



**FINAL**

15 August 2011

# Community Relations Plan

## **Former Adak Naval Complex**

Adak, Alaska

**Department of the Navy**

**Naval Facilities Engineering Command Northwest**

1101 Tautog Circle

Silverdale, WA 98315



**FINAL  
COMMUNITY RELATIONS PLAN FOR  
FORMER ADAK NAVAL COMPLEX  
ADAK ISLAND, ALASKA**

**Prepared by  
URS Group, Inc.  
Seattle, Washington**

**Prepared for  
Naval Facilities Engineering Command Northwest  
Silverdale, Washington**

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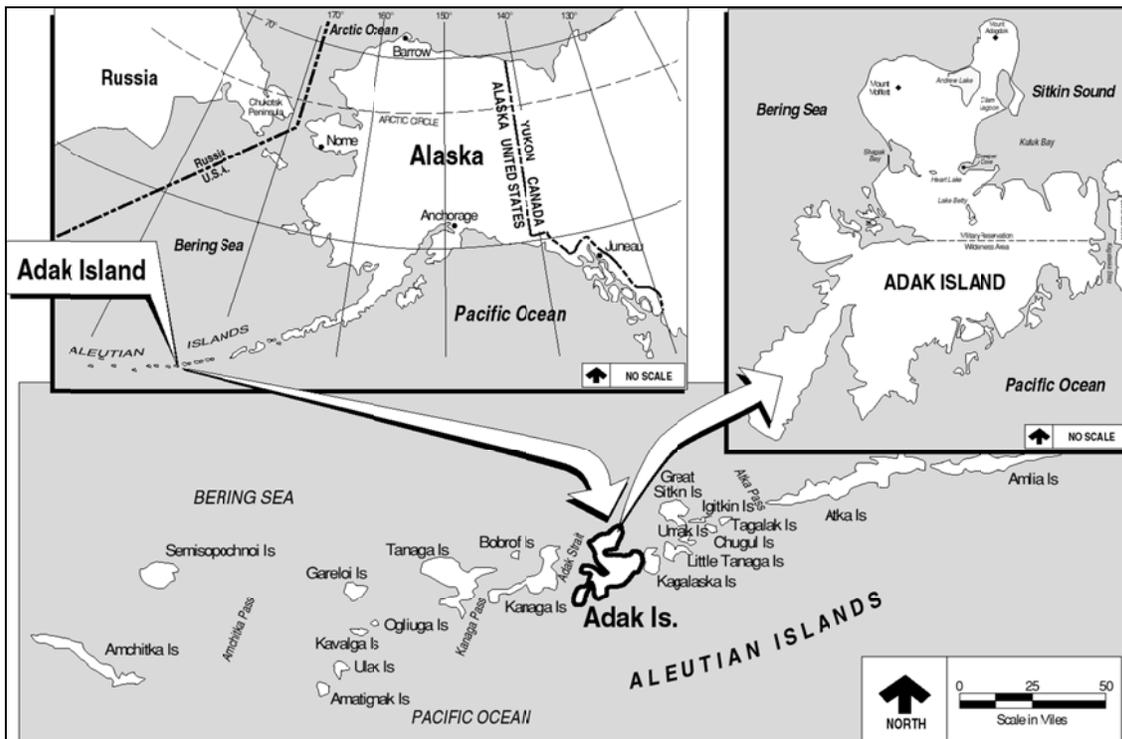
# FORMER ADAK NAVAL COMPLEX COMMUNITY RELATIONS PLAN EXECUTIVE SUMMARY

Page 1 of 1

The Navy developed this revised Community Relations Plan to facilitate two-way communication between the community at the former Adak Naval Complex and the Navy and to encourage community involvement and understanding of ongoing site environmental restoration activities. The Navy will use the community involvement activities outlined in this plan to ensure that residents are informed and provided opportunities to be involved.

Environmental restoration activities at the former Adak Naval Complex continue to be protective of human health and the environment. The Navy is currently conducting monitoring to demonstrate that the cleanup actions are working as intended. The Navy will ask for community input as needed and provide resources for the community to access information. Triggers for community input will include changing conditions at a site, significant progress, and community requests. Processes by which the Navy may ask for community input or provide information to the community include:

- Newspaper advertisements
- Restoration Advisory Board (RAB) meetings
- NAVFAC Northwest Public Affairs Office
- Adak Island and UAA Information Repositories
- Adakupdate.com website



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## ABBREVIATIONS AND ACRONYMS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AOC	area of concern
AST	aboveground storage tank
avgas	aviation gas
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMP	Comprehensive Monitoring Plan
CRP	Community Relations Plan
DERA	Defense Environmental Restoration Account
DoD	Department of Defense
DRMO	Defense Reutilization Marketing Office
EPA	U.S. Environmental Protection Agency
FCT	field-constructed tank
FFA	Federal Facilities Agreement
FS	feasibility study
GRO	gasoline-range organic
IC	institutional control
JP-5	jet petroleum No. 5
MEC	munitions and explosives of concern
MLLW	mean lower low water
mogas	motor vehicle gasoline
MNA	monitored natural attenuation
NAVFAC	Naval Facilities Engineering Command
Navy	U.S. Navy
NMCB	Naval Mobile Construction Battalion
NPL	National Priorities List
NSGA	Naval Security Group Activity
OU	operable unit
PCB	polychlorinated biphenyl
POL	petroleum, oil, and lubricants
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act
RI	remedial investigation
ROD	Record of Decision

### **ABBREVIATIONS AND ACRONYMS (Continued)**

SA	source area
SAERA	State-Adak Environmental Restoration Agreement
SARA	Superfund Amendments and Reauthorization Act
SWMU	solid waste management unit
SVOC	semivolatile organic compound
TAC	The Aleut Corporation
UAA	University of Alaska, Anchorage
USGS	U.S. Geological Survey
UST	underground storage tank
VOC	volatile organic compound

## **1.0 OVERVIEW OF THE COMMUNITY RELATIONS PLAN**

The U.S. Navy (Navy) developed this Community Relations Plan (CRP) to facilitate two-way communication between the community surrounding the former Adak Naval Complex, Adak Island and the Navy and to encourage community involvement and understanding of ongoing environmental restoration activities. The Navy will use the community involvement activities outlined in this plan to ensure that residents stay informed and are provided opportunities to be involved. The first CRP was prepared in 1993, rewritten in September 1994, and revised in May 1995, December 1996, August 1999, and October 2001. A Community Involvement Plan was prepared in 2003 (U.S. Navy 2003).

Sections 1 and 2 of this CRP addresses the Navy's relationship to the community and to regulatory agencies, Section 3 describes the site, Section 4 provides a background of the Adak community, Section 5 presents the Navy's community relations program, and the appendices provide a summary of interview responses, regional contacts, a complete listing of available resources, and detailed descriptions of the Adak sites. The Navy drew upon several information sources to develop this plan, including interviews with community members, stakeholders, regulatory staff, and NAVFAC staff; site files; and Restoration Advisory Board (RAB) meetings. Naval Facilities Engineering Command (NAVFAC) Northwest will oversee the implementation of the community involvement activities outlined in this plan.

### **1.1 U.S. ENVIRONMENTAL PROTECTION AGENCY**

In 1980, Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as "Superfund." CERCLA made the U.S. Environmental Protection Agency (EPA) responsible for the long-term cleanup of uncontrolled hazardous waste sites. CERCLA was amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA), increasing EPA's authority. SARA also set requirements for the Defense Environmental Restoration Account (DERA), which funds Department of Defense (DoD) hazardous waste site cleanups.

The EPA maintains a National Priorities List (NPL) that categorizes hazardous waste sites in the nation by their priority for cleanup. Typically, the investigations involve many defined steps and related opportunities for community involvement and input, graphically displayed on Figure 1-1. As indicated in the figure, EPA works closely with the Navy during the cleanup process to plan, execute, and review the results of the studies conducted by the Navy.

## **1.2 ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

As with EPA, ADEC works closely with the Navy during the cleanup process to plan, execute, and review the results of the studies conducted by the Navy. The primary regulations that apply to petroleum-release sites at the former Adak Naval Complex is the State of Alaska Oil and Hazardous Substances Pollution Control Regulations 18 Alaska Administrative Code (AAC) 75, which became effective in 1992 and amended on October 9, 2008. These regulations give the state authority to apply administrative processes and standards to all facilities in the state at which there has been a release or threatened release of a hazardous substance that may pose a threat to human health or the environment. These regulations authorize the Alaska Department of Environmental Conservation (ADEC) through interagency agreements to identify, investigate, or initiate cleanup strategies on all sites in Alaska.

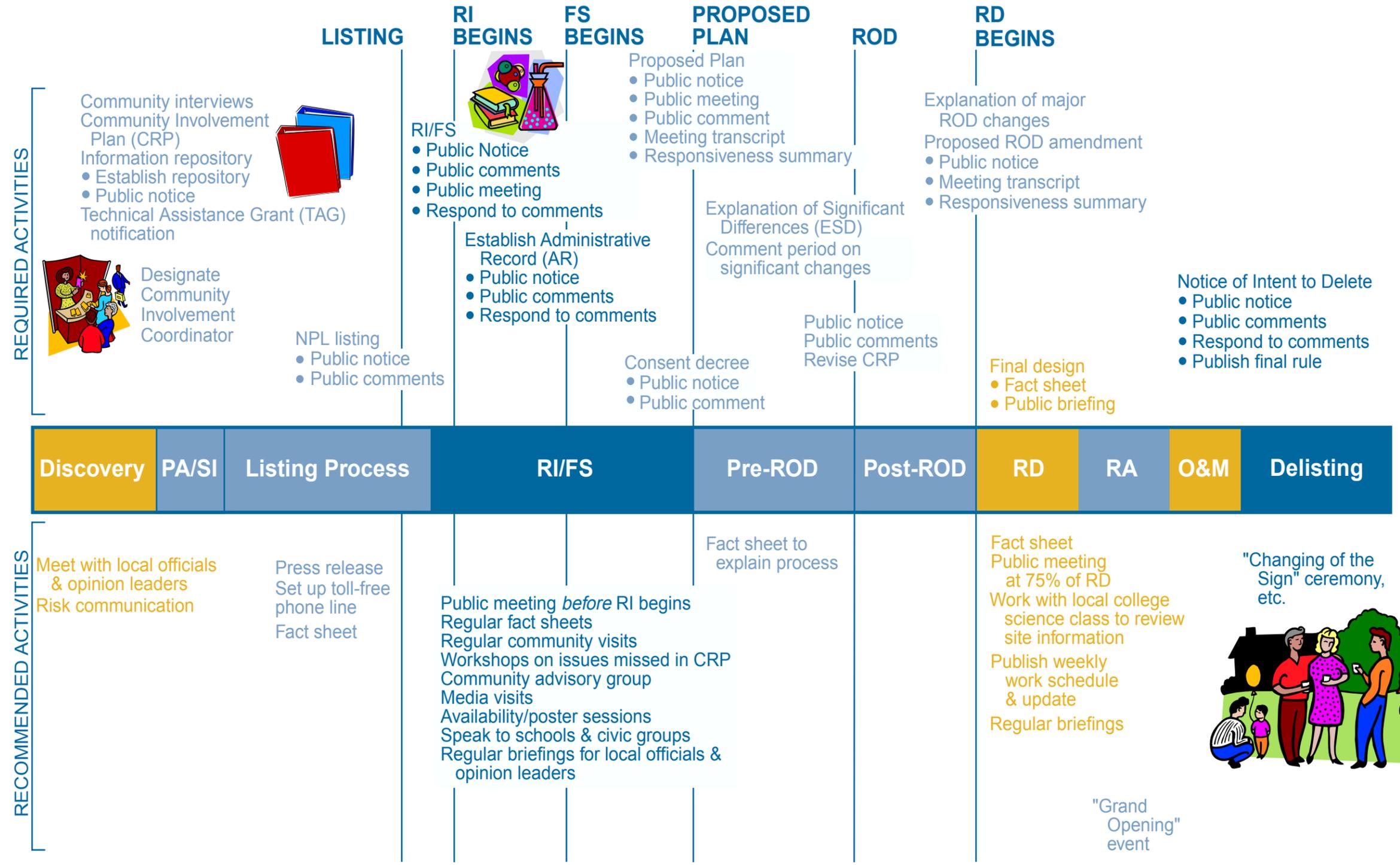
The Oil and Hazardous Substances Pollution Control Regulations set forth the requirements for addressing petroleum releases from underground storage tanks (USTs). These include the following:

- Removal and treatment of petroleum-contaminated soils
- Recycling of treated soils
- Methods of reducing contaminants in environmental media (including monitored natural attenuation [MNA] of petroleum chemicals in soils and groundwater)
- Free-product recovery to the maximum extent practicable as an interim remedial measure
- Institutional controls (ICs) to minimize the potential for direct contact with contaminants, to restrict groundwater use, and to restrict soil excavation until remedial objectives have been met.

## **1.3 DEPARTMENT OF DEFENSE ENVIRONMENTAL RESTORATION**

The Environmental Restoration Program is a DoD program funded by DERA to assess and clean up hazardous waste sites. The ER Program is very comprehensive and may involve years of cleanup and monitoring of these hazardous waste sites. This CRP is written to comply with both Navy requirements (2006 *Department of the Navy Environmental Restoration Program Manual*, Section 15.1, the *Environmental Readiness Program Manual* [OPNAVINST 5090.1C, 30 Oct.

# Community Involvement Activities Throughout the Superfund Remedial Process



2007, Section 18-4.5], and Public Affairs Policy and Regulations [SECNAVINST 5720.44B]) and EPA regulations (40 Code of Federal Regulations 300.430[c], Community Relations).

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 that identified and gathered information on potentially contaminated sites. A total of 68 sites, including 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 Federal Register 47204) and formally listed in May 1994 (59 Federal Register 27989).

In 1993 the Navy, EPA, and ADEC signed the Adak Federal Facilities 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 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. The FFA and SAERA ensure that environmental impacts associated with past practices at the former Adak Naval Complex are investigated and remedial actions completed as needed to protect human health and the environment.

For technical and administrative purposes, Adak was divided into two operable units (OUs) in 1998, OU A and OU B, through an amendment to the FFA. In May 1997, the Navy and ADEC agreed to integrate cleanup decision processes for petroleum sites with cleanup decision processes for hazardous-substance-release sites under CERCLA. As a result, the Record of Decision (ROD) for OU A was prepared for both petroleum-contaminated sites and hazardous-substance-release sites. The interim action ROD for Solid Waste Management Units (SWMUs) 11 and 13 and the final ROD for OU A were signed in March 1995 and April 2000, respectively (U.S. Navy, USEPA, and ADEC 1995 and 2000).

A narrative chronology of site events related to environmental investigation and remediation is summarized in Table 1-1. OU B addresses ordnance explosive safety hazards and human health and ecological risks associated with ordnance-related chemicals. In 2001, OU B was subdivided into OU B-1 and OU B-2 to expedite transfer of real estate by placing a higher priority on completing the investigation and remediation of OU B-1 sites located on property transferred to TAC.

**Table 1-1  
 Chronology of Site Events**

Event	Date
Initial assessment study performed	1986
Site inspection	1989
RCRA remedial facility assessment	1990
Federal Facility Compliance Agreement under RCRA signed by EPA	November 20, 1990
Adak proposed for listing to the National Priorities List	October 1992
Formal National Priorities List listing	May 1994
FFA signed	1993
Two-party agreement (SAERA) regarding petroleum sites signed	April 1994
ROD for interim remedial action signed for Sites 11 and 13	March 1995
SAERA amended	August 1996
Operational closure of Adak Naval Air Station	March 1997
FFA amended to designate OU B	1998
ROD for OU A signed	April 2000
Institutional Control Management Plan implemented	2000
OU B divided into OU B-1 and OU B-2	2001
OU B-1 ROD signed	December 2001
First 5-year review executed	December 2001
FFA and SAERA amended to move petroleum sites from OU A to SAERA	March 2002
OU A remedy construction complete at all non-SAERA sites	2003
OU A ROD amended to move all petroleum sites with further action from OU A to SAERA	October 2003
Land transfer from DOI and the Navy to TAC completed	March 2004
Decision document for final remedy at 10 OU A SAERA sites	May 2005
Decision document for final remedy at NMCB Building Expanded Area	March 2006
Decision document for final remedy at SWMU 62, New Housing Fuel Leak Site	August 2006
Decision document for final remedy at South of Runway 18-36 Area	October 2006
Second 5-year review executed	December 2006
Decision document for final remedy at SWMU 17, Power Plant No. 3 Area	January 2007
OU A remedy construction complete at all OU A SAERA sites	October 2006
OU B-1 remedy construction completion is pending agency concurrence	September 2010

Notes:

- EPA - U.S. Environmental Protection Agency
- DOI - U.S. Department of the Interior
- FFA - Federal Facilities Agreement
- OU - operable unit
- RCRA - Resource Conservation and Recovery Act
- ROD - Record of Decision
- SAERA - State-Adak Environmental Restoration Agreement
- SWMU - solid waste management unit
- TAC - The Aleut Corporation

## 2.0 SITE HISTORY

Adak Island was inhabited by the Aleuts over the past several thousand years while hunting whales, seals, otters, sea lions, and sea birds and fishing in Adak's freshwater streams and surrounding seas. The Aleuts lived in large communal subterranean structures of grass and earth built over driftwood and whalebone frames. Remnants of prehistoric Aleut settlements remain on Adak.

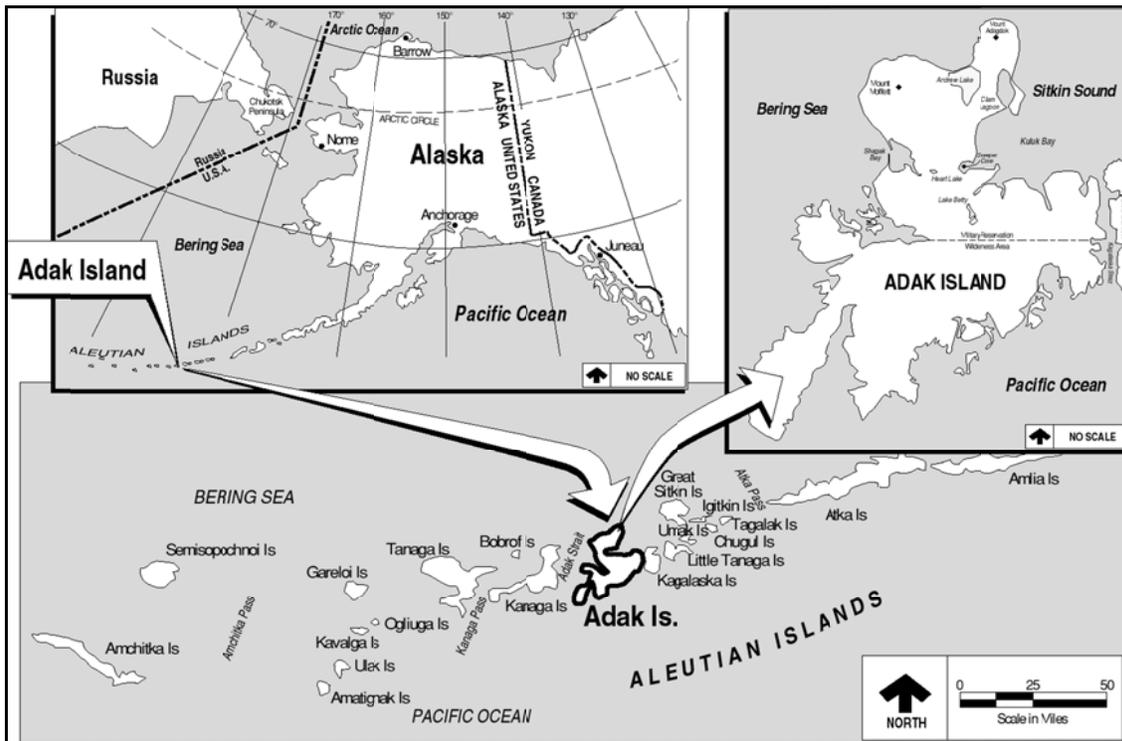
Russian mariners first visited the Aleutian Islands in the early 1740s and were trading with the Aleuts by 1750. By 1830, Russian settlers occupied Adak and relocated the Aleuts to Russian settlements on Kodiak, the Pribilof Islands, and Sitka. Adak Island became part of the Alaska Territory that was subsequently purchased from Russia by the United States in 1867. Adak Island was included in the 2.9-million-acre Aleutian Islands National Wildlife Refuge in 1913.

Military presence on Adak Island began in 1942 with its occupation as a staging area to mount a counter-offensive to dislodge the Japanese from Attu and Kiska Islands. The Navy presence at Adak was officially recognized by Public Land Order 1949, dated August 19, 1959, which withdrew the northern portion of Adak Island, comprising approximately 76,800 acres, for use by the Navy for military purposes. The Navy also used the base to conduct a variety of Cold War-era military activities. Naval Air Facility Adak was on the list of Department of Defense installations recommended for closure in 1995, and that recommendation became final when Congress did not disapprove the list. The active Navy mission ceased, and the base operationally closed on March 31, 1997. The Navy's Caretaker Site Office was closed in spring 2002, in anticipation of land transfer to The Aleut Corporation (TAC), a Native corporation.

In September 2000, the federal government entered into a land transfer agreement with TAC, as documented in the Interim Conveyance document issued by the U.S. Department of the Interior, Bureau of Land Management. The actual conveyance occurred on March 17, 2004, and encompassed approximately 47,000 acres of the former Adak Naval Complex property. The land transfer included all of the downtown area, housing units, and industrial facilities. TAC transferred the portion of the former Adak Naval Complex known as Adak Airport and associated facilities and aviation easements, not including Federal Aviation Administration navigation aids or weather reporting equipment, to the State of Alaska.

### 3.0 SITE DESCRIPTION

Adak Island is located approximately 1,200 miles southwest of Anchorage, Alaska along the Aleutian Chain (Figure 3-1). Adak Island is about 32 miles long and 21 miles wide and is the largest of the Andreanof group of Aleutian Islands. The former Adak Naval Complex comprises 61, 935 acres on the northern half of Adak. The U.S. Fish and Wildlife Service manages the southern portion of the island as a designated Wilderness Area within the Alaska Maritime National Wildlife Refuge System.



**Figure 3-1**  
**Location Map for Former Adak Naval Complex**

Detailed descriptions of the sites comprising OUs A and B are contained in the most recent Adak 5-Year Review (U.S. Navy 2011) and included in Appendix D together with discussions of environmental evaluations and remedy and how the remedy is protecting the community and environment. The remainder of this section contains tabulations of OUs A and B sites, as well as location maps.

### 3.1 OPERABLE UNIT A

OU A addresses chemical releases to the environment throughout the entire military reservation. The investigation and remediation of OU A sites involved state regulations, as well as CERCLA and RCRA procedures. A total of 180 sites were evaluated for OU A. Two of these sites were deferred to OU B (SWMU 8 and Source Area [SA] 93). Of the remaining 178 sites, 121 were petroleum sites, 50 were investigated under CERCLA (including the 5 water bodies), 5 were investigated under both CERCLA and SAERA, and 2 were investigated under both RCRA and SAERA.

A summary of all of the sites in the OU A ROD is included in Table 3-1. Figure 3-2 shows the locations of the chemical-release sites administered under CERCLA and RCRA that were retained for further action. Figure 3-3 shows the locations of the petroleum sites administered under SAERA that were also retained for further action.

