Final
13 December 2006

Second Five-Year Review of Records of Decision

Former Adak Naval Complex
Adak, Alaska

Department of the Navy
Naval Facilities Engineering Command Northwest
1101 Tautog Circle
Silverdale, WA 98315

EXECUTIVE SUMMARY

As lead agency for environmental cleanup of the former Adak Naval Complex, Adak Island, Alaska, the U.S. Navy has completed the second 5-year review of the remedial actions at Operable Unit A (OU A) and OU B-1 conducted pursuant to Section 121(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 Code of Federal Regulations Part 300). The purpose of this 5-year review is to ensure that the remedial actions selected in the Records of Decision (RODs) for OU A and OU B-1 at Adak remain protective of human health and the environment. A 5-year review is required for this site, because the remedies allow contaminants to remain in place at concentrations that do not allow unlimited site use and unrestricted exposure. This second 5-year review was prepared in accordance with *Navy/Marine Corps Policy for Conducting Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Statutory Five-Year Reviews*, November 2001 (Revised May 2004) and the U.S. Environmental Protection Agency's *Comprehensive Five-Year Review Guidance* (OSWER 9355.7-03B-P, June 2001). This 5-year review evaluates data collected at the site from May 2001 through September 2005.

The protectiveness of the remedies for the OU A sites is discussed in this report by grouping the sites into categories of protectiveness. Most of the 178 OU A sites fall into the categories of either "remedy is complete and protective," or "remedy is operating and is expected to be protective." Sites in these two categories are tabulated by name in Section 9.

The remedies for six of the OU A sites are concluded to be "not complete, but expected to be protective." These six sites are:

- ASR-8 Facility
- SA 77, Fuels Facility Refueling Dock, Small Drums Storage Area
- NMCB Building T-1416 Expanded Area
- South of Runway 18-36 Area
- SWMU 17, Power Plant 3
- SWMU 62, New Housing Fuel Leak

Limited soil removal is needed at two of these sites (ASR-8 Facility and SA 77, Fuels Facility Refueling Dock, Small Drums Storage Area), and implementation of the State-Adak Environmental Restoration Agreement (SAERA) final remedy is needed at the remaining four of these sites (NMCB Building T-1416 Expanded Area; South of Runway 18-36 Area; SWMU 17, Power Plant 3; and SWMU 62, New Housing Fuel Leak).

Three of the OU A sites require follow-up actions to ensure the future protectiveness of the final remedy. These three sites are:

- NORPAC Hill Seep Area
- SA 88, P-70 Energy Generator, UST 10578
- SWMU 61, Tank Farm B

The recommended follow-up actions include re-evaluating the appropriateness of the limited groundwater remedy at SA 88, P-70 Energy Generator, UST 10578 in light of the most recent data and adding visual inspection for seeps and sheens to the NORPAC Hill Seep Area and SWMU 61, Tank Farm B annual monitoring protocol for protection of surface water.

The remedy for OU B-1 is expected to be protective of human health and the environment upon completion. In the interim, exposure pathways that could result in unacceptable risks are being controlled through interim measures, including access restrictions and ordnance awareness training programs. Completion of the OU B-1 remedy at four sites is pending regulatory concurrence on a revised remedial approach. These four sites are:

- Lake Jean Ammunition Complex, LJ-01
- Mount Moffett, MM-10F
- Mount Moffett, MM-10G
- Mount Moffett, MM-10H

In addition, completion of the OU B-1 remedy implemented at 16 sites during the 2004 field season is pending regulatory concurrence.

The future remedy for OU B-2 is expected to be protective when selected and implemented. OU B-2 is in the remedial investigation/feasibility study stage, and munitions and explosives of concern (MEC) may be present. Interim measures (including the MEC awareness training program institutional controls and engineering controls [access barriers, signs, and fences]) are in place to protect human health and the environment.

Five-Year Review Summary Form

SITE IDENTIFICATION

Site name *(from WasteLAN)*: Adak Naval Air Station

EPA ID *(from WasteLAN)*: 110009457097

Region: 10	**State:** AK	**City/County:** Aleutians West

SITE STATUS

NPL status: Final **X** Deleted Other (specify)_____

Remediation status (choose all that apply): Under Construction **X** Operating **X** Complete **X**

Multiple OUs?* YES **X** NO	**Construction completion date:** not completed as of 12/31/05

Has site been put into reuse? YES **X** NO

REVIEW STATUS

Lead agency: EPA State Tribe Other Federal Agency: Navy

Author name: Mark Wicklein

Author title: Remedial Project Manager	**Author affiliation:** Naval Facilities Engineering Command Northwest

Review period:** June 2005 to August 2006

Date(s) of site inspection: October 2002, October 2003, September 2004, September 2005

Type of review:

Post-SARA **X** Pre-SARA NPL-Removal only
Non-NPL Remedial Action Site NPL State/Tribe-lead
Regional Discretion

Review number: 2 (second)

Triggering action:

Actual RA Onsite Construction at OU 1 ~~Actual RA Start at OU 1~~
Construction Completion Previous Five-Year Review Report
Other (specify):_____

Triggering action date *(from WasteLAN)*: December 2001

Due date *(five years after triggering action date)*: December 2006

*["OU" refers to operable unit.]

