



**UNITED STATES AIR FORCE
611TH AIR SUPPORT GROUP
611TH CIVIL ENGINEER SQUADRON**

**JOINT BASE ELMENDORF-RICHARDSON,
ALASKA**

**NIKOLSKI RADIO RELAY STATION
NIKOLSKI, ALASKA**

CERCLA RECORD OF DECISION:

AOC01 (Dam and Pump House Foundation)

LF001 (Landfill Disposal Area)

**SS002 (Former Water Supply House and Aboveground
Storage Tank)**

SS003 (Petroleum, Oil, and Lubricants Pipeline)

SS004 (Petroleum, Oil, and Lubricants Tank Area)

**SS005 (Runway Lighting Vault Building and
Underground Storage Tank)**

FINAL

APRIL 2013

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ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
Air Force	U.S. Air Force
ANCSA	Alaska Native Claims Settlement Act
AST	aboveground storage tank
bgs	below ground surface
BLM	U.S. Bureau of Land Management
BRA	Baseline Risk Assessment
BTEX	benzene, toluene, ethylbenzene, and xylenes
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CEC	Civil Engineering Squadron
CFR	Code of Federal Regulations
COC	contaminants of concern
DERP	Defense Environmental Restoration Program
DEW	Distant Early Warning
DoD	U.S. Department of Defense
DOI	U.S. Department of the Interior
DRO	diesel range organics
ELCR	Excess Lifetime Cancer Risk
EPA	U.S. Environmental Protection Agency
ERP	Environmental Restoration Program
FS	Feasibility Study
GRO	gasoline range organics
HI	Hazard Index
HQ	Hazard Quotient
IC	institutional control
IRA	Indian Reorganization Act
JBER	Joint Base Elmendorf-Richardson
LUC	land use control
mg/Kg	milligrams per kilogram
mg/L	milligrams per liter
MOGAS	motor vehicle gasoline
NCP	National Contingency Plan
NFA	No Further Action
NFRAP	No Further Remedial Action Planned
NWR	National Wildlife Refuge
PA	preliminary assessment
PAH	polycyclic aromatic hydrocarbons
PID	photoionization detector
PCB	polychlorinated biphenyl
ppm	part(s) per million
POL	petroleum, oil, and lubricants

RAB	Restoration Advisory Board
RAO	remedial action objective
RI	remedial investigation
ROD	Record of Decision
RRO	residual range organics
RRS	Radio Relay Station
SARA	Superfund Amendment and Reauthorization Act
SI	site investigation
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
VOC	volatile organic compound

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PART 1. DECLARATION

1.1 SITE NAME AND LOCATION

1.1.1 ERP Site AOC01

Facility Name: Dam and Pump House Foundation (AOC01),
Nikolski Radio Relay Station (RRS)

Site Location: Nikolski, Alaska; Section 25; Township 083
South; Range 136 West; Seward Meridian

Latitude and Longitude Number: 52°56'13"N, 168°52'11"W

CERCLIS ID Number: AK4570028684 (archived)

ADEC Contaminated Sites Hazard ID: File Number 2621.38.004

Operable Unit/Site: AOC01

1.1.2 ERP Site LF001

Facility Name: Landfill Disposal Area (LF001), Nikolski RRS

Site Location: Nikolski, Alaska; Section 25; Township 083
South; Range 136 West; Seward Meridian

Latitude and Longitude: 52°56'13"N, 168°52'11"W

CERCLIS ID Number: AK4570028684 (archived)

ADEC Contaminated Sites Hazard ID: File Number 2621.38.004

Operable Unit/Site: LF001

1.1.3 ERP Site SS002

Facility Name: Former Water Supply House and Aboveground
Storage Tank (AST) (SS002), Nikolski RRS

Site Location: Nikolski, Alaska; Section 25; Township 083
South; Range 136 West; Seward Meridian

Latitude and Longitude: 52°56'13"N, 168°52'11"W

CERCLIS ID Number: AK4570028684 (archived)

ADEC Contaminated Sites Hazard ID: #129, File Number 2621.38.004

Operable Unit/Site: SS002

1.1.4 ERP Site SS003

Facility Name: Petroleum, Oil, and Lubricants (POL) Pipeline
(SS003), Nikolski RRS

Site Location: Nikolski, Alaska; Section 25; Township 083
South; Range 136 West; Seward Meridian

Latitude and Longitude: 52°56'13"N, 168°52'11"W
CERCLIS ID Number: AK4570028684 (archived)
ADEC Contaminated Sites Hazard ID: #130, File Number 2621.38.004
Operable Unit/Site: SS003

1.1.5 ERP Site SS004

Facility Name: POL Tank Area (SS004), Nikolski RRS
Site Location: Nikolski, Alaska; Section 25; Township 083 South; Range 136 West; Seward Meridian
Latitude and Longitude: 52°56'13"N, 168°52'11"W
CERCLIS ID Number: AK4570028684 (archived)
ADEC Contaminated Sites Hazard ID: #131, File Number 2621.38.004
Operable Unit/Site: SS004

1.1.6 ERP Site SS005

Facility Name: Runway Lighting Vault Building and Underground Storage Tank (UST) (SS005), Nikolski RRS
Site Location: Nikolski, Alaska; Section 25; Township 083 South; Range 136 West; Seward Meridian
Latitude and Longitude: 52°56'13"N, 168°52'11"W
CERCLIS ID Number: AK4570028684 (archived)
ADEC Contaminated Sites Hazard ID: #134, File Number 2621.38.004
Operable Unit/Site: SS005

Each of these six sites were part of Nikolski RRS, located on Umnak Island in the Aleutian Island chain, Alaska, approximately 900 air miles from Anchorage, Alaska.

1.2 STATEMENT OF BASIS AND PURPOSE

This Record of Decision (ROD) presents the selected remedies for Environmental Restoration Program (ERP) Sites AOC01, LF001, SS002, SS003, SS004, and SS005 at Nikolski RRS in Nikolski, Alaska. The remedies were chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendment and Reauthorization Act (SARA) of 1986 and, to the extent practicable, the National Contingency Plan (NCP). This decision document is based on the Administrative Record file for each site, which can be accessed online at www.adminrec.com,

or at the Information Repository at the Nikolski Indian Reorganization Act (IRA) Council Office in the village of Nikolski.

1.2.1 Statement of Basis and Purpose under CERCLA

As the lead agency, the U.S. Department of Defense (DoD), U.S. Air Force (Air Force) issues this document. The Air Force is managing remediation of contamination at AOC01, LF001, SS002, SS003, SS004, and SS005 in accordance with CERCLA and as required by the Defense Environmental Restoration Program (DERP). This ROD is issued in accordance with and satisfies requirements of: the DERP, United States Code (USC), Title 10, Section 2701 et seq.; CERCLA 42 USC 9601 et seq.; and the NCP (Code of Federal Regulations [CFR], Title 40, Chapter 300).

As the lead agency, the Air Force has selected the remedies for these sites. The Alaska Department of Environmental Conservation (ADEC) concurs that the selected remedies for AOC01, LF001, SS002, SS003, SS004, and SS005, if properly implemented, will comply with state law.

The U.S. Environmental Protection Agency (EPA), Region 10, was consulted with respect to National Priorities List (NPL) listing and response. Subsequently, the EPA has deferred to ADEC for regulatory oversight of the ERP activities at Nikolski RRS.

1.2.2 Statement of Basis and Purpose under State of Alaska Regulations

ERP Sites SS003 and SS004 have POL contamination. Due to the petroleum exclusion in the CERCLA definition of hazardous substances, POL contamination is not normally subject to the CERCLA NCP remedy selection requirements. The CERCLA remedy for SS003 and SS004 is No Further Action (NFA), because there are no CERCLA hazardous substances detected above screening levels at these sites that are not associated with petroleum. There is, however, petroleum contamination at SS003 and SS004 above ADEC cleanup levels. Therefore, the site remedy selected for these two sites will be implemented pursuant to State of Alaska laws and regulations.

ERP Site LF001 was initially permitted by the ADEC Solid Waste Program in 1985. In 1988, ADEC issued a permit enabling use of the site and an associated asbestos cell for disposal of facility demolition debris. The CERCLA remedy for LF001 is NFA, because there are no

CERCLA hazardous substances detected above screening levels at this site. LF001 is designated as a closed landfill by the ADEC Solid Waste Program. Therefore, the site remedy selected for LF001 will be implemented pursuant to State of Alaska laws and regulations.

Because POL contaminants are contaminants of concern (COCs) under State of Alaska regulations at SS003 and SS004, and solid waste and asbestos were disposed at LF001, the remedies for these sites are being addressed consistent with Title 46 of the Alaska Statutes and 18 Alaska Administrative Code (AAC) Chapters 60 and 75 promulgated thereunder. The State of Alaska agrees that the selected remedy, when properly implemented, will meet the State of Alaska regulatory requirements.

This document complies with the requirements of the Alaska Oil and Hazardous Substances Pollution Control Act, 18 AAC 75, revised as of 9 October 2008.

1.3 ASSESSMENT OF SITES

1.3.1 Assessment of Sites under CERCLA

No response action under CERCLA is necessary at ERP Sites AOC01, LF001, SS002, SS003, SS004, and SS005 to protect the public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment. No CERCLA COCs are present at these sites above 18 AAC 75 soil cleanup levels.

1.3.2 Assessment of Sites under State of Alaska Regulations

Assessment of the six ERP sites addressed in this ROD under State of Alaska regulations is summarized below.

ERP Sites AOC01, SS002, and SS005. No response action under State of Alaska regulations is necessary at these sites to meet 18 AAC 75 soil cleanup levels.

ERP Site LF001. The response action for LF001 selected in this ROD consists of land use controls (LUCs) that are required to comply with State of Alaska solid waste regulations (18 AAC 60), which will be achieved by documenting the site's former use as a permitted solid waste landfill, preventing residential use and occupancy, and restricting surface excavation activities unless approved by ADEC in accordance with State of Alaska regulations.

ERP Site SS003. The response action selected for SS003 in this ROD is necessary to prevent exposure to non-CERCLA petroleum contaminants that will be excavated for offsite disposal. The COCs are diesel range organics (DRO) and residual range organics (RRO) that are present at levels above 18 AAC 75 soil cleanup levels.

ERP Site SS004. The response action selected for SS004 in this ROD is necessary to prevent exposure to non-CERCLA petroleum contaminants that will be excavated for offsite disposal. The COCs are petroleum contaminants that are present at levels above 18 AAC 75 soil and groundwater cleanup levels.

1.4 DESCRIPTION OF THE SELECTED REMEDIES

1.4.1 ERP Site AOC01

The Final Remedial Investigation (RI) Report (USAF, 2002a) found that screening and analytical results indicate that extensive areas of contamination are not present at AOC01. The only analytical result exceeding regulatory limits was lead in one soil sample detected at 427 milligrams per kilogram (mg/Kg), slightly above the regulatory limit of 400 mg/Kg. DRO, gasoline range organics (GRO), and benzene, toluene, ethylbenzene, and xylenes (BTEX) were not detected. The detection of lead in the soil sample could have been attributed to lead solder, lead paint, lead shotgun pellets, or the presence of leaded gasoline. The volume of lead-contaminated soil, however, was determined to be de minimus and, therefore, not a threat to human health or the environment. Area soils were screened for POL contamination, and the screening results indicated that leaded gasoline is not present.

The Final RI Report recommended removal of site debris and leaving the dam remnants in place to prevent stream sedimentation. No further action was recommended for AOC01. ADEC concurred with the RI recommendations for NFA and debris removal at AOC01 (ADEC, 2006). The dam remnants were left in place, and site debris was removed in 2007.

CERCLA-Selected Remedy. The CERCLA selected remedy for AOC01 is Action Not Necessary for Protection.

Remedy Required under State of Alaska Regulations. No remedy is required under State of Alaska Regulations. The Air Force has selected a CERCLA remedy for AOC01 that meets all applicable requirements of the State of Alaska including, but not limited to, 18 AAC 75.

1.4.2 ERP Site LF001

LF001 is designated by the ADEC Solid Waste Program as a closed landfill that also contains an estimated 333 cubic yards of asbestos waste. The Final 2001 RI Report found that analytical results indicate the presence of DRO and arsenic above applicable regulatory limits for the migration-to-groundwater pathway and subsurface soils, respectively (USAF, 2002a). However, arsenic results detected are considered to be in the range of naturally-occurring background levels, DRO was considered an isolated detection, and no groundwater was found at the site. The Final RI Report recommended no further action for this site.

CERCLA-Selected Remedy. The CERCLA selected remedy for LF001 is No CERCLA Authority to Take Action.

Remedy Required under State of Alaska Regulations. LF001 is designated by the ADEC Solid Waste program as a closed landfill. The selected remedy is implementation of LUCs in accordance with State of Alaska solid waste regulations (18 AAC 60). The Air Force will be responsible for implementing, maintaining, monitoring, reporting and enforcing the remedial actions identified for the duration of the remedy selected in this Decision Document. LUCs are an integral part of the selected remedy. The LUCs are designed to prevent activities that could affect the performance of the other components of the selected remedy, and to limit resource use and prevent or control exposure at LF001 to protect human health and the environment. Specific elements of the selected remedy include:

- LUCs to prevent residential use and restrict surface excavation activities at LF001 will be developed for an area described as Tract 37A, covering approximately 9.64 acres (**Appendix A**, Figures A-1 and A-2). A Notice of Environmental Contamination will be placed in the Alaska Department of Natural Resources' land records.
- The Air Force will have the right to control road access within Tract 37A.
- The Air Force will prohibit residential use and occupancy within Tract 37A in excess of 335 hours per year by any one individual (40 CFR 761.3).
- The Air Force will require all surface excavation or digging activities within Tract 37A to be subject to ADEC approval, as required by State of Alaska regulations (e.g., 18 AAC 75.325(i)).