**Table 3-1  
 OU A CERCLA and Petroleum Sites Listed or Evaluated on Adak Island**

SWMU or SA No. <sup>a</sup>	Site Name <sup>b</sup>	Listed or Investigated Under	Interim Remedy	Final Remedy
1	Andrew Lake Waste Ordnance Demolition Range <sup>c</sup> (a.k.a. Andrew Lake OB/OD and Range)	CERCLA and SAERA	CERCLA Portion Deferred to OU B	OU A ROD
2	Causeway Landfill and Minefield <sup>c</sup>	CERCLA	NA	OU A ROD
3	Clam Lagoon Landfill	CERCLA	NA	OU A ROD
4	South Davis Road Landfill	CERCLA	NA	OU A ROD
5	North Davis Road Landfill	CERCLA	NA	OU A ROD
6	Andrew Lake Drum Disposal Area 1	CERCLA	NA	OU A ROD
7	Andrew Lake Drum Disposal Area 2	CERCLA	NA	OU A ROD
8	Andrew Lake Landfill and Shoreline <sup>c</sup>	CERCLA	Deferred to OU B	Deferred to OU B
9	Black Powder Club	CERCLA	NA	OU A ROD
10	Old Baler Building	CERCLA	NA	OU A ROD
11	Palisades Landfill	CERCLA	1995 ROD	OU A ROD
12	Quartermaster Road Debris Disposal Area (a.k.a. Quartermaster Site)	SAERA	NA	OU A ROD
13	Metals Landfill	CERCLA and RCRA	1995 ROD	OU A ROD
14	Old Pesticide Disposal Area (a.k.a. Old Pesticide Storage and Disposal Area)	CERCLA and SAERA	NA	OU A ROD
15	Future Jobs/DRMO (Former Hazardous Waste Storage)	CERCLA and SAERA	NA	OU A ROD

**Table 3-1 (Continued)**  
**OU A CERCLA and Petroleum Sites Listed or Evaluated on Adak Island**

<b>SWMU or SA No.<sup>a</sup></b>	<b>Site Name<sup>b</sup></b>	<b>Listed or Investigated Under</b>	<b>Interim Remedy</b>	<b>Final Remedy</b>
16	Former Firefighting Training Area (including SWMUs 32 and 33)	CERCLA	NA	OU A ROD
17	Power Plant 3 Area (including SWMUs 36-40 and 63) (a.k.a. Power Plant 3)	CERCLA and SAERA	OU A ROD, as amended	2007 Decision Document
18	South Sector Drum Disposal Area (now part of White Alice Landfill)	DEC-SW and CERCLA	NA	OU A ROD
19	Quarry Metal Disposal Area (now White Alice Landfill)	DEC-SW and CERCLA	NA	OU A ROD
20	White Alice/Trout Creek Disposal Area	CERCLA	NA	OU A ROD
21A	White Alice Upper Quarry	CERCLA	NA	OU A ROD
21B	White Alice Lower Quarry	CERCLA	NA	OU A ROD
21C	White Alice East Disposal Area	CERCLA	NA	OU A ROD
22	Avgas Drum Storage Area South of Tank Farm A (a.k.a. Avgas Drum Storage Area South of Tank Farm A)	SAERA	NA	OU A ROD
23	Heart Lake Drum Disposal Area	CERCLA	NA	OU A ROD
24	Hazardous Waste Container Storage Facility (a.k.a. Hazardous Waste Storage Facility)	RCRA and SAERA	NA	OU A ROD
25	Roberts Landfill	DEC-SW and RCRA	NA	OU A ROD
26	Mitt Lake Drum Disposal Area	CERCLA	NA	OU A ROD
27	Lake Leone Drum Disposal Area	CERCLA	NA	OU A ROD
28	Lake Betty Drum Disposal Area	CERCLA	NA	OU A ROD
29	Finger Bay Landfill	CERCLA	NA	OU A ROD
30	Magazine 4 Landfill	CERCLA	NA	OU A ROD
31	Runway 18-36 Aviation Gas Drum Disposal	SAERA	NA	OU A ROD
34	Steam Plant 4 Used Oil Storage Area (a.k.a. Steam Plant 4 Used Oil AST)	SAERA	NA	OU A ROD
35	GSE Used Oil Tank (a.k.a. Ground Support Equipment Building)	SAERA	NA	OU A ROD
41	Ground Support Equipment (GSE) Used Oil Storage Area	SAERA	NA	OU A ROD
42	GSE Steam Clean Oil/Water Separator	CERCLA	NA	OU A ROD
43	AIMD Acid Battery Storage Area	CERCLA	NA	OU A ROD
44	AIMD Used Oil Storage Area	SAERA	NA	OU A ROD
45	Sewage Treatment Plant (including SWMUs 46, 47, 48, 49, and 50) (a.k.a. Sewage Treatment Plant Petroleum Contamination)	SAERA	NA	OU A ROD
51	NSGA Transportation Bldg. 10354 Waste Storage Area	CERCLA	NA	OU A ROD

**Table 3-1 (Continued)**  
**OU A CERCLA and Petroleum Sites Listed or Evaluated on Adak Island**

<b>SWMU or SA No.<sup>a</sup></b>	<b>Site Name<sup>b</sup></b>	<b>Listed or Investigated Under</b>	<b>Interim Remedy</b>	<b>Final Remedy</b>
52	Former Loran Station (including SWMUs 53 and 59)	CERCLA	NA	OU A ROD
54	NMCB Battery Storage	CERCLA	NA	OU A ROD
55	Public Works Transportation Department Waste Storage Area	CERCLA and SAERA	NA	OU A ROD
56	Public Works Transportation Department Storage Tank	SAERA	NA	OU A ROD
57	Refueling Dock Oil/Water Separator (a.k.a. Fuels Facility Refueling Dock)	SAERA	NA	OU A ROD
58	NSGA 10348 JP-5 Tank (a.k.a. Heating Plant 6)	SAERA	OU A ROD, as amended	2005 Decision Document
60	Tank Farm A	SAERA	NA	OU A ROD
61	Tank Farm B	SAERA	NA	OU A ROD
62	Housing Area Fuel Leak (a.k.a. New Housing Fuel Leak)	SAERA	OU A ROD, as amended	2006 Decision Document
64	Tank Farm D	SAERA	NA	OU A ROD
65	Contractor's Camp Fire/Demolition Site	CERCLA	NA	OU A ROD
66	Palisades Lake PCB Spill	CERCLA	NA	OU A ROD
67	White Alice PCB Spill Site	CERCLA	NA	OU A ROD
68	New Pesticide Storage Area (no evaluation done)	CERCLA	NA	OU A ROD
69	Ski Lodge Waste Pile	CERCLA	NA	OU A ROD
70	Davis Road Asphalt Drums	CERCLA	NA	OU A ROD
71	NSGA Fueling Facility	CERCLA	NA	OU A ROD
72	NSGA Transportation Building 10354	CERCLA	NA	OU A ROD
73	NSGA Oil/Water Separator (a.k.a. Heating Plant 6)	SAERA	OU A ROD, as amended	2005 Decision Document
74	Old Batch Facility	CERCLA and SAERA	NA	OU A ROD
75	Asphalt Storage Area	CERCLA	NA	OU A ROD
76	Old Line Shed Building	CERCLA	NA	OU A ROD
77	Fuel Division Area Drum Storage (a.k.a. Fuels Facility Refueling Dock, Small Drum Storage Area)	RCRA and SAERA	NA	OU A ROD
78	NSGA Building USTs (a.k.a. Old Transportation Building)	SAERA	OU A ROD, as amended	2005 Decision Document
79	Main Road Pipeline (a.k.a. Main Road Pipeline, North End [MRP-MW15] and South End)	SAERA	NA	OU A ROD
80	Steam Plant 4 USTs (a.k.a. Steam Plant 4)	SAERA	OU A ROD, as amended	2005 Decision Document

**Table 3-1 (Continued)**  
**OU A CERCLA and Petroleum Sites Listed or Evaluated on Adak Island**

<b>SWMU or SA No.<sup>a</sup></b>	<b>Site Name<sup>b</sup></b>	<b>Listed or Investigated Under</b>	<b>Interim Remedy</b>	<b>Final Remedy</b>
81	NSGA Gun Turret Hill USTs (a.k.a. Gun Turret Hill)	SAERA	NA	OU A ROD
82	NSGA P80, P81 USTs (a.k.a. P-80/P-81 Buildings)	SAERA	OU A ROD, as amended	2005 Decision Document
83	Former Chiefs Club Station (no evaluation done)	CERCLA	NA	OU A ROD
84	Sand Shed	SAERA	NA	OU A ROD
85	New Baler Building	SAERA	NA	OU A ROD
86	Old Happy Valley Child Care Center	SAERA	NA	OU A ROD
87	Old Zeto Point Wizard Station	SAERA	NA	OU A ROD
88	NSGA P70 Energy Generator (a.k.a. P-70 Energy Generator)	SAERA	OU A ROD, as amended	2005 Decision Document
89	Tank Farm C	SAERA	NA	OU A ROD
90	Husky Road Landfill (no evaluation done)	CERCLA	NA	OU A ROD
91	Airplane Crash Sites	CERCLA	NA	OU A ROD
92	Waste Ordnance Pile (Fin Field)	CERCLA	NA	OU A ROD
93	World War II Mortar Impact Area <sup>c</sup>	CERCLA	Deferred to OU B	Deferred to OU B
94	Chemical Weapons Disposal Area	CERCLA	NA	OU A ROD
95	Transformer Disposal Area	CERCLA	NA	OU A ROD
96	NORPAC Hill Debris Site	SAERA	NA	OU A ROD
97	Generator Debris Site	SAERA	NA	OU A ROD
None <sup>d</sup>	Sweeper Cove	CERCLA	NA	OU A ROD
	South Sweeper Creek	CERCLA	NA	OU A ROD
	Clam Lagoon	CERCLA	NA	OU A ROD
	Andrew Lake	CERCLA	NA	OU A ROD
	Kuluk Bay	CERCLA	NA	OU A ROD
	Administration Building (UST 30004-A)	SAERA	NA	OU A ROD
	Amulet Housing, Well AMW-706 Area	SAERA	NA	OU A ROD
	Amulet Housing, Well AMW-709 Area	SAERA	NA	OU A ROD
	Antenna Field (USTs ANT-1, ANT-2, ANT-3, and ANT-4)	SAERA	NA	OU A ROD
	Armory (UST 10311-A)	SAERA	NA	OU A ROD
	Artillery Battalion (USTs ART-1 and ART-2)	SAERA	NA	OU A ROD
	ASR-8 Facility (UST 42007-B)	SAERA	NA	OU A ROD
	Bering Chapel (UST 42090-A)	SAERA	NA	OU A ROD
Boy Scout Camp, South Haven Lake (UST BS-2)	SAERA	NA	OU A ROD	

**Table 3-1 (Continued)**  
**OU A CERCLA and Petroleum Sites Listed or Evaluated on Adak Island**

<b>SWMU or SA No.<sup>a</sup></b>	<b>Site Name<sup>b</sup></b>	<b>Listed or Investigated Under</b>	<b>Interim Remedy</b>	<b>Final Remedy</b>
	Boy Scout Camp, West Haven Lake (UST BS-1)	SAERA	NA	OU A ROD
	CDAAC Complex (USTs 10580 and 10654)	SAERA	NA	OU A ROD
	Clam Road Truck Fill Stand	SAERA	NA	OU A ROD
	Cold Storage Facility (AST T-1440)	SAERA	NA	OU A ROD
	Contractor's Camp Burn Pad	SAERA	NA	OU A ROD
	Contractor's Pad UST T-1706 (Navy Pad)	SAERA	NA	OU A ROD
	Drum Disposal Area at Tank Farm D	SAERA	NA	OU A ROD
	Elementary School (UST 42017-A)	SAERA	NA	OU A ROD
	Finger Bay Quonset Hut (UST FBQH-1)	SAERA	NA	OU A ROD
	Former Power Plant Building (T-1451)	SAERA	NA	OU A ROD
	GCI Compound (UST GCI-1)	SAERA	OU A ROD, as amended	2005 Decision Document
	Girl Scout Camp (UST GS-1)	SAERA	NA	OU A ROD
	Housing Area (Arctic Acres)	SAERA	NA	OU A ROD
	Housing Outfall Area (Sandy Cove)	SAERA	NA	OU A ROD
	Kuluk Housing (UST HST-6C)	SAERA	NA	OU A ROD
	Kuluk Recreation Center (UST 30034)	SAERA	NA	OU A ROD
	Line Crew Building (USTs 2776, 2776-B, and 2776-C)	SAERA	NA	OU A ROD
	Loran Station (USTs V149A, V149B, and V149C)	SAERA	NA	OU A ROD
	MAUW Compound (UST 24000-A)	SAERA	NA	OU A ROD
	MAUW Compound (UST 24032-B)	SAERA	NA	OU A ROD
	McDonalds UST	SAERA	NA	OU A ROD
	Medical Center (UST 27088)	SAERA	NA	OU A ROD
	Mount Moffett Power Plant 5 (Used Oil AST)	SAERA	NA	OU A ROD
	Mount Moffett Power Plant 5 (Used Oil Pit)	SAERA	NA	OU A ROD
	Mount Moffett Power Plant 5 (USTs 10574 through 10577)	SAERA	NA	OU A ROD
	Mount Moffett Tower (Mogas AST and Used Oil AST)	SAERA	NA	OU A ROD
	NAVFAC Compound (USTs 20052 and 20053)	SAERA	NA	OU A ROD
	Navy Exchange Building (UST 30026)	SAERA	NA	OU A ROD
	Navy Exchange Building (UST 30027-A)	SAERA	NA	OU A ROD
	Navy Exchange Building (UST 30033)	SAERA	NA	OU A ROD
	New Roberts Housing (UST HST-7C)	SAERA	NA	OU A ROD
	New Transportation Building (O/W 10644)	SAERA	NA	OU A ROD

**Table 3-1 (Continued)**  
**OU A CERCLA and Petroleum Sites Listed or Evaluated on Adak Island**

<b>SWMU or SA No.<sup>a</sup></b>	<b>Site Name<sup>b</sup></b>	<b>Listed or Investigated Under</b>	<b>Interim Remedy</b>	<b>Final Remedy</b>
	New Transportation Building (UST 10590)	SAERA	NA	OU A ROD
	New Transportation Building (UST 10591)	SAERA	NA	OU A ROD
	NMCB Building Area, T-1416 Expanded Area	SAERA	OU A ROD, as amended	2006 Decision Document
	NMCB Building (UST T-1416-A)	SAERA	OU A ROD, as amended	2006 Decision Document
	NORPAC Hill Seep Area	SAERA	OU A ROD, as amended	2005 Decision Document
	NSGA Filling Station, Mogas and JP-5 ASTs	SAERA	NA	OU A ROD
	Officer Hill and Amulet Housing (UST 31047-A)	SAERA	NA	OU A ROD
	Officer Hill and Amulet Housing (UST 31049-A)	SAERA	NA	OU A ROD
	Officer Hill and Amulet Housing (UST 31050-A)	SAERA	NA	OU A ROD
	Officer Hill and Amulet Housing (UST 31051-A)	SAERA	NA	OU A ROD
	Officer Hill and Amulet Housing (UST 31052-A)	SAERA	NA	OU A ROD
	Officer Hill and Amulet Housing (UST 31053-A)	SAERA	NA	OU A ROD
	Old Fuel Truck Shop (UST 10520-A)	SAERA	NA	OU A ROD
	Old Fuel Truck Shop (UST 10520-B)	SAERA	NA	OU A ROD
	Pantograph Pad (UST RT-1)	SAERA	NA	OU A ROD
	Pumphouse 5 Area	SAERA	NA	OU A ROD
	Quarters A	SAERA	NA	OU A ROD
	ROICC Contractor's Area (UST ROICC-5)	SAERA	NA	OU A ROD
	ROICC Contractor's Area (UST ROICC-6)	SAERA	NA	OU A ROD
	ROICC Contractor's Area (UST ROICC-7)	SAERA	NA	OU A ROD
	ROICC Contractor's Area (UST ROICC-8)	SAERA	NA	OU A ROD
	ROICC Warehouse (UST ROICC-1)	SAERA	NA	OU A ROD
	ROICC Warehouse (UST ROICC-2)	SAERA	NA	OU A ROD
	ROICC Warehouse (UST ROICC-3)	SAERA	NA	OU A ROD
	ROICC Warehouse (UST ROICC-4)	SAERA	NA	OU A ROD
	Runway 5-23 Avgas Valve Pit	SAERA	NA	OU A ROD
	Sewage Lift Station 10 (UST 42483-A)	SAERA	NA	OU A ROD
	Sewage Lift Station 11 (UST 42484-A)	SAERA	NA	OU A ROD
	Shack O-52 (UST O-52)	SAERA	NA	OU A ROD

**Table 3-1 (Continued)**  
**OU A CERCLA and Petroleum Sites Listed or Evaluated on Adak Island**

<b>SWMU or SA No.<sup>a</sup></b>	<b>Site Name<sup>b</sup></b>	<b>Listed or Investigated Under</b>	<b>Interim Remedy</b>	<b>Final Remedy</b>
	Shack O-69 (UST B)	SAERA	NA	OU A ROD
	South Avgas Pipeline at North Sweeper Creek	SAERA	NA	OU A ROD
	South of Runway 18-36 Area	SAERA	OU A ROD, as amended	2006 Decision Document
	Tanker Shed (UST 42494)	SAERA	OU A ROD, as amended	2005 Decision Document
	Telephone Exchange Building (UST 10324-A)	SAERA	NA	OU A ROD
	Telephone Substation T-100 (UST T-100-B)	SAERA	NA	OU A ROD
	TFB to TFC Pipeline—Area A	SAERA	NA	OU A ROD
	TFB to TFC Pipeline—Area B	SAERA	NA	OU A ROD
	TFB to TFC Pipeline—Area C	SAERA	NA	OU A ROD
	TFB to TFC Pipeline—Area D	SAERA	NA	OU A ROD
	TFB to TFC Pipeline—Area E (Truck Fill Stand)	SAERA	NA	OU A ROD
	TFB to TFC Pipeline—Area F	SAERA	NA	OU A ROD
	TFB to TFC Pipeline—Area G	SAERA	NA	OU A ROD
	TFC to NSGA Pipeline—Area A	SAERA	NA	OU A ROD
	TFC to NSGA Pipeline—Area B	SAERA	NA	OU A ROD
	TFC to NSGA Pipeline—Area C	SAERA	NA	OU A ROD
	TFC to NSGA Pipeline—Area D	SAERA	NA	OU A ROD
	TFC to NSGA Pipeline—Area E (Truck Fill Stand)	SAERA	NA	OU A ROD
	USGS (NOAA) Building (USTs NOAA-A, -C, and -D)	SAERA	NA	OU A ROD
	Yakutat Hangar (UST T-2039-A)	SAERA	OU A ROD, as amended	2005 Decision Document
	Yakutat Hangar (USTs T-2039-B and T-2039-C)	SAERA	NA	OU A ROD

<sup>a</sup>Sites are listed first by SWMU or SA number, then by water body, then by alphabetical petroleum site name.

<sup>b</sup>First name shown is name under CERCLA; alternative name (“a.k.a. \_\_\_\_\_”) is name under SAERA.

<sup>c</sup>SWMUs 1 (CERCLA portion only), 2 (minefield portion only), and 8 and SA 93 will be evaluated in the OU B process. The SAERA portion of SWMU 1 and the landfill portion of SWMU 2 were evaluated in the OU A ROD.

<sup>d</sup>SWMU or SA numbers were assigned only to sites in the Federal Facilities Agreement.

Notes:

AIMD - Aircraft Intermediate Maintenance Detachment

AST - aboveground storage tank

avgas - aviation gasoline

CDAA - circular disposed antenna array

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

DEC-SW - Alaska Department of Environmental Conservation Solid Waste Regulation

**Table 3-1 (Continued)**  
**OU A CERCLA and Petroleum Sites Listed or Evaluated on Adak Island**

DRMO - Defense Reutilization Marketing Office  
GCI - General Communications, Inc.  
GSE - ground support equipment  
JP-5 - jet petroleum No. 5  
Loran - long-range navigation  
MAUW - modified advanced underwater weapons  
mogas - motor vehicle gasoline  
NA - not applicable  
NAVFAC - Naval Facility  
NMCB - Naval Mobile Construction Battalion  
NOAA - National Oceanic and Atmospheric Administration  
NORPAC - North Pacific  
NSGA - Naval Security Group Activity  
OB/OD - open burn/open detonation  
O/W - oil/water separator  
PCB - polychlorinated biphenyl  
RCRA - Resource Conservation and Recovery Act  
ROD - record of decision  
ROICC - resident officer in charge of construction  
SA - source area  
SAERA - State-Adak Environmental Restoration Agreement  
SWMU - solid waste management unit  
TFB - Tank Farm B  
TFC - Tank Farm C  
USGS - U.S. Geological Survey  
UST - underground storage tank

### **3.2 OPERABLE UNIT B**

OU B addresses ordnance explosive safety hazards and human health and ecological risks associated with ordnance-related chemicals. Because CERCLA does not include specific provisions associated with explosive hazards related to ordnance, the OU B Project Team developed an investigation and cleanup approach for OU B consistent with the CERCLA process and acceptable to Adak stakeholders. The OU B Project Team consists of representatives from the Navy, EPA, ADEC, U.S. Fish and Wildlife Service, TAC, and the Aleutian/Pribilof Island Association. The Project Team was tasked to design an Adak-unique, CERCLA-consistent approach to identify, evaluate, and remediate sites potentially contaminated with ordnance.

In 2001, OU B was subdivided into OU B-1 and OU B-2 (Figures 3-4 and 3-5) to expedite transfer of real estate by placing a higher priority on completing the investigation and remediation of OU B-1 sites located within real estate planned for transfer to TAC. Under OU B-1, 155 sites

are addressed, 6 sites will be addressed under the formerly used defense site program, and the remainder will be addressed as part of OU B-2.

### **3.2.1 Operable Unit B-1**

The sites in OU B-1 include the Downtown and Remote Exchange Areas identified for land transfer (Table 3-2). Action was required at 47 sites by the OU B-1 ROD to meet the remedial action objectives (U.S. Navy, USEPA, and ADEC 2001). The actions required by the OU B-1 ROD fall into three categories:

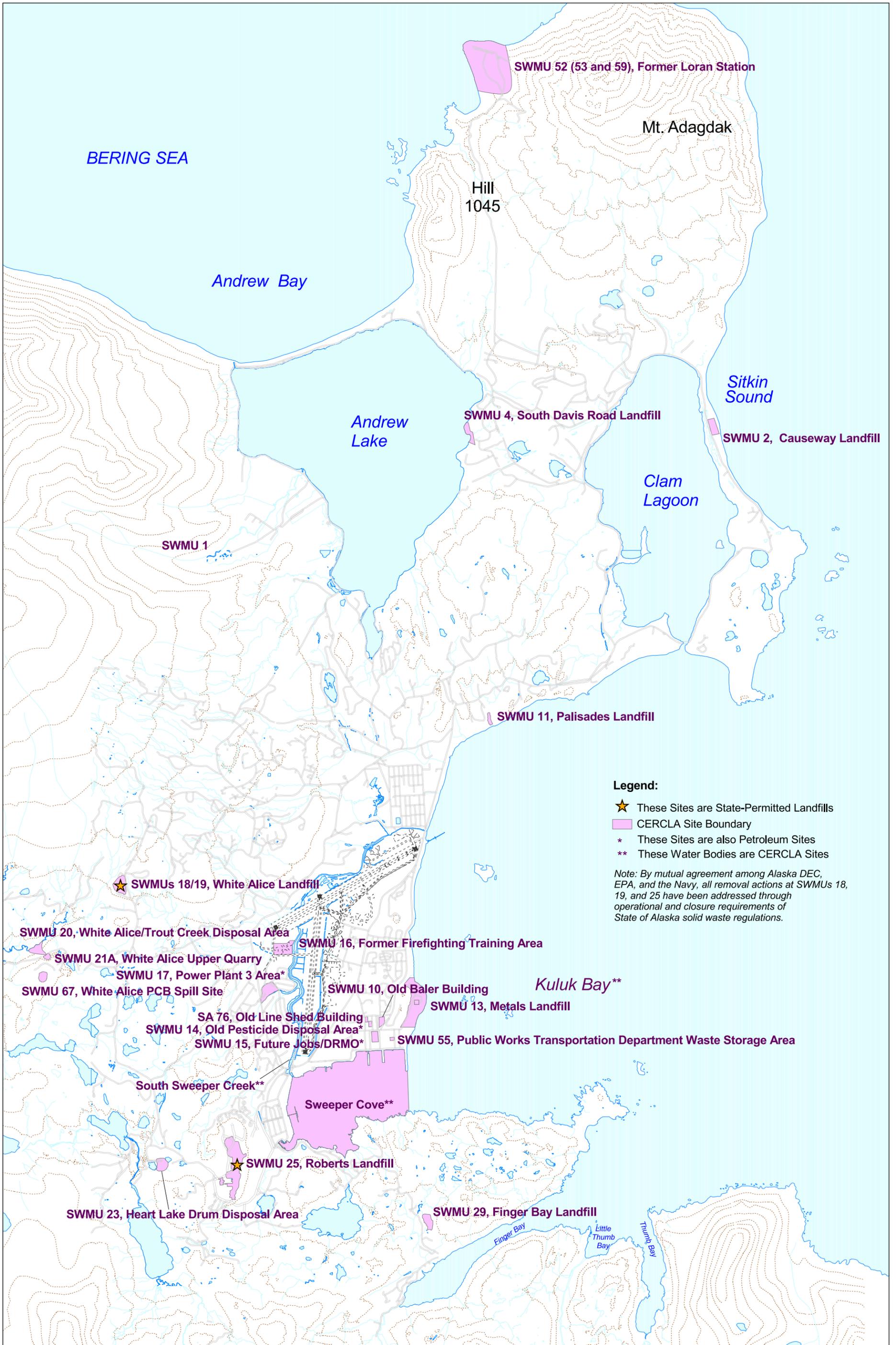
- Three sites (C3-01A, C6-01A, and ML-01A) were to be cleared of ordnance and explosives munitions and explosives of concern (MEC) to a depth of 4 feet below ground surface.
- Forty-four sites were to be investigated to identify locations of MEC contamination and, if necessary, remove potential MEC anomalies to a depth of 4 feet below ground surface.
- Nine sites were selected in the OU B-1 ROD for Alternative 4, soil samples collected and analyzed for munitions constituents.