**[Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.]

Five-Year Review Summary Form (Cont'd)

Issues:

- The endpoint criteria being used to evaluate sediment concentrations at Solid Waste Management Unit (SWMU) 11, Palisades Landfill, are likely unnecessarily restrictive and should be revised to more closely reflect potential health risks from sediment exposures at SWMU 11.
- The Operable Unit A (OU A) Record of Decision (ROD) remedy is not complete at the ASR-8 Facility and Source Area (SA) 77, Fuels Facility Refueling Dock, Small Drums Storage Area sites.
- The OU B-1 ROD remedy is not complete at sites in the Mount Moffett area, and the regulatory agencies have not concurred with the remedial actions implemented during 2004.
- The ordnance awareness training program is not fully functioning as intended by the Record of Decision.
- Land use controls are not fully functioning at the OU B sites.
- Issues related to communication with stakeholders were raised by the interviewees during this 5-year review and by interviewees during the 2005 institutional controls (ICs) inspections.
- The Alaska Department of Transportation and Public Facilities (ADOT&PF) noted a need for written excavation procedures for the airport.
- Free product found in one surface water protection well at the NORPAC Hill Seep Area site in 2005 could indicate a threat to surface water.
- The final remedy for site SA 88, P-70 Energy Generator is unlikely to function as anticipated, based on the free-product thicknesses measured in wells at the site during 2005.
- Gasoline-range organics and benzene levels in groundwater samples from surface water protection wells at SWMU 61, Tank Farm B, could indicate a threat to surface water.

Recommendations and Follow-Up Actions:

- Revise endpoint criteria used to evaluate sediment concentrations at SWMU 11, Palisades Landfill, to more closely reflect potential health risks from sediment exposures at SWMU 11.
- Complete limited soil removal component of OU A remedy at the ASR-8 Facility and SA 77, Fuels Facility Refueling Dock, Small Drums Storage Area sites.
- Evaluate, select, and implement additional land use controls to protect human health at OU B-1 and OU B-2 sites, where the selected remedy is not complete, while a remedy is selected (OU B-2) and a revised remedy is evaluated (OU B-1). Incorporate the selected land use controls in the next revision of the Institutional Control Management Plan (ICMP).
- Resolve with regulators the munitions and explosives of concern (MEC) clearance approach for Mount Moffett sites and the issues related to the 2004 After Action Report for OU B-1 remedy implementation.
- Continue to improve the ordnance awareness training programs.
- Provide a sufficient supply of ordnance awareness hiking maps at the Refuge.
- Address communication issues raised by stakeholders:
    - Ensure that ordnance discoveries and disposition are fully communicated to regulators.
    - Ensure that key project documents are distributed to all stakeholders.
    - Strive for improved dissemination of information to the public. Refer to public interview responses for specific suggestions, such as report summaries presented in lay terms.

Five-Year Review Summary Form (Cont'd)

Recommendations and Follow-Up Actions (Continued):

- Increase information provided to the public regarding issues raised during the interview process (such as the Palisades and Metals Landfills).
- Increase public awareness of the fishing advisory through improved dissemination of information.

- Work with ADOT&PF to resolve their concern regarding written excavation procedures for the airport.
- Because of the free product measured in the surface water protection well at the NORPAC Hill Seep Area site in 2005, add visual inspections for seeps and sheens to the annual monitoring protocol starting in 2006.
- Re-evaluate the selected final remedy for site SA 88, P-70 Energy Generator, considering the free product measured in wells at this site in 2005.
- Visual inspection of the shoreline and surface water for petroleum seeps and sheens is recommended at SWMU 61 in the vicinity of wells 14-113 and 14-210.
- Implement repairs and improvements recommended as a result of the 2005 IC inspections at SWMUs 2, 4, 13, 25 and 29.

Protectiveness Statement(s):

The protectiveness of the remedies for the OU A sites is discussed in this report by grouping the sites into categories of protectiveness. Most of the 178 OU A sites fall into the categories of either "remedy is complete and protective," or "remedy is operating and is expected to be protective." The remedies for six of the OU A sites (ASR-8 Facility; SA 77, Fuels Facility Refueling Dock, Small Drums Storage Area; NMCB Building T-1416 Expanded Area; South of Runway 18-36 Area; SWMU 17, Power Plant 3; and SWMU 62, New Housing Fuel Leak) are concluded to be "not complete, but expected to be protective." Limited soil removal is needed at two of these sites (ASR-8 Facility and SA 77, Fuels Facility Refueling Dock, Small Drums Storage Area), and implementation of the final remedy is needed at the remaining four of these sites (NMCB Building T-1416 Expanded Area; South of Runway 18-36 Area; SWMU 17, Power Plant 3; and SWMU 62, New Housing Fuel Leak). Three of the OU A sites (NORPAC Hill Seep Area , SA 88, P-70 Energy Generator, and SWMU 61, Tank Farm B) require follow-up actions to ensure the future protectiveness of the final remedy. The recommended follow-up actions include re-evaluating the appropriateness of the limited groundwater remedy at SA 88, P-70 Energy Generator, in light of the most recent data, and adding visual inspection for seeps and sheens to the NORPAC Hill Seep Area and SWMU 61 annual monitoring protocol for protection of surface water.

The remedy for OU B-1 is expected to be protective of human health and the environment upon completion. In the interim, additional measures are needed to control exposure pathways that could result in unacceptable risks. As recommended in Section 8, the Navy should maintain an ongoing improvement effort for the ordnance awareness training program. The Navy should also evaluate, select, and implement additional land use controls to protect human health at OU B-1 sites where the selected remedy is not complete. The Navy should incorporate the selected land use controls in the next revision of the ICMP.