- Initially, the Air Force will conduct periodic monitoring annually for 5 years and take prompt action to restore, repair, or correct any LUC deficiencies or failures identified at LF001. Afterwards, the monitoring frequency will be at 5-year intervals.
- The Air Force will timely submit to ADEC periodic LUC monitoring reports on the status of LUCs. The report will contain:
 - A statement as to whether all LUC objectives defined herein are being met, including summary results of verifications and landfill inspections.
 - A description of any deficiencies in the LUCs and what efforts or corrective measures have been or will be taken to correct these deficiencies.
 - The Air Force will provide notice to ADEC as soon as practicable, but no later than 10 days, after discovery of any activity that is inconsistent with the LUC requirements, objectives or controls, or any action that may interfere with the effectiveness of the LUCs. The Air Force will include in such notice a list of corrective actions taken or planned to address such deficiency or failure.
 - Reviews of these LUCs will be required every 5 years.

1.4.3 ERP Site SS002

During the 2001 RI, soil samples at SS002 were collected and screened for petroleum contamination. Approximately 1,000 mg/Kg of diesel fuel or lubricating oil was detected in one sample, above the ADEC Method Two Clean-Up Level of 230 mg/Kg for DRO. Other samples collected had POL levels ranging from 10 to 200 mg/Kg (USAF, 2002a). The extent of soil contamination was limited, and one drum of soil was excavated and shipped offsite for disposal. The Final RI Report recommended no further action for this site.

CERCLA-Selected Remedy. The CERCLA selected remedy for SS002 is NFA.

Remedy Required under State of Alaska Regulations. No remedy is required for SS002 under State of Alaska Regulations. ADEC has determined the site meets applicable cleanup levels defined in 18 AAC 75.

1.4.4 ERP Site SS003

Remedial alternatives for sites with POL contamination, including SS003, were developed and evaluated during the Feasibility Study (FS – USAF, 2003a). The Air Force selected

excavation and offsite disposal of POL-contaminated soil as the remedy required under State of Alaska regulations as the preferred alternative for SS003.

CERCLA-Selected Remedy. Releases at SS003 were found to solely contain petroleum products or petroleum product indicators. Under CERCLA Sections 101(14) and 101(33), petroleum products, to include any fractions or derivatives of crude oil, are excluded from the definitions of hazardous substances, pollutants, or contaminants. Therefore, the CERCLA selected remedy for SS003 is No CERCLA Authority to Take Action.

Remedy Required under State of Alaska Regulations. As documented in the Final 2001 RI Report (USAF, 2002a), SS003 has two areas of petroleum contamination above applicable Alaska regulatory limits for soil. The general response actions that can be undertaken to satisfy remedial action objectives (RAOs) for protecting human health and the environment at Nikolski RRS include limited actions (e.g., LUCs), containment, ex situ treatment, in situ treatment, and removal/offsite treatment or disposal. The selected remedy for SS003 is excavation and offsite disposal of POL-contaminated soil, which is in accordance with State of Alaska regulations at 18 AAC 75. No LUCs are applicable to this remedy, because POL-contaminated soils above applicable regulatory limits will be excavated and shipped offsite for disposal.

The Air Force will be responsible for implementing, maintaining, monitoring, reporting and enforcing the remedial actions identified for the duration of the remedy selected in this Decision Document. Specific elements of the selected remedy include:

- Excavation of POL-contaminated soils and transport offsite for disposal at an approved facility.

1.4.5 ERP Site SS004

Remedial alternatives for sites with POL contamination, including SS004, were developed and evaluated during the FS (USAF, 2003). The Air Force selected excavation and offsite disposal of POL-contaminated soil with long-term groundwater monitoring as the remedy required under State of Alaska regulations as the preferred alternative for SS004.

CERCLA-Selected Remedy. Releases at SS004 were found to solely contain petroleum products or petroleum product indicators. Under CERCLA Sections 101(14) and 101(33),

petroleum products, to include any fractions or derivatives of crude oil, are excluded from the definitions of hazardous substances, pollutants, or contaminants. Therefore, the CERCLA selected remedy for SS004 is No CERCLA Authority to Take Action.

Remedy Required under State of Alaska Regulations. As documented in the Final 2001 RI Report (USAF, 2002a), SS004 has POL contamination above applicable Alaska regulatory limits for soil and groundwater. The general response actions that can be undertaken to satisfy RAOs for protecting human health and the environment at Nikolski RRS include limited actions (e.g., LUCs), containment, ex situ treatment, in situ treatment, and removal/offsite treatment or disposal. The selected remedy for SS004 is excavation and offsite disposal of POL-contaminated soil and long-term groundwater monitoring, which is in accordance with State of Alaska regulations at 18 AAC 75.

The Air Force will be responsible for implementing, maintaining, monitoring, reporting and enforcing the remedial actions identified for the duration of the remedy selected in this Decision Document. LUCs are an integral part of the selected remedy. The LUCs are designed to limit resource use and prevent or control exposure at SS004 to protect human health and the environment. Specific elements of the selected remedy include:

- Excavation of POL-contaminated soils and transport offsite for disposal at an approved facility.
- LUCs to prohibit the use of groundwater for drinking water. Warning signs will be posted to implement this LUC. The LUCs will also be incorporated into the 611th Civil Engineering Squadron (CES) LUC Management Plan. A Notice of Environmental Contamination will be placed in the Alaska Department of Natural Resources' land records.
- Groundwater monitoring of petroleum contaminants migrating from soil to groundwater will occur annually for 5 years. Groundwater monitoring will occur at Well No. MW-08 and will cease once monitoring results indicate that POL contaminants have attenuated below applicable regulatory limits for groundwater.
- The Air Force will timely submit to ADEC annual monitoring reports on the status of LUCs and groundwater monitoring, and natural attenuation. The report will contain:
 - A summary of groundwater monitoring results and natural attenuation of groundwater contamination.

- A description of any deficiencies in the LUCs and what efforts or corrective measures have been, or will be, taken to correct these deficiencies.
- The Air Force will provide notice to ADEC as soon as practicable, but no later than 10 days, after discovery of any activity that is inconsistent with the LUC requirements, objectives or controls, or any action that may interfere with the effectiveness of the LUCs. The Air Force will include in such notice a list of corrective actions taken or planned to address such deficiency or failure.
- The Air Force will obtain prior concurrence from ADEC to terminate the LUCs and cease groundwater monitoring.

1.4.6 ERP Site SS005

During the 2001 RI, leaded fuel and batteries were removed from SS005 (USAF, 2002a). The 2001 Final RI Report recommended removal of the UST in accordance with State of Alaska regulations at 18 AAC 78, and removal of generators and the runway lighting control panel. Samples collected at SS005, including concrete chip and equipment wipe samples, were analyzed for polychlorinated biphenyls (PCBs) and found to be below applicable regulatory limits. Removal and closure of the UST was properly completed in 2009. NFA is recommended at the site.

CERCLA-Selected Remedy. The CERCLA-selected remedy for SS005 is NFA. In 2009, in accordance with ADEC guidance, the UST was removed and closed.

Remedy Required under State of Alaska Regulations. No remedy is required for SS005 under State of Alaska Regulations. Prior environmental response actions implemented by the Air Force have met all applicable requirements of the State of Alaska including, but not limited to, 18 AAC 75 and AAC 78.

1.5 STATUTORY DETERMINATIONS

The selected remedies for AOC01, LF001, SS002, SS003, SS004, and SS005 are protective of human health and the environment, comply with promulgated requirements that are applicable or relevant and appropriate to the remedial action, and are cost-effective.

The selected remedies represent the maximum extent to which permanent solutions can be used in a practicable manner at AOC01, LF001, SS002, SS003, SS004, and SS005. The remedies provide the best balance of tradeoffs in terms of the balancing criteria, while also considering state and community acceptance.

As summarized in Section 1.4, the selected remedies for ERP Sites AOC01 (Action Not Necessary for Protection), LF001 (No CERCLA Authority to Take Action), SS002 (NFA), SS003 (No CERCLA Authority to Take Action), SS004 (No CERCLA Authority to Take Action), and SS005 (NFA) require no additional actions under CERCLA. In addition, the selected remedies for AOC01, SS002, and SS005 require no further action under State of Alaska Regulations. However, the selected remedies for LF001, SS003, and SS004 require further action under State of Alaska Regulations.

The NCP establishes the expectation that treatment will be used to address the principal threats posed by a site whenever practical (40 CFR, Section 300.430(a)(1)(iii)(A)). For SS003 and SS004, excavation and offsite disposal was determined to be the most feasible option for remedial action that is protective of human health and the environment. SS004 will also require long-term monitoring for groundwater. For LF001, the selected remedy of LUCs does not satisfy the statutory preference for treatment as a principal element of the remedies, because LUCs will be applied to control exposure pathways and minimize risk without treatment. LF001 is designated as a closed landfill by the ADEC Solid Waste Program and includes an asbestos disposal cell. Landfill inspections and reports will be provided every 5 years after initiation of the remedial action to verify that the remedy is, or will be, protective of human health and the environment.

No source materials constituting principal threats exist at any of the six ERP sites addressed in this ROD.

1.6 DATA CERTIFICATION CHECKLIST

The following information is included in the Declaration or Decision Summary sections of this ROD. This information is pertinent to the selected remedies under State of Alaska regulations, and is not required for the selected CERCLA remedies:

- List of COCs for SS003 and SS004 and their respective concentrations (**Tables 1-1 and 1-2**).

- Human health and ecological risk evaluation represented by the COCs (Section 2.7).
- Cleanup levels established for COCs (Tables 1-1 and 1-2).
- Current and reasonably anticipated future land use assumptions and beneficial uses used in baseline risk calculations and the ROD (Section 2.6).
- Potential land and groundwater use that will be available at the site as a result of the selected remedy (Section 2.6).
- Estimated capital, annual operations and maintenance, total present worth costs, discount rate, and the number of years over which the remedy cost estimates are projected (Section 2.9).

Table 1-1 ERP Site SS003 Soil Contaminants of Concern and Cleanup Level

Contaminant of Concern	Maximum Detected Concentration (mg/Kg)	ADEC Method Two Cleanup Level (mg/Kg)
Diesel Range Organics	59,800	8,250 ¹
Residual Range Organics	22,800	8,300 ¹

Key:

1 – Ingestion for the over 40-inch zone.

ADEC – Alaska Department of Environmental Conservation

ERP – Environmental Restoration Program

mg/Kg – milligrams per kilogram

Table 1-2 ERP Site SS004 Soil Contaminants of Concern and Cleanup Level

Contaminant of Concern	Maximum Detected Concentration (mg/Kg)	ADEC Method Two Cleanup Level (mg/Kg)
Diesel Range Organics	7,800	230 ¹
Ethylbenzene	65	6.9 ¹
Toluene	20	6.5 ¹
Xylenes	940	63 ¹
Benzo(a)pyrene	3.2	0.40 ²
Dibenzo(a,h)anthracene	0.46	0.40 ²

Key:

1 – Migration-to-groundwater

2 – Direct contact

ADEC – Alaska Department of Environmental Conservation

ERP – Environmental Restoration Program

mg/Kg – milligrams per kilogram

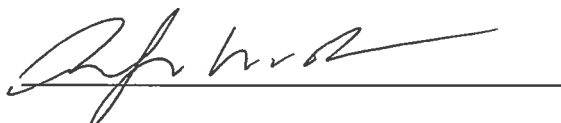
Additional information can be found in the Administrative Record files for these ERP sites, Nikolski RRS, Alaska, which can be accessed through the Air Force at Joint Base Elmendorf-

Richardson (JBER), via the internet at www.adminrec.com, or at the Information Repository at the Nikolski IRA Council Office in the village of Nikolski.

1.7 AUTHORIZING SIGNATURES

This signature sheet documents the Air Force approval of the remedies selected in this ROD for ERP Sites AOC01 (Dam and Pump House Foundation), LF001 (Landfill Disposal Area), SS002 (Former Water Supply House and AST), SS003 (POL Pipeline), SS004 (POL Tank Area), and SS005 (Runway Lighting Vault Building and UST).

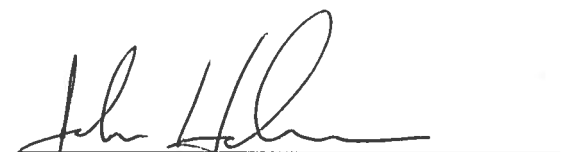
By signing this declaration, ADEC concurs that proper implementation of the selected remedies for AOC01, LF001, SS002, SS003, SS004, and SS005 will comply with state environmental laws. These decisions will be reviewed and may be modified in the future if information becomes available that indicates the presence of contaminants or exposures that may cause unacceptable risk the human health or the environment.



ROBYN M. BURK, Colonel, USAF
Commander, 611th Air Support Group

13 May 2013

Date



JOHN HALVERSON
Environmental Program Manager
Federal Facilities Section
Alaska Department of Environmental Conservation

5/15/2013

Date

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PART 2. DECISION SUMMARY

The decision summary identifies the selected remedies, explains how these remedies fulfill statutory and regulatory requirements, and provides a substantive summary of the administrative record file that supports the remedy selection decision.

2.1 SITE NAME, LOCATION, AND DESCRIPTION

ERP Sites AOC01, LF001, SS002, SS003, SS004, and SS005 are six of 13 ERP sites at Nikolski RRS, located on Umnak Island in the Aleutian Island chain, approximately 900 air miles from Anchorage, Alaska (**Figure 2-1**). The Nikolski RRS encompasses approximately 435 acres on the southwest end of Umnak Island and is located in Section 25, Township 083 South, Range 136 West, Seward Meridian. Nikolski RRS is an inactive Air Force installation established on lands withdrawn from public domain by Public Land Order.

As the lead agency for CERCLA response action, the Air Force has conducted environmental investigations, restoration removal, and interim response activities at AOC01, LF001, SS002, SS003, SS004, and SS005, including some excavations at SS002, SS003, SS004, and SS005 in accordance with CERCLA under the DoD ERP that was established by Section 211 of SARA of 1986. As the lead regulatory agency, ADEC provides primary oversight of the environmental restoration actions, in accordance with CERCLA and Alaska State laws and regulations. Each selected remedy is funded under the Defense Environmental Restoration Account created pursuant to 10 U.S.C. 2700.