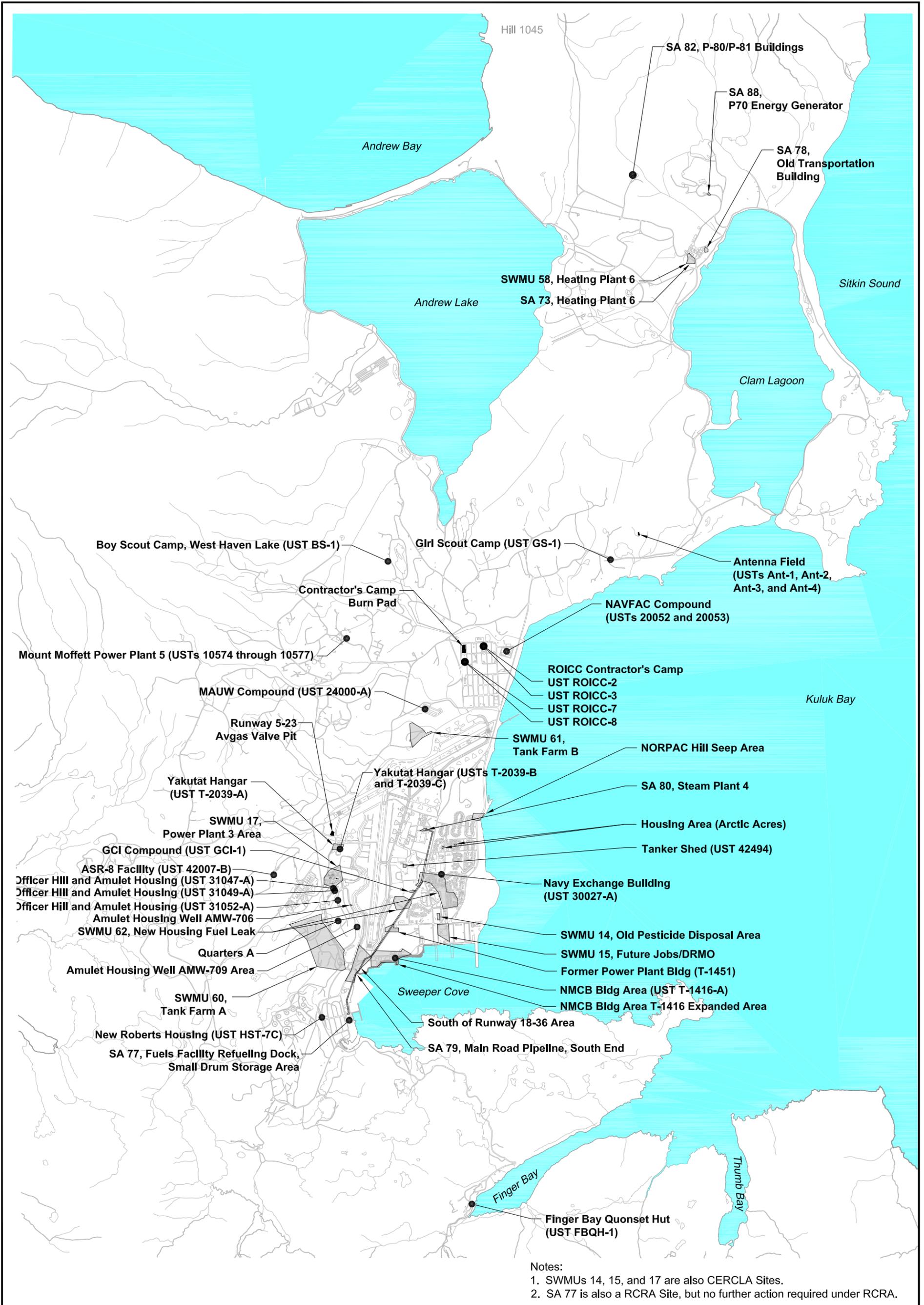
During 2004, three new sites were identified within or immediately adjacent to the boundaries of site MM-10E. These three sites are MM-10F, MM-10G, and MM-10H. Because these three sites are within or immediately adjacent to the boundaries of MM-10E, remedial actions specified in the OU B-1 ROD for MM-10E are applicable to MM-10F, MM-10G, and MM-10H. For the remaining OU B-1 sites, the selected remedy was No Further Action (abbreviated as “NOFA” in the OU B-1 ROD) with maintenance of a facility-wide ordnance awareness program.

### **3.2.2 Operable Unit B-2**

OU B-2 addresses ordnance explosive safety hazards and human health and ecological risks associated with ordnance-related chemicals in areas identified for possible retention by the Navy. There are 39 sites currently designated as OU B-2 (Table 3-3).

Data at OU B-2 sites potentially contaminated with MEC and munitions-related compounds were collected in 1999, 2000, and 2008 (U.S. Navy 2009). Data from the 1999 and 2000 investigations were reviewed to determine whether the information was adequate to assess risk and evaluate remedial alternatives in an FS. Data gaps were identified at 18 of the OU B-2 sites. The RI was conducted in 2008 to fill the identified data gaps at the 18 sites. Existing information was deemed sufficient to conclude that no further action was required at five OU B-2 sites. In addition to the





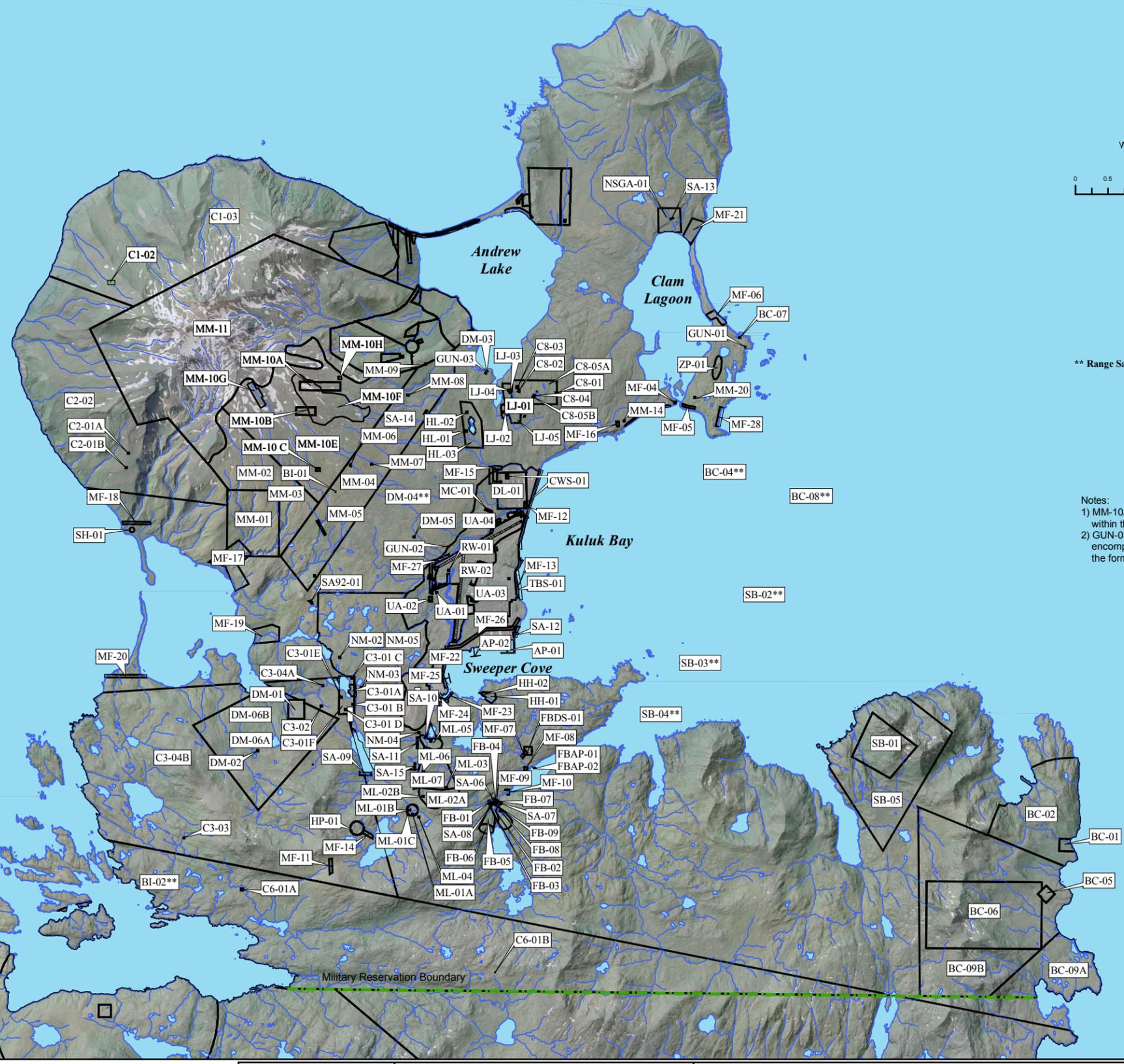
Notes:  
 1. SWMUs 14, 15, and 17 are also CERCLA Sites.  
 2. SA 77 is also a RCRA Site, but no further action required under RCRA.

**U.S. NAVY**

SCALE IN FEET

**Figure 3-3**  
**Operable Unit A Petroleum Sites**  
**That Require Further Action**

Delivery Order 0029  
 Adak Island, AK  
 COMMUNITY  
 RELATIONS PLAN



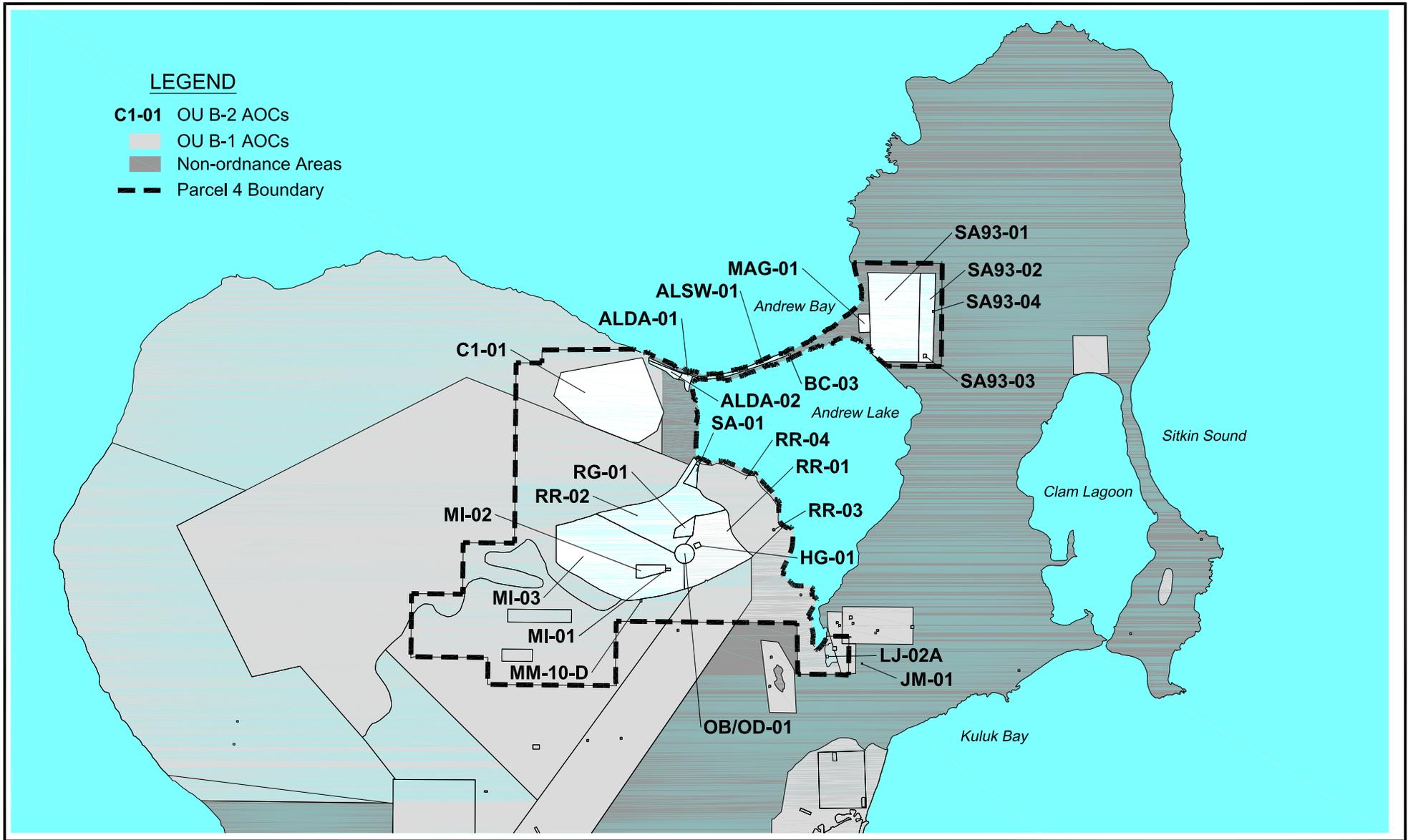
**\*\* Range Safety Fan:** BC-04  
 BC-08  
 BI-02  
 DM-04  
 SB-02  
 SB-03  
 SB-04

**Notes:**  
 1) MM-10A, B, C, F, G and H are located within the boundaries of MM-10E.  
 2) GUN-03 is included for deletion and encompasses 29 locations throughout the former military complex.

**U.S. NAVY**

Delivery Order 0029  
 Adak Island, AK  
 COMMUNITY RELATIONS PLAN

**Figure 3-4  
 Operable Unit B-1 Sites**



**U.S. NAVY**

0 3,500 7,000  
SCALE IN FEET

**Figure 3-5**  
**Operable Unit B-2 RI/FS Sites**

Delivery Order 0029  
Adak Island, AK  
COMMUNITY  
RELATIONS PLAN

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**Table 3-2  
OU B-1 Sites**

Candidate Site Name	Site Identifier/Name	Results of Preliminary Assessment <sup>f</sup>		
		NOFA	RI/SI	FS
Bay of Islands	BI-01 <sup>a</sup>		√	
Bay of Islands Impact Area	BI-02	√		
Blind Cove/Campers Cove Impact Area	BC-01, BC-05, BC-06, BC-07, BC-08, BC-09A		√	
	BC-02, BC-04, BC-09B	√		
Chemical Warfare Materials Warehouses	CWS-01	√		
Combat Range #1	C1-02 <sup>a</sup>		√	
	C1-03 <sup>a</sup>	√		
Combat Range #2	C2-01A <sup>a</sup> , C2-01B <sup>a</sup>		√	
	C2-02 <sup>a</sup>	√		
Combat Range #3	C3-01 (C3-01A, C3-01B, C3-01C, C3-01D, C3-01E), C3-04 (C3-04 <sup>a</sup> )	See Note <sup>b</sup>		
	C3-01 (C3-01F), C3-02, C3-03, C3-04 (C3-04B)		√	
Combat Range #6	C6-01 (C6-01A)	See Note <sup>b</sup>		
	C6-01B		√	
Combat Range #8	C8-01, C8-02, C8-03, C8-04, C8-05 (C8-05B)		√	
	C8-05 (C8-05A)	See Note <sup>b</sup>		
Davis Lake Ordnance Warehouses	DL-01	√		
Finger Bay Ammunition Pier	FBAP-01	√		
	FBAP-02		√	
Finger Bay Dynamite Storage	FBDS-01	√		
Finger Bay Impact Area	FB-01, FB-02, FB-04, FB-05		√	
	FB-03 <sup>c</sup> , FB-06, FB-07, FB-08, FB-09		√	
Gun Emplacements	GUN-01, GUN-02, GUN-03		√	
Gun Emplacement	Shagak Bay (SH-01)			√
Hammer Head Cover Impact Area	HH-01, HH-02	√		
Haven Lake Ordnance Area	HL-01, HL-02		√	
	HL-03	√		
Lake DeMarie Impact Area	DM-01, DM-02, DM-03, DM-04, DM-05, DM-06B		√	
	DM-06 (DM-06A)	See Note <sup>b</sup>		
Lake Jean Ammunition Complex	LJ-01, LJ-02, LJ-03, LJ-04		√	
	LJ-05	√		
MAUW Complex	MC-01	√		

**Table 3-2 (Continued)**  
**OU B-1 Sites**

Candidate Site Name	Site Identifier/Name	Results of Preliminary Assessment <sup>f</sup>		
		NOFA	RI/SI	FS
Minefields	Candlestick East (MF-04), Candlestick West (MF-05), Clam Lagoon Spit (MF-06), Finger Bay North Road (MF-07), Finger Bay NW (MF-08), Finger Bay SE (MF-09), Finger Bay SW (MF-10), Husky Pass (MF-11), Kuluk Bay (MF-12), Kuluk Bay South (MF-13), Lake Bonnie Rose (MF-14), NAVFAC (MF-15), Palisades (MF-16), Shagak Bay NE (MF-17), Shagak Bay NW (MF-18), Shagak Bay SE (MF-19), Shagak Bay SW (MF-20), Sweeper Cove North (MF-22), Sweeper Cove NW (MF-23), Sweeper Cove South (MF-26), Sweeper Cove SW (MF-25), Sweeper Cove West (MF-24), Yakutat (MF-27), Zeto Point (MF-28) SWMU 2 Clam Lagoon (MF-21)	√		√
Mount Moffett	MM-01 <sup>a</sup> , MM-02 <sup>a</sup> , MM-03 <sup>a</sup> , MM-04 <sup>a</sup> (encompasses MM-22 <sup>a</sup> and MM-23 <sup>a,d</sup> ), MM-05 <sup>a</sup> , MM-06 <sup>a</sup> , MM-07 <sup>a</sup> , MM-08 <sup>a</sup> , MM-09 <sup>a</sup> , MM-10A <sup>a</sup> (includes two chemical sampling targets), MM-10B <sup>a</sup> , MM-10C <sup>a</sup> , MM-10E <sup>a</sup> , MM-11 <sup>a</sup> , MM-14, MM-20		√	
	MM-10F, MM-10G, MM-10H	See Note <sup>e</sup>		
Husky Pass	a.k.a., Husky Pass Training (HP-01)			√
Mitt Lake Impact Area	ML-01 (ML-01A, ML-01B), ML-02 (ML-02A)	See Note <sup>b</sup>		
	ML-01 (ML-01C), ML-02 (ML-02B), ML-03, ML-04, ML-05		√	
	ML-06, ML-07	√		
NAF Adak/Lake DeMarie Ammunition Complex	NM-02, NM-03, NM-04		√	
	NM-05	√		
NSGA Magazine Complex	NSGA-01	√		
Scabbard Bay Impact Area	SB-01, SB-02, SB-03, SB-04, SB-05		√	
Small Arms Ranges	Finger Bay Pistol Range (SA-06), Finger Bay Rifle Range (SA-07), Finger Bay Submachine Gun Range (SA-08), Lake DeMarie Rifle Range (SA-09), Mitt Lake Sportsman's Pistol Range (SA-10), Mitt Lake Sportsman's Rifle Range (SA-11), NSGA Rifle Range (SA-13), NAF Trap and Skeet Range (SA-12), Nurses Creek Rifle Range (SA-14), Radar Hill Rifle Range (SA-15)	√		

**Table 3-2 (Continued)  
 OU B-1 Sites**

Candidate Site Name	Site Identifier/Name	Results of Preliminary Assessment <sup>f</sup>		
		NOFA	RI/SI	FS
Urban Area	UA-01, UA-02		√	
	UA-03, UA-04	√		
WWII Ammunition Pier (Sweeper Cove)	AP-01	√		
	AP-02		√	
WWII (Near Runways)	RW-01		√	
	RW-02	√		
WWII Temp Bomb Storage (Kuluk Beach)	TBS-01	√		
Finn Field Bomb Burn Pile	SA92-01	√		
Zeto Point Impact Area	ZP-01 <sup>a</sup>		√	

<sup>a</sup>Sites that were added to OU B-1 from OU B-2 include C1-02, C1-03, C2-01A, C2-01B, C2-02, BI-01, MM-01, MM-02, MM-03, MM-04 (encompasses MM-22 and MM-23), MM-05, MM-06, MM-07, MM-08, MM-09, MM-10A (includes two chemical sampling targets), MM-10B, MM-10C, MM-10E, MM-11, and ZP-01.

<sup>b</sup>Twelve sites that did not undergo preliminary assessment, but were evaluated in the RI include C3-01 (C3-01A, C3-01B, C3-01C, C3-01D, C3-01E); C3-04 (C3-04A); C6-01 (C6-01A); C8-05 (C8-05A); DM-06 (DM-06A); ML-01 (ML-01A, ML-01B); and ML-02 (ML-02A).

<sup>c</sup>FB-03 was transferred from NOFA to Final Characterization, based on the discovery of additional archival information following completion of the Proposed Plan.

<sup>d</sup>MM-23 did not undergo preliminary assessment.

<sup>e</sup>During the 2004 field season, the Navy established two new sites (MM-10F and MM-10G) within MM-10E. In addition, a new site (MM-10H) was established adjacent to the eastern border of MM-10E during a site certification meeting on December 8, 2004.

<sup>f</sup>Many of the sites identified for further investigation in the preliminary assessment were subsequently investigated and given a NOFA designation in the OU B-1 Record of Decision.

Notes:

FS - A feasibility study has been completed.

MAUW - Modified Advanced Underwater Weapons

NAF - Naval Air Facility

NSGA - Naval Security Group Activity

NOFA - no further action

OU - operable unit

RI/SI - A remedial investigation and/or site inspection has been completed.

WWII - World War II

**Table 3-3  
 OU B-2 Sites**

Site Designation	Site Name	Site Description
ALDA-01	Andrew Lake Disposal Area – Landfill Area	<p>ALDA-01 is a large-scale burial area, with possible wash-up of DMM from the offshore dump area of ALSW-01. ALDA-01 is located at the northwest corner of Andrew Lake and covers 6.7 acres. The site boundary is dog-legged and is wider at the north end of the site near Andrew Bay. Most of this site lies at elevations ranging from about 6.1 to 12.2 meters (20 to 40 feet) asl; however, a cliff on the west side of this site rises to heights of more than 200 feet asl. There is a distinct elevation break running across the site from northwest to southeast that separates the low-lying portion of the site into higher and lower elevation areas. The elevation difference of this feature is about 8 feet. The lower elevation area is a depositional environment from Andrew Bay, with this portion of the site experiencing possible wash-up of DMM from the offshore dump area. This site is bordered by ALDA-02 to the west, Andrew Lake to the east, ALSW-01 to the northeast, and a thin strip of ALSW-01 to the north. Parcel 4 areas outside of OU B-2 border this site to the southwest. There is direct access to this site via the main access road running along the western shore of Andrew Lake. This road is gated with a locking steel gate near the south end of the lake to deter general access. The terrain is generally flat, except for steep slopes along the western edge. A line of craters trends northwest to southeast across the site. Vegetation is predominantly grass ranging in height from 12 to 18 inches, which is sparser toward the beach area, but still thick enough to hide the underlying cobbled surface. The geology of the site is characterized by shallow bedrock with a thin layer of soil. The soil is dominated by cobbles and boulders. There should be no groundwater because of the shallow bedrock.</p>
ALDA-02 <sup>a</sup>	Andrew Lake Disposal Area – Beach Crater Area	<p>ALDA-02 is a potential aerial bombing range based on review of aerial photography showing craters in the site. However, no targets were present in the photographs. The craters form a long straight line that is atypical of an aerial bombing range with a target. ALDA-02 is located adjacent to the beaches of Andrew Bay and northwest of Andrew Lake in the northwestern portion of OU B-2. The site covers 9.5 acres. The area is roughly rectangular, with the long sides of the rectangle running parallel to the Andrew Bay shoreline. Elevations in ALDA-02 range from about 6.1 to 61 meters (20 to 220 feet) asl, with the vast majority of the elevation gain in the form of a cliff along the southern edge of the site. This site is bordered by ALDA-01 to the east and by C1-01 to the southwest. There is indirect access to this site via overland walk from the main access road running along the western shore of Andrew Lake to the east of this site. This road is gated with a locking steel gate near the south end of the lake to deter general access. The terrain is rolling and irregular, and transitions over a strip approximately 50 meters wide from a cobble beach in the north to a rocky cliff in the south. Vegetation is tall grass, which is thick at most locations. The thick vegetation</p>

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
ALDA-02 <sup>a</sup> (Cont.)	Andrew Lake Disposal Area – Beach Crater Area	impedes access and hides holes and hummocks in the uneven terrain. An ephemeral drainage channel from C1-01 cuts across ALDA-02, outfalling over a cliff to a rocky shelf beside Andrew Bay. The geology of the site is characterized predominantly by bedrock with a very thin layer of soil. There should be limited groundwater because of the shallow bedrock.
ALSW-01 <sup>b</sup>	SWMU 8, Andrew Lake Seawall	ALSW-01 is a wash-up area for disposal at sea and potential disposal area (burial). ALSW-01 consists of the western portion of the seawall located along the north shoreline of Andrew Lake and covers 10 acres. The seawall is narrow and elongated, similar to a dike with a narrow flat top and steep sides. The seawall separates the freshwater lake from Andrew Bay to the north, which is an embayment of the Bering Sea. A munitions dump is located offshore of the seawall. The location and amount of munitions in the offshore dump area are unknown. Elevations in the upland portion of the site range from about 3 to 9.1 meters (10 to 30 feet) asl. This site is bordered by ALDA-01 to the west, Andrew Lake to the south, the Andrew Bay beach area to the north, and non-OU B-2 areas to the east. The Navy periodically performs sweeps on the Andrew Bay beach, within the tidal zone, to remove MEC items that have washed up from offshore dump sites. The area below the mean higher high water mark on the Andrew Bay side of the seawall is owned by the Alaska Department of Natural Resources. There is direct access to this site via an unimproved road originating on the east side of Andrew Lake near the Recreation Center. There is a locked steel gate and rock barrier on this roadway just north of the Recreation Center to deter public access. There is also indirect access via a walk from main access road running along the western shore of Andrew Lake. This road is gated (locked steel gate) near the south end of the lake to deter general access. The terrain transitions from generally flat atop the seawall to very steep along the sides (north and south). Vegetation consists of short, relatively sparse grass atop the wall and tussocks of taller grass along the sides where adequate soil is present. A natural spillway at the northwest corner of Andrew Lake allows some flow of freshwater into Andrew Bay. At times, the spillway is obstructed and discharge is limited to water flowing through the cobble substrate of the seawall to Andrew Bay. The seawall is a man-made feature composed of boulders, cobbles, gravel, large metal debris, and wood.
BC-03 <sup>a</sup>	Blind Cove/ Campers Cove – Firing Point #1	BC-03 is a firing point for 155-mm projectiles. This site is located atop the seawall, near the center of the dike-like feature, and covers 0.02 acre of land. This site is a small, roughly square site that is surrounded on all sides by land that is not part of OU B-2. The elevation of BC-03 is about 9.1 meters (30 feet) asl. A small portion of this site was inaccessible for investigation because of the presence of Quonset hut debris. There is direct access to this site via an unimproved road originating on the east side of Andrew Lake near

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
BC-03 <sup>a</sup> (Cont.)	Blind Cove/ Campers Cove – Firing Point #1	the Recreation Center. There is a locked steel gate and rock barrier on this roadway just north of the Recreation Center to deter public access. The terrain is relatively flat. Vegetation is relatively sparse because of the unsuitability of the soils to sustain vegetation, and consists of grasses 8 to 18 inches tall. The site geology is similar to ALSW-01, which is a man-made feature composed of boulders, cobbles, gravel, large metal debris, and wood.
C1-01	Combat Range #1 – Mortar Target Area	C1-01 is a target/impact area that covers 387 acres. C1-01 is located north of the former Range Complex at Andrew Lake. It is roughly oval in shape. C1-01 is situated on a sloping plateau above and west of ALDA-01 on the flanks of Mount Moffett. Elevations range from about 152 to 396 meters (500 to 1,300 feet) asl. It is bordered on all sides by C1-03. ALDA-01 and ALDA-02 are located northeast of this site, and Andrew Lake lies to the east. There is indirect access to this site via a moderate hike from the Andrew Lake range area. Access to the range area is via a locked steel gate near the south end of Andrew Lake. The terrain is moderately steep and rocky in most areas, and the site is inaccessible along the northern boundary. Vegetation consists primarily of sparse short grasses, lichens, and small alpine flowers ranging in height from 1 to 4 inches. An ephemeral drainage channel cuts across C1-01, outfalling north over a steep cliff to a rocky shelf beside Andrew Bay. The geology of the site is characterized by shallow soils with rock outcrops. Groundwater is anticipated to be deep due to the elevation of the site (500 to 1,300 feet) relative to nearby permanent surface water features at Andrew Bay and Andrew Lake.
HG-01	Andrew Lake Hand Grenade Range	HG-01 is a target/impact area. It is a small, square area of about 2 acres located within the former Range Complex at Andrew Lake. Remnants of a berm with incorporated throwing pits are located near the east side of the range. The pits are reinforced with heavy timbers and, at one time, offered protection from exploding grenades during training exercises. The elevation in this site is approximately 33.5 meters (110 feet) asl. This site is located wholly within RR-01. There is direct access to this site via the gravel range entry road, which branches from the main access road along the western side of Andrew Lake. This main road is gated (locked steel gate) near the south end of the lake to deter general access. A locked cable barrier also deters access to the range entry road. The terrain is relatively flat. There are steep slopes on the berm protecting the throwing pits. Vegetation consists of tall tundra grasses up to 18 inches tall interspersed with wildflowers. The valley floor is composed of a silty, gravelly, sand, alluvial/colluvial, and/or outwash material overlying andesitic basalt bedrock or consolidated ash tuff. Groundwater is anticipated to be shallow, and there may be intermittent standing water at certain times of the year.