Completion of the OU B-1 remedy is pending stakeholder concurrence on a revised remedial approach for the Mount Moffett sites and resolution of issues regarding the 2004 after action report. The remedy, once completed, is expected to be protective.

The remedy for OU B-2, when selected in the future ROD, is expected to be protective. In the interim, additional measures are needed to control exposure pathways that could result in unacceptable risks. As recommended in Section 8, the Navy should maintain an ongoing improvement effort for the ordnance awareness training program. The Navy should also evaluate, select, and implement additional land use controls to protect human health at OU B-2 sites. The Navy should incorporate the selected land use controls in the next revision of the ICMP.

Five-Year Review Summary Form (Cont'd)

Other Comments:

The Navy is in the process of completing a Remedial Action Completion Report for soil, sediment, and fresh surface water related to the Comprehensive Environmental Response, Compensation, and Liability Act sites at OU A and soils in OU B-1. This report will be used by U.S. Environmental Protection Agency as the main documentation necessary to remove large portions of OU A by media and the majority of OU B-1 from the National Priorities List (NPL). Deletion from the NPL indicates that cleanup actions are complete and that remediation goals have been met. Therefore, the portions of the site that have been deleted from the NPL are available for reuse. Groundwater and marine surface water are not being proposed for deletion at this time.

CONTENTS

CONTENTS (Continued)

CONTENTS (Continued)

CONTENTS (Continued)

APPENDICES [Included on CD attached to back cover]

CONTENTS (Continued)

FIGURES

CONTENTS (Continued)

FIGURES (Continued)

TABLES

ABBREVIATIONS AND ACRONYMS

AAC	Alaska Administrative Code
ACL	alternative cleanup level
ADOT&PF	Alaska Department of Transportation and Public Facilities
A/PIA	Aleutian/Pribilof Island Association
ARAR	applicable or relevant and appropriate requirement
ARC	Adak Reuse Corporation
AST	aboveground storage tanks
avgas	aviation gasoline
BEQ	bachelor enlisted quarters
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CMP	Comprehensive Monitoring Plan
COC	chemical of concern
cPAH	carcinogenic polycyclic aromatic hydrocarbons
CRP	Community Relations Plan
DCE	dichloroethene
DEC	Department of Environmental Conservation (State of Alaska)
DEM	downgradient exposure medium
DIN	dissolved inorganics
DRMO	Defense Reutilization Marketing Office
DRO	diesel-range organics
EC	engineering control
EPA	U.S. Environmental Protection Agency
ERL	effects range low
ERM	effects range medium
ESHA	explosives safety hazard assessment
FCT	field-constructed tank
FFA	Federal Facility Agreement
FFCA	Federal Facilities Compliance Agreement
FR	Federal Register
FS	feasibility study
GRO	gasoline-range organics
HI	hazard index
HWSF	Hazardous Waste Container Storage Facility
IC	institutional control

ABBREVIATIONS AND ACRONYMS (Continued)

ICMP	Institutional Control Management Plan
IRIS	Integrated Risk information System
JP-5	jet petroleum No. 5
loran	long-range navigation
LPAH	low-molecular-weight polycyclic aromatic hydrocarbons
MAUW	Modified Advanced Underwater Weapons
MCL	maximum contaminant level
MEC	munitions and explosives of concern
µg/kg	microgram per kilogram
µg/L	microgram per liter
mg/kg	milligram per kilogram
mg/L	milligram per liter
MLLW	mean lower low water
mogas	motor gasoline
msl	mean sea level
MW	monitoring well
NAF	Naval Air Facility
NAP	natural attenuation parameter
NAVFAC NW	Naval Facilities Engineering Command Northwest
Navy	U.S. Navy
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEX	Navy Exchange Building
NFA	No Further Action (abbreviation used in OU A ROD)
NFRAP	No Further Remedial Action Planned
NMCB	Naval Marine Construction Battalion
NOFA	No Further Action (abbreviation used in the OU B-1 ROD)
NPL	National Priorities List
NSGA	Naval Security Group Activity
NUWC	Naval Undersea Warfare Center
OE	ordnance and explosives
O&M	operation and maintenance
OMM	operation, maintenance, and monitoring
OU	operable unit
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
POL	petroleum, oil, and lubricant

ABBREVIATIONS AND ACRONYMS (Continued)

PQL	practical quantitation limit
PRG	preliminary remediation goal
PSE	preliminary source evaluation
RAB	Restoration Advisory Board
RAO	remedial action objective
RBSC	risk-based screening concentration
RCRA	Resource Conservation and Recovery Act
Refuge	Alaska Maritime National Wildlife Refuge
RG	remediation goal
RI	remedial investigation
ROD	Record of Decision
ROICC	resident officer in charge of construction
RRO	residual-range organics
SA	source area
SAERA	State-Adak Environmental Restoration Agreement
SARA	Superfund Amendments and Reauthorization Act
SDSA	Small Drum Storage Area
SVOC	semivolatile organic compound
SWMU	solid waste management unit
TAC	The Aleut Corporation
TCDD	tetrachlorodibenzo-p-dioxin
TCE	trichloroethene
TDS	total dissolved solids
TIN	total inorganics
TOC	total organic carbon
TPH	total petroleum hydrocarbons
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UXO	unexploded ordnance
UST	underground storage tank
VOC	volatile organic compound
WQP	water quality parameter

1.0 INTRODUCTION

This report presents the results of the second 5-year review performed for the former Adak Naval Complex, Adak Island, Alaska National Priorities List (NPL) site (Figure 1-1). The purpose of a 5-year review is to determine whether the remedies selected for implementation in the Record of Decision (ROD) for a site are protective of human health and the environment. The methods, findings, and conclusions of 5-year reviews are documented in 5-year review reports, which identify any issues found during the review and provide recommendations to address them.