The locations of AOC01, LF001, SS002, SS003, SS004, and SS005 are shown on **Figure 2-2**.

2.1.1 ERP Site AOC01

Site Name: Dam and Pump House Foundation (AOC01), Nikolski RRS

Site Location: Section 25; Township 083 South; Range 136 West; Seward Meridian

Latitude and Longitude: 52°56'13"N, 168°52'11"W

Point of Contact:

611th CES
(907) 552-4496
Air Force 611 CES/CEAR
10471 20th Street, Suite 302
JBER AK 99506

The Dam and Pump House Foundation site (AOC01 – **Figure 2-3**) is situated along an unnamed stream approximately 2,000 feet northeast of a topographic feature known as High Hill (Figure 2-2). The Pumphouse was constructed to provide water for the construction camp when the Nikolski RRS was initially built. In 1995 and 2001, the Air Force investigated AOC01, and the Final RI (USAF, 2002a) documents the investigations and associated actions taken. The Pumphouse had collapsed prior to 2001, leaving only the foundation and remaining debris. A wooden dam also remained in place within the creek. Analytical results associated with the environmental investigations indicate that extensive areas of contamination are not present onsite at AOC01. Lead contamination in soil was detected in one soil sampling location at 427 mg/Kg, which is slightly above the ADEC Method Two soil cleanup level of 400 mg/Kg (18 AAC 75.341). For residential land use, the volume of lead-contaminated soil is de minimus.

The 2002 RI Report recommended no further action at AOC01 for hazardous substances (USAF, 2002a). The RI Report also recommended removal of the debris remaining at the site, which included building materials, pump parts, and pipe sections; this debris was removed in 2007. The remains of the dam were left in place to prevent a sudden discharge of sediment to the stream. ADEC concurred with the RI Report recommendations of no further action and debris removal from AOC01 (ADEC, 2006).

2.1.2 ERP Site LF001

Site Name: Landfill Disposal Area (LF001), Nikolski RRS

Site Location: Section 25; Township 083 South; Range 136 West; Seward Meridian

Latitude and Longitude: 52°56'13"N, 168°52'11"W

Point of Contact:

611th CES

(907) 552-4496

Air Force 611 CES/CEAR

10471 20th Street, Suite 302

JBER AK 99506

The Landfill Disposal Area (LF001 – **Figure 2-4**), located just east of High Hill (Figure 2-2), was likely used during active facility operations. In addition, LF001 was used as the site demolition disposal area, including the associated asbestos cell, during the 1988 facility

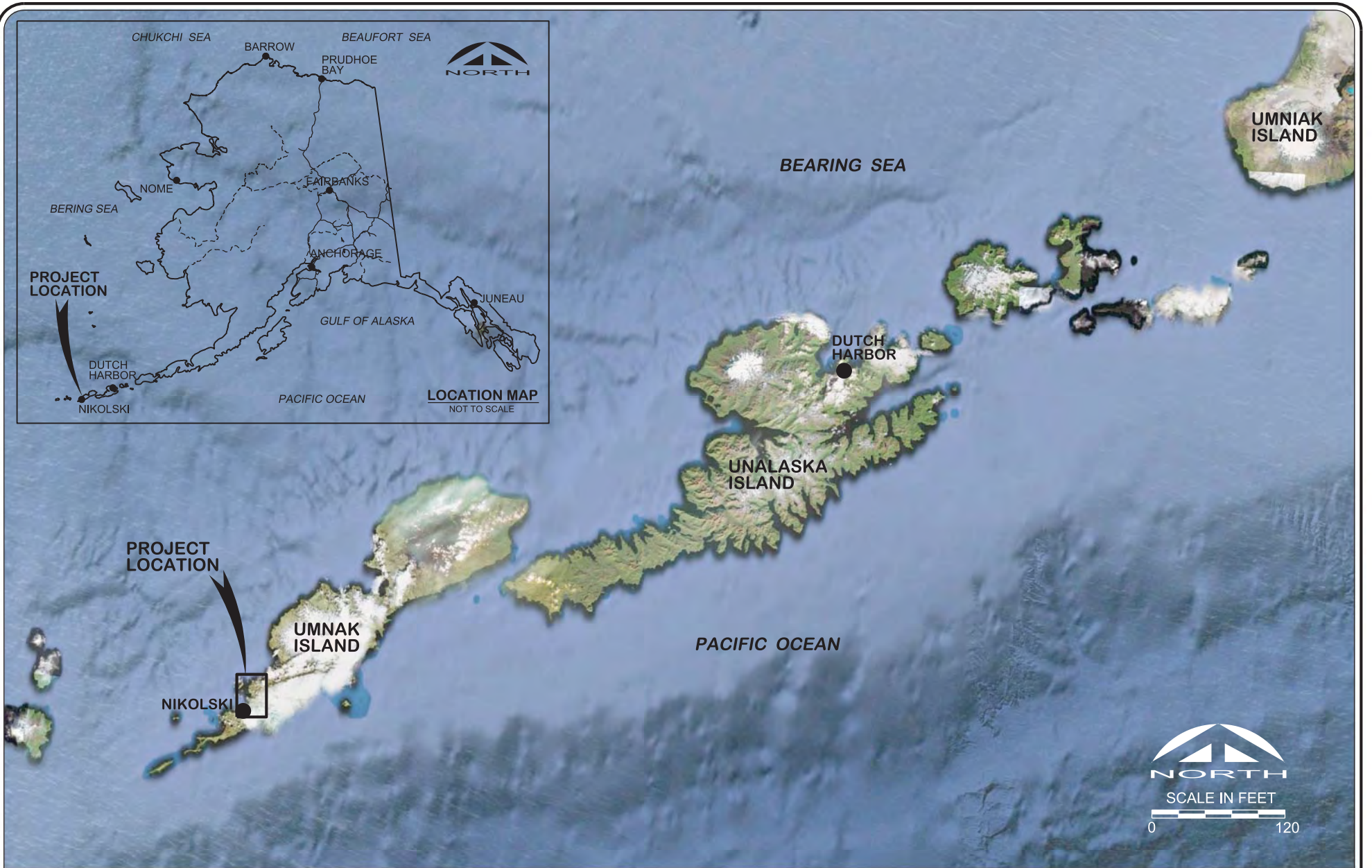


FIGURE 2-1

U.S. AIR FORCE - NIKOLSKI RRS, ALASKA
RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005

LOCATION AND VICINITY MAP

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FIGURE 2-2
U.S. AIR FORCE - NIKOLSKI RRS, ALASKA
RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005
SITE MAP

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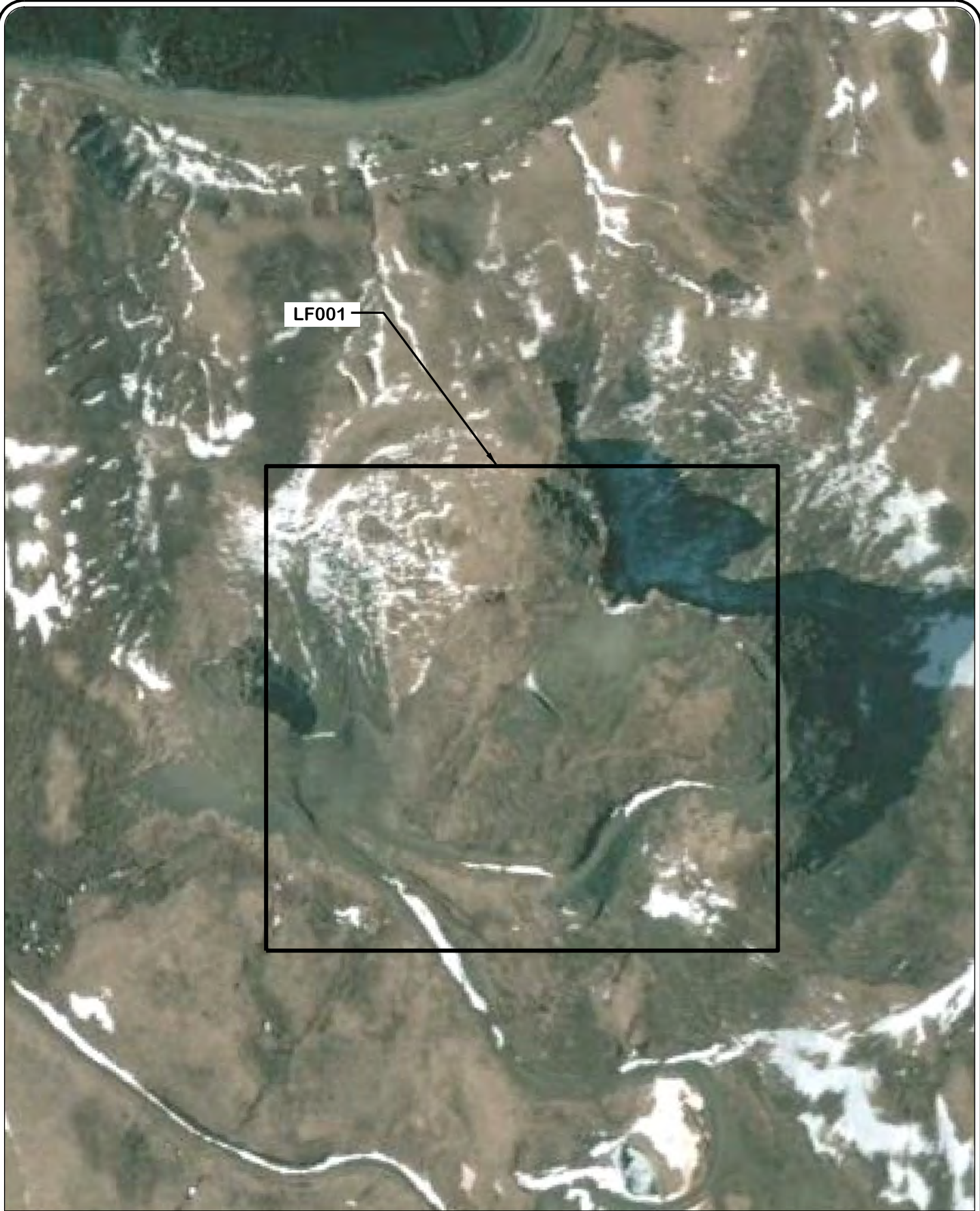
AOC01



SCALE IN FEET
0 300

FIGURE 2-3
U.S. AIR FORCE - NIKOLSKI RRS, ALASKA
RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005
ERP SITE AOC01
DAM AND PUMPHOUSE FOUNDATION

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SCALE IN FEET



FIGURE 2-4

U.S. AIR FORCE - NIKOLSKI RRS, ALASKA
RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005
**ERP SITE LF001
LANDFILL DISPOSAL AREA**

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demolition. The landfill was initially permitted by the ADEC Solid Waste Program in June 1985 (Permit No. 8421- BA009) and is now listed by ADEC as a closed landfill.

The site demolition disposal area and associated asbestos cell were permitted in January 1988 (Permit No. 8721-BA026) for the disposal of facility demolition debris, which included buildings and structures near High Hill, including foundations demolished in 1988. Nonhazardous building demolition debris and empty drums were disposed of in the LF001 demolition disposal area, which had a volume of approximately 10,000 cubic yards and was subsequently covered with a 2.5- to 4-foot lift of soil. Asbestos waste was placed in the asbestos cell, which had a capacity of approximately 333 cubic yards and was subsequently covered with an 8-foot lift of soil. Hazardous materials generated during the 1988 demolition were transported offsite to the Elmendorf Air Force Base treatment, storage, and disposal facility (USAF, 1995). LF001 was investigated in 1995 and 2001. During the 2001 RI, DRO was found above the screening level of 603 mg/Kg for soils within a landfill. All LF001 investigations and actions from 1995 to 2001 are summarized or documented in the RI Report (USAF, 2002a).

2.1.3 ERP Site SS002

Site Name: Former Water Supply House and AST (SS002), Nikolski RRS

Site Location: Section 25; Township 083 South; Range 136 West; Seward Meridian

Latitude and Longitude: 52°56'13"N, 168°52'11"W

Point of Contact:

611th CES
(907) 552-4496
Air Force 611 CES/CEAR
10471 20th Street, Suite 302
JBER AK 99506

The Former Water Supply House and AST site (SS002) pumped water from a nearby unnamed lake to the former Composite Building (**Figure 2-5**). SS002 is located southwest of High Hill on the northwest edge of a lake (Figure 2-2). A 30-gallon AST, formerly located approximately 10 feet northeast of the Former Water Supply House, was used to store gasoline for the pump. SS002 was investigated in 1995, 2000, and 2001. During the 2001 RI, a small area of soil was excavated (less than one 55-gallon drum of soil was removed)

following field readings that indicated DRO contamination of 1,000 mg/Kg (USAF, 2002a). No other analytical results were found to be above soil cleanup levels.

2.1.4 ERP Site SS003

Site Name: POL Pipeline (SS003), Nikolski RRS

Site Location: Section 25; Township 083 South; Range 136 West; Seward Meridian

Latitude and Longitude: 52°56'13"N, 168°52'11"W

Point of Contact:

611th CES

(907) 552-4496

Air Force 611 CES/CEAR

10471 20th Street, Suite 302

JBER AK 99506

The POL Pipeline site (SS003) consisted of an approximate 3-mile-long aboveground POL pipeline (**Figure 2-6**) that supplied diesel fuel from the ASTs at the POL Tank Area (ERP Site SS004) to the two 20,000-gallon USTs on High Hill (ERP Site TU019). The pipeline was constructed of 2-inch-diameter steel piping welded at 21-foot intervals and fitted with four gate valves. The pipeline extends aboveground from the POL Tank Area, northwest along an access road parallel with the coastline, to High Hill (Figure 2-2), where the pipeline crosses beneath the access road and continues underground to the two 20,000-gallon USTs atop High Hill. In some areas, the pipeline is buried as deep as approximately 3 feet below grade; however, in other areas, the pipeline was not buried. Currently, Chaluka Corporation owns the property between the POL Tank Area and the main facility location on High Hill, on which the majority of the SS003 pipeline is located. During the 2001 RI, RRO and DRO were detected at the site exceeding regulatory cleanup levels (USAF, 2002a).

