



FINAL
MARCH 2015

Land Use Controls and Institutional Controls Repair/ Improvement Work Plan

Former Naval Air Facility Adak

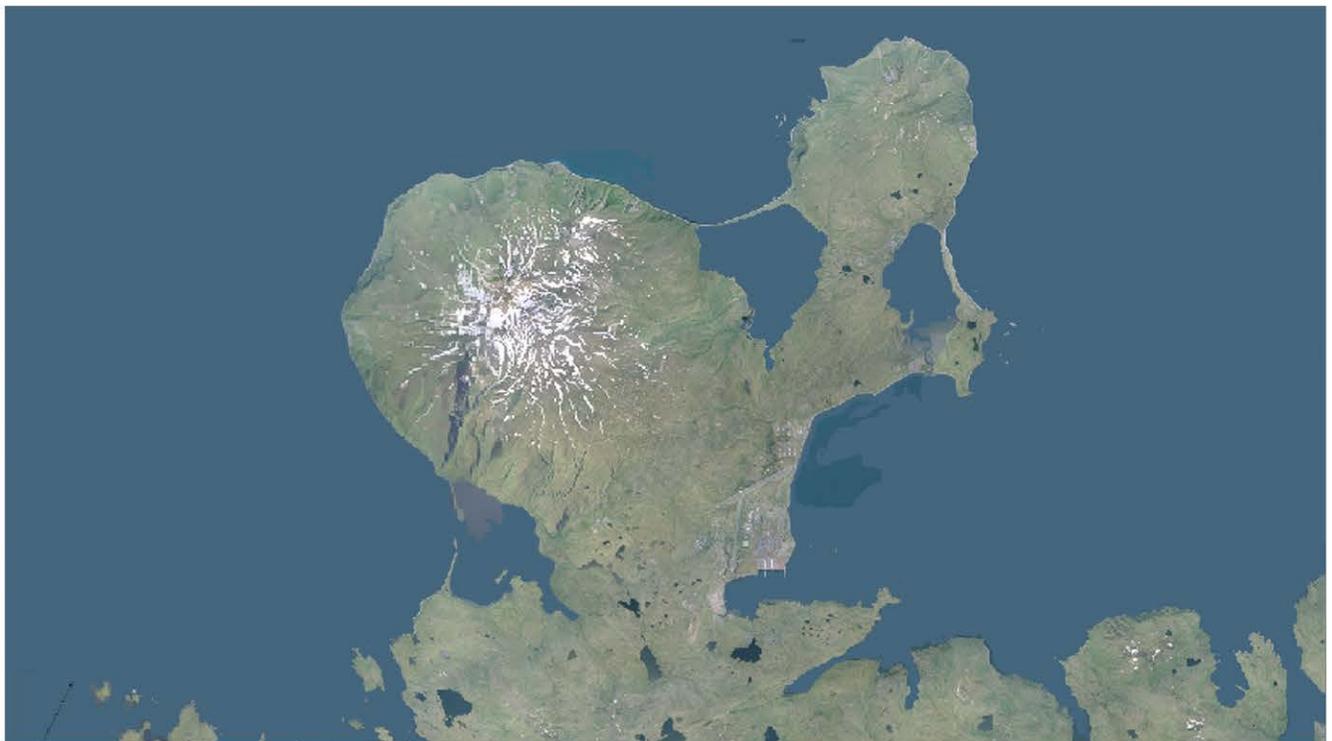
Adak Island, Alaska

Department of the Navy

Naval Facilities Engineering Command Northwest

1101 Tautog Circle, Suite 203

Silverdale, WA 98315-1101



CONTRACT NO. N62470-13-D-8007
TASK ORDER JP03

FINAL
LAND USE CONTROLS AND
INSTITUTIONAL CONTROLS REPAIR / IMPROVEMENT
WORK PLAN

FORMER NAVAL AIR FACILITY ADAK
ADAK, ALASKA

TETRA TECH EC, INC.

DCN: 4659-JP03-15-0068

MARCH 2015

Prepared by:



Mitch Favrow
Assistant Remediation Engineer

Reviewed by:



Andrew Schmeising, PG
Task Order Manager



Senda Ozkan, PE
Project Engineer

CONTENTS

| | | |
|--------|---|------|
| 1. | INTRODUCTION | 1-1 |
| 1.1 | PROJECT DESCRIPTION | 1-1 |
| 1.2 | BACKGROUND AND SITE CONDITIONS | 1-2 |
| 1.2.1 | SWMU 4, South Davis Road Landfill | 1-2 |
| 1.2.2 | SWMU 11, Palisades Landfill | 1-3 |
| 1.2.3 | SWMU 13, Metals Landfill | 1-4 |
| 1.2.4 | SWMU 15, Future Jobs/Defense Reutilization Marketing Office | 1-5 |
| 1.2.5 | SWMU 18, South Sector Drum Disposal Area and SWMU 19, Quarry Metal Disposal Area (White Alice Landfill) | 1-5 |
| 1.2.6 | SWMU 20, White Alice/Trout Creek Disposal Area | 1-6 |
| 1.2.7 | SWMU 24, Hazardous Waste Storage Area | 1-7 |
| 1.2.8 | SWMU 25, Roberts Landfill | 1-7 |
| 1.2.9 | SWMU 29, Finger Bay Landfill | 1-8 |
| 1.2.10 | SWMU 55, Public Works Transportation Department Waste Storage Area | 1-9 |
| 1.2.11 | Parcel 4 Ordnance Areas | 1-10 |
| 2. | PROJECT ACTIVITIES | 2-1 |
| 2.1 | PRE-CONSTRUCTION ACTIVITIES | 2-1 |
| 2.1.1 | Procurement Activities | 2-1 |
| 2.1.2 | Permits and Other Prior Approvals | 2-2 |
| 2.1.3 | Field Team Selection and Preparation | 2-2 |
| 2.1.4 | Mobilization of Equipment and Materials | 2-2 |
| 2.1.5 | Pre-Construction Meeting | 2-3 |
| 2.1.6 | Temporary Facilities | 2-3 |
| 2.1.7 | Traffic Control | 2-3 |
| 2.1.8 | Work Area Identification | 2-4 |
| 2.1.9 | Utility Locate | 2-4 |
| 2.2 | REPAIRS AND IMPROVEMENTS | 2-4 |
| 2.2.1 | Fencing and Gates | 2-4 |
| 2.2.2 | Signs | 2-6 |
| 2.2.3 | Shoreline Repair | 2-8 |
| 2.2.4 | Landfill Cap and Swale Repair | 2-10 |
| 2.2.5 | Erosion Control | 2-12 |
| 2.2.6 | Site Restoration | 2-14 |
| 2.3 | DEMOBILIZATION | 2-14 |
| 3. | ENVIRONMENTAL PROTECTION PLAN | 3-1 |
| 3.1 | REGULATORY FRAMEWORK | 3-1 |
| 3.1.1 | Title 33 Code of Federal Regulations (CFR), Section 1344 – Clean Water Act, Section 404; Section 10 River and Harbor Act, 33 U.S.C. 403 | 3-1 |

CONTENTS (Continued)

| | | |
|-------|---|------|
| 3.1.2 | Federal Coastal Zone Management Act (CZMA), 16 U.S.C. 1451-1464; 15 CFR 921-933/Alaska Coastal Management Act; 6 Alaska Administrative Code (AAC) 80; 11 AAC 112 | 3-2 |
| 3.1.3 | Federal Endangered Species Act, 16 U.S.C. 1531-1544; 50 CFR 17, 401-424, 450-453 | 3-3 |
| 3.1.4 | 33 CFR Part 325 and 330.4, National Register of Historic Places; State Historic Preservation Office | 3-4 |
| 3.1.5 | Clean Water Act, Section 401 et. seq., National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Construction Activities | 3-4 |
| 3.2 | ENDANGERED SPECIES AND CRITICAL HABITAT EVALUATION | 3-4 |
| 3.3 | EROSION CONTROL | 3-5 |
| 3.4 | SPILL PREVENTION AND PREPAREDNESS | 3-5 |
| 3.4.1 | Spill Prevention Best Management Practices | 3-6 |
| 3.4.2 | Nonemergency Spills | 3-6 |
| 3.4.3 | Emergency Spills | 3-7 |
| 3.4.4 | Agency Spill Notification Requirements | 3-8 |
| 3.4.5 | Spill Control, Containment, and Clean-up Materials and Equipment | 3-10 |
| 3.5 | INSPECTIONS AND AUDITS | 3-11 |
| 4. | WASTE MANAGEMENT PLAN | 4-1 |
| 4.1 | NON-HAZARDOUS WASTE AND DEBRIS SOLIDS | 4-1 |
| 4.2 | NON-HAZARDOUS SOIL | 4-2 |
| 4.3 | DECONTAMINATION WATER AND SOLIDS | 4-4 |
| 4.4 | ORDINARY TRASH | 4-5 |
| 4.5 | UNANTICIPATED OR UNKNOWN WASTES ENCOUNTERED DURING THE PROJECT | 4-6 |
| 4.6 | WASTE CHARACTERIZATION SAMPLING AND ANALYSIS PLAN | 4-6 |
| 4.6.1 | Sample Identification | 4-7 |
| 4.6.2 | Soil Sampling Methodology | 4-7 |
| 4.6.3 | Decontamination Water Sampling Methodology | 4-7 |
| 4.6.4 | Sample Handling and Shipping | 4-10 |
| 4.6.5 | Record-keeping, Sample Labeling, and Chain-of-Custody Procedures | 4-10 |
| 4.6.6 | Sample Handling, Storage, and Shipping | 4-10 |
| 4.6.7 | Sample Analyses | 4-10 |
| 4.6.8 | Field Quality Assurance and Duplicate Samples | 4-10 |
| 4.6.9 | Trip Blanks | 4-11 |
| 4.7 | NON-HAZARDOUS WASTE PACKAGING, MARKING, AND LABELING AND STORAGE | 4-11 |
| 4.8 | NON-HAZARDOUS WASTE DISPOSAL AND DOCUMENTATION | 4-12 |