The U.S. Navy (Navy), the lead agency for Adak, is preparing this 5-year review report pursuant to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121 and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP; 40 Code of Federal Regulations [CFR] Part 300). CERCLA Section 121 states the following:

> If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

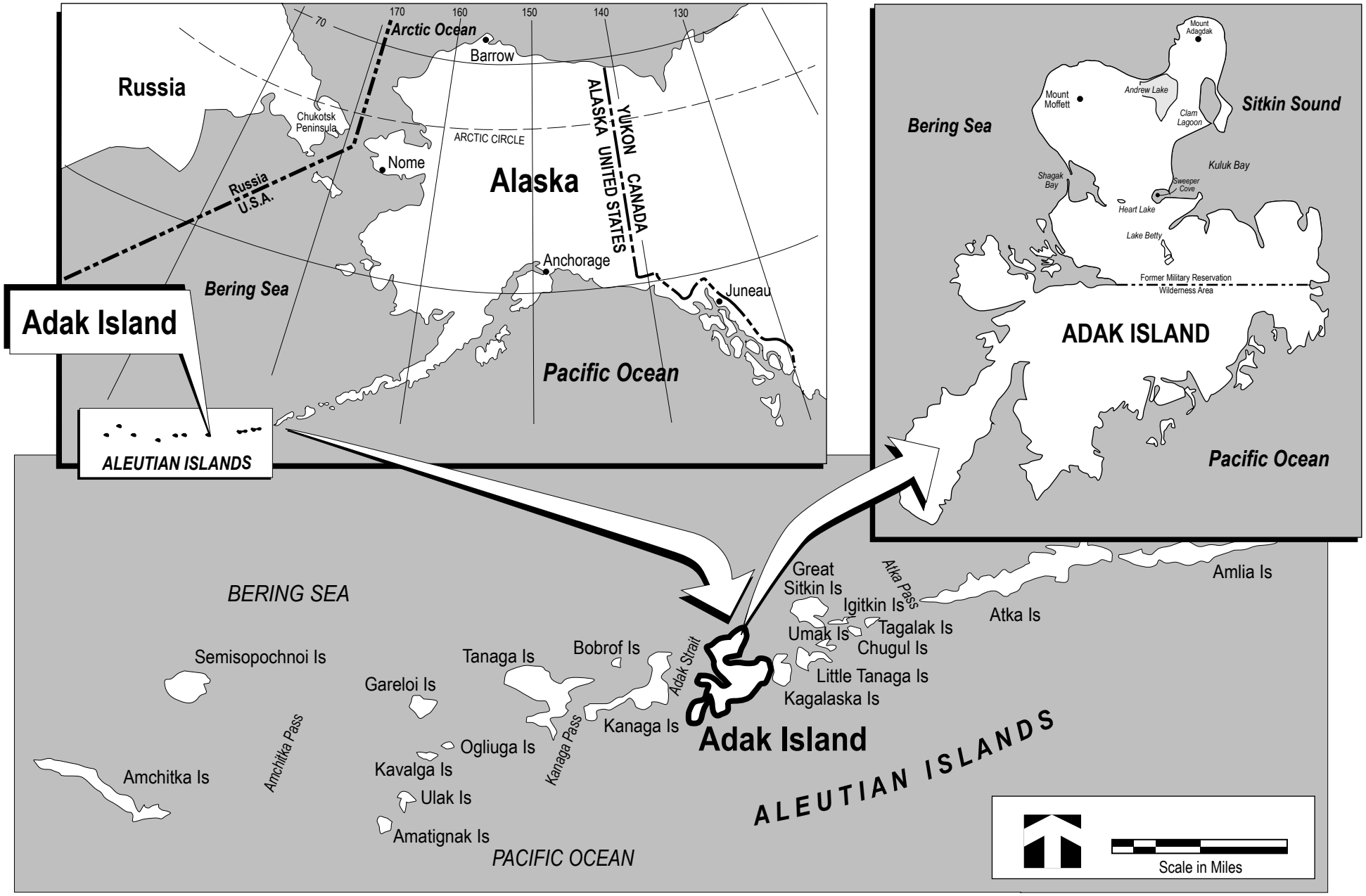
The Naval Facilities Engineering Command Northwest has conducted this 5-year review of the remedial actions implemented at Adak. This review was conducted from June 2005 through August 2006, and this report documents the results of the review. In addition, this 5-year review evaluates data collected at the site from May 2001 through September 2005.

While the former Adak Naval Complex is listed on the NPL as a single listing, the former Adak Naval Complex includes multiple CERCLA- and NCP-regulated sites, which are referred to as solid waste management units (SWMUs), source areas (SAs), or as individual areas of investigation. This report covers the remedies selected for each of these sites in the signed RODs for Operable Unit A (OU A) and OU B-1 (U.S. Navy, USEPA, and Alaska DEC 1995, 2000, and 2001). Progress towards remedy selection for OU B-2 sites is also summarized.