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
JM-01 <sup>a</sup>	Candidate Chemical Weapons Disposal Site	This site was thought to be located in the Lake Jean area, just west of Combat Range 8. Thirteen sites were evaluated, and none was judged to be the actual location. The site was described by a WWII veteran (“J.M.”) as a small, rectangular area enclosed by a barbed wire fence that was used for a one-time chemical weapons disposal via earth-tamped detonation. The general area where the site was thought to be located includes diverse terrain. The center of the area is a relatively flat, meadow-like area cut by meandering streams that form deep, winding ravines. On three sides (north, east, and south) of this area, the terrain rises in a series of ridges and ravines. To the west, the terrain falls steeply toward Andrew Lake. Vegetation in the general area consists predominantly of tall tundra grass. There are some areas near the hilltops where heaths and mosses are plentiful.
LJ-02A <sup>a</sup>	Lake Jean Disposal Area	LJ-02A is located just south of Lake Jean within the Lake Jean Ammunition Complex and covers approximately 0.4 acre. It is contained wholly within LJ-02, an OU B-1 site. This site was originally part of LJ-02 until potential evidence of buried items was found during the search for JM-01 in this area. As a result, a new OU B-2 site was created in 2002. There is direct access to this site via a rutted dirt road around the perimeter of LJ-02. The terrain is generally undulating and hummocky. Vegetation consists of lowland tundra species ranging from 12 to 24 inches in height. Because the site is approximately 16 to 24 meters (60 to 80 feet) above the Lake Jean shoreline, groundwater is expected to be relatively deep.
MAG-01 <sup>a</sup>	WWII Magazine – Andrew Lake Seawall	MAG-01 is a storage magazine that covers 12.3 acres. It is located at the eastern end of the Andrew Lake seawall along the north-central shoreline of Adak Island. The area is a small rectangle that is located at the base of a cliff that rises to meet SA93-01 to the east. To the north, west, and south, the site is bordered by property lying outside of OU B-2. The elevation ranges from 6 to 12 meters (20 to 40 feet) asl in the accessible portion of the site. It rises rapidly to elevations above 79.2 meters (260 feet) asl in the eastern portion of the site. There is direct access via unimproved road originating on the east side of Andrew Lake near the Recreation Center. There is a locked steel gate and rock barrier on this roadway just north of the Recreation Center to deter public access. The terrain is relatively flat in the western portion of the site and very steep (cliff-like) in the eastern portion. The vegetation consists of moderately thick beach grass ranging in height from 8 to 12 inches in the lower areas, with little vegetation in the steeper areas. A small lake or pond, which may be man-made, is located in the central portion. Because of the site’s proximity to Andrew Lake and Andrew Bay and its similar elevation, groundwater is expected to be shallow.

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
MF-01	Andrew Lake East Minefield	MF-01 is located at the eastern end of the Andrew Lake Seawall, which is located along the north shoreline of Andrew Lake. The site has not been intrusively investigated for mine-related debris. However, a historical pistol/rifle range and magazine nearby were investigated during the preliminary source evaluation for chemical contamination. Based upon the data available and the intense utilization of this area, it is not realistic to conclude that this minefield was ever installed. Therefore, the site met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is "Limited Action.")
MF-02	Andrew Lake Seawall Minefield	MF-02 is located along the entire length of the Andrew Bay Seawall along the north shoreline of Andrew Lake. The seawall is narrow, and elongated, and similar to a dike with a narrow flat top and steep sides. The seawall is a man-made feature composed of boulders, cobbles, gravel, large metal debris, and wood. The site has not been intrusively investigated for mine-related debris. However, the site was visited during the preliminary source evaluation, and periodic sweeps have been conducted along the seawall to remove ordnance washed up by frequent violent storms. Based on the field data and the extensive historical use of this area for daily/routine activities, it is not realistic to conclude that this minefield was ever installed. Therefore, this site met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is "Limited Action.")
MF-03	Andrew Lake West Minefield	MF-03 is located northwest of Andrew Lake in the vicinity of ALDA-01 and ALDA-02. The site has not been intrusively investigated for mine-related debris. However, the site was investigated during the 1999 field season in areas that overlap ALDA-01. No mine or related waste was found. Therefore, the site met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is "Limited Action.")
MI-01	Andrew Lake Mortar Impact Area – Rocket Disposal Area	MI-01 is a target/impact area that covers 0.7 acre. It is located along the southern side of the mortar impact valley in the Range Complex at Andrew Lake (west of Andrew Lake). It is bordered by MI-02 immediately to the west and OB/OD-01 to the east, and is otherwise surrounded by MI-03. Elevation in the site ranges from 48 to 55 meters (160 to 180 feet) asl. There is indirect access to this site via the gravel range entry road that terminates at OB/OD-01, which branches from the main access road along the western side of Andrew Lake. This main road is gated (locked steel gate) near the south end of the lake to deter general access. A locked cable barrier also deters access to the range entry road. The terrain at the site slopes gently to the north toward the floor of the mortar impact valley. Dominant vegetation is a mixture of grasses and

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
MI-01 (Cont.)	Andrew Lake Mortar Impact Area – Rocket Disposal Area	lowland tundra species ranging in height from 12 to 24 inches. The valley floor is composed of a silty, gravelly, sand, alluvial/colluvial, and/or outwash material overlying andesitic basalt bedrock or consolidated ash tuff. Based on the elevation and proximity to stream channels, groundwater is anticipated to be shallow in lowland areas.
MI-02	Andrew Lake Mortar Impact Area – 40-mm Projectile Impact Area	MI-02 is a target/impact area that covers 19 acres. It is located along the southern side of the mortar impact valley in the Range Complex at Andrew Lake (west of Andrew Lake). It is bordered by MI-01 to the east and is otherwise surrounded by MI-03. The elevation in this site ranges from about 49 to 104 meters (160 to 340 feet) asl. There is indirect access to this site via a gravel range entry road that terminates at OB/OD-01, which branches from the main access road along the western side of Andrew Lake. This main road is gated (locked steel gate) near the south end of the lake to deter general access. A locked cable barrier also deters access to the range entry road. The terrain is relatively flat, rising moderately to the west toward Mount Moffett. The area is somewhat flatter in the eastern portion closer to Andrew Lake. The area is bordered on the south by steep terrain that becomes inaccessible near the top of the ridge delineating the southern boundary of MI-02 and the Range Complex at Andrew Lake. Steep terrain also forms the northern boundary of this site to the west. Vegetation is grassy with lowland tundra species ranging in height from 12 to 24 inches. Intermittent standing water in the eastern portion of the site (i.e., lowland area) may possibly be present due to shallow groundwater. The valley floor is composed of a silty, gravelly, sand, alluvial/colluvial, and/or outwash material overlying andesitic basalt bedrock or consolidated ash tuff. Groundwater in upper portions of this site is anticipated to be relatively deep compared with shallow depths expected along the valley floor.
MI-03	Andrew Lake Mortar Impact Area – Mortar Impact Area	MI-03 is a target/impact area that covers 425 acres. It consists of a steep valley draining west to east from the flanks of Mount Moffett toward Andrew Lake. MI-03 is bordered by OU B-1 (MM-11 and various components of MM-10) to the west, south, and north. Three OU B-2 sites border MI-03 to the east: OB/OD-01, RR-01, and RR-02. MI-01 and MI-02 are located wholly within this site. The elevation in MI-03 ranges from about 40.1 meters (130 feet) asl at the eastern edge to about 280 meters (920 feet) asl along the western edge on the flanks of Mount Moffett. There is indirect access to this site via a gravel range entry road that terminates at OB/OD-01, which branches from the main access road along the western side of Andrew Lake. This main road is gated (locked steel gate) near the south end of the lake to deter general access. A locked cable barrier also deters access to the range entry road. The terrain ranges from relatively low and flat in the eastern portion nearest the OB/OD area to steep and inaccessible at the western end and along the southern border. There is a steep ridgeline near the northern side of the site

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
MI-03 (Cont.)	Andrew Lake Mortar Impact Area – Mortar Impact Area	with a relatively flat top. The top of this ridge is shared with RR-02. Vegetation is grassy in the east with lowland tundra species ranging in height from 12 to 24 inches. The vegetation transitions to upland species (mixed grasses, heaths, and mosses) of shorter stature in the west. Runoff channels or streams within the site run easterly toward Moffett Creek, which is partially located within this site. Groundwater is anticipated to be shallow in the lowland areas, which provides the potential for groundwater seeps. Small ponds or lakes are present at two locations. The valley floor is composed of a silty, gravelly, sand, alluvial/colluvial, and/or outwash material overlying andesitic basalt bedrock or consolidated ash tuff. Groundwater in upper portions of the site is anticipated to be relatively deep compared with shallow depths expected along the valley floor.
MM-10D <sup>a</sup>	Mt. Moffett Impact Area – Central Impact Area Lone 81-mm Mortar	MM-10D is a target/impact area that covers 0.2 acre. It is a small, square site on the eastern flanks of Mount Moffett, where a lone, partial 81-mm mortar (frag) was found. MM-10D is located adjacent to the southern boundary of MI-03 directly south of the western edge of MI-02. The elevation of this site is approximately 213 meters (700 feet) asl. Access to this site is difficult given the steep embankment to the north, which separates the site from the mortar impact valley in the Range Complex at Andrew Lake. The terrain slopes gently to the east; however, just north of the site the terrain falls very steeply into the Range Complex at Andrew Lake. Vegetation is sparse and consists of short tundra grasses, lichens, mosses, and alpine flowers. Groundwater is anticipated to be quite deep based on the terrain and elevation.
MM-12	Mt. Moffett Impact Area – Range Safety Fan #1	MM-12 is a roughly triangular area that includes the range safety fan for the historical southwestern 155-mm impact area on Mount Moffett. It passes over Andrew Lake and then across the Andrew Lake Range Complex and the lower flanks of Mount Moffett to the impact area. The terrain in this area varies a great deal and includes relatively flat areas and areas where rolling hills and ravines dominate. Near the impact area, the terrain becomes quite steep and inaccessible. Many portions of the range safety fan area were investigated during the 1999 field season as part of the investigation in the Andrew Lake Range Complex areas and the Mt. Moffett Impact Area over which the fan passes. No ordnance consistent with the 155-mm guns was found in any of the fan areas examined. Therefore, MM-12 met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is “Limited Action.”)

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
MM-13	Mt. Moffett Impact Area – Range Safety Fan #2	MM-13 is a roughly triangular area that includes the range safety fan for Firing Point #2 for the Mt. Moffett Impact Area. It passes over open country between Firing Point #2 at Andrew Lake and the impact area. The terrain in this area varies a great deal and includes relatively flat areas near the firing point and very steep, inaccessible rocky areas toward the impact area at the western end of the fan. A portion of the range safety fan area was investigated during the 1999 field season as part of the investigation in the Andrew Lake Range Complex west of Andrew Lake and the Mt. Moffett Impact Area over which the fan passes. No ordnance consistent with the 90-mm guns was found in the fan area examined. Therefore, MM-13 met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is “Limited Action.”)
MM-15	Mt. Moffett Impact Area – Range Safety Fan #3	MM-15 is a roughly triangular area that includes the range safety fan for Firing Point #3 for the Mt. Moffett Impact Area. It passes over open country between Firing Point #3 on the shoreline of Kuluk Bay and the 90-mm Impact Area at the crest of Mount Moffett. The terrain in this area varies a great deal and includes relatively flat areas near the firing point and very steep, inaccessible rocky areas toward the impact area at the western end of the fan. About half of the range fan area overlaps Range Safety Fan #2. A portion of the range safety fan area was investigated during the 1999 field season as part of the investigation in the Lake Jean Ammunition Complex, the Haven Lake Ordnance Area, and the Mt. Moffett Impact Area over which the fan passes. No ordnance consistent with the 90-mm guns was found in the fan area examined. Therefore, MM-15 met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is “Limited Action.”)
MM-16	Mt. Moffett Impact Area – Range Safety Fan #4	MM-16 is a roughly triangular area that includes the range safety fan for Firing Point #4 for the Mt. Moffett Impact Area. It passes over open country between Firing Point #4 near downtown Adak and the 90-mm Impact Area at the crest of Mount Moffett. The terrain in this area varies a great deal and includes relatively flat areas near the firing point and very steep, inaccessible rocky areas toward the impact area at the western end of the fan. It should be noted that about half of the range fan area overlaps Range Safety Fans #2 and #3. A portion of the range safety fan area was investigated during the 1999 field season as part of the investigation in the Mt. Moffett Impact Area over which the fan passes. No ordnance consistent with the 90-mm guns was found in the fan area examined. Therefore, MM-16 met the requirements for NOFA in the

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
MM-16 (Cont.)	Mt. Moffett Impact Area – Range Safety Fan #4	preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is “Limited Action.”)
MM-17	Mt. Moffett Impact Area – Firing Point #5	MM-17 is situated in the eastern central portion of downtown Adak near the shoreline of Kuluk Bay. The firing point was used during training exercises to shoot at the Mt. Moffett Impact Area and at Scabbard Bay. This area is currently the location of abandoned housing units. This rectangular area surrounds the former location of a 90-mm gun battery and roughly represents the area where unfired ordnance may have been stored, dropped, discarded, or disposed of during World War II-era military operations. The terrain in this area is characterized by rolling hills and ravines. This firing point was not investigated during the 1999 field effort. However, it was part of the investigation area in 1997 when the Priority I and II Areas of downtown Adak were evaluated. At that time, 100 percent of the accessible Priority I and II Areas was successfully cleared and geophysically evaluated, including this firing point. There has also been a great deal of construction activity in this area, including the installation of utilities and the construction of streets and housing. No ordnance has been found at this site. Furthermore, it is highly unlikely that any ordnance that may have been left at this site remains undiscovered. Therefore, MM-17 met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is “Limited Action.”)
MM-18	Mt. Moffett Impact Area – Range Safety Fan #5	MM-18 is a roughly triangular area that includes the range safety fan for Firing Point #5 for the Mt. Moffett Impact Area. It passes over both open areas and developed areas of Adak between Firing Point #5 in downtown and the 90-mm Impact Area at the crest of Mount Moffett. The terrain in this area varies a great deal and includes relatively flat areas near the firing point and very steep, inaccessible rocky areas toward the impact area at the western end of the fan. It should be noted that about two-thirds of the range fan area overlaps Range Safety Fans #2, #3, and #4. A large portion of the range safety fan area was investigated during the 1997 and 1998 field seasons as part of the investigation in the Priority I, II, and III Areas over which the fan passes. No ordnance consistent with the 90-mm guns was found in the fan area examined. Therefore, MM-18 met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is “Limited Action.”)

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
MM-19	Mt. Moffett Impact Area – Range Safety Fan #6	MM-19 is a roughly triangular area that includes the range safety fan for Firing Point #6 for the Mt. Moffett Impact Area. It passes over open country between NAF Adak/Lake DeMarie Ammunition Complex and the impact area. The terrain in this area varies a great deal and includes relatively flat areas near the firing point and very steep, inaccessible rocky areas toward the impact area at the western end of the fan. It should be noted that about half of the range fan area overlaps Range Safety Fans #2, #3, #4, and #5. A portion of the range safety fan area was investigated during the 1999 field season as part of the investigation in the NAF Adak/Lake DeMarie Ammunition Complex and the Mt. Moffett Impact Area over which the fan passes. No ordnance consistent with the 90-mm guns was found in the fan area examined. Therefore, MM-19 met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is “Limited Action.”)
MM-21	Mt. Moffett Impact Area – Range Safety Fan #7	MM-21 is a roughly triangular area that includes the range safety fan for Firing Point #7 for the Mt. Moffett Impact Area. It passes over open country between Clam Lagoon and the 155-mm impact area on Mount Moffett. The terrain in this area varies a great deal and includes relatively flat areas near the firing point and very steep, inaccessible rocky areas toward the impact area at the western end of the fan. A portion of the range fan also passes over Clam Lagoon. A large portion of the range safety fan area was investigated during the 1999 field season as part of the investigation in Combat Range #8, the Lake Jean Ammunition Complex, and the Mt. Moffett Impact Area over which the fan passes. No ordnance consistent with the 155-mm guns was found in any of the fan areas examined. Therefore, MM-21 met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is “Limited Action.”)
OB/OD-01	Andrew Lake Open Burn/Open Detonation Disposal Range	OB/OD-01 is a circular area with a radius of 182 meters (600 feet) that covers 18 acres. The boundary encompasses visible historical demolition craters and an ample buffer zone around the craters to account for kick-outs during disposal operations. It is bordered by RR- 02 to the northwest; RR-01 to the northeast, east, and southeast; and MI-03 to the south and west. The elevation in this site ranges from about 33 to 40 meters (110 to 130 feet) asl. There is direct access to this site via the gravel range entry road, which branches from the main access road along the west side of Andrew Lake. This main road is gated (locked steel gate) near the south end of the lake to deter general access. A locked cable barrier also deters access to the range entry road. The terrain is relatively flat, but hummocky in some locations and marshy in others. There are several craters in this area resulting from previous disposal events. The site is generally covered in knee-high, grassy tundra; however, there are relatively

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
OB/OD-01 (Cont.)	Andrew Lake Open Burn/Open Detonation Disposal Range	barren areas surrounding some of the disposal craters. Moffett Creek runs from west to northeast through the northwestern portion of the site. In addition, standing water has been observed in the disposal craters. The valley floor is composed of a silty, gravelly, sand, alluvial/colluvial, and/or outwash material overlying andesitic basalt bedrock or consolidated ash tuff. The groundwater is shallow, as evidenced by standing water in the disposal craters. Groundwater is in hydraulic communication with the creek (i.e., there is interconnection between the creek and the groundwater aquifer in this area).
RG-01 <sup>a</sup>	Andrew Lake 40-mm Rifle Grenade Range	RG-01 is a target/impact area that covers 16 acres. This site is located on a hillside northwest of the HG-01. The area is trapezoidal in shape, narrowing from the target line near the base of a hill to the crown of the hill. RG-01 is bordered by RR-01 to the east and southeast, and is otherwise surrounded by RR-02. The elevation in this site ranges from about 34 meters (110 feet) asl near the target line to about 125 meters (410 feet) asl at the top of the hill behind the targets. A non-time critical removal action was conducted at RG-01 in 2006 and 2008. There is direct access to this site via the gravel road running from the range entry road up to the firing line area. This road connects ultimately to the main access road for the general range area on the west side of Andrew Lake. This main road is gated (locked steel gate) near the south end of the lake to deter general access. A locked cable barrier also deters access to the range entry road. The terrain is steep and largely inaccessible in the western portion of the site. Vegetation consists of tundra grass up to 18 inches tall with a very thick rootmat near the firing line. Steeper areas generally consist of shorter grasses interspersed with alpine flowers and some moss. Intermittent standing water in the southeastern portion of the site (i.e., lowland area) may possibly be present due to shallow groundwater.
RR-01	Andrew Lake Range Remainder – Hand Grenade/40-mm Area	RR-01 is a target/impact area that covers 182 acres. It is located in the southern central portion of the Range Complex at Andrew Lake. RR-01 is bordered by RR-02 to the north; OU B-1 to the south; RR-04 to the east; and OB/OD-01, RG-01, and MI-03 to the west. HG-01 is located wholly within this site. The elevation in this site ranges from about 15 to 152 meters (50 to 500 feet) asl. There is direct access to this site via the range entry road, which branches from the main access road along the west side of Andrew Lake. This main road is gated (locked steel gate) near the south end of the lake to deter general access. A locked cable barrier also deters access to the range entry road. The terrain is generally flat in northern portion, but can be uneven and marshy. The steep slopes to the south make the southern third of the site largely inaccessible. The vegetation is predominantly dense, lush tundra grass in lowland accessible portions. Moffett Creek runs from west to northeast through the northern portion of this site. Lowland areas bordering this creek are often saturated with pooled water at certain times of the year. Groundwater

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
RR-01 (Cont.)	Andrew Lake Range Remainder – Hand Grenade/40-mm Area	is in hydraulic communication with the creek. The valley floor is composed of a silty, gravelly, sand, alluvial/colluvial, and/or outwash material overlying andesitic basalt bedrock or consolidated ash tuff. The groundwater is anticipated to be shallow in lowland areas.
RR-02 <sup>a</sup>	Andrew Lake Range Remainder – Mortar Impact Area	RR-02 is a potential target/impact area based on the finding of material potentially presenting an explosive hazard in 1999. This site is located along the northern side of the valley containing the former Range Complex at Andrew Lake and covers 231 acres. RR-02 includes a valley running east and west that connects the flank of Mount Moffett with the lowlands on the western shore of Andrew Lake. This site shares a steep ridgeline and plateau area atop the ridge with MI-03 to the south. RR-02 is bordered by OU B-1 to the north; SA-01 and RR-04 to the east; MI-03 to the west; and RG-01, RR-01, and OB/OD-01 to the south. Elevations in this site range from about 12 to 238 meters (40 to 780 feet) asl. There is direct access to this site via a small dirt road, which branches from the main access road along the west side of Andrew Lake. This main road is gated (locked steel gate) near the south end of the lake to deter general access. The terrain rises from the flatlands near Andrew Lake to a narrow, steep valley bordered by steep hillsides (north, south, and west). An inaccessible ridge runs along the south side of this site, which has a relatively flat top. Vegetation is grassy with lowland tundra species ranging in height from 12 to 24 inches. There are also scattered areas containing mosses, heaths, and alpine flowers. Vegetation is sparser at higher elevations. An ephemeral drainage channel cuts across this site to SA-01 and ultimately to Andrew Lake. The valley floor is composed of a silty, gravelly, sand, alluvial/colluvial, and/or outwash material overlying andesitic basalt bedrock or consolidated ash tuff. Groundwater is anticipated to be shallow in lowland areas in the eastern portion. Groundwater is expected to be deep at the higher elevations to the west.
RR-03 <sup>a</sup>	Andrew Lake Range Remainder – Flare Site	RR-03 is range buffer zone that covers 0.2 acre. This site is a small, square site located near the southeastern boundary of the former Range Complex at Andrew Lake. It is wholly within RR-04 and was created to allow evaluation of a lone, abandoned, signal flare found in 1999. The elevation in this site is about 12 meters (40 feet) asl. There is indirect access to this site via the gravel road that branches from the main access road along the west side of Andrew Lake. This main road is gated (locked steel gate) near the south end of the lake to deter general access. A locked cable barrier also deters access to the range entry road. The terrain is relatively flat. Vegetation consists of tall, lush grass ranging in height from 12 to 18 inches. Groundwater is anticipated to be relatively shallow based on this site's proximity to Andrew Lake.