In 2007, the aboveground portions of the pipeline were cut and removed. Due to the severe slope of the terrain of SS003 and potential health and safety risks, the underground sections of the POL Pipeline were capped and remain in place. Studies and reports providing details can be accessed through the Air Force at JBER, via the internet at www.adminrec.com, or at the Information Repository at the Nikolski IRA Council Office in the Village of Nikolski.



SCALE IN FEET
0 300

FIGURE 2-5

U.S. AIR FORCE - NIKOLSKI RRS, ALASKA
RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005
ERP SITE SS002
FORMER WATER SUPPLY HOUSE AND AST

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NIKOLSKI BAY

SS003

SHEEP CREEK

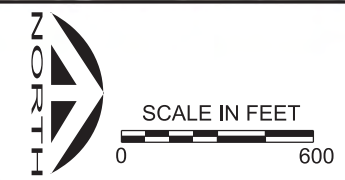


FIGURE 2-6
U.S. AIR FORCE - NIKOLSKI RRS, ALASKA
RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005
ERP SITE SS003
POL PIPELINE

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2.1.5 ERP Site SS004

Site Name: POL Tank Area (SS004), Nikolski RRS

Site Location: Section 25; Township 083 South; Range 136 West; Seward Meridian

Latitude and Longitude: 52°56'13"N, 168°52'11"W

Point of Contact:

611th CES

(907) 552-4496

Air Force 611 CES/CEAR

10471 20th Street, Suite 302

JBER AK 99506

The POL Tank Area site (SS004) is located near the shoreline overlooking Mona Lisa Beach and Nikolski Bay (Figure 2-1). SS004 is a former petroleum storage site used for the management and storage of fuel, and consists of an upland area where tanks were located, and a beach area where fuel barges landed (**Figure 2-7**). The tank area contained three bulk ASTs used for diesel fuel, a smaller motor vehicle gasoline (MOGAS) AST, a concrete pumphouse, and associated fuel piping. Diesel fuel was transferred from barges to the ASTs via piping from the beach to the upland tank area. Fuel was then pumped from the bulk diesel ASTs via the 3-mile POL Pipeline (SS003) to two 20,000-gallon USTs on High Hill for use at the Composite Building.

2.1.6 ERP Site SS005

Site Name: Runway Lighting Vault Building and UST (SS005), Nikolski RRS

Site Location: Section 25; Township 083 South; Range 136 West; Seward Meridian

Latitude and Longitude: 52°56'13"N, 168°52'11"W

Point of Contact:

611th CES

(907) 552-4496

Air Force 611 CES/CEAR

10471 20th Street, Suite 302

JBER AK 99506

The Runway Lighting Vault Building and UST (SS005) is located north of the west end of the airstrip (Figure 2-1). SS005 provided electricity and controls for the landing lights that

surround the runway (**Figure 2-8**). The UST stored gasoline for the electricity generators in the Runway Lighting Vault. SS005 was investigated because the Lighting Vault and UST could have contributed to a release of petroleum hydrocarbons and CERCLA hazardous substances. Most of the Nikolski RRS buildings and structures were demolished in 1988, but the SS005 Runway Lighting Vault remains.

2.2 SITE HISTORY AND ENFORCEMENT ACTIVITIES

Nikolski RRS was one of 18 Distant Early Warning (DEW) stations constructed in Alaska between 1950 and 1959 to provide reliable communications for the DEW Line. The installation was constructed in 1958 and became operational in 1961. RRS facilities were originally known as White Alice Communications Systems, but were redesignated as an RRS by the Air Force Alaskan Air Command in 1969 (USAF, 1997a). The original installation consisted of the following:

- Main facility on High Hill:
 - Composite Building (OT001).
 - Composite Building septic tank and outfall (ST018)
 - Composite Building POL outfall (WP007).
 - Transformer building (OT010).
 - Two 20,000-gallon USTs (TU019), administratively incorporated into OT001.
 - Two 1,311-gallon ASTs for fuel storage, one 60-gallon AST MOGAS tank for the emergency fire pump, a 24,000-gallon AST for water storage, and Two White Alice Arrays were associated with the former Composite Building.
- Landfill located about 1/4-mile northeast of the main facility (LF001).
- POL storage and distribution facilities:
 - POL Tank Area (SS004) located about 1 mile northeast of the village of Nikolski.
 - POL Pipeline (SS003) running about 3 miles from the POL Tank Area to the north- northeast along the coast at High Hill.
- Airstrip and runway lighting vault (SS005).
- Construction camp septic tank (ST017).
- Dam and pumphouse (AOC01) located along a creek to the northeast of the main facility.



FIGURE 2-7

U.S. AIR FORCE - NIKOLSKI RRS, ALASKA
RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005

**ERP SITE SS004
POL TANK AREA**

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SCALE IN FEET
0 300

FIGURE 2-8

U.S. AIR FORCE - NIKOLSKI RRS, ALASKA
RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005
ERP SITE SS005
RUNWAY LIGHTING VAULT BUILDING AND UST

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- Water supply pumphouse and AST (SS002) located along the bank of the lake located east-southeast of the main facility.
- Drum storage area (SS006) at the foot of the runway.

Nikolski RRS was deactivated in 1977, and most buildings and structures were demolished in 1988, including all aboveground structures at the main facility on High Hill. Nonhazardous and asbestos-containing demolition debris, including building debris and empty drums, were placed into the site demolition landfill (LF001). Hazardous materials generated during the 1988 demolition were transported via barge to the Elmendorf Air Force Base treatment, storage, and disposal facility (USAF, 1995).

The following activities were performed at Nikolski RRS since the 1977 facility deactivation:

- 1983 PCB Removal Action
- 1988 Site Demolition (USAF, 1988)
- 1993 Preliminary Assessment (PA) (USAF, 1994)
- 1995 PA/Site Inspection (SI), which identified 13 areas where hazardous substances or petroleum products may have been stored, released to the environment, or disposed of onsite (USAF, 1995)
- 1996 follow-up PA/SI (USAF, 1996)
- 1997 Drum Removal Action at Former Drum Storage Area SS006 (USAF, 1997a, 1997b; 1998)
- 2000 SI Report (USAF, 2000)
- 2001 Clean Sweep Environmental Survey Report (USAF, 2001)
- 2001 RI, which included the 13 sites identified during the PA/SI (USAF, 2002a)
- 2002 Supplemental RI at the Construction Camp Septic Tank (ST017) and POL Tank Area (SS004) (USAF, 2002b)
- 2003 FS that addressed contaminants at the Composite Building and Associated White Alice Arrays (OT001), POL Tank Area (SS004), and Construction Camp Septic Tank site (ST017) (USAF, 2003)
- 2004 Baseline Risk Assessment (BRA) that addressed the Composite Building and Associated White Alice Arrays (OT001), the POL Outfall (WP007), the POL Pipeline (SS003), and the POL Tank Area (SS004) (USAF, 2004)

- 2007 septic tank closure and decommissioning addressed the septic tank at the Composite Building septic tank and outfall (ST-018)
- 2007 UST closure activities at SS005, including the removal of the 500-gallon UST, associated underground piping, and remaining equipment and debris from within the Runway Lighting Vault, as well as confirmation sampling and analysis, backfill, and site re-grading (USAF, 2010a).
- 2007 in-place closure at the Two 20,000-gallon USTs site (TU-019) of two USTs consisting of site preparation, soil excavation around the USTs, removal of tank liquids and sludge, UST cleaning, confirmation sampling and analysis, backfilling of the USTs, and site re-grading (USAF 2010b).
- 2009 excavation and removal of two USTs at Site TU-019 to address regulatory deficiencies identified by ADEC regarding the 2007 in-place UST closure (USAF, 2010b). Site TU-019 was incorporated into OT-001.
- 2009 Supplemental RI at SS005 that consisted of soil sampling and laboratory analysis in the area of the former UST and piping (USAF, 2010a)

2.2.1 ERP Site AOC01

In 1995 and 2001, the Air Force investigated AOC01, and the final RI (USAF, 2002b) documents the investigations and associated actions taken. The Pumphouse had collapsed prior to 2001, leaving only the foundation and remaining debris. A wooden dam also remained in place within the creek. Analytical results associated with these environmental investigations indicate that extensive areas of contamination are not present onsite at AOC01. Lead contamination in soil was detected in one soil sampling location at 427 mg/Kg, which is slightly above the ADEC Method Two soil cleanup level of 400 mg/Kg (18 AAC 75.341). For residential land use, the volume of lead-contaminated soil is de minimus.

The 2002 RI Report recommended no further action at AOC01 for hazardous substances (USAF, 2002a). The RI Report also recommended removal of the debris remaining at the site, which included building materials, pump parts, and pipe sections; this debris was removed in 2007. The remains of the dam were left in place to prevent a sudden discharge of sediment to the stream. ADEC concurred with the RI Report recommendations of no further action and debris removal from AOC01 (ADEC, 2006). Studies and reports providing details can be

found in the Administrative Record File or the Information Repository at the Nikolski IRA Council Office in the Village of Nikolski.

2.2.2 ERP Site LF001

LF001 is the location of a former landfill for Nikolski RRS. Buildings and structures near High Hill, including foundations, were demolished in 1988. Nonhazardous building demolition debris and empty drums were disposed of in the LF001 demolition disposal area, which had a volume of approximately 10,000 cubic yards and was subsequently covered with a 2.5- to 4-foot lift of soil. Asbestos waste was placed in the asbestos cell, which had a capacity of approximately 333 cubic yards and was subsequently covered with an 8-foot lift of soil. Hazardous materials generated during the 1988 demolition were transported offsite to the Elmendorf Air Force Base treatment, storage, and disposal facility (USAF, 1995).

LF001 was investigated in 1995 and 2001. Studies and reports providing details can be found in the Administrative Record file or the Information Repository at the IRA Council office in the village of Nikolski. During the 2001 RI, DRO was found above the screening level of 603 mg/Kg for soils within a landfill. All LF001 investigations and actions from 1995 to 2001 are summarized or documented in the RI Report (USAF, 2002a).

2.2.3 ERP Site SS002

The purpose of SS002 was to pump water from the nearby lake for use at the Composite Building associated with the former Nikolski RRS. The Water Supply House, AST, and pad are no longer present. SS002 was investigated in 1995, 2000, and 2001. During the 2001 RI, a small area of soil was excavated (less than one 55-gallon drum of soil) following field readings that indicated DRO contamination of 1,000 mg/Kg. No other analytical results were found to be above soil cleanup levels. All SS002 investigations and actions from 1995 to 2001 are summarized or documented in the RI Report (USAF, 2002a).

2.2.4 ERP Site SS003

The purpose of the POL Pipeline (SS003) was to move diesel fuel from the ASTs at the beach (also known as the POL Tank Area) to two 20,000-gallon USTs located approximately 3 miles away at the Composite Building on High Hill. SS003 was investigated

in 1995, 2000, and 2001. All SS003 investigations and actions from 1995 to 2007 are documented in the following documents:

- PA/SI Report (USAF, 1995)
- RI Report (USAF, 2002a)
- BRA (USAF, 2004)

During the 2001 RI, RRO (22,800 mg/Kg) and DRO (59,800 mg/Kg) were detected at the site exceeding regulatory cleanup levels. In 2007, the aboveground portions of the pipeline were cut and removed. Due to the severe slope of the terrain of SS003 and potential health and safety risks, the underground sections of the POL Pipeline were capped and remain in place.

2.2.5 ERP Site SS004

The POL Tank Area (SS004) was investigated in 1995, 2000, 2001, and 2007. Studies and reports providing details can be found in the Administrative Record file and the Information Repository at the Nikolski IRA Council office in the Village of Nikolski. All SS004 investigations and actions from 1995 to 2007 are documented in the following documents:

- PA/SI Report (USAF, 1995)
- RI Report (USAF, 2002a)
- Supplemental RI for Sites AOC07 and SS004 (USAF, 2002b)
- BRA (USAF, 2004)
- Cleanup Report for SS004: POL Tank Area (USAF, 2008)

In 2007, three bulk diesel ASTs, two smaller railcar ASTs on the bluff above the beach area, the pumphouse, and associated piping were removed from SS004 (USAF, 2008). Two of the bulk tanks had capacities of 210,000 gallons each; the third tank had a capacity of 336,000 gallons.

Additional site investigations at SS004 were completed in 2009 and 2010 (USAF, 2012). The field efforts and results are summarized below.

2.2.5.1 Groundwater Sample

Groundwater Sample Collection. All groundwater monitoring wells at SS004 (MW-01, MW-02, MW-03, MW-06, MW-07, MW-08, MW-09, and MW-10) were sampled except MW-08, which is damaged. Well MW-08 contained free product (diesel fuel) during all previous sampling events; a groundwater sample was collected using a bailer. Samples were collected in the other wells and analyzed for DRO, BTEX, polycyclic aromatic hydrocarbons (PAHs), and lead. **Figure 2-9** presents monitoring well locations and analytical results for samples collected for sampling events dating back to 2001.

The investigation work plan proposed sampling Well MW-08 for both DRO and PAH; however, the presence of free product indicated that DRO is likely present at a concentration greater than the cleanup level of 1.5 milligrams per liter (mg/L). Therefore, only PAHs were analyzed. Analytical results for all samples collected at SS004 were below cleanup levels listed in 18 AAC 75, Table C, with the exception of MW-08, which contained measurable free product. Although several PAHs were detected, all were below ADEC cleanup levels.

SS004 Groundwater Conclusions. Well MW-08 will need to be repaired or reinstalled due to damage to the well that would not allow low flow sampling to occur according to the approved monitoring work plan. Groundwater results for all other monitoring wells were below cleanup levels (18 AAC 75, Table C). The data from three consecutive monitoring events in 2009 and 2010 show stagnant or declining levels of COCs for all wells, except DRO in MW08. Due to this trend in COC levels, monitoring should cease for Wells MW-01, MW-02, MW-03, MW-06, MW-07, MW-09, and MW-10; and these wells should be decommissioned. After well repair or reinstallation of MW-08, DRO should be monitored in the well until there is no longer free product and DRO concentrations fall below cleanup levels listed in 18 AAC 75, Table C, for three consecutive annual monitoring events. The groundwater monitoring schedule will not be altered without prior ADEC approval.