This is the second 5-year review for Adak. The triggering action for this review was the completion of the first 5-year review in December 2001 and that contaminants have been left at Adak above levels that allow for unlimited use and unrestricted exposure.

The RODs documenting the remedies implemented at Adak OU A and OU B-1 were signed after October 17, 1986 (the effective date of the Superfund Amendments and Reauthorization Act [SARA]). Therefore, this is considered a statutory, rather than a policy, review. In general, reviews of RODs signed after the effective date of SARA are termed "statutory reviews," while reviews of RODs signed before the effective date of SARA (or when certain other conditions apply) are termed "policy reviews."

This report was prepared as part of the CERCLA 5-year review process, using Navy and U.S. Environmental Protection Agency (EPA) guidance (U.S. Navy 2004a and USEPA 2001).



U.S.NAVY	**Figure 1-1** **Adak Island Location Map**	Delivery Order 0001 Adak Island, AK SECOND FIVE-YEAR REVIEW OF RECORDS OF DECISION REPORT

33759501_01.ai

2.0 SITE CHRONOLOGY

This section provides a narrative chronology of site events related to environmental investigation and remediation, with a tabulated summary provided in Table 2-1. The chronology of land transfer activities is summarized in Section 3.

In 1986, an initial assessment study was conducted on Adak as the first phase of the Navy Assessment and Control of Installation Pollutants Program. Thirty-two sites were examined during the initial assessment study. In 1989, a site inspection was completed in which 19 sites were evaluated. In 1990, a Resource Conservation and Recovery Act (RCRA) remedial facility assessment was completed by EPA, which identified and gathered information on potentially contaminated sites. A total of 68 sites, which includes the 19 sites identified in the site inspection, were identified in the remedial facility assessment. EPA issued a Federal Facility Compliance Agreement in November 1990. Adak was proposed for the NPL in October 1992 (57 FR 47204) and formally listed in May 1994 (59 FR 27989).

In 1993 the Navy, EPA, and Alaska Department of Environmental Conservation (DEC) signed the Adak Federal Facility Agreement (FFA), which incorporates the EPA's cleanup process under CERCLA, as amended by SARA. The CERCLA exclusion of petroleum as a hazardous substance required that cleanup of petroleum-related chemicals would follow State of Alaska regulations. Therefore, the FFA stated that petroleum-contaminated sites, such as those containing underground storage tanks (USTs) and leaking underground fuel lines, would be evaluated under a separate two-party agreement between the Navy and the state of Alaska. This agreement, the State-Adak Environmental Restoration Agreement (SAERA), was signed in April 1994.

For technical and administrative purposes, Adak was divided into two OUs in 1998, OU A and OU B, through an amendment to the FFA. In May 1997, the Navy and Alaska DEC agreed to integrate the cleanup decision process for petroleum sites with the cleanup decision process being conducted for hazardous-substance-release sites under CERCLA. As a result, the ROD for OU A was prepared for both the petroleum-contaminated sites and the hazardous-substance-release sites. The interim action ROD for SWMUs 11 and 13 and the final ROD for OU A were signed in March 1995 and April 2000, respectively.

A listing of the sites included in the OU A ROD is included in Table 2-2. A total of 180 sites were evaluated for OU A. Two of these sites were deferred to OU B (SWMU 8 and SA 93). Of the remaining 178 sites, 121 sites were petroleum sites, 50 sites were investigated under CERCLA, 5 were investigated under both CERCLA and SAERA, and two were investigated under both RCRA and SAERA. Figure 2-1 presents an overview of the process used to evaluate

OU A CERCLA sites, and Figure 2-2 presents an overview of the process used to evaluate OU A petroleum sites.

The original number of sites began with the FFA, which listed 84 SWMUs and SAs that needed to be evaluated within OU A. Twenty-six of the original 84 sites were petroleum-only sites administered under the SAERA agreement. Two of the remaining 58 sites were deferred to OU B-2 (SWMU 8 and SA 93); the CERCLA portion of 1 combined CERCLA and SAERA site was deferred to the OU B process, but remained a SAERA site (SWMU 1); the minefield portion of 1 CERCLA site was deferred to the OU B process, but the landfill portion remained as a CERCLA site (SWMU 2); SWMUs 53 and 59 were combined with SWMU 52; and one site was deferred to the SAERA process (SWMU 12). This left a total of 52 CERCLA sites, including 3 state-permitted landfills, 5 combined CERCLA and petroleum sites (SWMUs 14, 15, 17, 55, and 74), and 2 combined RCRA and petroleum sites (SWMU 24 and SA 77). An additional 93 petroleum sites were included in OU A between 1994 and 1997 (U.S. Navy, USEPA, and Alaska DEC 2000). The five water bodies that could be impacted by site contamination were not originally part of the FFA, but were added to the OU A site list around the time of the remedial investigation (RI). These water bodies were evaluated under CERCLA and include Sweeper Cove, South Sweeper Creek, Clam Lagoon, Andrew Lake, and Kuluk Bay.