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
RR-04 <sup>a</sup>	Andrew Lake Range Remainder – Remainder	<p>RR-04 is range buffer zone that covers 253 acres. It encompasses most of the lower valley at the former Range Complex at Andrew Lake. The site is bordered by a narrow strip of shoreline along Andrew Lake on the north and northeast; RR-01 to the southwest; SA-01 to the northwest; and RR-02 to the west; and undesignated portions of Parcel 4 to the south. RR-03 is located wholly within RR-04. The elevation in most of the site is 6 to 12 meters (20 to 40 feet) asl. A steep ridge on the south side of this site rises to just over 67 meters (220 feet) asl. There is direct access to this site via the gravel range entry road that runs through this site. This road connects ultimately to the main access road on the west side of Andrew Lake, which currently has a locked steel gate near the south end of the lake to deter public access. A locked cable barrier also deters access to the range entry road. The terrain is generally flat, except along the southern side of the former Range Complex at Andrew Lake, where a steep hillside forms the southern valley wall. Vegetation is grassy with lowland tundra species ranging in height from 12 to 24 inches. There are also scattered areas containing mosses, heaths, wetland species, and alpine flowers. Moffett Creek runs from southwest to northeast through the central portion of this site. The lowland areas bordering this creek are often saturated with pooled water or are subject to overland sheet flow at certain times of the year. The valley floor is composed of a silty, gravelly, sand, alluvial/colluvial, and/or outwash material overlying andesitic basalt bedrock or consolidated ash tuff. Groundwater is anticipated to be relatively shallow based on this site’s proximity to Andrew Lake. Groundwater is in hydraulic communication with the creek. RR-04 met the requirements for NOFA in the preliminary assessment. (Note that for all OU B-2 sites, the current terminology for NOFA is “Limited Action.”) However, Alaska Department of Environmental Conservation requested that additional investigation work be performed at this site. This work was performed in 2008 as part of the remedial investigation.</p>
SA-01 <sup>a</sup>	Andrew Lake Machine Gun and Sub-Caliber Training Range	<p>SA-01 is a small arms range that covers 10.2 acres. It is located at the northern edge of the former Range Complex at Andrew Lake (on the west side of Andrew Lake). SA-01 is bordered by SA-02 to the north, RR-04 to the east, and RR-02 to the west and south. Elevation in this site ranges from about 12 to 49 meters (40 to 160 feet) asl. Direct access to this site is provided by the small arms range access road to the north, which branches from the main access road along the west side of Andrew Lake. This main road is gated (locked steel gate) near the south end of the lake to deter general access. The terrain is relatively flat in most areas, but slopes upward in the southwestern corner. Vegetation is primarily tall, lush grasses ranging in height from 6 to 18 inches. An ephemeral drainage channel cuts across the abutting RR-02 through this site to Andrew Lake. The valley floor is composed of a silty,</p>

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
SA-01 <sup>a</sup> (Cont.)	Andrew Lake Machine Gun and Sub-Caliber Training Range	gravelly, sand, alluvial/colluvial, and/or outwash material overlying andesitic basalt bedrock or consolidated ash tuff. Groundwater is anticipated to be relatively shallow based on this site's proximity to Andrew Lake.
SA-02	Andrew Lake Pistol Range	SA-02 is located along the northern hillside that defines the valley containing the range complex. The site was identified as a pistol range and .22 caliber antiaircraft and antitank weapons training area. This range is described as a 1,000-inch range, which indicates that it was scaled down to allow training using full-size weaponry firing small caliber munitions. A site inspection was performed on October 27, 1999. No live ordnance was located during the site visit. Therefore, SA-02 met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is "Limited Action.")
SA-03	Andrew Lake Seawall Pistol Range	SA-03 is located at the eastern end of the Andrew Lake seawall. The range consisted of two firing lines and one target line. The target line was at the eastern end of the range located at the base of a small hill. A site visit was conducted on March 14, 1997. The wooden walkways and the target posts are still visible. An investigation of the backstop located .45 caliber bullets down to a depth of 14 inches below ground surface. Bullet scarring was still evident behind the target posts. No live ordnance was located at the site. Therefore, SA-03 met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is "Limited Action.")
SA-04	Andrew Lake Seawall Rifle Range	SA-04 is located at the eastern end of the Andrew Lake seawall and is approximately 300 yards long. The range had a single firing line at the western end. There were three target lines at 100, 200, and 300 yards to the east of the firing line. The range had both fixed targets and raised targets. A site visit was conducted on March 14, 1997. The range area is still littered with range debris and the target lines are still visible. Small caliber rifle slugs were located in the subsurface soils at all three target lines. Bullet scarring at this range was minimal in comparison to other ranges located on Adak. No live ordnance was located during the visit. Therefore, SA-04 met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is "Limited Action.")

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
SA-05	SWMU 9, Black Powder Sportsman's Club	The Black Powder Sportsman's Club, also known as SWMU 9, is located along the southwest shore of Andrew Lake. The site was used by the Black Powder Sportsman's Club for recreational target practice. Prior to its use as a firing range, the site was used as a disposal area for metal debris (1970s and 1980s). The area also may have been used for small arms training in the late 1970s. The site is 200 by 100 feet. A site visit performed in 1993 located steel drums perforated with bullet holes. No live ordnance or bullet slugs were noted during the visit. Therefore, SA-05 met the requirements for NOFA in the preliminary assessment and did not require further evaluation in the remedial investigation. (Note that for all OU B-2 sites, the current terminology for NOFA is "Limited Action.")
SA93-01	Source Area #93 – Multiple Ordnance Impact Area	SA93-01 is a target/impact area that covers 263 acres. It is located to the northeast of Andrew Lake. Most of the site is on a plateau some 91 to 122 meters (300 to 400 feet) above the lake, but a small strip of this site along the southwestern corner abuts the shoreline of the lake. This site is bordered by SA93-02 to the east, areas lying outside Parcel 4 to the north and south, and Andrew Lake to the southwest. It is also bordered by MAG-01 to the west, but the two areas are not physically contiguous because of a steep cliff (i.e., MAG-01 is at the base of the cliff). Elevations in the central portion of this site range from about 67 to 98 meters (220 to 320 feet) asl. Along the western edge of this site, a steep ridge rises to just over 152 meters (500 feet) and then falls very rapidly (cliff) to elevations below 100 feet asl. To the north, a steep ridge rises to over 213 meters (700 feet) on the flanks of a small mountain peak. There is indirect access to this site via walking from the gravel road originating from the east side of Andrew Lake near the Recreation Center. The entire historical impact area in which this site resides is currently fenced (4-strand barbed wire), with posted signage to deter public access. On the west side of this site, a steep ridge forms a cliff above Andrew Lake. To the east of this ridge, the terrain falls gently toward a deep drainage ravine near the east side of this site. Vegetation is generally a mixture of grasses, sedges, mosses, and heaths ranging in height from 18 to 30 inches. A deep ravine at the eastern edge of the site carries runoff southward toward Andrew Lake. Also, there are areas of standing water or streams in the south-central portion of the site. Groundwater is expected to be deep, given the elevation of this site compared with Andrew Lake and Andrew Bay.
SA93-02 <sup>a</sup>	Source Area #93 – Eastern Impact Area	SA93-02 is a potential storage area (or staging site) based on its proximity to roadway and covers 78 acres. This site is a long, narrow strip (rectangle) running along the eastern edge of SA93-01. It is bordered by areas lying outside of Parcel 4 to the north, south, and east. SA93-03 and SA93-04 are both located wholly within SA93-02. Elevations in this site range from about 61 to 91 meters (200 to 300 feet) asl; however, a deep drainage ravine running

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
SA93-02 <sup>a</sup> (Cont.)	Source Area #93 – Eastern Impact Area	through the center of this site drops to an elevation below 12 meters (40 feet) asl. There is direct access to this site via a gravel road originating from the east side of Andrew Lake near the Recreation Center. The entire historical impact area in which this site resides is currently fenced (4-strand barbed wire), with posted signage to deter public access. The terrain is generally rolling with the exception of the very steep ravine running through the southern two-thirds of this site, from the north-central area to the southwestern corner. This ravine impedes pedestrian ingress from the road on the eastern side. Vegetation is generally a mixture of grasses, sedges, mosses, and heaths ranging in height from 12 to 24 inches. Mitchell Creek traverses this site in the north-south direction, within the deep drainage ravine. Groundwater is anticipated to be deep based on this site's elevation compared with Andrew Lake and Andrew Bay.
SA93-03	Source Area #93 – Firing Point	SA93-03 is a target/impact area that covers 0.6 acre. This small, rectangular site is located wholly within SA93-02 near the southern boundary of that site. This area was initially believed to be the principal firing point for 2.36-inch rockets found within SA93-01 (located across the ravine to the west). On the basis of items found during the 1999 site inspection, however, this site is now thought to be a rocket impact area. Nevertheless, the original name of this site has been retained to prevent confusion. The elevation of this site is about 29 meters (95 feet) asl, but a deep ravine abuts the site, falling to about 12 meters (40 feet) asl. There is indirect access to this site via walking from the gravel road originating from the east side of Andrew Lake near the Recreation Center. The entire historical impact area in which this site resides is currently fenced (4-strand barbed wire), with posted signage to deter public access. The terrain is generally flat. However, a deep ravine abuts the site on the west. Vegetation consists of low-growing upland tundra species ranging in height from 6 to 12 inches. Groundwater is anticipated to be deep based on this site's elevation compared with Andrew Lake and Andrew Bay.
SA93-04 <sup>a</sup>	Source Area #93 – Eastern Disposal Site	SA93-04 is a potential storage area and covers 0.25 acre. This site consists of a small area located on the eastern border of SA93-02, abutting the gravel access road serving the former long-range navigation Coast Guard Station to the north. It is bordered by SA93-02 to the north, south, and west, and by an area lying outside of Parcel 4 to the east. The elevation in this small, square site is about 76 meters (250 feet) asl. There is direct access to this site via the gravel road originating from the east side of Andrew Lake near the Recreation Center. The entire historical impact area in which this site resides is currently fenced (4-strand barbed wire), with posted signage to deter public access. The

**Table 3-3 (Continued)**  
**OU B-2 Sites**

Site Designation	Site Name	Site Description
SA93-04 (Cont.)	Source Area #93 – Eastern Disposal Site	terrain is relatively flat. Vegetation is generally a mixture of grasses, sedges, mosses, and heaths ranging in height from 12 to 24 inches. Groundwater is anticipated to be deep based on this site’s elevation compared with Andrew Lake and Andrew Bay, although standing water and marshy areas have been observed.

<sup>a</sup>These sites are currently proposed as “Limited Action” sites in the OU B-2 draft final feasibility study (U.S. Navy 2011f).

<sup>b</sup>The subsurface portion of this site is currently proposed as “Limited Action.”

Notes:

- asl - above sea level
- DMM - discarded military munitions
- mm - millimeter
- NAF - Naval Air Facility
- NOFA - no further action
- OB/OD - ordnance burning/ordnance disposal
- OU - operable unit
- SA - source area
- SWMU - solid waste management unit
- WWII - World War II

five no further action sites, earlier investigations had concluded that conditions at one site (RG-01) were sufficiently hazardous to merit removal of MEC under a non-time-critical removal action and, therefore, no further investigation of this site was performed during the 2008 RI. The non-time-critical removal action at site RG-01 was conducted during the 2006 and 2008 field seasons.

The MEC data collected during the 1999, 2000, and 2008 investigations were used to determine the nature and extent of contamination, complete the Adak conceptual site model, and determine the potential magnitude of the risk/hazard present at MEC sites. The data used for this analysis included reconnaissance observations concerning site accessibility and the potential for MEC to be transported beyond site boundaries by erosion or slope failure, instrument-aided visual surveys for the presence of MEC, and geophysical/intrusive investigation data.

Potential remedial alternatives for addressing the identified risks are being evaluated and documented in a separate FS report. The Navy continues to monitor and maintain access barriers, signs, and fences as interim engineering controls to limit access to OU B-2 sites while a remedy is being selected for the OU B-2 sites.

## 4.0 COMMUNITY BACKGROUND

As a major component of the West Aleutians census area, the population of Adak Island has decreased significantly since the last CRP was published in 1993. The largest populated area near the former installation is the City of Adak Island. The significant draw-down in military personnel upon closure of the former Adak Naval Complex on Adak Island in the mid-1990s appears to be the primary driver.

### 4.1 COMMUNITY PROFILE

Based on the 2010 census, Adak Island had a population of 326. This is a fraction of the population of 5,500 Navy personnel, their dependents, and contractors in the 1990s when the first CRP was prepared. Details of Adak Island's current population are presented in Table 4-1.

**Table 4-1  
 Adak Island Demographics**

Description	Estimate	Percent
Total population	326	100
Male	199	61.0
Female	127	39.0
Median age (years)	45.5	NA
Under 5 years	13	4.0
18 years and over	291	89.3
65 years and over	18	5.5
One race	291	89.3
White	64	19.6
Black or African American	13	4.0
American Indian and Alaska Native	18	5.5
Asian	171	52.5
Native Hawaiian and Other Pacific Islander	5	1.5
Some other race	20	6.1
Two or more races	35	10.7
Hispanic or Latino (of any race)	29	8.9

Note: NA - not applicable  
 Source: U.S. Census Bureau 2010

Employers on the island include commercial fishing companies, TAC, the City of Adak, and the U.S. Fish and Wildlife Service. Because of the difficult access, harsh climate, and seasonal employment changes, the population generally tends to be more transient than Alaska as a whole.

## 4.2 HISTORY OF COMMUNITY INVOLVEMENT

The Navy has strived to maintain an ongoing commitment to community involvement since the time of the first remedial investigations at former NAF Adak Island. Members of the Adak community have had the opportunity to participate and be kept informed about the multiple stages of the cleanup process through a number of ways, as discussed below.

**Restoration Advisory Board.** The RAB is jointly chaired by the installation (or the responsible military organization for BRAC sites that have or are undergoing closure) and the community. The members of the RAB consist of representatives from the community, installation, and regulatory agencies. The RAB is not a decision-making body, but does provide an opportunity for stakeholder involvement concerning environmental restoration activities. It is a forum for discussion and continued exchange of information among installations, regulatory agencies, tribes, and the community for the purpose of addressing issues associated with environmental restoration. In order for a RAB to be established, the installation must have an active installation restoration program or munitions response program, sustained community interest, and at least one of the following:

- The closure of the installation requires the transfer of property to the community.
- At least 50 local citizens petition the installation for the creation of a RAB.
- Federal, state, tribal, or local government representatives request the formation of a RAB.
- The installation determines the need for a RAB.

The installation commander (or responsible military organization) may recommend dissolution of a RAB when the RAB is no longer fulfilling the intended purpose of advising and providing community input to the installation commander and decision-makers on environmental restoration projects. Prior to dissolution, the commander of the installation must make a concerted effort to resolve issues that dictate the RAB's effectiveness.

The RAB can be adjourned if (1) there is no longer sufficient, sustained community interest, (2) the installation has been transferred out of DoD control, and day-to-day responsibility for making restoration response decisions has been assumed by the transferee, or (3) the RAB has achieved the installation's desired end goal.

The Adak RAB was formed in 1996 to advise the Navy on decisions concerning cleanup on Adak. Individuals interested in becoming members of the RAB filled out applications. All applicants were accepted as RAB members. The group originally consisted of approximately 45 interested private citizens and representatives of various organizations, such as TAC and the Adak Reuse Corporation. By early 1998, the RAB consisted of approximately 18 members. In 1999 and again in September 2000, additional RAB members representing the new emerging community on Adak were added as official members of the RAB. Since 2000, the Adak RAB membership has been updated periodically. Because Adak's population is transient, possible RAB candidates are identified and solicited by the on-island RAB co-chair and invited to an upcoming RAB meeting where their names are presented for election to the board.

In addition to private citizens, the Adak RAB currently includes representatives from the Navy and regulatory agencies, as well as civic, private, city government, and environmental activist groups. The RAB meets on a semi-annual basis in April and October.

As of July 2011, the individuals listed below are members of the Adak RAB. Only community members may vote to approve new action items or new members of the RAB.

<b>Name</b>	<b>Affiliation</b>	<b>Location</b>	<b>Voting Member</b>
Esther Bennett	RAB member (Community Co-Chair)	Adak, AK	1
AgafonKrukoff	RAB member	Anchorage, AK	2
Layton Lockett	RAB member	Adak, AK	3
Ed McNall	RAB member	Adak, AK	4
Chuck Mohn	RAB member	Adak, AK	5
Elaine Smiloff	RAB member	Adak, AK	6
Melvin Smith	RAB member	Anchorage, AK	7
Tom Spitler	RAB member	Adak, AK	8
Jack Stewart	RAB member	Adak, AK	9
Will Tillion	RAB member	Adak, AK	10
Cathy Villa	RAB member	Anchorage, AK	11
Guy Warren	*RAB member (ADEC)	Anchorage, AK	-
Chris Cora	*RAB member (EPA)	Seattle, WA	-
Mark Wicklein	*RAB member (Navy Co-Chair)	Silverdale, WA	-

\*Nonvoting member

**Community Update Newsletter/Fact Sheets.** A number of newsletters/fact sheets have been produced in the past by remedial project managers associated with the former Adak Naval Complex and/or by the Deputy Public Affairs Officer assigned to the specific project. Newsletters/fact sheets continue to be produced to keep the public informed of progress on cleanup activities and to solicit community input.

**Administrative Record.** The Navy is required, under CERCLA (Superfund) to maintain an Administrative Record that includes all relevant documents that were considered in the process of selecting and implementing a chosen remedy at a site. The Administrative Record for the former Adak Naval Complex is kept in the NAVFAC NORTHWEST central database. Arrangements can be made for members of the public to review this record. In order to do so, the NAVFAC NORTHWEST Public Affairs Officer must be contacted. Contact information is provided below:

Naval Facilities Engineering Command Northwest  
Public Affairs Office  
1101 Tautog Circle  
Silverdale, Washington 98315  
(360) 396-6387  
Monday–Thursday: 7:00 a.m. to 4:30 p.m.

**Media Inquiries.** Any inquiries from the media will be directed to the NAVFAC NORTHWEST Public Affairs Officer at (360) 396-6387.

#### 4.3 KEY COMMUNITY CONCERNS

In May 2011, the Navy sent interview forms to approximately 20 stakeholder and community members who have participated in past former Adak Naval Complex RAB meetings. The interviews allowed the Navy to gather information on residents' concerns with the site. Eleven interview surveys were completed by e-mail, mail, or in person.

Overall response was good, and the Navy was able to determine the types of information the community wants to receive and how the community prefers to remain involved. Following the interviews, the Navy analyzed the information provided by community members, reviewed supplemental site files, and designed this CRP.

Concerns or questions raised by the respondents included the following:

- The on-island information repository does not have copying capabilities.

- The on-island information repository location is not known to all residents.
- Both repositories should be more actively maintained.
- It would be useful to know how often the repositories are used.
- The agencies and the Navy should attend an on-island RAB at least occasionally.
- There is a negative image of Navy and on-island contractors held by some people as a result of hunting without licenses and vehicle use issues, and there is no formal way to record these concerns.
- There is no formal Navy presence on Adak. It would be desirable to foster a more proactive and collaborative approach to community relations and information distribution to minimize inaccurate information only available from the “rumor mill.”
- The RAB is seen by some as not addressing fundamental issues, but merely as a routine requirement to report on work that is already completed.

On the other hand, the majority of respondents think the Navy has done a good job of providing information to stakeholder groups. Most respondents regularly visit the new website at [www.Adakupdate.com](http://www.Adakupdate.com). There is significant interest in continuing to receive information regarding cleanup activities on Adak, with a preference for updates twice a year, only when something significant happens, quarterly, and monthly, in that order.

#### **4.4 SUMMARY OF COMMUNICATION NEEDS**

During the community interviews, the Navy asked the residents what types of information they wanted to receive about the site and the most effective ways for the Navy to communicate that information. A summary of interview responses is provided in Appendix A.

Overwhelmingly, respondents indicated that they preferred postings on the website at [www.Adakupdate.com](http://www.Adakupdate.com) and RAB meetings. There was also more limited interest in the information repositories and community update newsletters.

When asked how much time and effort they spend to keep informed about environmental restoration activities, most respondents indicated that they regularly attend RAB meetings, search the [www.Adakupdate.com](http://www.Adakupdate.com) website, read technical reports, and send comments to the Navy via e-mail.

When asked how well they thought the Navy had accomplished the goal of providing information to the public regarding environmental restoration activities, five respondents indicated “very well,” three respondents indicated “fairly well,” and three respondents indicated “needs improvement.” Suggestions on how the Navy could improve their communications with stakeholder groups and the public included the following:

- Attend city council meetings and community meetings, and meet individually with on-island businesses to understand their interests.
- Sponsor regular on-island events, such as barbecues, to inform members of the public and stimulate involvement.
- Augment RAB meetings with social media updates (use online networking sites).
- Attend on-island RAB meetings at least once every few years.
- Emphasize the positive accomplishments of ongoing cleanup activities, instead of just telling people where they can’t go. An example would be to highlight site closures with the community via announcements on the [www.Adakupdate.com](http://www.Adakupdate.com) website.
- Post RAB information on the local Adak television channel or in other centralized locations (such as the bulletin board outside the Adak store), including more informative general signage and timelines regarding upcoming and ongoing contractor activities.

## **5.0 NAVY'S COMMUNITY RELATIONS PROGRAM**

The overall purpose of the Navy's community relations program is to promote two-way communication between community members and stakeholders and the Navy and to provide opportunities to the community for meaningful and active involvement in the process.

### **5.1 OBJECTIVES OF THE COMMUNITY RELATIONS PLAN**

The primary objective of this CRP is to establish two-way communication between the Navy and the community in a format that will be effective for both.

The Environmental Restoration Program at the former Adak Naval Complex has been active for over 20 years and is a mature program. All of the identified sites have been evaluated, RODs have been executed, and environmental restoration activities at many sites have been completed. The program is in a monitoring and maintenance phase. Nonetheless, the RAB, a community-based outreach program, has experienced continuing community interest over the last few years commensurate with the number of on-island residents. The Navy continues to promote community interest in the RAB by using the internet (specifically through the Adakupdate.com website) to keep the community updated on former Adak Naval Complex ongoing remediation efforts.

This CRP will be updated as needed to reflect the community involvement in the former Adak Naval Complex remediation efforts.

### **5.2 COMMUNITY RELATIONS PLAN**

Environmental restoration activities at the former Adak Naval Complex continue to be protective of human health and the environment. The Navy is currently conducting monitoring to demonstrate that the remedies are working as intended. At a few sites, including some petroleum sites addressed under ADEC's SAERA program and some sites within OU B, follow-up evaluations, remedy maintenance, and ordnance cleanup are ongoing. As such, the Navy will ask for community input as needed and provide resources for the community to access information. Triggers for soliciting input will include changing conditions at a site, significant progress, and community requests. Requests for community input will be published in the local newspaper. The ways that the Navy will ask for community input or provide information to the community include the following:

- Educational awareness programs
- Newsletters and fact sheets
- Newspaper advertisements
- RAB meetings
- NAVFAC Northwest Public Affairs Office
- Adak Island repositories at Adak City Hall (formerly Bob Reeves High School) on Adak Island and the University of Alaska, Anchorage (UAA) Library
- Website at [www.Adakupdate.com](http://www.Adakupdate.com)

### **5.2.1 Educational Awareness Programs**

The Navy implemented a resident-focused unexploded ordnance (UXO) awareness education program on Adak Island in 1998. Under this program the Navy is responsible for ensuring that island residents and visitors are aware of the potential to encounter MEC items on Adak Island and know proper procedures for reporting such encounters. In addition, the program provides notification of access restrictions that exist for Parcel 4 (Figure 3-5). This program provides the following:

- Informational materials to residents of Adak (e.g., bookmarks, maps, and water bottles to convey information regarding how to report potential encounters with MEC
- Hiking maps, DVDs, posters, and other informational materials to the City of Adak for distribution and dissemination to residents and visitors to Adak Island
- Access restriction notifications and barriers to ensure they function properly
- Communication with the City of Adak and on-island employers to ensure awareness of access restrictions and the Navy's intent to enforce them
- Finally, reviews of any incident related to potential MEC encounters on Adak Island to assess the need for revising existing provisions of the ordnance education and awareness program and IC

## 5.2.2 Newsletters and Fact Sheets

Since September 1999, over 50 newsletters or fact sheets have been distributed. These newsletters (called *Adak Update* and jointly produced by the Navy, EPA, and ADEC) or fact sheets (prepared by the Navy) have been published as new issues, notifications, and critical documents are prepared. The newsletter is distributed to the individuals and groups on the general mailing list, as outlined in the CRP. Additional copies of the newsletter and fact sheets are sent to the information repository on Adak Island and to the [www.Adakupdate.com](http://www.Adakupdate.com) website. The following Fact Sheets and Newsletters have been posted to the [www.Adakupdate.com](http://www.Adakupdate.com) website since the last community relations update in 2001.