2.2.5.2 Soil Samples

To assess the nature and extent of fuel contamination, subsurface soil sampling was conducted in several areas at SS004 during 2010. Analytical samples were collected and analyzed in accordance with the procedures described in the approved investigation work plan. Samples were packaged and shipped to an analytical laboratory for analysis. Specifically, field screening and analytical soil samples were collected from three former AST locations: the

MOGAS tank location, the 2007 pumphouse excavation, and Mona Lisa Beach. A drill rig could not be mobilized to Nikolski to collect these samples; instead, a variety of hand and power tools were selected and used to accomplish project objectives. Visual observations (including staining and site features such as former tank cradles), field screening results, and historical data were used to select sample locations. Soil samples were obtained at depths up to 5 feet below ground surface (bgs) using either a power auger, rotary drill, auger extensions, sampling tube, or hand tools. Restoration activities included backfilling each hole and leveling the surface soil. Soil samples were screened using a photoionization detector (PID), and the highest readings were recorded.

Former AST Locations and Former MOGAS Tank Location.

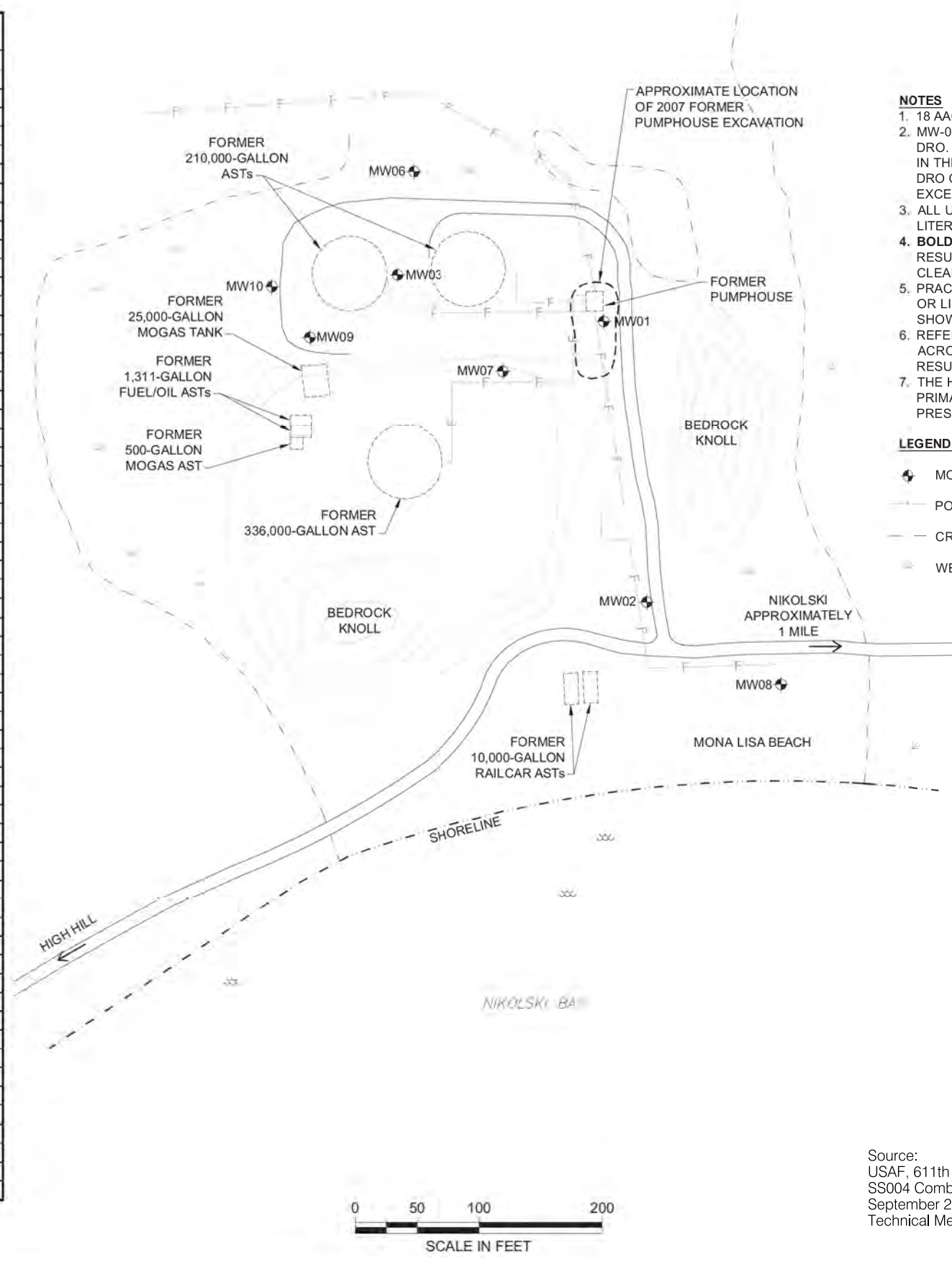
Field screening and analytical soil samples were collected at three former AST and the former MOGAS tank locations to evaluate subsurface soil conditions. **Figure 2-10** presents sampling locations and analytical results.

In 2007, the two 210,000-gallon and one 336,000-gallon diesel-storage ASTs at SS004 were demolished and the petroleum-treated sand in the concrete ring at the base of each AST was removed. The AST concrete rings were demolished in place and the crushed material was used to backfill the AST excavation area. At that time, three samples were collected from within each AST footprint at depths ranging from 1.5 to 3.5 feet bgs. DRO results for one sample from the south AST and two samples from the west AST exceeded the ADEC cleanup level of 230 mg/kg.

During 2010 field activities, field screening and analytical samples were collected from the same three locations as the previous samples at each AST. The objective for sampling at the former AST locations was to collect samples at intervals 2 feet below the samples collected in 2007 in order to evaluate subsurface soil conditions. However, the material at each of the former AST locations consisted of unconsolidated backfill, and the power auger became lodged in the ground during multiple attempts to auger in this area. Hand tools were used to advance the depth of each hole, ranging from 2 feet bgs at the west AST to 3.75 feet bgs at the south AST. In some cases, native soil was encountered at the maximum depth reached at the former north and south ASTs.

Samples were analyzed for DRO and PAHs. PID screening and DRO analytical results are presented in **Table 2-1**.

Location	Analyte	ADEC Table C	2001	2007	2009	May-2010	Sept-2010
MW01							
	DRO	1.5	7.83	0.738	0.46 J	0.15	0.38 J
	Lead	0.015	0.00261	NA	0.000148	0.000129	0.00008 B
	Acenaphthene	2.2	NA	NA	ND [0.000022]	ND [0.00002]	0.000024
	Benzo(a)anthracene	0.0012	NA	NA	ND [0.000022]	0.0000033 J,B	ND [0.00002]
	Fluorene	1.5	NA	NA	ND [0.000022]	ND [0.00002]	0.000056
MW02							
	DRO	1.5	ND	0.0918	0.11 J	0.068 J	0.11 J
	Acenaphthene	2.2	NA	NA	0.000036	0.000019 J	0.000025
	Benzo(a)anthracene	0.0012	NA	NA	ND [0.000023]	0.0000028 J,B	ND [0.000021]
	Fluorene	1.5	NA	NA	0.000045	0.000019 J	0.000027
	Naphthalene	0.73	NA	NA	0.00024	0.000085	0.00026
	Phenanthrene	11	NA	NA	0.0000066 J	ND [0.00002]	ND [0.000021]
MW03							
	DRO	1.5	ND	NA	0.04 J	0.05 J	0.035 J
	Lead	0.015	0.0067	NA	0.000241	0.000012 J	0.000079 B
	Benzo(a)anthracene	0.0012	NA	NA	ND [0.000023]	0.0000028 J,B	ND [0.000021]
	Naphthalene	0.73	NA	NA	ND [0.000023]	ND [0.00002]	0.0000056 J
	Phenanthrene	11	NA	NA	0.0000034 J	ND [0.00002]	ND [0.000021]
MW06							
	DRO	1.5	ND	NA	0.021J	ND [0.77]	0.015 J
	Benzo(a)anthracene	0.001	NA	NA	ND [0.00002]	0.000003 J,B	0.0000028 J
	Naphthalene	0.73	NA	NA	ND [0.00002]	0.00002 B	0.00003
	Phenanthrene	11	NA	NA	0.0000033 J	ND [0.00002]	ND [0.00002]
MW07							
	DRO	1.5	ND	NA	0.039 J	0.013 J	0.027 J
	Benzo(g,h,i)perylene	1.1	NA	NA	0.0000024 J	ND [0.000021]	ND [0.00002]
	Naphthalene	0.73	NA	NA	0.0000038 J	0.000015 J,B	0.00003
	Phenanthrene	11	NA	NA	0.0000055 J	ND [0.000021]	ND [0.00002]
MW08							
	DRO	1.5	ND	ND [0.349]	NA	NA	NA
	Acenaphthylene	2.2	NA	NA	ND [0.00038]	0.0019	ND [0.0002]
	Benzo(a)anthracene	0.0012	NA	NA	0.000012 J	ND [0.000026]	ND [0.00002]
	Benzo(a)pyrene	0.0002	NA	NA	ND [0.00002]	0.000011 J	0.000011 J
	Benzo(b)fluoranthene	0.0012	NA	NA	0.0000043 J	0.000022	0.000013 J
	Benzo(g,h,i)perylene	1.1	NA	NA	0.000008 J	0.000048	0.000031
	Benzo(k)fluoranthene	0.012	NA	NA	ND [0.00002]	0.0000065 J	ND [0.00002]
	Chrysene	0.12	NA	NA	0.000028	0.0002	0.000031
	Fluoranthene	1.5	NA	NA	0.00006	0.35 J	ND [0.000032]
	Indeno(1,2,3-cd)pyrene	0.0012	NA	NA	0.000002 J	0.013 J	0.0000069 J
	Naphthalene	0.73	NA	NA	0.000031	0.00054	ND [0.0003]
	Phenanthrene	11	NA	NA	ND [0.00013]	0.00061	ND [0.0002]
	Pyrene	1.1	NA	NA	0.00011	0.0018	0.0011
MW09							
	GRO	2.2	0.527	NA	0.059 J	ND [0.1]	ND [0.1]
	DRO	1.5	ND	NA	0.03 J	ND [0.8]	0.034 J
	Lead	0.015	0.00168	NA	0.00059	0.000306	0.0562
	Benzene	0.005	ND	ND [0.0004]	ND [0.0005]	ND [0.0005]	ND [0.0005]
	Toluene	1	0.0224	ND [0.001]	0.00017 J	0.00042 J,B,JM+	0.00028 J,B
	Ethylbenzene	0.7	0.00381	ND [0.001]	ND [0.0005]	ND [0.0005]	ND [0.0005]
	Xylenes (total)	10	0.1162	ND [0.003]	ND [0.0005]	ND [0.0005]	ND [0.0005]
	Benzo(a)anthracene	0.0012	NA	NA	ND [0.00002]	0.0000033 J,B	ND [0.000021]
	Benzo(g,h,i)perylene	1.1	NA	NA	0.0000021 J	ND [0.00002]	ND [0.000021]
	Fluorene	1.5	NA	NA	0.0000026 J	ND [0.00002]	ND [0.000021]
	Naphthalene	0.73	NA	NA	0.000042	0.0000067 J,B	0.000017 J
	Phenanthrene	11	NA	NA	0.0000039 J	ND [0.00002]	ND [0.000021]
MW10							
	DRO	1.5	ND	NA	0.019 J	ND [0.77]	0.013 J
	Benzo(a)anthracene	0.0012	NA	NA	ND [0.00002]	0.000003 J,B	ND [0.000021]
	Naphthalene	0.73	NA	NA	0.000042	0.000037 B	0.000006 J
	Phenanthrene	11	NA	NA	0.0000042 J,B	ND [0.00002]	ND [0.000021]



- NOTES**
- 18 AAC 75, TABLE C (ADEC 2008).
 - MW-08 WAS NOT ANALYZED FOR DRO. FREE PRODUCT MEASURED IN THE WELL INDICATES THAT THE DRO CONCENTRATION LIKELY EXCEEDS THE CLEANUP LEVEL.
 - ALL UNITS ARE MILLIGRAMS PER LITER (mg/L).
 - BOLD TEXT** INDICATES THAT THE RESULT EXCEEDS THE ADEC CLEANUP LEVEL.
 - PRACTICAL QUANTIFICATION LIMIT OR LIMIT OF QUANTITATION SHOWN IN BRACKETS.
 - REFER TO THE TEXT FOR ACRONYMS, ABBREVIATIONS, AND RESULT QUALIFIER DEFINITIONS.
 - THE HIGHER RESULT FROM EACH PRIMARY/DUPLICATE PAIR IS PRESENTED.