The OU A ROD selected final or interim remedies for each of 128 petroleum-contaminated sites, counting the NMCB Building Area T-1416 Expanded Area and NMCB Building (UST T-1416-A) as separate sites. This includes 121 petroleum-only sites, five combined CERCLA and petroleum sites (SWMUs 14, 15, 17, 55, and 74), and two combined RCRA and petroleum sites (SWMU 24 and SA 77). The interim remedy, free-product recovery, was selected for 14 sites that contained measurable quantities of free-phase petroleum product ("14 sites" is arrived at by counting NMCB Building Area T-1416 Expanded Area and NMCB Building [UST T-1416-A] as one combined site, and not two separate sites). In addition, the OU A ROD specified that these 14 sites would require future final remedy selection pursuant to the two-party SAERA. To clarify regulatory authority, the OU A ROD was amended in 2003 to remove these 14 petroleum sites and 47 others from CERCLA authority (see also Section 2). Therefore, final remedies for the 14 petroleum-contaminated sites were to be selected in accordance with Alaska State regulation 18 Alaska Administrative Code (AAC) 75.325 through 75.390, which provides the regulatory procedures and requirements for petroleum cleanup decisions.

The OU A ROD concluded that no further action was required for 114 sites (31 CERCLA sites, which include 2 water bodies, one combined CERCLA and petroleum site [SWMU 74], one combined RCRA and SAERA site [SWMU 24], the RCRA portion of one combined RCRA and SAERA site [SA 77], the SAERA portion of one combined CERCLA and SAERA site [SWMU 55], and 79 petroleum sites) (U.S. Navy, USEPA, and Alaska DEC 2000). These NFA sites are listed in Tables 2-3 and 2-4. Petroleum sites for which no further action was required under the OU A ROD were also considered to have met all requirements of the SAERA agreement. In

addition, those petroleum sites for which a final remedy was selected in the OU A ROD, and which met the OU A ROD remediation goals, were considered to have met all requirements of the SAERA agreement (U.S. Navy, USEPA, and Alaska DEC 2003).

There were 66 OU A sites (19 CERCLA sites [includes 3 water bodies and 3 state-permitted landfills], 3 combined CERCLA and petroleum sites [SWMUs 14, 15, and 17], the CERCLA portion of 1 combined CERCLA and petroleum site [SWMU 55], the SAERA portion of 1 combined RCRA and petroleum site [SA 77], and 42 petroleum sites [including the NMCB Building Area T-1416 Expanded Area and NMCB Building (UST T-1416-A) as separate sites]) that required remedial action. (Note that SA 77 is included as a no further action site under RCRA and as a remedial action site under SAERA. In addition, SWMU 55 is included as a no further action site under SAERA and as a remedial action site under CERCLA. Because of this double counting of SWMU 55 and SA 77, 114 no further action sites plus 66 remedial action sites equals 180 sites, and not 178 sites.) Of these sites, Figure 2-3 shows the locations of the chemical-release sites administered under CERCLA and RCRA retained for further action. Figure 2-4 shows the locations of the petroleum sites administered under SAERA retained for further action.

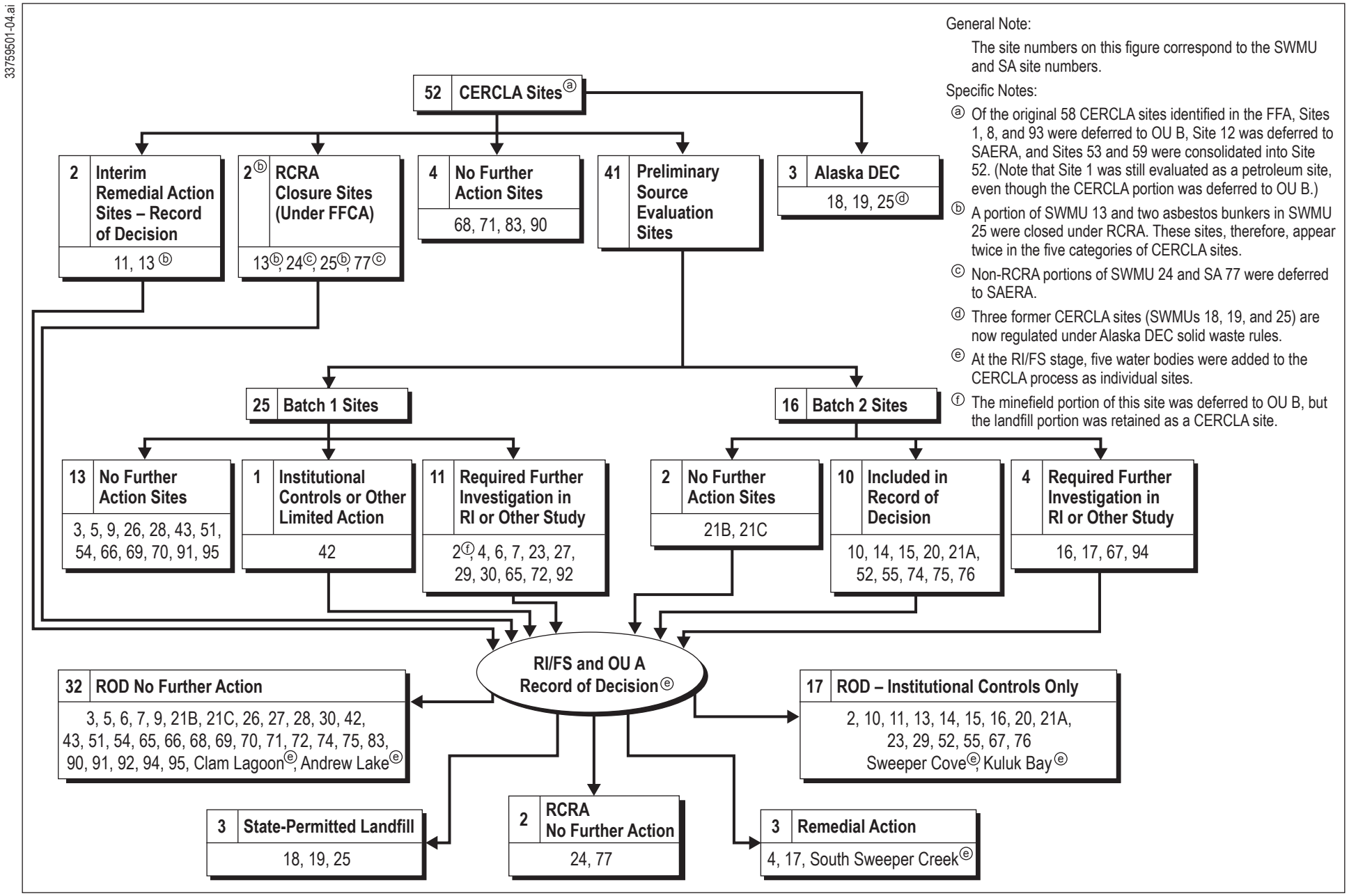
Removal actions and interim remedial actions at some CERCLA sites were completed prior to the completion of the OU A ROD. Removal actions were also completed at some of the 128 petroleum sites. Most of the physical remedy construction was completed at the last OU A site in 2003 (except for those transferred to SAERA) with the closure of Roberts Landfill. The remedy construction will be completed after soil is removed in 2008 as planned from ASR-8 Facility, UST 42007-B and SA 77, Fuels Facility Refueling Dock, Small Drum Storage Area. The Institutional Control Management Plan (ICMP), a component of the remedy for many of the OU A sites, was written in 2000, revised by the Navy in 2001, and again updated in 2004.