CONTENTS (Continued)

| | | |
|-------|--|------|
| 4.8.1 | Selection of Transporters and Disposal Facilities | 4-12 |
| 4.8.2 | Waste Profiles | 4-12 |
| 4.8.3 | Shipping Documents | 4-13 |
| 4.9 | TRAINING | 4-13 |
| 5. | SCHEDULE | 5-1 |
| 6. | PROJECT ORGANIZATION | 6-1 |
| 7. | QUALITY CONTROL PLAN | 7-1 |
| 7.1 | DEFINABLE FEATURES OF WORK | 7-1 |
| 7.2 | INSPECTION PROCESS | 7-1 |
| 7.2.1 | Preparatory Phase Meeting | 7-2 |
| 7.2.2 | Initial Phase Inspection | 7-2 |
| 7.2.3 | Follow-up Phase Inspection | 7-2 |
| 7.3 | INSPECTION SCHEDULE | 7-2 |
| 7.4 | TEST PLAN AND LOG | 7-3 |
| 7.5 | DEFICIENCY NOTIFICATION | 7-3 |
| 7.6 | IDENTIFYING DEFICIENCIES AND NONCONFORMANCE | 7-3 |
| 7.7 | FIELD CHANGE REQUEST AND DESIGN CHANGE NOTICE REQUIREMENTS | 7-4 |
| 7.8 | QUALITY CONTROL MEETINGS | 7-6 |
| 7.8.1 | Coordination and Mutual Understanding Meetings | 7-6 |
| 7.8.2 | On-Site Quality Control Meetings | 7-6 |
| 7.9 | SUBMITTALS | 7-6 |
| 7.9.1 | Contractor Production Report | 7-6 |
| 7.9.2 | Contractor Quality Control Report | 7-7 |
| 7.9.3 | Rework Items List | 7-7 |
| 7.9.4 | Quality Control Certifications | 7-7 |
| 7.9.5 | Submittal Register | 7-8 |
| 7.9.6 | Agency Participation | 7-8 |
| 7.10 | FIELD QUALITY CONTROL LOGBOOK | 7-8 |
| 7.11 | PROJECT FILES | 7-8 |
| 7.12 | COMPLETION OF INSPECTION | 7-8 |
| 8. | REFERENCES | 8-1 |

APPENDICES

| | |
|------------|--------------------------|
| APPENDIX A | ACCIDENT PREVENTION PLAN |
| APPENDIX B | SPILL NOTIFICATION FORMS |
| APPENDIX C | SAMPLING PROCEDURES |
| APPENDIX D | QC FORMS |
| APPENDIX E | RESPONSE TO COMMENTS |

CONTENTS (Continued)

TABLES

| | | |
|-------------------|---|-----|
| Table 2-1. | Description of Fencing and Gate Repairs by Site | 2-5 |
| Table 2-2. | Description of Signs Required at Each Site | 2-7 |
| Table 4-1. | Number and Type of Waste Characterization Samples if Necessary | 4-5 |
| Table 4-2. | Laboratory Analyses and Containers, Preservation, and Holding Time Requirements | 4-8 |

FIGURES

| | | |
|---------------------|--|------|
| Figure 1-1. | Vicinity Map | 1-11 |
| Figure 1-2. | LUC/IC Repair Site Locations | 1-12 |
| Figure 2-1. | Gate Details | 2-15 |
| Figure 2-2. | Sign Types and Sizes | 2-17 |
| Figure 2-3a. | Typical Shoreline Repair Details | 2-19 |
| Figure 2-3b. | Typical Details | 2-21 |
| Figure 2-4. | SWMU 4, South Davis Road Landfill | 2-23 |
| Figure 2-5. | SWMU 11, Palisades Landfill | 2-24 |
| Figure 2-6. | SWMU 13, Metals Landfill | 2-25 |
| Figure 2-7. | SWMU 15, Future Jobs/Defense Reutilization Marketing Office | 2-26 |
| Figure 2-8. | SWMU 18/19, South Drum and Quarry Metal Disposal Areas | 2-27 |
| Figure 2-9. | SWMU 20, White Alice/Trout Creek Disposal Area | 2-28 |
| Figure 2-10. | SWMU 24, Hazardous Waste Storage Area | 2-29 |
| Figure 2-11. | SWMU 25, Roberts Landfill | 2-30 |
| Figure 2-12. | SWMU 29, Finger Bay Landfill | 2-31 |
| Figure 2-13. | SWMU 55, Public Works Transportation Department Waste Storage Area | 2-32 |
| Figure 2-14. | Parcel 4, Ordnance Area, SA 93 and SWMU 1 | 2-33 |
| Figure 5-1. | Project Schedule | 5-3 |