- LEGEND**
- MONITORING WELL (MW)
 - POL PIPELINE
 - CREEK / POND
 - WETLAND

Source:
 USAF, 611th Civil Engineer Squadron
 SS004 Combined Groundwater and Soil Sample Results
 September 2009, May 2010, and September 2010
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FIGURE 2-9
 U.S. AIR FORCE - NIKOLSKI RRS, ALASKA
 RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005
SITE SS004 CURRENT AND HISTORICAL GROUNDWATER SAMPLE RESULTS

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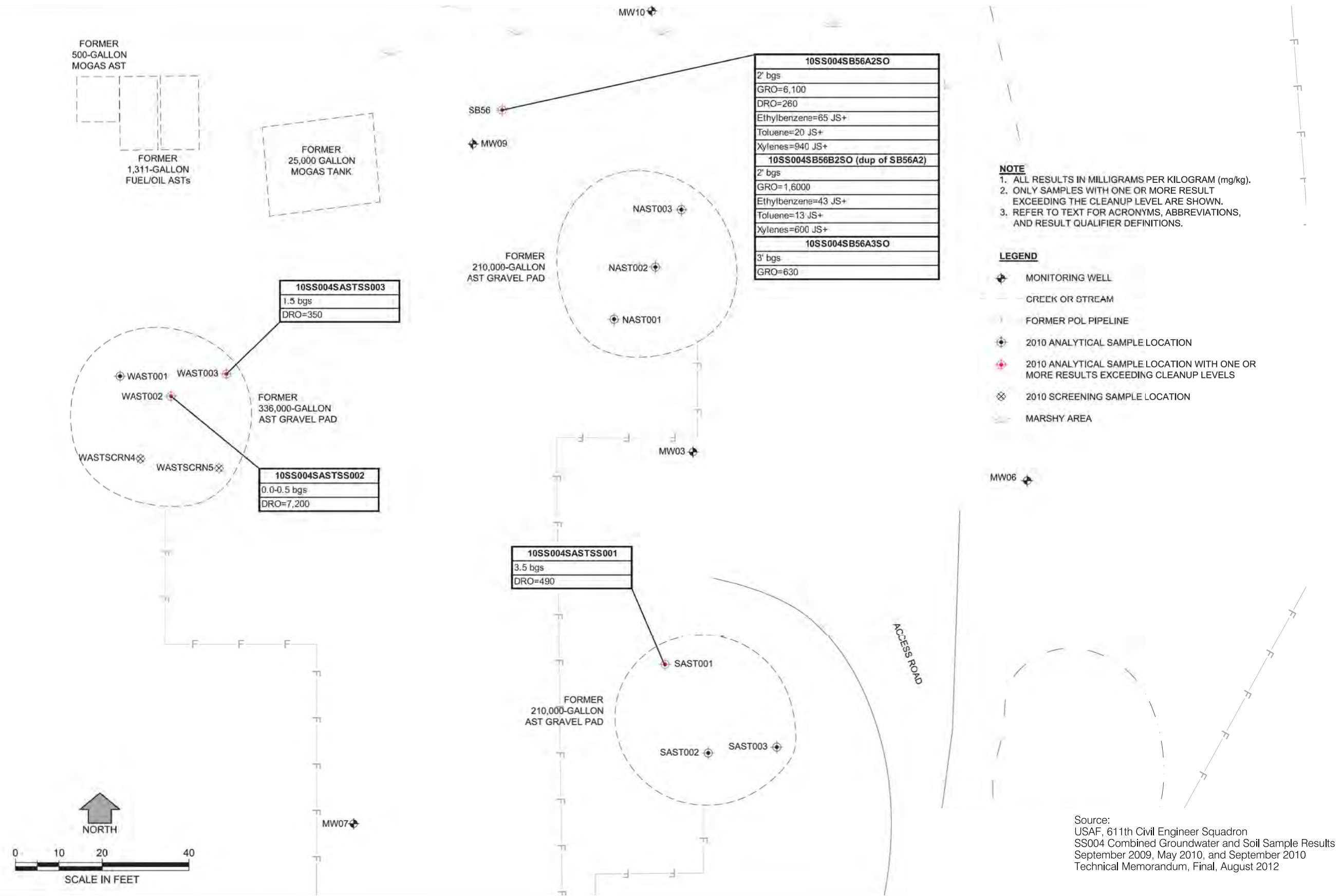


FIGURE 2-10
U.S. AIR FORCE - NIKOLSKI RRS, ALASKA
RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005
SITE SS004
2010 SOIL SAMPLE RESULTS

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Table 2-1 Field Screening and DRO Results for Samples Collected at the Former AST Locations at SS004

Field ID	Sample ID	Depth (feet bgs)	PID (ppm)	DRO (mg/Kg)
NAST001	10SS004NASTSS001	3.5	0.0	29 J
NAST002	10SS004NASTSS002	2.5	0.0	1.9 J
NAST003	10SS004NASTSS003	3	0.0	30
SAST001	10SS004SASTSS001	3.5	5.7	490
SAST002	10SS004SASTSS002	3.5	0.4	20 J
SAST003	10SS004SASTSS003	3.5-3.75	0.4	120
WAST001	10SS004WASTSS001	1.5-2	0.0	14 J
WAST002	10SS004WASTSS002-0	0.0-0.5	13.9	7,200
WAST002	10SS004WASTSS002	1.3	6.9	110
WAST003	10SS004WASTSS003	1.5	1.1	350
ADEC SCL	NA	NA	NA	230

Key:

ADEC – Alaska Department of Environmental Conservation

AST – aboveground storage tank

bgs – below ground surface

DRO – diesel range organics

J – estimated value

mg/Kg – milligrams per kilogram

NA – not applicable

PID – photionization detector

ppm – parts per million

SCL – soil cleanup level

Bold indicates that the result exceeds the ADEC SCL.

All PAH results for samples collected at the former AST locations were below ADEC Method Two cleanup levels. DRO results for samples collected at the former North AST location were all below ADEC cleanup levels. Concentrations of DRO in subsurface samples at one South AST location exceeded the ADEC cleanup level of 230 mg/Kg at 490 mg/Kg. At the West AST, concentrations of DRO in subsurface samples at one location exceeded the ADEC cleanup level of 230 mg/Kg at 350 mg/Kg. At the former West AST location, a surface sample was collected in addition to the three subsurface soil samples. While field screening in this area, black staining and fuel odor were observed in surface soil mixed with fill at several different locations, presumably the remnants of the petroleum-treated sand used for the base of the AST. A sample was collected from surface soil at location WAST002 that was representative of the oily black sand mixed with fill material observed across this area. The DRO result for the surface soil sample of oily sand mixed with fill collected from the West AST was 7,200 mg/Kg.

The 2010 analytical results at the former AST locations confirm the data collected in 2001 and 2007. However, it could not be determined whether the vertical extent of DRO contamination extends below 3 feet bgs at the former South AST location or 1.5 to 2 feet bgs at the former West AST location due to auger limitations. Despite a previous removal action at the former West AST location, sand containing concentrations of DRO exceeding the cleanup level remains mixed with surface soil in this area. Bedrock and fractured bedrock were observed at 1.5 to 2 feet bgs at five screening sample locations in this area, which likely hindered the ability of an excavator to remove all of the oily sand in this area.

Regarding the former MOGAS tank, historical drawings indicate that a 25,000-gallon tank was located just north of the other former ASTs (Figure 2-10). In 2001, GRO and BTEX were detected at concentrations exceeding ADEC Method Two cleanup levels in samples collected from 0 to 2 feet bgs and 4 to 6 feet bgs at location SS4-SB56, which is adjacent to the former MOGAS tank (USAF, 2002a). These contaminants are water soluble and readily biodegradable. Therefore, the 2001 data may no longer present an accurate characterization of the area.

During fall 2010 field activities, sample collection was planned for the MOGAS tank at approximately the same depths as the 2001 samples in order to obtain replacement data. However, augering to the planned depth was inhibited due to large gravel and fill material present at this location. After several attempts to auger deeper, field screening and analytical samples were collected at depths of 2.0 feet bgs and 3.0 feet bgs. A strong fuel odor was observed for both samples. Samples were analyzed for GRO, DRO, and BTEX. PID screening and analytical results are presented in **Table 2-2**.

At a location immediately adjacent to the former MOGAS tank and former soil boring SB56 (completed as MW09), the 2010 results indicate that concentrations of GRO, DRO, ethylbenzene, toluene, and xylenes exceeded ADEC cleanup levels at depths of 2 and 3 feet bgs. Though previous data indicate that GRO, DRO, and BTEX compounds were below ADEC cleanup levels in soil between 4 and 6 feet bgs at this location, the vertical extent of contamination could not be confirmed due to limitations in augering capability. The lateral extent of contamination in soil at this location also remains unknown. However, groundwater results from Well MW09 indicate that concentrations of GRO and BTEX have remained below ADEC cleanup levels since 2001, which suggests that the soil contaminants are not migrating to groundwater.

Table 2-2 Field Screening and Analytical Results for Samples Collected at the Former MOGAS Tank (SS4-SB56) at SS004

Field ID	Sample ID	Depth (feet bgs)	PID (ppm)	GRO (mg/Kg)	DRO (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylenes (mg/Kg)
SB56	10SS004SB56A2SO	2.0	346	6,100	260	U (0.55)	20 JS+	65 JS+	940 JS+
SB56	10SS004SB56B2SO (Dup of SB56A2)	2.0	346	2,600	NA	U (0.31)	13	43	600 JS+
SB56	10SS004SB56A3SO	3.0	302	630	87	U (0.065)	0.89 JS+	3.4 JS+	46 JS+
ADEC SCL			NA	260	230	0.025	6.5	6.9	63

Key:

ADEC – Alaska Department of Environmental Conservation

bgs – below ground surface

DRO – diesel range organics

GRO – gasoline range organics

JS+ – Estimated, the result is potentially biased high due to high surrogate recovery.

Bold indicates that the result exceeds the ADEC SCL.

mg/Kg – milligrams per kilogram

PID – photoionization detector

ppm – parts per million

SCL – soil cleanup level

Former Pumphouse Excavation.

In 2007, the pumphouse at SS004 was demolished, and all piping and equipment were removed. Also, contaminated soil adjacent to and beneath the pumphouse was excavated and replaced with overburden and surrounding material that field screening identified as clean. In 2010, field screening and analytical soil samples were collected to characterize the material used as backfill in 2007 at the former Pumphouse Excavation area. **Figure 2-11** presents sampling locations and analytical results.

To characterize the 2007 excavation floor, nine samples were planned for collection from the bottom of the former excavation during 2010. In addition, multi-increment samples were to be collected from within the excavation area in order to assess the material used to backfill the excavation. Finally, field screening and analytical samples were planned in order to delineate the remaining fuel contamination surrounding the former pumphouse excavation. DRO, PAHs, and lead were identified in the work plan as the COCs for this area. The 2007 excavation depth varied from 1 to 2 feet bgs at the west end and 6 to 8 feet bgs at the east end (near the former pumphouse).

Field screening and analytical samples were collected for two floor locations at the west end of the former pumphouse excavation. However, during numerous attempts to auger in this area, the large gravel and fill material either collapsed in the hole or caused the equipment to become trapped or lodged in the sampling tube, which limited sample recovery. Thus,

maximum depths that could be reached during the 2010 investigation in this area were 3 to 4 feet bgs. In addition, use of the power auger made it difficult to distinguish when the floor of the excavation had been reached. As a result, the remaining seven planned floor samples were not collected.

Based on numerous holes advanced in this area using a variety of hand and power augering methods, it was determined that the number of aliquots required for the primary, duplicate, and triplicate multi-increment samples were unable to be collected by the planned methods. Instead, discrete samples were collected to characterize the backfill at the former Pumphouse Excavation. A power auger was used to advance nine holes to depths ranging from 2 to 4 feet bgs within the former pumphouse excavation area. Backfill samples were collocated with proposed floor samples. PID field screening and analytical samples were collected at each location. Floor and backfill samples were analyzed for DRO, PAHs, and lead. Analytical results exceeded ADEC cleanup levels only for backfill characterization samples; the analytical results and PID screening values for those samples are presented in **Table 2-3**

Table 2-3 Analytical Results for Backfill Samples that Exceed ADEC Cleanup Levels at the Former Pumphouse Excavation at SS004

Field ID	Sample ID	Depth (feet bgs)	PID (ppm)	Analyte	Result (mg/Kg)
PHB1	10SS004PHB01A3SO	3	0.3	Diesel Range Organics	380
				Benzo(a)pyrene	3.2
				Dibenzo(a,h)anthracene	0.46
PHB2	10SS004PHB02A2SO	2	0.2	Benzo(a)pyrene	2.7
				Dibenzo(a,h)anthracene	0.42
PHB4	10SS004PHB04A3SO	3	0.0	Benzo(a)pyrene	1.2
PHB5	10SS004PHB05A3SO	2.5	0.0	Benzo(a)pyrene	1.4
PHB6	10SS004PHB06A3SO	3	0.0	Benzo(a)pyrene	0.49

Key:

ADEC – Alaska Department of Conservation

bgs – below ground surface

ppm – parts per million

mg/Kg – milligrams per kilogram

PID – photoionization detector

After locating the 2007 excavation, a power auger was used to advance holes around the 2007 excavation boundary. In order to delineate fuel contamination remaining outside the limits of the 2007 excavation at the former Pumphouse, additional holes were placed at step-out locations to determine the lateral extent of contamination (**Figure 2-12**).