In 2001, OU B was further divided into OU B-1 and OU B-2 to accommodate land transfer under the base realignment and closure program to a combination of private and public entities. The OU B-1 ROD and the first 5-year review were both signed in December 2001. The remedies selected in the OU B-1 ROD began in 2001, with many remedial actions completed during the 2004 field season. Additional munitions and explosives of concern (MEC) items will need to be assessed and potentially removed and decommissioned once a final remedial approach is cooperatively developed among the Navy, EPA, and Alaska DEC.

In March of 2002, the FFA and SAERA were amended to administratively move 62 petroleum sites included in OU A, out of OU A (and out of the FFA). From the date of this amendment forward, all future decisions regarding the moved sites were to be made based on State of Alaska regulations (under SAERA), rather than Federal regulations (U.S. Navy, USEPA, and Alaska DEC 2002). This change was subsequently reflected in an OU A ROD amendment signed October 10, 2003 (U.S. Navy, USEPA, and Alaska DEC 2003). Fourteen petroleum sites

removed from the OU A ROD potentially required further action under SAERA. The selected remedy for these 14 sites under the OU A ROD was free-product recovery. A decision document memorializing final remedies at 10 of these sites was signed May 20, 2005 (U.S. Navy and Alaska DEC 2005a), and a decision document memorializing the final remedy for the NMCB Building T-1416 Expanded Area was signed on March 22, 2006 (U.S. Navy and Alaska DEC 2006).

During this review period, "No Further Action" (NFA) or "No Further Remedial Action Planned" (NFRAP) status was granted by Alaska DEC for 19 sites (Alaska DEC 2005b). No further action closure is used for sites at which all media meet the most stringent levels of remediation (Method 2 for soil, Table C for groundwater). No further remedial action planned is a conditional closure. This status is used when a site has met the remedial action objectives of protection of human health and the environment but has not yet met final closure standards.