1. INTRODUCTION

1.1 PROJECT DESCRIPTION

Naval Facilities Engineering Command Northwest (NAVFAC NW) selected Tetra Tech EC, Inc. (TtEC) to prepare a work plan and supporting documents for the implementation of improvements to the land use controls (LUCs) and institutional controls (ICs) in place at various sites located at the former Naval Air Facility (NAF) Adak on Adak Island, Alaska (Figure 1-1). TtEC will complete this work under Contract No. N62470-13-D-8007, Contract Task Order (CTO) JP03.

The basis for the required activities included in this work plan stems from the Draft 2013 IC Site Inspection Report (Sealaska 2014) and a site review, Technical Memorandum – Institutional Controls Repair Scoping Inspection (TtEC 2014).

The 11 sites requiring improvements to the LUCs and ICs are shown on Figure 1-2 and listed below:

- Solid Waste Management (SWMU) 4, South Davis Road Landfill
- SWMU 11, Palisades Landfill
- SWMU 13, Metals Landfill
- SWMU 15, Future Jobs / Defense Reutilization Marketing Office (DRMO)
- SWMU 18, South Sector Drum Disposal Area and SWMU 19, Quarry Metal Disposal Area (White Alice Landfill)
- SWMU 20, White Alice / Trout Creek Disposal Area
- SWMU 24, Hazardous Waste Storage Area
- SWMU 25, Roberts Landfill
- SWMU 29, Finger Bay Landfill
- SWMU 55, Public Works Transportation Department Waste Storage Area
- Parcel 4, Adak Island Ordnance Areas

The improvements to the sites listed include:

- Fencing and gate repair/replacement
- Sign repair/replacement

- Additional sign installation
- Landfill cap repairs
- Swale repairs
- Armor wall repairs
- Erosion control and fill of sinkholes
- Site restoration

The specific LUC and IC improvements by site are detailed in the following sections of this work plan. The improvements will be implemented during the 2015 field season.

1.2 BACKGROUND AND SITE CONDITIONS

Former NAF Adak was operationally closed on March 31, 1997. In September 2000, the federal government, acting by and through the Department of the Interior and the U.S. Navy (Navy), entered into a land transfer agreement with The Aleut Corporation (TAC), a native corporation. This agreement resulted in conveyance of approximately 47,271 acres of the former NAF property to TAC on March 17, 2004. The transferred property includes several Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and petroleum sites.

The Navy, the Alaska Department of Environmental Conservation (ADEC), and the U.S. Environmental Protection Agency (EPA) signed a Record of Decision (ROD) for Operable Unit (OU) A in April 2000 and also signed decision documents for 14 petroleum release sites. Other controlling documents associated with this work plan include the OU B-1 ROD signed in 2001 and the Sites 11 and 13 ROD signed in 1995. Inspection and maintenance of ICs and the maintenance and repair of compromised LUCs are an integral part of the decision documents for these former Navy sites.

The location, background, current condition, and IC repair recommendations from the 2013 inspection report and 2014 on-island site review for each site where work will be performed are described below.

1.2.1 SWMU 4, South Davis Road Landfill

The South Davis Road Landfill, SWMU 4, is located on the eastern shore of Andrew Lake, approximately 3 miles from downtown Adak. SWMU 4 is a former 3.91-acre landfill that operated in the 1940s and is thought to have been closed in the late 1940s with a soil and rock cover. The landfill is believed to be filled with construction debris and waste generated

by the construction and subsequent demolition of Albert Mitchell Airfield. A vegetative soil cover was installed over the site in 1999. Construction work completed in 2010 at the site included repairing portions of the landfill cap where erosion was taking place and the installation of engineering controls to address ponding in the drainage swale. After inspections of the ICs in 2012 and 2013, the following recommendations were included in the 2013 Institutional Controls Site Inspection Report (Sealaska 2014):

- Repair eroded area on the west end of the north swale.
- Evaluate seep in the south swale.

The site review (TtEC 2014) determined the likely source of the seep at the south swale, confirmed the IC inspection, and provided the following recommendations:

- Install new material to prevent further erosion on the north swale.
- Repair the east part of the south swale to prevent ponding.