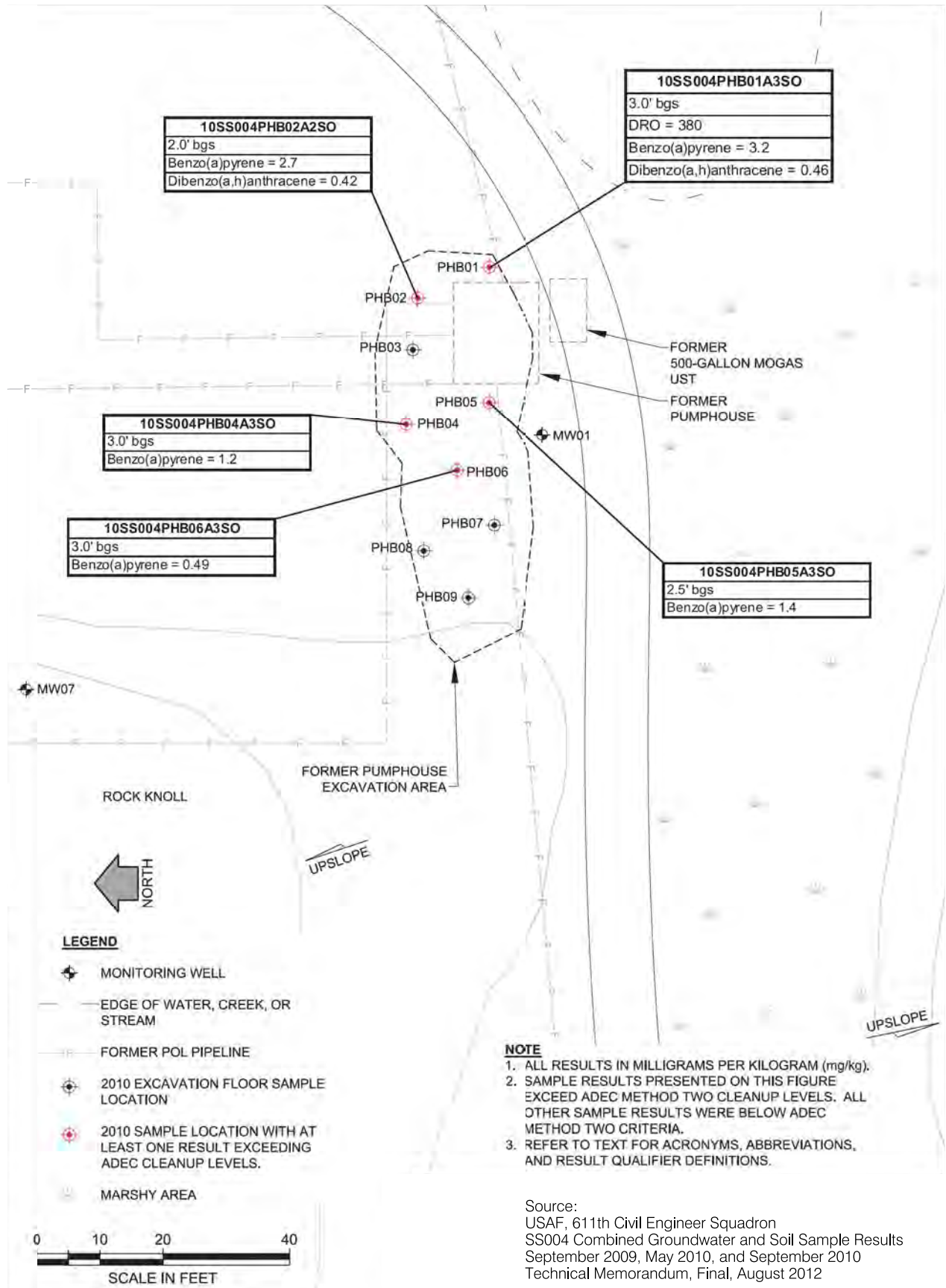
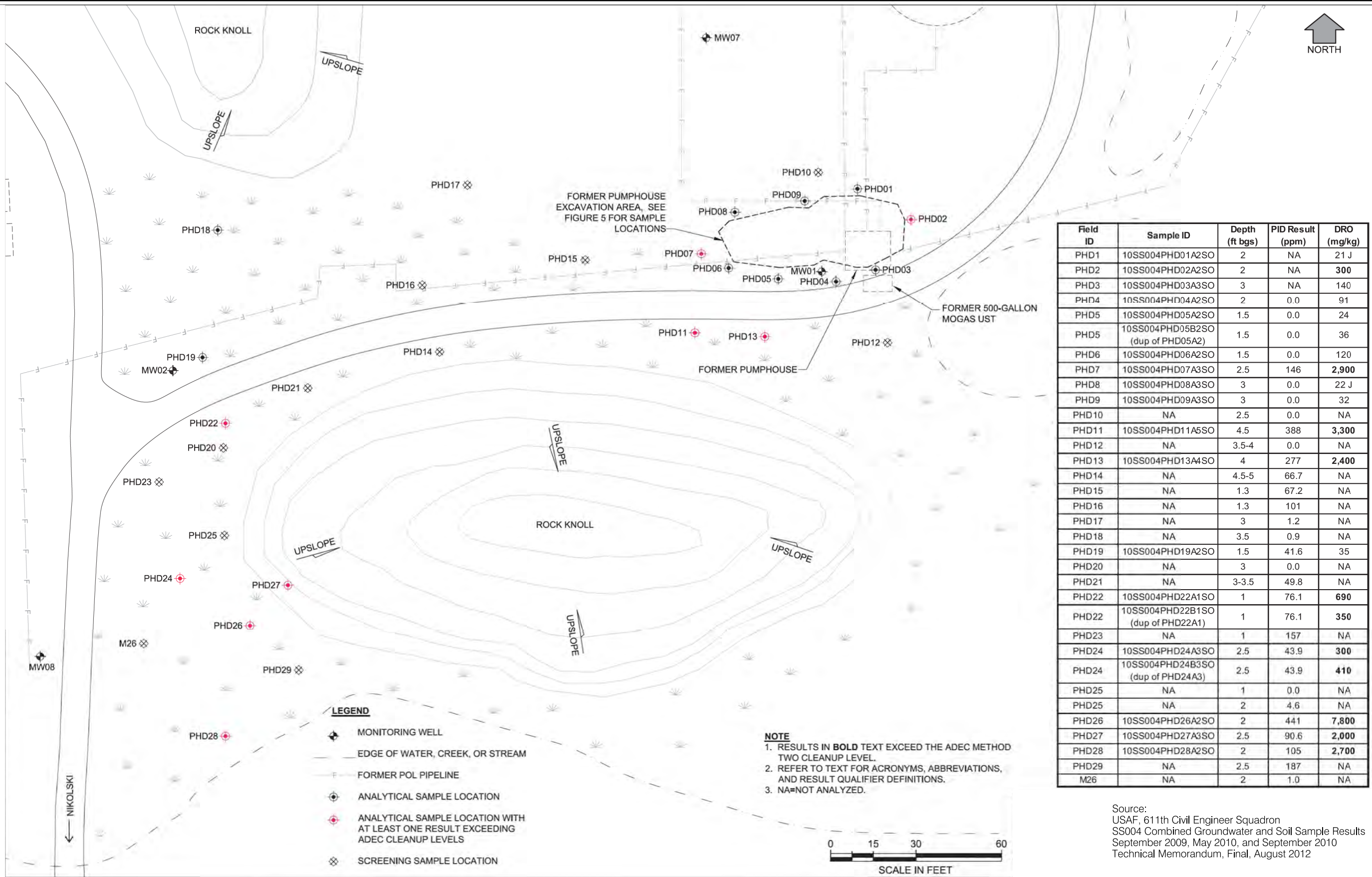


FIGURE 2-11
 U.S. AIR FORCE - NIKOLSKI RRS, ALASKA
 RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005
SITE SS004
SOIL SAMPLE RESULTS

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FILE: D:\CAD\Proj\AFCEE\Nikolski\2012 ROD\6-shes (AOC01-LF001-SS002-SS003-SS004-SS005)\final\fig2-12.dgn
 TIME: 07-MAR-2013 14:52
 JOB No. 1012609-392020401



Source:
 USAF, 611th Civil Engineer Squadron
 SS004 Combined Groundwater and Soil Sample Results
 September 2009, May 2010, and September 2010
 Technical Memorandum, Final, August 2012

FIGURE 2-12
 U.S. AIR FORCE - NIKOLSKI RRS, ALASKA
 RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005
SITE SS004 FORMER PUMPHOUSE AREA
2010 SOIL SAMPLE RESULTS

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PID screening results, as well as visual and olfactory observations, were used to determine subsequent sample locations. Analytical samples were collected from each location. Signs of fuel contamination were observed at locations to the south and west of the former Pumphouse Excavation and extending along both sides of the roadway toward Mona Lisa Beach. Rocky soil and proximity to a bedrock knoll on the south side of the roadway prevented reaching depths greater than 2.5 feet bgs in this area.

A total of 29 screening and/or analytical samples were collected to delineate contamination around the former Pumphouse Excavation boundary. In general, delineation samples were collected at depths ranging from 1.5 to 5 feet bgs. DRO results and PID screening values for samples collected to delineate fuel contamination at the former Pumphouse Excavation at Mona Lisa Beach are presented on Figure 2-12. PID screening results ranged from zero to 441 parts per million (ppm). Analytical samples were analyzed for DRO, PAHs, and lead. All lead results were below the ADEC cleanup level of 400 mg/Kg. PAH results were less than ADEC cleanup levels for all samples in this area, with the exception of two samples that had concentrations of benzo(a)pyrene that exceeded the ADEC cleanup level of 0.40 mg/Kg.

The 2010 results for five of the nine discrete samples collected to characterize the backfill used for the former pumphouse excavation, as well as two samples collected from the excavation boundary, indicate that benzo(a)pyrene and dibenzo(a,h)anthracene exceed ADEC cleanup levels. Field screening and analytical results for samples collected at the former Pumphouse Excavation indicate that DRO contamination remains above the ADEC cleanup level (230 mg/Kg) on the east side of the excavation, as well as downgradient along both sides of the roadway toward the beach. A sample collected along the estimated boundary of the excavation (PHD02) and a backfill sample collected at location PHB01 had DRO results of 380 mg/Kg and 300 mg/Kg, respectively (Table 2-3).

Mona Lisa Beach.

In 2001, four soil borings were advanced in the area of Mona Lisa Beach just west of the roadway. In addition, one surface soil sample was collected at the west end of a broken supply pipe running from the beach to the pumphouse. During field activities in 2010, a power auger was used to collect subsurface samples to delineate the extent of DRO contamination at Mona Lisa Beach. Global Positioning System (GPS) coordinates were used to locate previous boring locations. PID screening results and visual and olfactory observations were used to determine

sample locations. Samples were collected from step-out locations until PID results and visual observations indicated that the lateral extent of contamination had been reached.

Field screening and/or analytical samples were collected and analyzed at 25 and 11 locations, respectively, to delineate fuel contamination at the former pumphouse. Sample locations and analytical results are presented on **Figure 2-13**. Depth of sample collection was limited by large cobbles and heavy beach gravel despite numerous off-sets and multiple attempts. In general, samples were collected from depths ranging from 2 to 4.5 feet bgs. PID screening values, which ranged from 0 to 296 ppm, and DRO results are presented in **Table 2-4**. Sample results indicated that concentrations of DRO exceeded the ADEC Method Two cleanup level in both surface and subsurface soils.

Table 2-4 DRO and PID Screening Results for Delineation Samples Collected at Mona Lisa Beach

Field ID	Sample ID	Depth (feet bgs)	PID (ppm)	DRO (mg/Kg)
M3	10SS004MB03A3SO	2.5	0.6	42
M6	10SS004MB06A2SO	2	3.2	16 J
M7	10SS004MB07A3SO	3	0.0	38
M10	10SS004MB10A3SO	3	0.0	17 J
M11	10SS004MB11A3SO	3	94.9	70
M12	10SS004MB12A3SO	3	88.1	120
M13	10SS004MB13A3SO	3	296	3,700
M15	10SS004MB15A4SO	4-4.5	10.1	670
M17	10SS004MB17A2SO	2-2.5	58.5	560
M18	10SS004MB18A4SO	4	0.0	13 J
M19	10SS004MB19A3SO	3	0.6	6 J
M19	10SS004MB19B3SO (duplicate of 10SS004MB19A3SO)	3	0.6	5.8 J
ADEC SCL	NA	NA	NA	230

Key:

ADEC – Alaska Department of Environmental Conservation

bgs – below ground surface

DRO – diesel range organics

mg/Kg – milligrams per kilogram

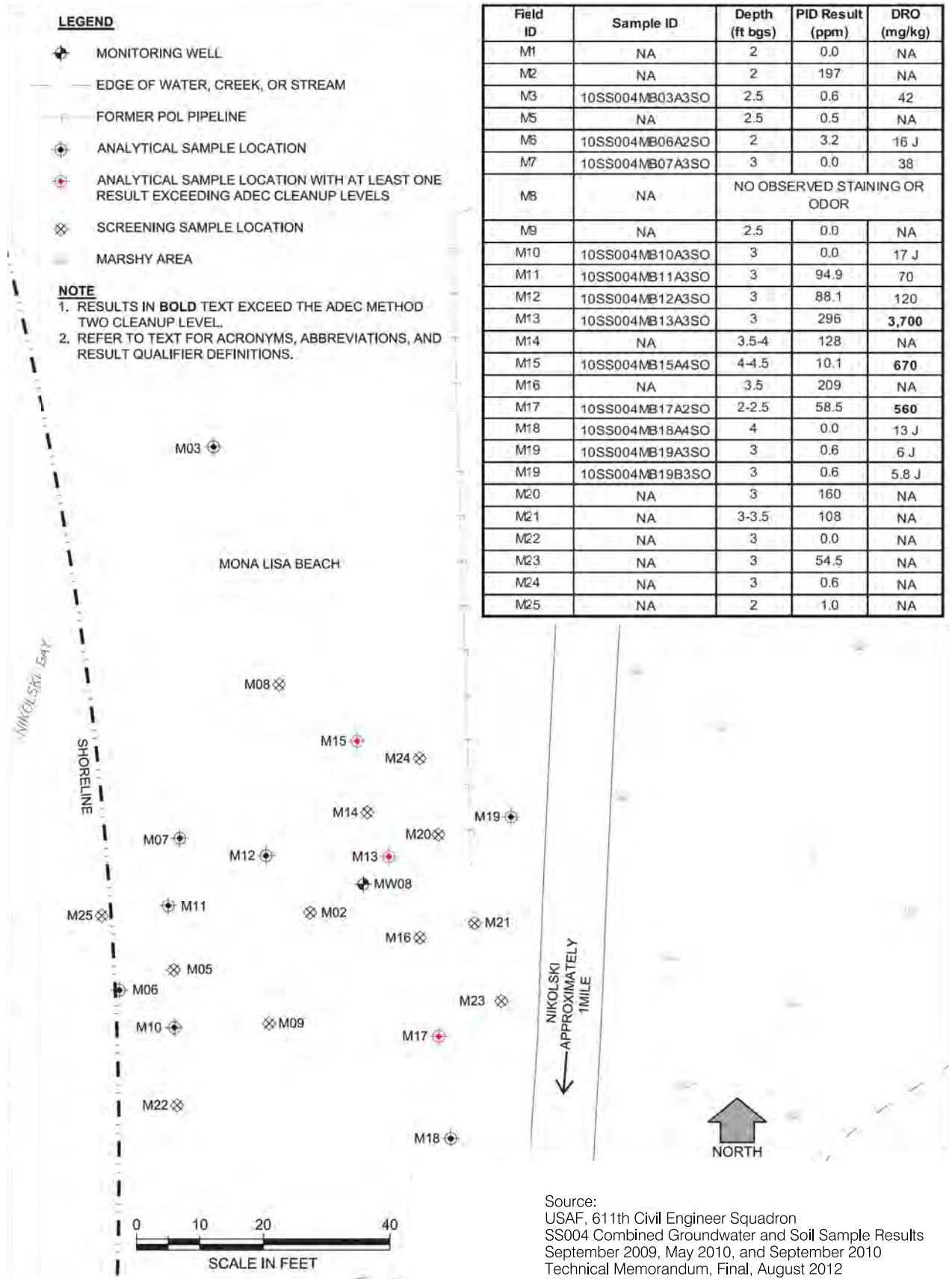
NA – not applicable

PID – photoionization detector

ppm – parts per million

SCL – soil cleanup level

Bold indicates that the result exceeds the ADEC SCL.