Petroleum Fact Sheet	June 2002
Institutional Controls Fact Sheet	April 2003
Excavation Notification Fact Sheet	July 2003
Adak Fish Fact Sheet	October 2003
Adak Land Transfer Fact Sheet	March 2004
Army 716th EOD Unit Brochure	April 2004
Munitions Awareness Fact Sheet	July 2004
Adak Marine Monitoring Fact Sheet	July 2004
Adak NMCB Proposed Cleanup Fact Sheet	August 2005
Adak Second 5-Year Review Fact Sheet	August 2005
Adak South of Runway 18-36 Area Proposed Cleanup Fact Sheet	November 2005
Adak SWMU 62 New Housing Fuel Leak Proposed Cleanup Fact Sheet	November 2005
Adak Health Advisory and PCB Levels in Rock Sole and Blue Mussels Fact Sheet	January 2006
SWMU 17, Power Plant #3 Proposed Cleanup Fact Sheet	August 2006
Institutional Controls Education Fact Sheet	August 2006
Adak Institutional Control Management Plan Fact Sheet	June 2008
Health Advisory – PCB Levels in Rock and Blue Mussels Fact Sheet	June 2008
Third 5-Year Review to Begin	November 2010



In addition, a special fact sheet posted in 2002 documented the last uniformed military presence on Adak Island, Petty Officer Ron O'Toole, who departed the island on March 1, 2002.



## Last Uniformed Military Leaves Adak

On March 1, 2002, Petty Officer Ronald O'Toole, a Navy SeaBee, left Adak. Petty Officer O'Toole had been assigned to duty at the Navy Caretaker Site Office (CSO) since April 1999. Petty Officer O'Toole has the distinction of being the last uniformed military member to serve on Adak, marking the end of nearly 60 years of continuous military presence.

Military presence at Adak began during the early days of World War II. The Japanese had occupied Attu and Kiska Islands, and the United States was beginning preparations for an offensive campaign to dislodge them. In August 1942, members of the unit nicknamed "Castner's Cutthroats" first landed on Kuluk Beach. The following quote from *The Thousand-Mile War: World War II in Alaska and the Aleutians*, by Brian Garfield, describes this initial landing:

*"In the heaving darkness of the night of August 28, 1942, fleet submarines Triton and Tuna surfaced a mile off the Adak coast. Without lights or sound, Colonel Lawrence Castner and the thirty-seven commandos slipped into rubber boats, pushed away*



*from the pitching submarines, and rowed toward the dim coastline.*

*Crossing the reefs, they paddled into Kuluk Bay, dragged their rafts up on the beach, and fanned out inland. They covered ground thoroughly, taking all night to sweep the island. They found no Japanese; there were not even any ashes to indicate recent enemy presence on the island code-named Fireplace."*

Petty Officer O'Toole is retiring from active military service after 20 years in the Navy. His friends and co-workers wished him well at a formal retirement ceremony on March 22, 2002, at the Navy's Engineering Field Activity, Northwest, in Poulsbo, Washington.

Petty Officer O'Toole's departure from Adak marks another significant milestone toward completing the transition of the former naval air facility to a self-sustaining, self-governing Alaska community with a private-sector commercial economy.

### 5.2.3 Newspaper Announcements

Announcements are periodically posted in the *Anchorage Daily* newspaper to announce meetings or disseminate information regarding milestones achieved by the Environmental Restoration Program at the former Adak Naval Complex.

#### **5.2.4 RAB Meetings**

RAB meetings will continue to be held, as needed, to communicate changing conditions at a site, to communicate significant progress of the Environmental Restoration Program, or at the request of the community.

#### **5.2.5 Contact the Navy**

Community members are encouraged to contact the NAVFAC NORTHWEST Public Affairs Office at their convenience to seek additional information and for information on how to contact the current RAB community co-chair. NAVFAC NORTHWEST Public Affairs Office contact information is provided in Appendix B.

#### **5.2.6 Adak Repositories**

Information repositories are available for public review (Appendix C). Community members are encouraged to visit these repositories and review any documentation of interest. The repository locations are the following:

- Adak Island Information Repository  
Adak City Hall (formerly Bob Reeves High School)  
Adak, Alaska  
(907) 592-4500
- University of Alaska, Anchorage  
Library Reserve Room  
3211 Providence Drive  
Anchorage, Alaska 99508
- Naval Facilities Engineering Command Northwest  
1101 Tautog Circle  
Silverdale, Washington 98315  
(360) 396-6387  
Hours: Monday–Thursday 7:00 a.m. to 4:30 p.m.

#### **5.2.7 Adakupdate.com Website**

The project website at [www.AdakUpdate.com](http://www.AdakUpdate.com) was upgraded in 2010. The website is easily accessible through common Internet search engines. Information is added and updated on a regular basis. The site contains all project newsletters, all presentation materials prepared for the

RAB, fact sheets, and news releases. Links to appropriate technical documents are provided. Information is also provided on RAB meetings and public meetings and links to state and federal agency sites. There are currently approximately 70 subscribers to the website, which also provides an interactive opportunity by enabling stakeholders and the public to e-mail their questions and comments.



### 5.3 RECOMMENDATIONS FOR IMPROVING THE ADAK COMMUNITY RELATIONS PLAN

Based largely on the results of the interviews and surveys with RAB members, community representatives, and Adak stakeholders, we recommend the following to improve the effectiveness of the Adak CRP:

- Establish a schedule for updating the information repositories.

- Develop and post flyers and updated event calendars to a special “Navy Update” posting cabinet at the Adak City Hall.
- Update the process by which technical documents are identified and transmitted to the designated Adak information repositories.
- Replace the UAA hard-copy repository with an electronic library of controlled CDs or DVDs.
- Maintain and update the hard-copy Adak Island information repository.
- Alternatively, consider replacing the hard-copy Adak Island information repository with an electronic library of controlled CDs or DVDs.
- Develop a virtual information repository that is accessible through the [www.Adakupdate.com](http://www.Adakupdate.com) website.
- Consider the feasibility of linking social media sites to the [www.Adakupdate.com](http://www.Adakupdate.com) website in order to leverage the interest and historical knowledge of existing social network groups and to provide an alternative avenue for disseminating information and soliciting feedback.
- Plan for at least biannual on-island RAB meetings attended by Navy and regulatory personnel.
- In conjunction with the City of Adak, develop additional community relations aids to highlight the location of the on-island information repository and to advertise RAB meetings.

## 6.0 REFERENCES

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**APPENDIX A**

**Summary of Interview Response**

Appendix A  
Summary of Interview Responses

**Summary of Community Member/Stakeholder Interview Responses  
Adak Island CRP Update**

**1. Preferred Method of Receiving Information**

Response #	Community Meetings	Public Workshops	Open Houses	Community Update Newsletters	Adakupdate Website	Articles in Newspaper	RAB Meetings	Information Repositories
1	1			1			1	
2			1					
3	1	1		1	1			1
4					1		1	
5					1		1	1
6	1				1		1	1
7					1		1	
8	1				1		1	1
9				1	1		1	
<b>Totals</b>	4	1	1	2	7	0	7	4

**2. Tell us what you know about the Adak Island RAB. Are you a member?**

1. Not much-- meet once a year.
2. They keep working at it.
3. Advisory Board meets only twice a year to review things that have previously occurred. Yes [I am a RAB member]
4. No, I've attended one meeting telephonically.
5. Yes, I've been involved with the RAB since 2002.
6. They are a group of stakeholders and contractors that contribute to the clean-up of Adak. Yes [I am a member].
7. I am a government member. The RAB has few members and all the agencies do well in attendance and strive to keep RAB members informed.
8. My department (DOT/PF) is a member. Due to military presence it is contaminated.
9. As a Navy RPM, I attend the RAB meetings although I am not a voting member. I know that they are held twice yearly and folks join in from Adak, Anchorage and Washington State.

**3. Where have you seen notices for or heard about public meetings?**

Response #	Posted Meeting Notices	Notices in Fact Sheets	Adakupdate Website	Email Messages	Ads in local Newspaper or Cable Channel
1	1				
2	1				
3	1				
4				1	
5		1	1	1	1
6			1	1	
7	1	1	1	1	
8		1		1	
9			1		
<b>Totals</b>	4	3	4	5	1

I receive mailings.

Appendix A  
Summary of Interview Responses

4. How much time and effort do you (or the group you represent) prefer to spend to keep informed about cleanup activities at Former Naval

Response #	Minimal Time	Attend Public Meeting	Read Local Paper	Search Information Repositories	Search Adakupdate Website	Regularly Attend Pubic Meetings	Read Technical Reports	Send comments to Navy via E-mail
1		1		1		1		1
2	1							
3		1				1		1
4							1	1
5		1			1			
6					1	1		
7						1	1	
8	1			1	1		1	
9					1	1	1	
<b>Totals</b>	2	3	0	2	4	5	4	3

Stakeholder 5. What do you think would stimulate public interest in learning about the cleanup activities at Former Naval Air Complex

Response #	Provide Information At More Libraries	Hold More Public Meetings	Post Information Online
1	NA	NA	NA
2	NA	NA	NA
3		1	1
4			1
5		1	1
6			1
7			1
8	1	1	1
9		1	1
<b>Totals</b>	1	4	7

Other Ideas:

1. NA.
2. NA.
3. No response.
4. No response.
5. No response.
6. No response.
7. No response.
8. No response.
9. No other ideas at this time.

Appendix A  
Summary of Interview Responses

**Community Member 5./Stakeholder 6. Have you ever sought information from the information repository?**

Response #	Yes	No	Find What was Needed	NA
1		1		NA
2		1		NA
3	1		Yes	
4		1		NA
5	1		Yes	
6	1			
7	1		Yes	
8		1		NA
9	1			NA
<b>Totals</b>	5	4		0

The repository in Adak does not have the capability to copy materials. Would help to have an electronic database to search for materials (electronic card catalog). Work with the city to verify materials are at the repository (after so many changes have occurred). Also work with the City to consolidate repository and be able to access materials

No response

**Community Member 6./Stakeholder 7. Any suggestions for repository locations at Bob Reeve High School and UAA Library?**

1. Let people know where it is located.
2. Advertise it more.
3. Work with the city to verify materials are at the repository (after so many changes have occurred). Also work with the City to consolidate repository and be able to access materials digitally and/or be able to photocopy materials.
4. No response.
5. No suggestions.
6. No response.
7. We should strive to keep it up to date.
8. No -- not that familiar with Adak.
9. I'm interested to know if the repositories are utilized at all. I'd suggest a sign in sheet or other method for determining the use over the course of a year.

**Community Member 7./Stakeholder 8. How well do you think the Navy has accomplished the goal of providing information to various stakeholder groups and the public regarding cleanup activities?**

Response #	Very Well	Fairly Well	Needs Improvement
1			1
2			1
3			1
4	1		
5	1		
6		1	
7	1		
8		1	
9	1		
<b>Totals</b>	4	2	3

Only if you attend their meetings.

**Community Member 8./Stakeholder 9. Do you have any suggestions on how the Navy could improve its communication with stakeholder gr**

1. Attend city council meetings with information and updates; have community meetings; meet individually with businesses with information tailored to
2. Post more informative signs around town.
3. Communicate more with community; sporadic meetings (RAB twice a year) is not effective. Social media with regular updates; use timelines/calendars to provide information to community about what will be happening as well as what process is ongoing. Community does not hear about what is going on until contractors start probing for information and the rumor mill starts. The only other time the community hears something is

Appendix A  
Summary of Interview Responses

4. No.
5. No comments.
6. No response.
7. The Navy and agencies should attend a RAB on site once every few years.
8. No response.
9. I think the improvements made to the Adakupdate.com website have made the information more available to the general public. I can't think of any improvements that can be made at this time (or we'd be doing them!)

**Community Member 9./Stakeholder 10. What changes would you like to see for future public information and public involvement activities?**

1. Bi-annual community barbeque--attendance and interest is increased with food
2. Instead of telling people where they can't go, tell us about something that's been cleaned up so that we can now go there.
3. Social media usage. More involvement in community events (public relations and/or local sponsorship; brand management and marketing) to keep NAVFAC and its contractors in people's mind other than just showing up and spending money. Provide regular updates as to what is expected to be occurring or what is being contracted out.
4. No response.
5. No
6. No response.
7. I would like to see more public involvement.
8. No response.
9. I'd consider adding public meeting (RAB) info on the local Adak TV channel and/or post information in centralized locations (airport, general store, bar, etc.) prior to the meetings. This can be handled by the on island RAB co-chair with support from the Navy.

**Community Member 10./Stakeholder 11. Would you like to receive information regarding the progress of cleanup activities? If yes, how often?**

Response #	Yes	No	Twice per Year	Quarterly	Monthly	Only when Something Significant Occurs
1	1		1			
2	1					1
3	1			1	1	
4	1		1			
5	1					1
6	1				1	
7	NA					
8	1		1			
9	1					1
<b>Totals</b>	8	0	3	1	2	3

**Community Member 11./Stakeholder 12. Please provide any additional comments you feel would be useful.**

1. Navy and contractors get a negative community image due to: hunting without licenses, killing ptarmigan out of season and not eating them, misuse of government/contract vehicles. Community needs an off-island contact to file complaints.
2. Just keep trying to get it cleaned up.
3. No response.
4. No response.

Appendix A  
Summary of Interview Responses

5. No comments.

6. No response.

7. No response.

8. No response.

9. The Navy does not have a presence on the island anymore. I'd like to see the local residents and stakeholders take a more proactive approach to community relations and to the information distribution on island. Working together as a team, we can provide every resident and visitor the information they need to remain safe and enjoy all that Adak has to offer.

Appendix A  
Summary of Interview Responses

Summary of Regulator Interview Responses  
Adak Island CRP Update

1. Preferred Method of Receiving Information

Response #	Community Meetings	Public Workshops	Open Houses	Community Update Newsletters	Adaupdate Website	Articles in Newspaper	RAB Meetings	Information Repositories
1				1	1		1	
2				1	1		1	1
<b>Totals</b>	0	0	0	2	2	0	2	1

Percentages

2. Tell us what you know about the Adak Island RAB. Are you a member?

1. It seems to not address any fundamental issues and is done out of routine versus need.

2. RAB is a great tool to involve the community in decisions and provide updates and information. I think that periodic community meetings to interested persons while the Navy is on island would also be a way to communicate project updates to those unable to attend RABS.

3. Where have you seen notices for or heard about public meetings?

Response #	Posted Meeting Notices	Notices in Fact Sheets	Adakupdate Website	Email Messages	Ads in local Newspaper or Cable Channel
1				1	
2			1		
<b>Totals</b>	0	0	1	1	0

receive mailings.

4. How much time and effort do you (or the group you represent) prefer to spend to keep informed about cleanup activities at Former Naval Air Complex Adak Island?

Response #	Minimal Time	Attend Public Meeting	Read Local Paper	Search Information Repositories	Search Adaupdate Website	Regularly Attend Pubic Meetings	Read Technical Reports	Send comments to Navy via E-mail
1					1	1	1	1
2					1	1	1	1
<b>Totals</b>	0	0	0	0	2	2	2	2

5. What do you think would stimulate public interest in learning about the cleanup activities at Former Naval Air Complex Adak Island?

Response #	Provide Information At More Libraries	Hold More Public Meetings	Post Information Online
1		1	
2		1	1
<b>Totals</b>	0	2	1

An actual risk/threat to their well being.

Other Ideas:

1. No response.

2. No response.

6. Have you ever sought information from the information repository?

Response #	Yes	No	Find What was Needed	NA
1		1		1
2		1		1
<b>Totals</b>	0	2		2

**7. Any suggestions for repository locations at Bob Reeve High School and UAA Library?**

1. No.
2. From recent pictures of the Anchorage repository, it needs to be updated. If the repository includes all versions of a report, it can make looking for information confusing and burdensome.

**8. How well do you think the Navy has accomplished the goal of providing information to various stakeholder groups and the public regarding cleanup activities?**

Response #	Very Well	Fairly Well	Needs Improvement
1		1	
2	1		
<b>Totals</b>	1	1	0

**9. Do you have any suggestions on how the Navy could improve its communication with stakeholder groups and the public?**

1. No response.
2. No response.

**10. What changes would you like to see for future public information and public involvement activities?**

1. No response.
2. No response.

**11. Would you like to receive information regarding the progress of cleanup activities? If yes, how often would you like to be informed?**

Response #	Yes	No	Twice per Year	Quarterly	Monthly	Only when Something Significant Occurs
1	1			1		
2	1		1			
<b>Totals</b>	2	0	1	1	0	0

**12. Please provide any additional comments you feel would be useful**

1. No response.
2. No response.

**APPENDIX B**  
**Regional Contact**

FINAL COMMUNITY RELATIONS PLAN  
Former Adak Naval Complex, Adak Island, AK  
Naval Facilities Engineering Command Northwest  
Contract No. N44255-09-D-4001  
Delivery Order 0029

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## **REGIONAL CONTACT**

Naval Facilities Engineering Command Northwest  
Public Affairs Office  
1101 Tautog Circle  
Silverdale, Washington 98315  
(360) 396-6387

**APPENDIX C**  
**Repository Locations**

## REPOSITORY LOCATIONS

### LOCAL REPOSITORY

#### **Adak Island Information Repository**

c/o City of Adak  
Adak City Hall (formerly Bob Reeves High School)  
Adak, Alaska  
(907) 592-4500

### OTHER REPOSITORIES

#### **University of Alaska, Anchorage**

Library Reserve Room  
3211 Providence Drive  
Anchorage, Alaska 99508

#### **Naval Facilities Engineering Command Northwest**

1101 Tautog Circle  
Silverdale, Washington 98315  
(360) 396-6387  
Hours: Monday–Thursday 7:00 a.m. to 4:30 p.m.

### EPA REGION 10 RECORDS CENTER

**Contact Information:** The Records Center is open to the public and is located in the Park Place Building at Sixth and University in downtown Seattle. Please note that there are limited former Adak Naval Complex environmental restoration documents at this center. Visitors may check in at the EPA Service Center on the 12th Floor. The EPA librarian can be contacted as follows:

Telephone: (206) 553-1289  
Fax: (206) 553-6346  
E-mail: [library-reg10@epa.gov](mailto:library-reg10@epa.gov)  
"Ask a Librarian" Web form

Mailing Address: U.S. EPA Region 10 Library (OMP-104), 1200 Sixth Avenue, Seattle, Washington 98101

**Hours of Operation:** The library is open Monday through Friday, excluding federal holidays:

- To staff: 8:00 a.m.–12:00 p.m. and 1:00 p.m.–2:30 p.m.
- To the public: 9:00 a.m.–12:00 p.m. and 1:00 p.m.–2:30 p.m.

**APPENDIX D**

**Detailed Operable Unit A Site Descriptions**

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This appendix describes the following for each of the sites retained for further action within OU A:

- Physical descriptions
- Environmental evaluations and remedy
- How the remedy is protecting the community and environment

## **ANTENNA FIELD**

### **Physical Description**

Antenna Field is located on a hilltop northeast of Palisades Lake, midway between downtown Adak and Clam Lagoon. Three buildings and antennas were built in 1948 on the site. USTs supplied jet petroleum No. 5 (JP-5) as heating fuel to the buildings, but were removed in 1993. A petroleum release was identified and appears to have originated from the USTs.

The general topography of Antenna Field is irregular and is characterized by hills and drainage swales. Palisades Lake is located about 750 feet downgradient (southwest) of the site. Groundwater appears as a perched layer seasonally..

### **Environmental Evaluations and Remedy**

The OU A ROD-specified remedy for this site is MNA and ICs. Natural attenuation groundwater monitoring for this site began in 1999. As required by the latest version of the Comprehensive Monitoring Plan (CMP), the presence or absence of free product is assessed prior to groundwater sampling at each well.

The implementation of ICs began following execution of the ROD in April 2000. Land use restrictions are required to ensure that the land will never be used in a way inconsistent with the land use assumptions set forth in the Adak Island RODs. The land use restrictions/prohibitions were included in the Interim Conveyance. Excavation notification is required at all sites, including Antenna Field.

In 2009, The Navy and ADEC agreed to perform additional investigation to assess the current extent of petroleum-impacted media of concern at the site. The additional characterization resulted in a recommendation for no further groundwater monitoring at the site.

## **How the Antenna Field Remedy Is Protecting the Community and Environment**

The Antenna Field remedy is protecting the community and the environment by preventing human exposure to contaminated soil through the use of ICs.

### **AREA 303**

#### **Physical Description**

The petroleum-release site designated as Area 303 is located in downtown Adak between the air terminal and the former high school building. It is bound by Airport Road to the north, Sandy Cove Housing area and the former high school building to the east, Eagle Bay Housing area and an unnamed dirt road to the south, and the air terminal to the west. Area 303 occupies approximately 23 acres that include disturbed commercial-industrial areas and open grass-covered areas. The general topography of the site is relatively flat, with surface drainage directed to the west. Elevations of the ground surface in this area are generally 26 to 30 feet above mean lower low water (MLLW).

The primary physical features at Area 303 include the former line crew building (Building T-2776), which is located at the northern limit of Area 303 along Airport Road, the GCI Compound, which includes the GCI Building (Building 42352) and an associated long-distance telecommunications transmitter and receiver antenna, and an underground utility corridor that contains former fuel transfer pipelines and traverses the site parallel and adjacent to Main Road.

#### **Environmental Evaluations and Remedy**

During 2002, the U.S. Geological Survey (USGS) study of the Navy's groundwater monitoring program for OU A found evidence of groundwater contamination. The resulting field investigation, conducted during May and June 2003, collected groundwater samples from locations between the GCI Compound and the East Canal using a Geoprobe sample collection method. The chemical analyses conducted on these samples identified the presence of gasoline-range organics (GRO) that greatly exceeded those from the GCI source area. The USGS concluded that a second GRO plume was emanating from an unidentified source somewhere south or southwest of the GCI source area along Main Road.

The Navy conducted a follow-on investigation to characterize the GRO release, evaluate the human health and ecological risks associated with the release, and present remedial alternatives. Field investigation activities were conducted during May, June, and July 2006 for the Area 303 site characterization. The primary activities included a survey of the pipelines within Area 303,

a Geoprobe survey, surface and subsurface soil sampling, monitoring well installations, and groundwater sampling.

As a result of the investigation, it was concluded that the source of petroleum-related chemicals in soil and groundwater at Area 303 was likely to have originated from the 8-inch aviation gas (avgas) pipeline located just east of Main Road. In addition, the release may have been controlled to some extent by migration along the pipeline trench backfill. During summer 2010, the Navy conducted soil vapor sampling to support assessment of the risk of potential vapor intrusion at Area 303. Results of this sampling showed no unacceptable human health risk posed by the site.

Although there is no remedy in place for Area 303, area-wide institutional controls do apply and represent the interim means of protecting the community and environment.

### **How the Area 303 Remedy Is Protecting the Community and Environment**

The remedy for Area 303 is currently under development and will be documented in the Decision Document for this site.

## **FORMER POWER PLANT BUILDING T-1451**

### **Physical Description**

The Former Power Plant Building T-1451 site is located in the southeast portion of downtown Adak, at the southeast corner of Public Works Road and Main Road. This building has also been referred to as Power House No. 4, Power Plant No. 4, or the main GEM building. The site consists of a level gravel lot at an elevation of approximately 20 feet above MLLW and an area dominated by native grasses sloping to the west toward East Canal, the closest surface water body, at approximately 500 feet west of the site. Underground utilities run along the roadways and in the area west of Building T-1451. The facility was constructed in 1944 and consisted of a power plant building, three diesel aboveground storage tanks (ASTs), a fuel pump shed, water tank, and septic tank. Sometime after 1986, the power plant building was expanded and the former ASTs removed.

An 8-inch-diameter pipeline that reportedly transferred avgas from former Fuel Dock 7 to Tank Farm B ran along the eastern side of Main Road past the Former Power Plant Building site, but was abandoned in 1977. The Main Road Pipeline is located west of the site along the west side of Main Road. This pipeline was reportedly cleaned but not closed. A pipeline investigation was performed in 2007 to determine whether all pipelines in the vicinity of this site have been

decommissioned. The located pipelines were decommissioned in 2009. Soils are highly permeable, and all identified petroleum-affected soils are subsurface.

### **Environmental Evaluations and Remedy**

Investigations were conducted at the Former Power Plant Building T-1451 site from 1992 to 1998. Petroleum hydrocarbons were identified in soil and groundwater. MNA was initiated in 1999 and continues on an annual basis. The Navy is also monitoring hydrocarbons and the presence of petroleum sheens in the surface water of East Canal. The MNA remedy is being re-evaluated, and an enhanced remedial action is being developed.

### **How the Former Power Plant Building T-1451 Remedy Is Protecting the Community and Environment**

The remedy for Former Power Plant Building T-1451 is protecting the community and the environment by the following:

- Preventing human exposure to contaminated soil through the use of ICs
- Reducing dissolved-phase petroleum contamination in groundwater through the use of MNA

### **GCI COMPOUND (UST GCI-1)**

#### **Physical Description**

The GCI Compound is located in downtown Adak west of Main Road, approximately 600 feet southwest of the intersection of Main Road and Terminal Road, west of the high school and east of the air terminal building. The site was previously used by the Navy as a gas station and motor pool facility, but now is a long-distance telecommunications transmitter and receiver facility. UST GCI-1 was a 6,000-gallon steel tank buried about 40 feet northwest of the site of a former fuel dispenser island at the GCI Compound that presumably supplied fuel to the dispenser island.