1.2.2 SWMU 11, Palisades Landfill

Palisades Landfill, SWMU 11, is a former 12.08-acre landfill located north of downtown Adak and covers portions of the coastal uplands adjacent to Kuluk Bay and part of a ravine that opens to the bay. The ravine is about 1,200 feet long, 5 to 300 feet wide, and 5 to 150 feet deep with Palisades Creek running through it. This landfill was used as the primary disposal area for all of Adak Island from the 1940s to about 1970, including, but not limited to, the following wastes: sanitary trash, construction waste, and scrap vehicles. The upper portion of the landfill received a cap in 1996. Other engineering controls (signs, soil cover, and drainage swales) were also implemented. Material and debris located in the ravine were not capped due to the steep slopes. Construction work completed in 2010 included repairing signage, liner material, and a sinkhole. After inspections of the ICs in 2012 and 2013, the following recommendations were included in the 2013 Institutional Controls Site Inspection Reports (Sealaska 2014):

- Repair the sinkhole at the south end of the pond and associated eroded area.
- Repair or replace leaning landfill warning sign on the northeast boundary.
- Repair or replace downed landfill warning sign on the northwest boundary.

The site review (TtEC 2014) identified exposed liner material at the central drainage swale, confirmed the IC inspection, and provided the following recommendations:

- Relocate accessible and manageable metal debris to the sinkhole and cover with gravel/rock material.
- Fill sinkhole at southern end of pond area located in the north central portion of the landfill with gravel/rock material to increase safety and prevent water flowing into the hole.
- Reinstall the existing A-5 signage at previously installed locations.
- Cover swale with larger rock or intermixed large rocks to cover the exposed liner and prevent washout.
- Repair and reseed disturbed areas after construction is completed.

1.2.3 SWMU 13, Metals Landfill

Metals Landfill, SWMU 13, is located immediately southeast of downtown Adak and is bordered by Monument Hill to the west and Kuluk Bay to the east. The total site area is 31.45 acres; approximately 19 acres were used as an industrial landfill. The landfill received wastes between the 1940s and 1989. A soil and vegetative cover was constructed over the landfill as part of the landfill closure activities. An armor wall is also located along the steep shoreline of Kuluk Bay to control erosion of the landfill caused by wave action. Previous repairs and maintenance conducted at the Metals Landfill included landfill cap repairs, drainage channel repairs, and installation of LUC warning signs and gates. Construction work completed in 2010 included gravel placement on exposed liner material, erosion repair along the cliff, and armor wall reinforcement. After inspections of the ICs in 2012 and 2013, the following recommendations were included in the 2013 Institutional Controls Site Inspection Reports (Sealaska 2014):

- Repair swale 6 at the eroding area from the outlet to the armor rock wall.
- Evaluate metal debris within the armor rock wall at northeastern landfill boundary.

The site review (TtEC 2014) confirmed the IC inspection and provided the following recommendations:

- Repair the east end of swale 6 at the outlet end.
- Evaluate exposed metal debris and determine whether or not the material can be buried or recycled.

- Relocate accessible and manageable exposed metal debris in the armor wall to the pocket areas.
- Add rock to the armor wall to cover exposed debris and augment the slope for consistency and improved protection during storms.
- Repair and reseed disturbed areas after construction is completed.
- Install an additional sign currently in storage on-island.

1.2.4 SWMU 15, Future Jobs/Defense Reutilization Marketing Office

The Future Jobs and Defense Reutilization Marketing Office, SWMU 15, is located between two warehouses near the dock facilities on Sweeper Cove and was used to store construction materials, paint, solvents, transformers, petroleum and lubricant compounds, and other materials. This vacant, rectangular, flat, and fenced site comprises compact gravel with concrete and asphalt paved areas. The site is periodically used for commercial purposes, including the storage of fishing equipment. Construction work completed in 2010 included installation of an excavation restriction sign and post. After inspections of the ICs in 2012 and 2013, the following recommendation was included in the 2013 Institutional Controls Site Inspection Reports (Sealaska 2014) and confirmed by the site review (TtEC 2014):

- Replace the missing excavation restriction sign installed in 2010.

1.2.5 SWMU 18, South Sector Drum Disposal Area and SWMU 19, Quarry Metal Disposal Area (White Alice Landfill)

South Sector Drum Disposal Area (SWMU 18) and Quarry Metal Disposal Area (SWMU 19) make up the area considered to be the White Alice Landfill and are located 2 miles west of downtown Adak. The site is approximately 15.41 acres and contains predominantly wood debris in one half and asbestos in the other half. In 1997 it was closed per State of Alaska regulations; closure activities included the placement of soil cover over the landfill, grading and contouring, surface water and erosion controls, access restrictions, and installation of a vegetative cover. Other engineering controls implemented at SWMU 18 and 19 include soil cover, swales, signs, and fencing. Construction work completed in 2010 included fence repair, installation of erosion control measures, and surface vegetation repair. After inspections of the ICs in 2012 and 2013, the following recommendations were included in the 2013 Institutional Controls Site Inspection Report (Sealaska 2014):

- Seed and fertilize approximately 5,000 square feet of eroded area on the southeast side of the site near the south entrance gate.

