lapsed Funds
FY 90	$3,909,900	$349,425	$ 0	$3,560,475
FY 91	3,169,900	883,646	203,520	2,082,734
FY 92	2,911,400	441,126	324,930	n/a
FY 93	800,000 *	n/a	n/a	n/a

n/a — Not available.
* In addition to these funds, a separate appropriation of $1.2 million was made to DEC for the nearshore strike team demonstration project.

Source:s
OHSRRF Annual Report, Fiscal Years 1990 and 1991.
Division of Legislative Audit, Audit Number 18-4429-92 (March 17 1992)

Table 11
Future OHSRRF Revenue
from the Nickel-per-Barrel Surcharge
Mid-Range Production Forecast
($ million)

FY 93	26.7
FY 94	26.5
FY 95	26.0
FY 96	24.8
FY 97	22.7
FY 98	20.6
FY 99	18.3
FY 00	16.1
FY 05	9.4
FY 10	5.1
FY 15	3.3

Source: DEC "A Strategic Plan for the Oil and Hazardous Substance Release Response Fund" (April 1992)

CES

California adopts tough spill law

25-cent per-barrel tax finances $100 million oil-spill cleanup fund

By JERRY GILLAM
Los Angeles Times

SACRAMENTO — Saying "an ounce of prevention would certainly be worth a barrel of spilled crude oil," California Gov. George Deukmejian on Saturday signed into law the most comprehensive offshore oil-spill prevention and cleanup plan in the nation.

In his regular weekly radio address, the governor said the new law "will give California an unprecedented ability to prevent spills before they happen and to fight the effects of spills if they do occur."

The statute, which takes effect immediately, is a direct result of the Exxon Valdez oil spill in Alaska last year and the British Petroleum tanker spill off Huntington Beach, Calif., in February.

Generally viewed as one of the major achievements of the recently concluded legislative session, it would create a $100 million oil-spill cleanup fund to be financed by placing an additional tax of 25 cents on each barrel of oil, which is expected to add less than a cent per gallon of gasoline sold at the pump.

In the event of a spill, the state also would be given unlimited authority to borrow additional funds for cleanup operations that would be repaid by the oil companies.

The governor is given the power to appoint a state oil-spill "czar" or response administrator who will be charged with setting up a detailed comprehensive plan for the safe transportation of oil along California's coast.

These steps are expected to include surprise inspections of tankers and terminals, up-to-date safety plans for refineries, use of radar for tanker traffic, and requiring tugboat escorts in hazardous waters.

Oil companies transporting their product through state waters also must be able to demonstrate that they have $500 million worth of oil-spill liability insurance protection.

For the first 60 days following a spill, cleanup crews will be immune from lawsuits for property damage they may cause. Oil industry representatives contend immunity from liability for professional cleanup crews is necessary because they must act quickly to prevent the spill from spreading and should not be inhibited by fears they might get sued.

In his radio speech, Deukmejian said: "As everyone knows, the price of an oil spill is measured not only in miles of polluted beaches, but also in the tax dollars that must be expended to clean up the mess.

"In the case of oil spills, an ounce of prevention would certainly be worth a barrel of spilled crude oil."