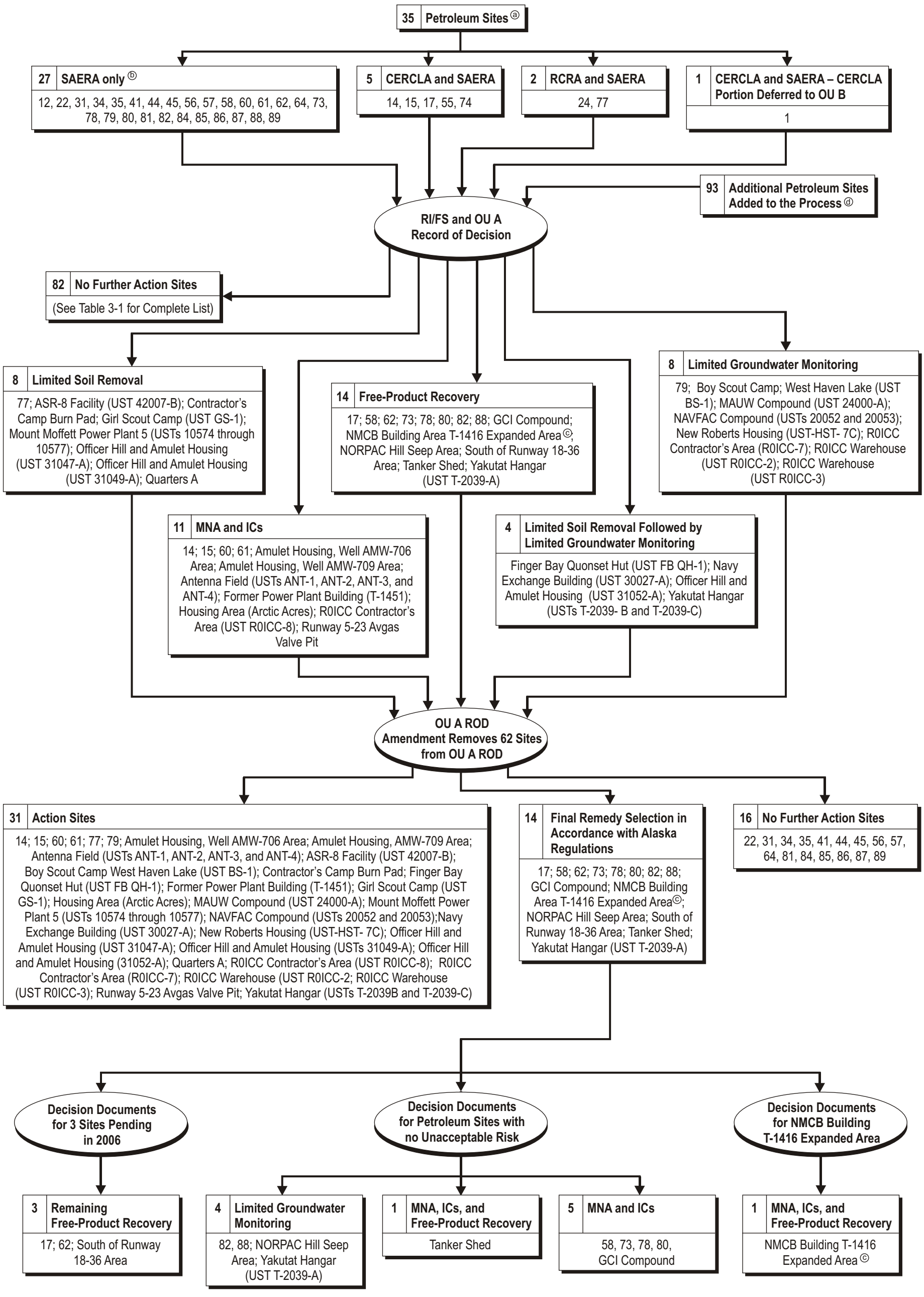


U.S.NAVY

Figure 2-1
Summary of CERCLA Site Process at Former Adak Naval Complex

Delivery Order 0001
Adak Island, AK
SECOND FIVE-YEAR REVIEW OF RECORDS OF DECISION REPORT

33759501_04.CDR



General Note:

The site numbers on this figure correspond to the SWMU and SA site numbers.

Specific Notes:

ⓐ Original number of petroleum sites from FFA.

ⓑ SWMU 12 was originally listed as a CERCLA site in the FFA. It was transferred to the SAERA process.

ⓒ NMCB Building (UST T-1416-A) was combined with this site.

ⓓ A complete listing of these sites is provided in Table 2-1 of the OU A ROD and includes SA 96 and SA 97 and all the sites without a SWMU or SA number, except does not include the five water bodies (Sweeper Cove, South Sweeper Creek, Clam Lagoon, Andrew Lake, and Kuluk Bay).

U.S.NAVY	**Figure 2-2** **Summary of Petroleum Site Process at Former Adak Naval Complex**	Delivery Order 0001 Adak Island, AK SECOND FIVE-YEAR REVIEW OF RECORDS OF DECISION REPORT

SWMU 52 (53 and 59), Former Loran Station

Mt. Adagdak

BERING SEA

Hill
1045

Andrew Bay

Sitkin
Sound

Andrew
Lake

SWMU 4, South Davis Road Landfill

SWMU 2, Causeway Landfill

Clam
Lagoon

SWMU 1

SWMU 11, Palisades Landfill

Legend:

- These Sites are State-Permitted Landfills
- CERCLA Site Boundary
- Surface Drainage Divide
- * These Sites are also Petroleum Sites
- ** These Water Bodies are CERCLA Sites

Note: By mutual agreement among Alaska DEC, EPA, and the Navy, all removal actions at SWMUs 18, 19, and 25 have been addressed through operational and closure requirements of State of Alaska solid waste regulations.

SWMUs 18/19, White Alice Landfill

SWMU 20, White Alice/Trout Creek Disposal Area

SWMU 16, Former Firefighting Training Area

SWMU 21A, White Alice Upper Quarry

SWMU 17, Power Plant 3 Area*

SWMU 67, White Alice PCB Spill Site

SWMU 10, Old Baler Building

Kuluk Bay**

SWMU 13, Metals Landfill

SA 76, Old Line Shed Building

SWMU 14, Old Pesticide Disposal Area*

SWMU 15, Future Jobs/DRMO*

SWMU 55, Public Works Transportation Department Waste Storage Area

South Sweeper Creek**

Sweeper Cove**

SWMU 25, Roberts Landfill

SWMU 23, Heart Lake Drum Disposal Area

SWMU 29, Finger Bay Landfill

Finger Bay

Little
Thumb
Bay

Thumb Bay

April 4 2006 T:\ADAK\IDIQ\Sub-Tasks\DO 1\ROD\Figure 2-3-cercla.apr

U.S. NAVY

N

0 2000 4000 Feet

1:50000

Figure 2-3
Operable Unit A CERCLA Sites That Require Further Action
Adak Island, Alaska

Delivery Order 0001
Adak Island, AK
SECOND FIVE-YEAR REVIEW OF
RECORDS OF DECISION
REPORT