- Cover exposed swale liner areas near southern boundary of landfill with rock.
- Install flow dissipaters in the channel near the southern boundary to prevent sliding rock.
- Relocate or raise the landfill sign near the entrance gate so vegetation does not obscure it.
- Repair damaged fencing along the perimeter.

The site review (TtEC 2014) confirmed the IC inspection and provided the following recommendations:

- Remove large rocks from eroded area on the southeast side of the site.
- Reseed eroded area and cover with jute matting early in the field season to promote growth throughout the summer season.
- Replace swale rock on existing liner with available washed-out rock on-site and larger or intermixed large swale rock throughout the exposed liner section placed as flow dissipation ribs to mitigate rock slides.
- Improve visibility of the landfill sign.
- Replace barbed wire along approximately 22 sections of fencing, equating to 330 linear feet of perimeter fencing, or 660 linear feet of barbed wire.

1.2.6 SWMU 20, White Alice/Trout Creek Disposal Area

White Alice/Trout Creek, SWMU 20, is located approximately 2 miles west of downtown Adak and covers 10.61 acres. The site is located on a steep northwest-facing hillside with a heavily vegetated marshy Trout Creek floodplain at its base. This disposal area contained 55-gallon drums and other debris originating from the closure of the White Alice facility in the 1980s. In 1992, approximately 100 55-gallon drums and other debris and 7 cubic yards of polychlorinated biphenyl (PCB) impacted soils were removed. Construction work completed in 2010 included excavation restriction sign repair and installation of erosion controls near the cliff face. After inspections of the ICs in 2012 and 2013, the following recommendation was included in the 2013 Institutional Controls Site Inspection Reports (Sealaska 2014):

- Repair approximately 900 square feet of eroded area on the cliff.

The site review (TtEC 2014) identified two excavation restriction signs requiring service, confirmed the IC inspection, and provided the following recommendations:

- Cover cliff area with 4-man and swale rock to the extent possible to slow the erosion process.
- Fill eroded depression near the top of the cliff with swale rock to stabilize the area.
- Replace defaced landfill sign on existing post and re-set existing sign and post.

1.2.7 SWMU 24, Hazardous Waste Storage Area

Hazardous Waste Storage Area, SWMU 24, is located south of the Public Works Road and east of Building T-1443. The site is a former container storage area and was petitioned for closure under Resource Conservation and Recovery Act (RCRA) by the Navy. SWMU 24 is approximately 300 by 55 feet, and the entire perimeter is fenced, with access through a locked gate at the western end of the site. Building 30006, formerly located at the eastern end of the paved yard, was used to store, categorize, sort, and label wastes. The building has since been removed. After inspections of the ICs in 2012 and 2013, the following recommendation was included in the 2013 Institutional Controls Site Inspection Reports (Sealaska 2014) and confirmed by the site review (TtEC 2014):

- Replace missing excavation restriction sign.

1.2.8 SWMU 25, Roberts Landfill

Roberts Landfill, SWMU 25, is located on a hilltop southwest of downtown Adak. The landfill opened in the 1980s. Closure activities in accordance with ADEC solid waste regulations began in April 1997. Closure activities included the installation of a low-permeability soil cover over the landfill, grading and contouring, access restrictions, surface water and erosion controls, and a vegetative cover. Maintenance activities were also performed and included securing adjacent asbestos-filled bunkers, landfill cover preservation, ongoing monitoring, and ICs for land-use restrictions. A portion of Roberts Landfill was reopened and closed in 2002 for the disposal of demolition debris. Construction work completed in 2010 included fence and sign repair, gate installation on the northern entrance, erosion repair and prevention, and soil reseeded. After inspections of the ICs in 2012 and 2013, the following recommendations were included in the 2013 Institutional Controls Site Inspection Report (Sealaska 2014):

- Repair eroded area and swale liner near southwestern portion of landfill.

- Repair fencing along perimeter.
- Replace faded signage on the western perimeter.
- Replace three asbestos warning signs located on buried bunkers west across the road from the landfill area.
- Repair gate at the Fuels Facility.
- Evaluate ponding on southern portion of landfill.