The ground surface at the GCI Compound consists of a level gravel lot with patches of grass within the fenced enclosure and an extensive level area covered with native grasses outside the fenced area. East Canal is the closest surface water body, located approximately 1,000 feet southwest of the site.

## **Environmental Evaluations and Remedy**

Investigations were conducted at the site from 1992 to 1998. Diesel and gasoline were detected in soil and groundwater. Free product was also identified on the groundwater surface. Free-product recovery was conducted opportunistically at the request of ADEC until 2010 when it was discontinued. The final remedy specified MNA and ICs.

## **How the GCI Compound Remedy Is Protecting the Community and Environment**

The remedy for the GCI Compound is protecting the community and the environment by the following:

- Preventing human exposure to contaminated soil through the use of ICs
- Reducing petroleum contamination in groundwater and soils through free-product recovery
- Reducing dissolved-phase petroleum contamination in groundwater through the use of MNA

## **HOUSING AREA (ARCTIC ACRES)**

### **Physical Description**

The Housing Area (Arctic Acres) site is located in downtown Adak, east of Main Road and north of Kagalaska Drive. The site consists of duplex housing units, paved roads, and flat gravel areas constructed in 1975. All housing units have been vacant since at least early 1996. Heating fuel (JP-5) was formerly delivered to each unit through underground pressurized pipelines connected to two 27,000-gallon steel ASTs. The ASTs are located west of the housing area and received their fuel from the Main Road Pipeline. The site is drained by roadside ditches and storm drains that flow toward Kuluk Bay. Groundwater elevations measured at the site indicate that groundwater flows toward Kuluk Bay about 1,000 feet to the east on the eastern portion of the site toward East Canal and about 3,550 feet to the west on the western portion of the site.

During a routine pipeline test in August 1993, investigators discovered that JP-5 had been released from the pipeline. The combined leak rate was estimated at 7.5 gallons per hour, but it was not known how long the pipeline had been releasing product. The fuel line was repaired within one day of the discovery of the leaks.

## **Environmental Evaluations and Remedy**

Investigations were conducted between 1993 and 1999. Petroleum hydrocarbons were detected in excess of their cleanup criteria in soil and groundwater. The 2000 OU A ROD identified MNA and ICs as the remedy for this site. Natural attenuation monitoring was conducted between 1999 and 2004. Product recovery was conducted at two wells from 2000 to 2002. The Navy completed limited soil removal and currently conducts passive product recovery from selected wells and annual monitoring for natural attenuation of the groundwater.

## **How the Housing Area (Arctic Acres) Remedy Is Protecting the Community and Environment**

The remedy for the Housing Area (Arctic Acres) is protecting the community and the environment by the following:

- Preventing human exposure to contaminated soil through the use of ICs
- Reducing dissolved-phase petroleum contamination in groundwater through the use of MNA

## **NMCB BUILDING AREA, T-1416 EXPANDED AREA, AND NMCB BUILDING (UST T- 1416-A)**

### **Physical Description**

The Naval Mobile Construction Battalion (NMCB) Building Area site is located on the northern shore of Sweeper Cove in downtown Adak. This site was used primarily for industrial purposes until the late 1990s. Two of the four buildings remain at the site. Three abandoned underground fuel transfer pipelines cross the site. The site consists of a large lowland area between the north shore of Sweeper Cove and the southern end of Runway 18-36. The site extends from East Canal of the airport ditch system on the northwest, south to Sweeper Cove, and east approximately 2,000 feet.

The site and surrounding area were used primarily for industrial purposes up to the military drawdown at Adak in the late 1990s. Three buildings were constructed in the area in the early 1940s, of which only Building T-1416 remains. The land was part of a back-beach lagoon prior to occupation and was rapidly converted to a fuel receipt and distribution center and industrial area to support the U.S. Aleutian campaign during WWII.

Several potential sources of petroleum releases are present at the site. These sources include two abandoned 8-inch-diameter fuel transfer pipelines, one abandoned 12-inch-diameter fuel transfer pipeline, the former used oil collection tank UST T-1416-A, an inactive AST located south of the southwest corner of Building T-1416, and a 550-gallon JP-5 storage tank located along the east wall of Building T-1416. The abandoned fuel line reportedly was a source of subsurface fuel contamination, and residual product was observed in the excavated trench.

### **Environmental Evaluations and Remedy**

Investigations at the site began in 1993. Free product was found, and petroleum hydrocarbons in groundwater exceeded state cleanup criteria. Free-product recovery was conducted at NMCB Building Area intermittently from September 1997 through July 2005. As of July 2005, free-product recovery in existing wells met the established endpoint specified in the OU A ROD. The Navy continues ICs, passive product recovery, and annual monitoring for product thickness in 17 wells and natural attenuation monitoring in nine wells.

Marine sediment and surface water samples were collected from locations in Sweeper Cove offshore of NMCB in 1998. Petroleum hydrocarbons were detected in surface water samples collected near the shoreline and in marine sediment samples.

### **How the NMCB Building Area, T-1416 Expanded Area, and NMCB Building (UST T-1416-A) Remedy Is Protecting the Community and Environment**

The remedy for the NMCB Building Area is protecting the community and the environment by the following:

- Preventing human exposure to contaminated soil through the use of ICs
- Reducing petroleum contamination in groundwater and soils through free-product recovery

## **NORPAC HILL SEEP AREA**

### **Physical Description**

Based on field observations, the NORPAC Hill Seep Area was located roughly southeast of NORPAC Hill at the shoreline of Kuluk Bay. A petroleum sheen has been occasionally observed since 1996, usually during high tide, on the surface of Kuluk Bay in this vicinity. The exact source is unknown, but potential sources include the former local heating fuel systems, a fuel pipeline associated with a shutoff valve located about 250 feet west of and upgradient from

the seep area, or a source yet undiscovered. The petroleum hydrocarbon within the sheen had been identified as JP-5.

### **Environmental Evaluations and Remedy**

Initial investigations conducted in 1996 (when free product was initially discovered) and 1997 included the drilling of six soil borings, five of which were completed as monitoring wells, and collecting one surface soil sample.

Between September 1996 and November 2001, a measurable free-product layer was observed in two wells installed in the vicinity. A passive recovery bailer was installed in well 04-146 on March 18, 1998. Product recovery was conducted through June 2000. A passive recovery bailer was reinstalled on June 1, 2001.

### **How the NORPAC Hill Seep Area Remedy Is Protecting the Community and Environment**

The remedy for the NORPAC Hill Seep Area is protecting the community and the environment by the following:

- Preventing human exposure to contaminated soil through the use of ICs
- Reducing petroleum contamination in groundwater and soils through free-product recovery

### **ROICC CONTRACTOR'S AREA (UST ROICC-7)**

#### **Physical Description**

The ROICC Contractor's Area is located north of the airport and downtown Adak in an unpopulated area approximately 1/2 mile from Kuluk Bay. The ROICC Contractor's Area was used for storage of equipment and supplies for contractors working for the Navy. UST ROICC-7 was located on the south side of Davis Street near a concrete pad that had been a warehouse foundation. Hydrocarbon odors and a sheen on the tank were noted during excavation. The source of petroleum release appears to have originated from the UST.

The general topography of the site is flat. North Sweeper Creek is located approximately 2,200 feet south of the former location of UST ROICC-7. Groundwater flow is generally to the south-southeast toward North Sweeper Creek.

## **Environmental Evaluations and Remedy**

A subsurface investigation was conducted in 1999. Petroleum hydrocarbons were detected in soil and groundwater in excess of state cleanup levels. The 2000 OU A ROD identified limited groundwater monitoring as the remedy for this site. Limited groundwater monitoring was conducted between 1999 and 2002. Natural attenuation monitoring was initiated in 2003. The Navy continues annual monitoring for natural attenuation.

## **How the ROICC Contractor's Area (UST ROICC-7) Remedy Is Protecting the Community and Environment**

The remedy for the ROICC Contractor's Area is protecting the community and the environment by the following:

- Reducing dissolved-phase petroleum contamination in groundwater through the use of MNA
- Preventing human exposure to contaminated soil through the use of ICs

## **RUNWAY 5-23 AVGAS VALVE PIT**

### **Physical Description**

Runway 5-23 Avgas Valve Pit is located approximately 800 feet south of the southern end of Runway 5-23 and 50 feet west of a former truck fill stand. The valve pit is associated with an abandoned 6-inch-diameter avgas transfer pipeline that supplied fuel to the Runway 5-23 truck fill stand.

### **Environmental Evaluations and Remedy**

The pipeline had been abandoned after the aboveground portions of the piping were removed, the fuel drained from the buried sections, and the pipe ends capped. In 1994, a product sheen was observed on the groundwater surface of an excavation area opened to remove the valve. One soil sample collected during the valve removal contained petroleum hydrocarbons greater than state cleanup levels. No record is available on petroleum releases at this facility. However, the source probably includes leaks from the piping and valve.

Two groundwater monitoring wells were installed in 1996. Petroleum hydrocarbons in groundwater exceeded state cleanup levels. The 2000 OU A ROD identified MNA and ICs as the interim remedy for this site. Intermittent free-product recovery was conducted from 1989 to 2000. The Navy continues annual monitoring of two wells for natural attenuation.

### **How the Runway 5-23 Avgas Valve Pit Remedy Is Protecting the Community and Environment**

The remedy for the Runway 5-23 Avgas Valve Pit is protecting the community and the environment by the following:

- Reducing dissolved-phase petroleum contamination in groundwater through the use of MNA
- Preventing human exposure to contaminated soil through the use of ICs

### **SA 78, OLD TRANSPORTATION BUILDING USTs 10583, 10584, AND ASTs**

#### **Physical Description**

SA 78, Old Transportation Building, is located approximately 5 miles north of downtown Adak in the Naval Security Group Activity (NSGA) complex, on the lower southern slope of Mount Adagdak, near the northwestern shore of Clam Lagoon. The Old Transportation Building was used as the NSGA fire station and transportation garage from 1950 until mid-1991. Two USTs and two ASTs were used at the Old Transportation Building site to store motor vehicle gasoline (mogas) from the early 1960s until 1993.

The area east of Old Transportation Building was filled, graded flat, and used as a vehicle fueling area. Although the site was graded level, the surrounding topography slopes southeast toward Clam Lagoon. Surface water runoff generally flows southeast toward Clam Lagoon, approximately 250 feet from the source area.

#### **Environmental Evaluations and Remedy**

Investigations were conducted between 1990 and 2000. Free product was detected in one of seven wells after 4 years of monitoring at the site. Petroleum hydrocarbons were detected in surface soil and groundwater samples collected from the former fueling area during these investigations.

Monitoring wells in the vicinity of Old Transportation Building have been gauged periodically for the presence of free product. Since November 1996, free product has been detected five times in only one of seven monitoring wells (well 12-145). An absorbent product removal device was installed in monitoring well 12-145 in October 1997. Because a measurable quantity of free product was not recovered at this site during the 33-month period from October 1997 to June 2000, product recovery efforts were discontinued at this site in July 2000.

### **How the SA 78, Old Transportation Building USTs 10583, 10584, and ASTs Remedy Is Protecting the Community and Environment**

The remedy for SA 78, Old Transportation Building USTs 10583, 10584, and ASTs is protecting the community and the environment by the following:

- Reducing petroleum contamination in groundwater and soil through the use of free-product recovery
- Preventing human exposure to contaminated soil through the use of ICs

### **SA 79, MAIN ROAD PIPELINE, SOUTH END**

#### **Physical Description**

The Main Road Pipeline historically supplied JP-5 for multiple facilities, including aircraft refueling hydrants, residential heating oil distribution tanks, and the Steam Plant 4 fuel supply tanks. The Main Road Pipeline was reportedly cleaned but not closed. Impacted soils were observed during repair and replacement of sections of the pipeline in 1990. The southern portion of Main Road Pipeline runs south along Transit Road between the traffic circle and the former Aleutian Steak House restaurant.

#### **Environmental Evaluations and Remedy**

Impacted soils were observed during repair and replacement of sections of the pipeline in 1990. Investigations were performed at the site from 1992 to 1999. Petroleum hydrocarbons in soil and groundwater were detected in excess of state cleanup levels. The 2000 OU A ROD identified limited groundwater monitoring as the remedy for this site. Limited monitoring did not meet criteria in the first 2 years, and this site was transitioned to MNA. The Navy continues annual monitoring of two wells to evaluate natural attenuation.

During subsequent decommissioning activities in 2009, 46,300 linear feet of pipelines were either physically decommissioned or were documented as having been previously decommissioned. The decommissioning activities were conducted to ensure that the pipelines were closed in accordance with state and federal regulatory requirements and to further ensure that residual fuel present in these pipelines was removed to prevent future release into the environment.

### **How the SA 79, Main Road Pipeline, South End, Remedy Is Protecting the Community and Environment**

The remedy for the SA 79, Main Road Pipeline, South End, is protecting the community and the environment by the following:

- Reducing dissolved-phase petroleum contamination in groundwater through the use of MNA
- Reducing petroleum contamination in soils through pipeline decommissioning activities
- Preventing human exposure to contaminated soil through the use of ICs

### **SA 80, STEAM PLANT 4 USTs 27089 AND 27090**

#### **Physical Description**

The SA 80, Steam Plant 4 USTs 27089 and 27090 site is located in the northern end of downtown Adak, approximately 2,000 feet east of Runway 18-36, 2,800 feet south of Runway 5-23, and 2,500 feet southwest of NORPAC Hill. Steam Plant 4 supplied steam to various buildings in the area. Steam Plant 4 was built in the late 1940s and was operational until 1995, when an earthquake severed the main steam line that connected the steam plant to buildings in the area. USTs 27089 and 27090 were 22,000-gallon tanks installed in 1950 that stored JP-5 fuel used for the boilers in the steam plant. The USTs were filled from the Main Road Pipeline (6-inch JP-5), which passes through the site.

The regional topography in this vicinity slopes gently toward the southwest, though the local topography of the site is flat to slightly undulating. Kuluk Bay is approximately 2,500 feet east of the site. The closest downgradient surface water body is East Canal, located approximately 1,400 feet west of the site. Two known releases were reported to have occurred at the site. In June 1991, a release of approximately 50 to 70 gallons occurred when a fill hole ruptured while

servicing the tanks. In May 1995, prior to the removal of UST 27089, trace amounts of fuel reportedly dripped to surrounding soils from the ends of a section of Main Road Pipeline under repair. Immediately following this release, 5 cubic yards of soil were removed from the area.

### **Environmental Evaluations and Remedy**

Investigations were performed at the site from 1992 to 1997. Petroleum hydrocarbons were detected in groundwater at concentrations greater than state cleanup levels, and free product was identified on the groundwater surface. Passive free-product recovery was conducted from 1997 to 2000. Passive-style skimmers were initially installed in 1997. Less than 25 gallons of free product were recovered at SA 80 between January 1997 and June 2000. Free-product recovery efforts at the site were terminated during July 2000, because the Navy contends that free product has been recovered at the site to the maximum extent practicable.

The 2000 OU A ROD identified free-product recovery as the interim remedy for this site. The 2005 Decision Document identifies MNA and ICs as the final remedy selected for this site. Monitoring of six wells commenced during 2005 and continues on an annual basis.

### **How the SA 80, Steam Plant 4 USTs 27089 and 27090, Remedy Is Protecting the Community and Environment**

The remedy for the SA 80, Steam Plant 4 USTs 27089 and 27090 is protecting the community and the environment by the following:

- Reducing petroleum contamination in groundwater and soil through free-product recovery
- Monitoring the natural attenuation of petroleum contamination in groundwater
- Preventing human exposure to contaminated soil through the use of ICs

### **SA 82, P-80/P-81 BUILDINGS (USTs 10587 AND 10579 AND ASTs)**

#### **Physical Description**

The P-80/P-81 Buildings were used by the former NSGA and are located on Stor Road, approximately 4,500 feet north of the main NSGA complex. UST 10587 and AST 10333 were located west of Building P-80 and were used to store JP-5 fuel for the heating boiler. UST 10579 was located northwest of Building P-81 and was used to store JP-5 fuel to supply the generator in Building P-81.

The natural topography of the area slopes gently at a 5 to 10 percent grade toward Clam Lagoon, approximately 1 mile to the southeast. The closest surface water body is an unnamed stream approximately 550 feet east-southeast of the site.

### **Environmental Evaluations and Remedy**

Investigations were performed from 1996 to 2000. Hydrocarbon concentrations in groundwater exceeded established cleanup levels. The 2000 OU A ROD identified free-product recovery as the interim remedy for this site. Free product was detected intermittently in the two wells situated in the former UST locations. Passive product recovery yielded a total of 0.04 gallon. Free product has not been observed in any monitoring well in the vicinity of the P-80/P-81 Buildings since July 1998, and the criterion to cease free-product recovery was met. The 2005 Decision Document identified limited groundwater monitoring as the final remedy selected for this site. SA 82 was closed in 2010, and the site is inspected annually for institutional controls.

### **How the SA 82, P-80/P-81 Buildings (USTs 10587 and 10579 and ASTs), Remedy Is Protecting the Community and Environment**

The remedy for the SA 82, P-80/P-81 Buildings is protecting the community and the environment by the following:

- Reducing petroleum contamination in groundwater and soil through free-product recovery
- Reducing petroleum contamination in groundwater through limited groundwater monitoring
- Preventing human exposure to contaminated soil through the use of ICs

### **SA 88, P-70 ENERGY GENERATOR (UST 10578)**

#### ***Physical Description***

SA 88 is located on the north side of Giddens Road, approximately 1 mile north of the main NSGA complex. This site was once used as a radio receiving facility. The site occupies 0.5 acre in an undeveloped portion of NSGA. The site and surrounding area are situated at the southern base of Mount Adagdak and slope toward Clam Lagoon. The P-70 Building was used for auxiliary power generation and miscellaneous storage at NSGA. UST 10578 was installed at Building P-70 in 1965 to store JP-5 for powering the generator.

The site itself is flat, having been cut into the slope and graded as a platform for the buildings. East of the site, the natural topography of the area slopes at a 10 to 25 percent grade toward Clam Lagoon located approximately 1,500 feet southeast. The closest surface water body is an unnamed creek approximately 350 feet southeast of the site.

### **Environmental Evaluations and Remedy**

Free product was reported during excavation of the UST near the building. Additional investigations occurred from 1996 through 2000. Soil samples contained petroleum hydrocarbons in excess of state cleanup levels, and free product was also detected in four wells.

Free product was observed in monitoring wells at the P-70 Energy Generator site between 1996 and 2002. At least one passive-style skimmer was rotated between wells that had measurable product thicknesses between January and December 1997.

The 2000 OU A ROD identified free-product recovery as the interim remedy for this site. Intermittent free-product recovery was conducted from 1989 to 2000, when the criterion to cease free-product recovery was met. The Decision Document signed in 2005 identified limited groundwater monitoring as the final remedy selected for this site. The site was recommended for closure in 2011, and the Navy will no longer conduct annual limited groundwater monitoring.

### **How the SA 88, P-70 Energy Generator (UST 10578) Remedy Is Protecting the Community and Environment**

The remedy for the SA 88, P-70 Energy Generator (UST 10578) is protecting the community and the environment by the following:

- Reducing petroleum contamination in groundwater and soil through free-product recovery
- Reducing petroleum contamination in groundwater through limited groundwater monitoring
- Preventing human exposure to contaminated soil through the use of ICs

## **SOUTH OF RUNWAY 18-36 AREA**

### **Physical Description**

South of Runway 18-36 Area consists of the lowland area surrounding the southern portion of Runway 18-36. It extends from East Canal of the airport ditch system on the east to South Sweeper Creek on the west and Sweeper Cove to the south. In September 1990, an abandoned jet petroleum fuel line located near the southeast corner of Runway 18-36 was uncovered during installation of a new fuel line. Residual product was observed in the excavated trench.

To the east, this site adjoins another large petroleum-release site, the NMCB Building Area. The primary physical features on this site include the southern portion of Runway 18-36, Main Road, the northern end of Transit Road south to the Transit Road Bridge, and the southern portion of the airport ditch system West and Crossover Canals. Topography at South of Runway 18-36 Area is flat, low-lying land adjacent to and south of the Runway 18-36, area extending to Sweeper Cove. Elevations in this area are generally less than 15 feet above MLLW.

Early in 1989, several leaks were discovered in underground pipelines that traverse the hillsides in the vicinity of Tank Farm A. These leaks typically occurred in abandoned World War II-era pipelines still connected to the active fuel distribution system. In September 1990, an abandoned fuel line located near the southeast corner of Runway 18-36 was uncovered during installation of a new fuel line adjacent to Main Road. The abandoned fuel line reportedly was the source of a subsurface fuel release, and residual product was observed in the excavated trench.

### **Environmental Evaluations and Remedy**

Subsequent site investigation activities indicated the presence of petroleum hydrocarbons in soil and groundwater over a large area South of Runway 18-36 Area. Measurable quantities of free product have been periodically observed in and recovered from groundwater monitoring wells at the site. Potential sources of the petroleum hydrocarbons present at the site include various pipelines that crisscross the site. Additional investigations were conducted from 1994 to 2001.

Cleanup activities that have been implemented at the South of Runway 18-36 Area include soil capping, sediment removal, replacement of crossover canal with metal culverts and contaminated soil excavation, installation of a product interception device, and pipeline cleaning and closures.

Removal, treatment, and disposal of polychlorinated biphenyl (PCB) contaminated sediment from South Sweeper Creek were completed from April to August 1999. Airport ditch culvert installation activities occurred from May to September 2001 to reduce the potential for contamination to seep into the airport ditch drainage system. During August 2001, a product

interception device was installed along the bank of South Sweeper Creek to prevent release of petroleum into the creek by eliminating an observed seep.

The 2000 OU A ROD identified free-product recovery as the interim remedy for this site. Intermittent free-product recovery was conducted from 1997 to 2004. A Decision Document was prepared according to State of Alaska regulations in 2006. ICs, free-product recovery and containment, MNA for groundwater, and natural recovery for surface water and sediment were selected as the final remedy. Free product removal and monitoring occurs on a bi-monthly basis, and groundwater monitoring occurs annually.

### **How the South of Runway 18-36 Area Remedy Is Protecting the Community and Environment**

The remedy for South of Runway 18-36 Area is protecting the community and the environment by the following:

- Reducing petroleum contamination in groundwater and soil through free-product recovery
- Reducing dissolved-phase petroleum contamination in groundwater through the use of MNA
- Preventing human exposure to contaminated soil through the use of ICs

### **SWMU 11, PALISADES LANDFILL**

#### **Physical Description**

SWMU 11, Palisades Landfill, is located several miles north of the main downtown area and was used as the primary disposal area for all operations on Adak Island from the 1940s to approximately 1970. The approximately 6-acre landfill area covers portions of the coastal uplands immediately adjacent to Kuluk Bay and part of a ravine. The ravine is approximately 1,200 feet long and contains a small stream (Palisades Creek) that runs through the site and into Kuluk Bay.

The landfill received wastes from the 1940s to the 1990s. Approximately 80,000 to 100,000 cubic yards of solid waste are located in the landfill. A wide variety of materials was reportedly disposed of at Palisades Landfill, including waste petroleum, oil, and lubricants (POL), chlorinated and nonchlorinated solvents, paint waste, sanitary trash, scrap vehicles, lead and

mercury batteries, construction waste, and mercury. The landfill was covered with local soils in the early 1970s after disposal practices were stopped. A portion of waste material within the ravine has no cover and is on a slope. The exposed waste in the ravine consists primarily of barrels and construction waste. The waste in the ravine covers a portion of Palisades Creek, but the landfill does not extend into Kuluk Bay. Groundwater occurs locally under the site and discharges into the marine environment at the downgradient boundary.

### **Environmental Evaluations and Remedy**

Surface soil, groundwater, surface water, and stream sediment samples were collected during the 1988 and 1992 site investigations. Volatile organic compounds (VOCs), semivolatile organic compound (SVOCs), Aroclors (PCBs), and inorganics were detected in soil. VOCs, SVOCs, and inorganics were detected in sediment, and inorganics were detected in surface water. Although no formal remedial investigation (RI) or risk assessment was performed at the time, the FFA parties concluded that performing an interim remedial action was the best option.

The 1995 interim action ROD recommended landfill capping to reduce risks to human and ecological receptors. Landfill capping was completed in 1996. Rock sole fillet and blue mussel tissue monitoring in Kuluk Bay began in 1996 and is repeated every 2 years. The fish and mussel tissue is analyzed for PCBs, and the results of the analysis are used to prepare a fish consumption advisory for Kuluk Bay. Risk potentially attributable to SWMU 11 is assessed as part of the monitoring program established for Kuluk Bay. Human health risk was initially evaluated by a risk assessment in the Adak RI and feasibility study (FS).

ICs were implemented after they were established in the 2000 OU A ROD to ensure that the remedy remains protective of human health and the environment. The Navy maintains ICs and annual closure monitoring at this landfill.

### **How the SWMU 11, Palisades Landfill, Remedy Is Protecting the Community and Environment**

The remedy for the SWMU 11, Palisades Landfill, is protecting the community and the environment by the following:

- Periodic monitoring of contamination in sediment, surface water, and marine tissue
- Preventing human exposure to contaminated soil through the use of ICs

- Preventing human exposure to contaminants in marine tissue through recommended consumption advisories

## **SWMU 13, METALS LANDFILL**

### **Physical Description**

SWMU 13, Metals Landfill, is located immediately southeast of the central community of Adak and is bound by Monument Hill to the west and Kuluk Bay to the east. The total volume of landfill waste and soil in the Metals Landfill is approximately 400,000 cubic yards, not including material scattered on the surface and adjacent to the shoreline. The total site area is 28 acres, of which approximately 19 acres were used for the landfill.