The site review (TtEC 2014) identified a surface depression at the northwest perimeter of the site, confirmed the IC inspection, and provided the following recommendations:

- Expand swale on the south face of existing swale area to include the approximately 600-square-foot erosion area and cover with additional liner material and rock.
- Seed approximately 100-square-foot erosion area on the east face of the swale with tundra seed mix and cover with jute matting early in the field season to promote growth throughout summer season.
- Repair fencing along approximately 34 sections of fencing, equating to 510 linear feet of perimeter fencing, or 1,020 linear feet of barbed wire.
- Replace landfill sign on existing fence post.
- Replace and install three asbestos warning signs at each of the four buried bunkers. Two signs will be placed at the front of each bunker near the access road. A third sign will be placed at the rear of each bunker.
- Repair eastern gate post at the Fuels Facility to align the gate.
- Improve drainage pipe near east side of pond on the southern portion of landfill by lowering and extending the pipe entrance approximately 25 feet towards the pond. Expose approximately 10 feet of the existing entrance to the pipe and tie-in an additional section of pipe to complete the extension, use 4-man rock to anchor the drainage pipe.
- Fill surface depressions at the northwest perimeter with gravel material and compact.
- Repair and reseed disturbed areas after construction is completed.

1.2.9 SWMU 29, Finger Bay Landfill

The Finger Bay Landfill, SWMU 29, is located 0.5 mile south of Sweeper Cove and 1,800 feet north of Finger Bay, adjacent to Finger Bay Road in a low-lying area at the base of a

hill slope that forms the east boundary of the site. The landfill is approximately 5.95 acres with a depth of 5 to 10 feet. The landfill was reportedly used between 1972 and 1975 for disposal of municipal and industrial refuse and construction debris. Engineering controls implemented at SWMU 29 include a soil cover and signs. Construction work completed in 2010 included erosion repair, revegetation, and installation of erosion controls. After inspections of the ICs in 2012 and 2013, the following recommendations were included in the 2013 Institutional Controls Site Inspection Reports (Sealaska 2014):

- Remove debris on ground surface of the landfill east of the high point.
- Evaluate pond on east side of the site high point.
- Evaluate pond in the central section of the landfill.
- Evaluate hole at the south end of the landfill.

The site review (TtEC 2014) confirmed the IC inspection and provided the following recommendations:

- Remove visible debris and/or cover with rock to eliminate exposure.
- Repair the hole and ponds with crushed rock and recovered site debris.
- Fill ponds and hole depressions to promote surface water flow out of low areas.

1.2.10 SWMU 55, Public Works Transportation Department Waste Storage Area

Public Works Transportation Department Waste Storage Area, SWMU 55, is located in the industrial area of downtown Adak, between two warehouses near the Sweeper Cove dock and adjacent to SWMU 24. The site consists of a graded gravel open area, comprising an area of 1.2 acres. Elevation at most of SWMU 55 is 19 feet above mean lower low water. In 1983, the Navy constructed a small steel shed, approximately 700 square feet, for storage of flammable materials. Vehicle care and maintenance products were stored in and adjacent to the shed. Waste is no longer stored at the site. SWMU 55 was evaluated under the State-Adak Environmental Restoration Agreement (SAERA). Engineering controls at the site include groundwater monitoring wells and signs. After inspections of the ICs in 2012 and 2013, the following recommendation was included in the 2013 Institutional Controls Site Inspection Reports (Sealaska 2014) and confirmed by the site review (TtEC 2014):

- Replace missing excavation restriction sign.

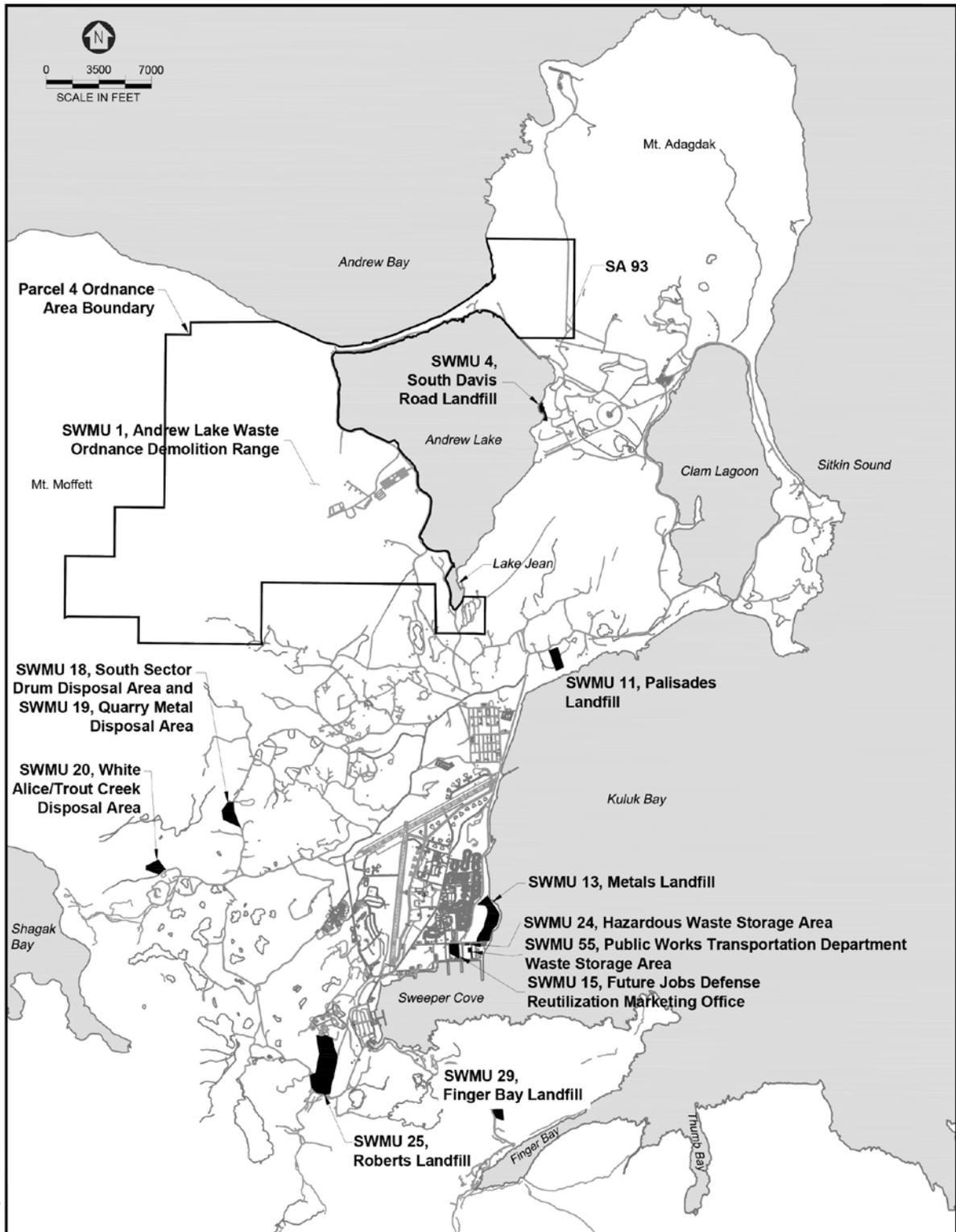
1.2.11 Parcel 4 Ordnance Areas

The Parcel 4 Ordnance Areas are located north of downtown Adak, bordered to the north by Andrew Bay, to the west by Mt. Moffett, and to the east by Andrew Lake. SA 93, a World War II (WWII) Mortar Impact Area, is included in the Parcel 4 Ordnance Area. The site covers approximately 380 acres and makes up the northeastern section to the east of Andrew Lake. SWMU 1, Andrew Lake Waste Ordnance Demolition Range, is located in Moffett Creek Valley within Parcel 4 and covers approximately 890 acres. Site access to SWMU 1 is provided by a gravel road. These areas are restricted by the Navy due to the presence of unexploded ordnance (UXO). Engineering controls at these areas include perimeter fencing, gates, and warning signs. Construction work completed in 2010 included erosion repair, sign replacement, vegetation evaluation, gate installation, and installation of erosion controls. After inspections of the ICs in 2012 and 2013, the following recommendations were included in the 2013 Institutional Controls Site Inspection Reports (Sealaska 2014):

- Install sign by the northeast corner gate of SA 93.
- Install sign at the southwestern entrance to SA 93 at the Andrew Lake Recreation Center.
- Replace one UXO warning sign on the east perimeter of SA 93 fence.
- Repair fencing along perimeter of SA 93.
- Repair fencing along south perimeter of SWMU 1.
- Replace two UXO signs on Lake Jean road and the south entrance road of SWMU 1.
- Replace UXO sign on the south gate of SWMU 1.

The site review (TtEC 2014) confirmed the IC inspection and provided the following recommendations:

- Replace signage on fence posts to avoid intrusive excavation operations.
- Repair fencing along approximately 26 sections of fencing, equating to 260 linear feet of perimeter fencing, or 520 linear feet of barbed wire.



P:\106-4569 Adak_LUCs\CAD\Sites Map.dwg
 PLOT/UPDATE: January 2, 2015

| | | | |
|-------------------------|--|---|--|
| <p>U.S. NAVY</p> |  <p>TETRA TECH EC, INC.</p> | <p>Figure 1-2 LUC/IC REPAIR SITE LOCATIONS ADAK ISLAND, ALASKA</p> | <p>CTO JP03 FORMER NAVAL AIR FACILITY ADAK, ADAK ISLAND, AK</p> |
|-------------------------|--|---|--|