The Metals Landfill began operations in the 1940s and received a variety of waste materials, including sanitary trash, construction waste, paints, chlorinated and nonchlorinated solvents, batteries, scrap vehicles, medical waste, and sewage sludge. In 1970, restrictions were placed on the type of materials that could be disposed of at the landfill. Beginning in 1988, when a sludge press was installed at the sewage treatment plant, dewatered sewage sludge was disposed of on the southern end of the eastern section of the landfill. The landfill stopped receiving wastes in 1989.

### **Environmental Evaluations and Remedy**

In 1989, regulatory agencies conducted a site inspection of Metals Landfill. They discovered four drums with liquid, one cracked vehicular battery, and one acetylene cylinder scattered in one small area of the landfill. As a result, the regulatory agencies determined that the battery area contained hazardous waste and, therefore, was considered a hazardous waste pile under RCRA. The remaining landfill has been designated as a SWMU under RCRA. The presence of the batteries resulted in a Federal Facilities Compliance Agreement being signed and issued by the EPA in November 1990. The hazardous waste pile was closed under RCRA guidelines.

Surface and subsurface soil, groundwater, surface water, and sediment samples were collected from 1989 through 1993. VOCs, SVOCs, pesticides, Aroclors, and inorganics were detected in soil. Total petroleum hydrocarbons were detected above regulatory criteria in one well. Although no RI or risk assessment was performed at the time, the FFA parties concluded that performing an interim remedial action was the best option.

After the landfill was recontoured and capped in 1996, the Navy performed additional construction activities at the site. In 2000, the Navy removed approximately 98 percent of the scrapped equipment and miscellaneous metal debris that littered approximately 1,500 feet of the shoreline along the landfill and installed a protective riprap cover over the shoreline. Risk that is potentially attributable to SWMU 13 is assessed as part of the monitoring program established for Kuluk Bay, the downgradient water body, which was evaluated by a risk assessment in the Adak RI/FS. The Navy maintains ICs and annual closure monitoring at this landfill.

### **How the SWMU 13, Metals Landfill, Remedy Is Protecting the Community and Environment**

The remedy for the SWMU 13 Metals Landfill, is protecting the community and the environment by the following:

- Reducing contamination through engineering controls, including landfill closure inspections
- Monitoring contamination in groundwater
- Preventing human exposure to contaminated soil through the use of ICs
- Preventing human exposure to contaminants in marine tissue through recommended consumption advisories

## **SWMU 14, OLD PESTICIDE DISPOSAL AREA**

### **Physical Description**

SWMU 14, Old Pesticide Disposal Area, consists of a vacant property located to the southwest of the Public Works Building in the downtown area. The site includes the foundation of former Building 1471 and an abandoned drain field reportedly used to disperse pesticide rinse water. Elevation of the site ranges from about 23 to 24 feet above MLLW. Sweeper Cove is located approximately 1,500 feet south of the site.

Building 1471 was used from 1950 to 1987 for handling a variety of pesticides. From 1950 to 1980, residual material and rinse water from pesticide handling were discharged through a drain pipe to a subsurface drain field at the south end of the building. The drain pipe reportedly broke in 1980, resulting in discharge to the ground surface from 1980 to 1984. Recycling of pesticide wastes and rinse water was initiated in 1984, and no additional wastewater was discharged to the site.

Building 1471 also was used as a motor vehicle filling station from approximately 1950 to 1985. Two USTs, one for leaded and one for unleaded gasoline, were reportedly located approximately 100 feet south of the building foundation.

### **Environmental Evaluations and Remedy**

Investigations were conducted from 1992 to 1996 at the site. In 1992, the Navy used ground-penetrating radar to locate the USTs. Empty fuel pipes were found and excavated.

SWMU 14 was also evaluated under SAERA because it contains petroleum contamination. Petroleum hydrocarbons observed in four quarterly groundwater sampling events in 1999 and 2000 exceeded groundwater cleanup criteria. The 2000 OU A ROD identified ICs and MNA as the remedy for this site. The final remedy is in place. The Navy maintains ICs and annually monitors two wells for natural attenuation and compliance monitoring.

### **How the SWMU 14, Old Pesticide Disposal Area, Remedy Is Protecting the Community and Environment**

The remedy for the SWMU 14, Old Pesticide Disposal Area, is protecting the community and the environment by the following:

- MNA of contamination in groundwater
- Preventing human exposure to contaminated soil through the use of ICs

### **SWMU 15, FUTURE JOBS/DEFENSE REUTILIZATION MARKETING OFFICE (DRMO)**

#### **Physical Description**

SWMU 15, Future Jobs/DRMO, also known as the former Hazardous Waste Storage Area, is located south of the Public Works Building and north of Sweeper Cove between Warehouse No. 2 (Building T-1443) and Warehouse No. 3 (Building T-1446), which are to the east and west of the site, respectively. SWMU 15 was used as a storage yard from the 1950s until the site was cleared in 1992.

Reportedly, 150 gallons of PCB transformer coolant were spilled at the site. The site is relatively flat, ranging between 18 and 19 feet above MLLW.

## **Environmental Evaluations and Remedy**

In 1992, approximately 252 cubic yards of surface soil were removed, based on sampling conducted in 1990. Additional samples of surface and subsurface soil, sediment, and groundwater were collected in 1996. VOCs were detected in groundwater in excess of acceptable levels. SWMU 15 was also evaluated under SAERA.

The 2000 OU A ROD identified ICs, CERCLA compliance monitoring, and MNA as the remedy for this site. The final remedy is in place. The Navy maintains ICs and monitors the groundwater in one well for CERCLA compliance on an annual basis.

### **How the SWMU 15, Future Jobs/DRMO, Remedy Is Protecting the Community and Environment**

The remedy for SWMU 15, Future Jobs/DRMO, is protecting the community and the environment by the following:

- Monitoring natural attenuation of contamination in groundwater
- Preventing human exposure to contaminated soil through the use of ICs

## **SWMU 17, POWER PLANT 3 AREA**

### **Physical Description**

SWMU 17, Power Plant 3 Area, is west of the downtown core area and Runway 18-36. SWMU 17 contained several areas of concern, including the waste oil pond, the north pond, the bulk storage waste oil tank, two oil/water separators, two temporary drum accumulation areas, the power plant tank farm, the seepage area along the slope below the power plant, a Quonset hut used previously for transformer storage, the dry cleaners, and stained areas within the ditches along both sides of Akutan Way.

Power Plant 3 became operational in 1950. Two of the ASTs stored JP-5, one stored waste oil, and the remaining two stored reserve oil supplies. The waste oil pond was constructed in the mid-1960s to contain waste POL generated at the plant. The Quonset hut has historically been used for electric line and transformer repairs and auto repair. The dry-cleaning facility located south of the power plant began operation in 1968. The power plant continues to serve as the main electrical generating source on Adak.

The two vertical ASTs were reported to be cleaned and closed during 1998. One horizontal AST was reported to be removed at that time. The two remaining ASTs remain in operation and contain JP-5 used to fuel the power plant.

### **Environmental Evaluations and Remedy**

Seeps of free product were observed along the roadside ditches in 1995. The Navy installed coffer dams within the trench to act as oil/water separators. Approximately 5,000 gallons of water and product were recovered from the trench by January 1996. During the summer of 1996, a product-recovery trench was constructed at the intersection of Amulet Way and Akutan Way. During the construction of the recovery trench, much of the stained surface soil in the ditches was excavated.

As part of the CERCLA investigation for the site, analytical results of sediment, surface and subsurface soil, groundwater, and surface water were used to assess human health and ecological risk in the preliminary source evaluation report for the site.

As part of the SAERA investigation for the site under the OU A ROD, free product was detected in 7 of 18 wells. Petroleum hydrocarbon concentrations in surface and subsurface soils exceeded soil cleanup levels for industrial sites.

In 1999, the oil/water separators were removed and their inflows were rerouted directly to the sanitary sewer system. Contaminated soils in the waste oil pond and water retention pond were removed and treated. In 2000, the existing free-product recovery trench was redesigned and upgraded to improve product-recovery rates. Another interim remedial action to eliminate free-product seeps at the ground surface was completed in 2002.

The 2000 OU A ROD selected MNA as the final remedy. Natural attenuation monitoring was initiated in 1999 at three wells and continues on an annual basis. The Navy is monitoring concentrations of total aromatic hydrocarbons and total aqueous hydrocarbons in addition to a sheen on surface water. The Navy continues to evaluate alternatives to protect surface water.

### **How the SWMU 17, Power Plant 3 Area, Remedy Is Protecting the Community and Environment**

The remedy for the SWMU 17 Power Plant 3 Area, is protecting the community and the environment by the following:

- Reducing contamination in sediments through sediment removal actions
- Reducing contamination in groundwater and soil through free-product recovery

- Monitoring natural attenuation of contamination in groundwater
- Preventing human exposure to contaminated soil through the use of ICs

## **SWMUS 18/19, WHITE ALICE LANDFILL**

### **Physical Description**

SWMU 18, the South Sector Drum Disposal Area, was located at the base of an abandoned quarry located west of the downtown area. Approximately twenty 55-gallon drums were disposed of in low-lying tundra. The drums were heavily rusted and were most likely deposited during the 1940s.

SWMU 19, Quarry Metal Disposal Area, was a small scrap metal disposal area located in the abandoned quarry west of downtown. Scrap metal, including material from demolition of Quonset huts, was placed on the floor of the quarry. The disposal area was active from 1980 to 1985.

There is no information on the history of any contaminant releases at either site.

### **Environmental Evaluations and Remedy**

SWMU 18, together with SWMU 19, became White Alice Landfill, which received construction wastes in the 1990s until it was covered with soil and closed in 1998 according to Alaska solid waste regulations. The Navy performs monitoring at the landfill every 2 years.

### **How the SWMUs 18/19, White Alice Landfill, Remedy Is Protecting the Community and Environment**

The remedy for the SWMUs 18/19, White Alice Landfill, is protecting the community and the environment by the following:

- Reducing contamination by installing a vegetated soil cover, grading, and surface water and erosion controls
- Monitoring natural attenuation of contamination in groundwater
- Preventing human exposure to contaminated soil and groundwater through the use of ICs

## **SWMU 25, ROBERTS LANDFILL**

### **Physical Description**

SWMU 25, Roberts Landfill, is located approximately one mile southwest of the former Adak Naval Complex. Roberts Landfill encompasses 59 acres, including a main portion, a designated asbestos disposal area, and partially buried metal bunkers filled with asbestos material. The areal extent of refuse within the main portion of the landfill is 28.5 acres.

The landfill operated from the early 1950s until 1972 and then again from 1975 to 2000, when it was capped and closed. During the initial operation, managed wastes included sanitary trash, metal debris, batteries, solvents, waste paints, and construction rubble. Between 1975 and 2000, the landfill accepted only sanitary trash. Portions of the landfill were reopened for disposal of demolition debris in 2001 and again in 2002 for the demolition and disposal of 52 cabins.

### **Environmental Evaluations and Remedy**

Roberts Landfill was subsequently closed again in 2003. Groundwater monitoring was conducted around the landfill quarterly beginning in 1995 and then annually since 1996. No significant release was detected. ADEC approved closure of the landfill in 2002. As part of the closure requirements, annual monitoring is conducted to inspect the cover, monitor groundwater and surface water, and inspect ICs.

### **How the SWMU, 25 Roberts Landfill, Remedy Is Protecting the Community and Environment**

The remedy for the SWMU 25, Roberts Landfill, is protecting the community and the environment by the following:

- Reducing contamination by installing a vegetated soil cover, grading, and surface water and erosion controls
- Monitoring the natural attenuation of contamination in groundwater
- Preventing human exposure to contaminated soil and groundwater through the use of ICs

## **SWMU 55, PUBLIC WORKS TRANSPORTATION DEPARTMENT WASTE STORAGE AREA**

### **Physical Description**

SWMU 55, Public Works Transportation Department Waste Storage Area, is located in the industrial area of downtown Adak. It is west of the Red Shed (Building T-1441). SWMU 55 consists of approximately 0.7 acre of flat, gravel-covered surface (approximately 150 by 200 feet). The elevation of most of SWMU 55 is 19 feet above MLLW. Site drainage leads to Sweeper Cove, about 700 feet away. Wastes stored on site included POL, spent solvents, and other maintenance-related materials. Waste accumulation and storage at this site may have started as early as 1951.

### **Environmental Evaluations and Remedy**

Surface soils beneath and around the drums showed signs of staining under the wooden pallets during the 1995 field investigation. During the CERCLA evaluation, analytical results of groundwater, surface and subsurface soil, and sediment samples were used to assess human health and ecological risk. This site was also evaluated under SAERA. No petroleum hydrocarbon concentrations exceeded the screening criterion for industrial sites.

The 2000 OU A ROD identified ICs and CERCLA compliance monitoring as the remedy for this site. The final remedy is in place. The Navy maintains ICs and monitors groundwater for CERCLA compliance monitoring every 2 years.

### **How the SWMU 55, Public Works Transportation Department Waste Storage Area, Remedy Is Protecting the Community and Environment**

The remedy for the SWMU 55, Public Works Transportation Department Waste Storage Area, is protecting the community and the environment by the following:

- Monitoring natural attenuation of contamination in groundwater
- Preventing human exposure to contaminated soil and groundwater through the use of ICs

## **SWMU 58/SA 73 HEATING PLANT 6**

### **Physical Description**

SWMU 58/SA 73, Heating Plant 6, is situated in the southeast corner of the former NSGA complex, approximately 5 miles north of downtown Adak on the lower southern slope of Mount Adagdak. Heating Plant 6 supplied heat and power to the NSGA complex from the 1950s until 1995. Free product was encountered on the groundwater during the removal activities of one of the six former USTs and the oil/water separator. Native tundra grasses exist south of the site. Two drainage ditches that channel surface water runoff toward Clam Lagoon are located at the edge of the gravel area.

### **Environmental Evaluations and Remedy**

Between 1993 and 1999, results of sampling at the sites indicated that petroleum hydrocarbons in some soil samples exceeded state cleanup levels. No groundwater sample contained petroleum hydrocarbons in excess of the state cleanup levels.

Monitoring wells within the vicinity of the Heating Plant 6 site have been gauged for the presence of free product since October 1996. Passive-style product skimmers were installed in selected monitoring and recovery wells in January 1997. The skimmers operated continually at the site from January through May 1997 and intermittently as product volume decreased. Product-recovery efforts were discontinued at this site during July 2000.

The 2000 OU A ROD identified free-product recovery as the interim remedy for this site. The Decision Document signed in 2005 identified MNA and ICs as the final remedy selected for this site. The final remedy is in place. The Navy maintains ICs and continues annual monitoring of groundwater for natural attenuation in six wells.

### **How the SWMU 58/SA 73, Heating Plant 6, Remedy Is Protecting the Community and Environment**

The remedy for the SWMU 58/SA 73, Heating Plant 6, is protecting the community and the environment by the following:

- Reducing contamination in groundwater and soil through the use of free-product recovery
- Monitoring natural attenuation of contamination in groundwater

- Preventing human exposure to contaminated soil and groundwater through the use of ICs

## **SWMU 60, TANK FARM A**

### ***Physical Description***

Tank Farm A is a former bulk-fuel storage facility located in the upland area west of Runway 18-36 that occupies an area of approximately 55 acres situated on a hill with steeply sloped margins. The site is approximately 200 feet south of Yakutat Creek and approximately 900 feet west of South Sweeper Creek. When constructed in 1943, the facility consisted of 45 bulk-fuel-storage field-constructed tanks (FCTs) ranging in capacity from 21,000 to 420,000 gallons. The FCTs were primarily constructed above the ground surface, and some may have been partially buried or built into hillsides.

### **Environmental Evaluations and Remedy**

Numerous investigations were performed at Tank Farm A and the surrounding areas starting in 1987. One investigation reported that 1.2 million gallons of residual fuel may be present in approximately 146,000 cubic yards of soil in the Tank Farm A area. Petroleum hydrocarbons were detected in excess of state cleanup levels for groundwater.

The 2000 OU A ROD identified MNA and ICs as the selected remedy for this site. Natural attenuation monitoring has been reduced as the endpoint criteria were met in several wells. The Navy continues annual monitoring to evaluate natural attenuation and maintains ICs for this site.

### **How the SWMU 60, Tank Farm A, Remedy Is Protecting the Community and Environment**

The remedy for the SWMU 60, Tank Farm A, is protecting the community and the environment by the following:

- Monitoring natural attenuation of contamination in groundwater
- Preventing human exposure to contaminated soil and groundwater through the use of ICs

## **SWMU 61, TANK FARM B**

### **Physical Description**

Tank Farm B is located next to and north of Runway 5-23 and is surrounded on three sides by water. North Sweeper Creek is located at the base of the hill to the south and east. When constructed in 1943, the facility originally consisted of forty 23,800-gallon USTs and one 420,000-gallon FCT. All of these tanks were originally used to store avgas and had a combined capacity of 1.37 million gallons. A second 420,000-gallon FCT was constructed in 1958.

The FCTs were primarily constructed beneath the ground surface. A pump house was located on top of each FCT. Fuel was transferred to, from, and throughout Tank Farm B by several pipelines ranging from 6 to 10 inches in diameter.

### **Environmental Evaluations and Remedy**

Investigations at Tank Farm B began in 1992. Petroleum hydrocarbons were detected in soil and groundwater at concentrations exceeding state cleanup levels. During September 1993, 30 of the 40 USTs were removed at Tank Farm B. Removal of most of the aboveground sections of pipelines, plugging abandoned underground sections of pipelines, and cleaning and disposing of piping and other debris at Tank Farm B were completed in 1993.

The 2000 OU A ROD identified MNA and ICs as the selected remedy for this site. Natural attenuation monitoring has been reduced as the endpoint criteria were met in several wells. The Navy continues to monitor groundwater to evaluate natural attenuation and maintains ICs for this site. At the request of ADEC, the Navy also monitors total aromatic hydrocarbons and total aqueous hydrocarbons to protect surface water. The Navy is evaluating alternatives to protect surface water.

### **How the SWMU 61, Tank Farm B, Remedy Is Protecting the Community and Environment**

The remedy for the SWMU 61, Tank Farm B, is protecting the community and the environment by the following:

- Monitoring natural attenuation of contamination in groundwater
- Preventing human exposure to contaminated soil and groundwater through the use of ICs

## **SWMU 62, NEW HOUSING FUEL LEAK (SANDY COVE HOUSING)**

### **Physical Description**

SWMU 62, New Housing Fuel Leak, is located in the downtown area of Adak, east of Runway 18-36, north of Public Works Road, west of Bayshore Highway, and south of Kagalaska Drive. SWMU 62 occupies an area of approximately 100 acres and includes Sandy Cove Housing, Eagle Bay Housing, Turnkey Housing, two school buildings and yards, and miscellaneous facilities.

During 1988 and 1989, leaks were discovered in the heating fuel piping system for the housing complex, and these leaks were repaired. However, significant volumes of heating fuel were released. The volume of fuel released has not been determined.

Groundwater is found as both a laterally discontinuous perched layer and a regional water table aquifer beneath SWMU 62. Groundwater appears to flow toward Kuluk Bay, East Canal, and Sweeper Cove, depending on its proximity to each.

### **Environmental Evaluations and Remedy**

In 1988 and 1989, the Navy conducted inventory reviews and visual site inspections in housing units and crawl spaces after occupants reported hydrocarbon-like odors. As a result of the visual inspections, five piping fuel leaks were discovered and repaired. Based on the results from these investigations, approximately 102 cubic yards of surface soil were removed from beneath the housing units. The excavated material was replaced with clean sand, and vapor barriers were installed and sealed to the housing unit foundations.

The 2000 OU A ROD identified free-product recovery as the interim remedy for this site. Intermittent free-product recovery was conducted from 1989 to 2000. A Decision Document was prepared according State of Alaska regulations in 2006. Free-product containment and passive recovery, surface soil excavation, and MNA for groundwater were selected as the final remedy. Surface soil excavation was completed in 2007. The final remedy is in place and is being monitored on an annual basis, and free product recovery occurs on a bi-monthly basis.

### **How the SWMU 62, New Housing Fuel Leak (Sandy Cove Housing), Remedy Is Protecting the Community and Environment**

The remedy for SWMU 62, New Housing Fuel Leak (Sandy Cove Housing), is protecting the community and the environment by the following:

- Reducing contamination in groundwater and soil through the use of free-product recovery
- Reducing contamination in soils through surface soil removal
- Monitoring natural attenuation of contamination in groundwater
- Preventing human exposure to contaminated soil and groundwater through the use of ICs

## **SWMU 62, NEW HOUSING FUEL LEAK (EAGLE BAY HOUSING)**

### **Physical Description**

SWMU 62, New Housing Fuel Leak, is located in the downtown area of Adak, east of Runway 18-36, north of Public Works Road, west of Bayshore Highway, and south of Kagalaska Drive. Eagle Bay Housing complex is located to the southeast of the Sandy Cove Housing complex.

### **Environmental Evaluations and Remedy**

During 1988 and 1989, leaks were discovered in the heating-fuel piping system for the housing complex. These leaks were repaired. However, an unknown volume of heating fuel was released. Additional investigations were conducted between 1989 and 2003. Free product was found on the groundwater surface and was also detected seeping into East Canal of the airport ditch system west of the Eagle Bay Housing area.

The 2000 OU A ROD identified free-product recovery as the interim remedy for this site. Intermittent free-product recovery was conducted from 1989 to 2000. A Decision Document was prepared according to State of Alaska regulations in 2006. Free-product containment, passive product recovery, and MNA for groundwater were selected as the final remedy. The Navy continues passive product recovery and annual monitoring for product thickness and natural attenuation.

### **How the SWMU 62, New Housing Fuel Leak (Eagle Bay Housing), Remedy Is Protecting the Community and Environment**

The remedy for SWMU 62, New Housing Fuel Leak (Eagle Bay Housing), is protecting the community and the environment by the following:

- Reducing contamination in groundwater and soil through the use of free-product recovery
- Monitoring natural attenuation of contamination in groundwater
- Preventing human exposure to contaminated soil and groundwater through the use of ICs

## **TANKER SHED**

### **Physical Description**

Tanker Shed is located approximately at the midpoint between Main Road and Runway 18-36 in downtown Adak. Tanker Shed was used to perform maintenance on the tanker trucks that transport fuel for the housing area heating system and for aircraft refueling. When the UST used to collect oil from the oil/water separator was removed in 1995, soil samples that were collected contained petroleum hydrocarbons in excess of the state cleanup level.

Most of the land surface around Tanker Shed is flat and paved with concrete or asphalt. The land surface immediately east of the building is unimproved and covered with tundra grass. The regional topography in this vicinity slopes to the west. The closest downgradient surface water body is East Canal, located approximately 800 feet west of former UST 42494.

### **Environmental Evaluations and Remedy**

Investigations occurred from 1996 through 2001. Free product was detected and petroleum hydrocarbons exceeded state cleanup levels in soil and groundwater. In 2001, a supplemental site assessment was conducted to address data gaps.

The 2000 OU A ROD identified free-product recovery as the interim remedy for this site. Intermittent free-product recovery was conducted from 1997 to 2001. A Decision Document was prepared according State of Alaska regulations in 2005. MNA with continued product recovery, and ICs were selected as the final remedy. The Navy continues annual monitoring to evaluate natural attenuation, performs passive product recovery, and maintains ICs.

### **How the Tanker Shed Remedy Is Protecting the Community and Environment**

The remedy for Tanker Shed is protecting the community and the environment by the following:

- Reducing contamination in groundwater and soil through the use of free-product recovery
- Monitoring natural attenuation of contamination in groundwater
- Preventing human exposure to contaminated soil and groundwater through the use of ICs

## **YAKUTAT HANGAR**

### **Physical Description**

The Yakutat Hangar site is located approximately 1,800 feet west of Runway 18-36 and approximately 1,500 feet south of the west end of Runway 5-23. Building T-2039 was built in the 1940s as an airplane hangar. Sometime in the late 1970s, the hangar was converted to house additional automobile repair and automobile hobby shop facilities. A UST was installed in 1979 about 17 feet north of Yakutat Hangar and contained used oil generated by auto repairs at Building T-2039.

The general topography of the Yakutat Hangar area slopes slightly down to the north and west. The area surrounding the former UST is paved with asphalt and has been used for vehicle parking and storage. South Sweeper Creek, approximately 370 feet northeast and downgradient of the former UST, is the closest surface water body.

### **Environmental Evaluations and Remedy**

During the removal of a UST at the Yakutat Hangar in 1993, a sheen was observed on the groundwater. In 1996, the Navy discovered free product in a drainage ditch northwest of Yakutat Hangar. A product-recovery system was installed in 1997.

The 2000 OU A ROD identified free-product recovery as the interim remedy for this site. Free-product recovery was conducted from 1997 to 2000. The Decision Document that was signed in 2005 identified limited groundwater monitoring as the final remedy selected for this site. The cleanup is complete with ICs. No additional monitoring is being conducted.

### **How the Yakutat Hangar Remedy Is Protecting the Community and Environment**

The remedy for the Yakutat Hangar is protecting the community and the environment by the following:

- Reducing contamination in groundwater and soil through the use of free-product recovery
- Reducing contamination in groundwater through limited groundwater monitoring
- Reducing contamination in surface water through surface water sampling
- Preventing human exposure to contaminated soil and groundwater through the use of ICs