Source:
 USAF, 611th Civil Engineer Squadron
 SS004 Combined Groundwater and Soil Sample Results
 September 2009, May 2010, and September 2010
 Technical Memorandum, Final, August 2012

FIGURE 2-13
 U.S. AIR FORCE - NIKOLSKI RRS, ALASKA
 RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005
SITE SS004 MONA LISA BEACH AREA
2010 FIELD SCREENING AND SOIL SAMPLE RESULTS

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The 2010 results indicate that DRO contamination extends west from the former Pumhouse Excavation along both sides of the roadway to the marshy wetland soil east of the main road. Across the main road, DRO contamination extends from the outfall of a broken pipe downgradient toward the shoreline. Vertically, signs of fuel contamination were observed in soil just above the water table and as shallow as 1 foot bgs in marshy areas along the roadway. At Mona Lisa Beach west of the main road, contamination was generally observed at 3 feet bgs in numerous screening locations; however, elevated PID results were observed at 4 to 4.5 feet bgs, which was the maximum depth reached in this area (Figure 2-12).

SS004 Soil Conclusions.

In general, analytical results from 2010 sampling confirmed that fuel contamination remains in soil at concentrations exceeding ADEC cleanup levels at several areas at SS004, including two former AST locations, the former MOGAS Tank location, the former Pumhouse Excavation area, and Mona Lisa Beach.

2.2.6 ERP Site SS005

Multiple investigations and early response activities have been completed at SS005, and results are summarized or documented in the final RI Report (USAF, 2002a). Work at SS005 began in 1993 with compilation of existing historical information regarding the Nikolski RRS (USAF, 1994). Studies conducted in 1995 and 2001 indicated that no contaminants were detected at SS005 in excess of any applicable screening level in soil or concrete chip and wipe samples obtained from the site. SS005 was identified as an area of concern under CERCLA, as documented in the following:

- PA/SI (USAF, 1995)
- 2000 SI Report (USAF, 2000)
- 2003 FS Report (USAF, 2003)

PA/SI. During the 1995 PA/SI, one soil sample was collected at SS005 and analyzed for PCBs. Laboratory analysis indicated low levels of PCBs (1 mg/Kg – USAF, 1995). During the 2000 SI, four surface soil samples were collected and analyzed for PCBs. Laboratory analysis indicated PCB-1260 at 0.15 mg/Kg, with all other PCBs at nondetectable levels (USAF, 2000).

2000 SI. During the 2000 SI, an electromagnetic survey was conducted at SS005 to verify the presence and limits of the UST. The survey confirmed the location of the UST and established its size as approximately 500 gallons. The contents of the tank were sampled, and results indicated the presence of leaded gasoline. Four surface soil samples were collected (two in the vicinity of the UST and two northwest of the vault building), with higher DRO and RRO concentrations detected just southeast of the UST (USAF, 2000).

2000 RI. During the 2001 RI, the gasoline was removed from the 500-gallon UST at SS005, and the batteries were removed from inside the Runway Lighting Vault Building. Four soil borings were advanced in the vicinity of the Runway Lighting Vault, and two soil borings were advanced in the vicinity of the UST to assess whether fuel had leaked from the tank or had been spilled during refueling operations. Two soil borings were advanced downhill from the Runway Lighting Vault (between the vault and the village of Nikolski) to assess the possibility that contaminants could be migrating from SS005. Following the removal of the leaded gasoline from the UST, a surface soil sample was collected approximately 1 foot west of the UST fill pipe (USAF, 2002a).

Analytical results from the 2000 SI (USAF, 2000) and 2001 RI (USAF, 2002a) indicated that one sample, located southeast of the UST, contained DRO above the ADEC Method Two soil cleanup level for migration-to-groundwater. No other contaminants were present at levels exceeding ADEC cleanup levels; however, these investigations were not performed with the intent of UST closure or to meet the UST guidance at the time of investigation. DRO and RRO analyses are not a requirement for closure investigation of a leaded UST, per the ADEC UST Procedures Manual, Table 2A (ADEC, 2002).

2007 SI. Field activities at SS005 during 2007 consisted of: site preparation, UST removal, confirmation sampling and analysis, excavation backfilling, site restoration, and Runway Lighting Vault debris removal. UST closure included removal of the 500-gallon UST, associated underground piping, and remaining equipment and debris from within the Runway Lighting Vault. Soil samples were collected from the below the former UST location, and overburden soil was screened with a PID, although no laboratory confirmation samples were collected. Less than 10 cubic yards of soil was segregated and stockpiled for later use as excavation backfill (USAF, 2010a).

The analytical results for the UST samples did not indicate any petroleum hydrocarbon constituents at concentrations exceeding laboratory method detection limits or practical

quantitation limits. Analytical results from two samples indicated the presence of lead, but at concentrations below the respective ADEC cleanup level for inhalation and ingestion.

All remaining equipment from within the Runway Lighting Vault at SS005 was inspected for liquids and other potentially hazardous materials. When no liquids were identified in the equipment, the equipment was removed from the Runway Lighting Vault and temporarily staged at Mona Lisa Beach prior to being transported offsite for disposal. The UST excavation was backfilled and graded to conform to the surrounding elevations.

Because of deficiencies in the UST closure investigation at SS005, as identified by ADEC, the Air Force conducted a supplemental RI during summer 2009 in accordance with 18 AAC 78.235. The supplemental RI consisted of soil sampling and laboratory analysis in the area of the former UST and piping. A qualified individual with the requisite ADEC UST decommissioning credential was present, and a work plan was prepared and submitted to ADEC for approval prior to the investigation. A supplemental RI Report was submitted to ADEC. No additional contamination was detected at levels above applicable cleanup limits (USAF, 2010b).

2.3 COMMUNITY PARTICIPATION

NCP Section 300.430(f)(3) establishes requirements for notification and document availability of Proposed Plans for review by the public. The Air Force has participated in several public meetings in the Village of Nikolski, and has met with staff and officers of the tribal government and Chaluka Corporation to discuss issues specifically pertaining to the Nikolski RRS. In 2001, a fact sheet was provided to the community to seek public input regarding formation of a Restoration Advisory Board (RAB) and other ways that the public could provide input and voice concerns. However, community members opted to not participate in a formal RAB.

The Proposed Plan and supporting documents for SS005 were made available to the public in March 2007, and the public review and comment period for the Proposed Plan was 22 March to 18 April 2007. The public comment period was extended to 21 May 2007 at the request of stakeholders. A public meeting on the Proposed Plan for SS005 was held in Nikolski on 6 April 2007. The Proposed Plans and supporting documents for ERP Sites AOC01, LF001, SS002, SS003, and SS004 were made available to the public in February 2012, and the public review and comment period for these Proposed Plans was 16 February to 17 March 2012. A

public meeting on the Proposed Plans for AOC01, LF001, SS002, SS003, and SS004 was held in Anchorage on 1 March 2012. At the request of ADEC, the public comment period was extended by 30 days to 17 April 2012.

Air Force responses to comments received during the public comment period for the Proposed Plans are included in Section 3 (Responsiveness Summary) of this ROD.

2.4 SCOPE AND ROLE OF OPERABLE UNIT OR RESPONSE ACTION

ERP Sites AOC01, LF001, SS002, SS003, SS004, and SS005 are six of 13 ERP sites located at the former Nikolski RRS. Environmental restoration at Nikolski RRS is being conducted under the authority of CERCLA. In addition, certain closure activities (e.g., petroleum sites, UST closures, and septic tank closures) are being conducted in accordance with State of Alaska regulations (18 AAC 75 and 78) or guidance (ADEC, 2000).

The overall RAO for ERP sites at Nikolski RRS is protection of human health and the environment. Site-specific RAOs are described below.

2.4.1 ERP Site AOC01

AOC01 does not have any site-specific RAOs. While AOC01 has a de minimus volume of lead contamination in soil above applicable ADEC soil cleanup levels, the RI Report recommended NFA and removal of site debris (USAF, 2002a), which was accomplished in 2007. ADEC concurred with the RI Report recommendations for debris removal and NFA (ADEC, 2006). Therefore, Action Not Necessary for Protection has been selected as the CERCLA remedy for AOC01, and no further action is necessary under State of Alaska laws and regulations.

2.4.2 ERP Site LF001

LF001 does not have site-specific RAOs. LF001 is designated as a closed landfill in the ADEC Solid Waste program (18 AAC 60). Although other sites at Nikolski RRS are being addressed by the Air Force, no anticipated chemical interactions or migration of contaminants is expected between LF001 and the other sites. The selected CERCLA remedy for LF001 is No CERCLA Authority to Take Action. However, given its designation as a closed landfill,

further action is necessary under State of Alaska laws and regulations, including 18 AAC 60 and 18 AAC 75.

2.4.3 ERP Site SS002

SS002 does not have site-specific RAOs. Several other sites at Nikolski RRS are being addressed under the Air Force ERP; however, no chemical interactions or migration of contaminants are anticipated between SS002 and the other sites. There is no potential for a response action at SS002 that would affect response actions at any other site. SS002 has no residual contamination above applicable cleanup levels, and the former Water Supply House has been removed. Therefore, the selected remedy for SS002 under CERCLA is NFA, and no further action is necessary under State of Alaska laws and regulations.

2.4.4 ERP Site SS003

The selected remedy for SS003 under CERCLA is No CERCLA Authority to Take Action. However, additional action is required under State of Alaska laws and regulations. The following RAOs have been established for SS003:

- Prevent ingestion or inhalation of soil containing DRO in excess of 8,250 mg/Kg.
- Prevent ingestion or inhalation of soil containing RRO in excess of 8,300 mg/Kg.

2.4.5 ERP Site SS004

The selected remedy for SS004 under CERCLA is No CERCLA Authority to Take Action. However, additional action is required under State of Alaska laws and regulations. The following RAOs have been established for SS004:

- Prevent migration to groundwater of soil containing DRO in excess of 230 mg/Kg.
- Prevent migration of benzene in excess of 0.025 mg/Kg, toluene in excess of 6.5 mg/Kg, ethylbenzene in excess of 6.9 mg/Kg, and xylenes in excess of 63 mg/Kg from soil to groundwater.
- Prevent direct contact with soil containing benzo(a)pyrene in excess of 0.40 mg/Kg or dibenzo(a,h)anthracene in excess of 0.40 mg/Kg.
- Restore the aquifer to 1.5 mg/L for DRO.

2.4.6 ERP Site SS005

During the 2001 RI, leaded fuel and batteries were removed from SS005. The 2001 Final RI Report recommended removal of the UST in accordance with State of Alaska regulations at 18 AAC 78, and removal of generators and the runway lighting control panel. Samples collected at SS005, including concrete chip and equipment wipe samples, were analyzed for PCBs and found to be below applicable regulatory limits. Removal and closure of the UST was properly completed in 2009. SS005 has no residual contamination above applicable cleanup levels, and the UST and any residual debris has been removed. Therefore, the selected remedy for SS005 under CERCLA is NFA, and no further action is necessary under State of Alaska laws and regulations.

2.5 SITE CHARACTERISTICS

Umnak Island is a part of the Aleutian Island Chain (Figure 2-1). The island is composed of volcanic, volcanoclastic sedimentary, and intrusive rocks. The southwestern portion of the island, which includes the Nikolski RRS site, is relatively flat. Umnak Island has a cold maritime climate characterized by high humidity, considerable cloudiness, frequent fog, and abundant rain and snow. The wet weather in the area is caused by a number of factors, including the Aleutian low pressure cell, the impacts of the Pacific Ocean and Bering Sea, and orographic precipitation.

Surface water drains from High Hill in all directions: into Sheep Creek to the south and east, and into the Bering Sea to the north and west. Surface water from the Nikolski RRS travels over a drainage area of about 100 acres to the point of probable entry into Nikolski Bay, or over a drainage area of roughly 250 acres to the point of probable entry into Sheep Creek. Drinking water for the facility during its years of operation was obtained from a lake about half of a mile south of AOC01. This lake, about 300 feet above sea level (USAF, 1994), is the headwater of Sheep Creek, which flows westward into Nikolski Bay and discharges about 800 feet north of the POL Tank Area (USAF, 1997a). The Village of Nikolski is not in the same watershed as the former Nikolski RRS facility (USAF, 1994). A community water supply currently supplies the Village of Nikolski with its water. The water comes from a seep located approximately 1 mile southwest of the airstrip.

Umnak Island provides habitat for diverse marine mammals and fish species, including spawning habitat for coho, sockeye, and pink salmon (USAF, 1994). Several sea bird colonies

have been identified within the Umnak Island area, and various duck and goose species are known to inhabit this area. In addition, bald eagles have been known to inhabit areas around Cape Udak. Three pairs of bald eagles were observed near the facility during the RI (USAF, 2002a). Sea lions have been documented in the nearby Aleutian Islands Wilderness (USAF, 1994).

2.5.1 ERP Site AOC01

The Dam and Pumphouse Foundation site (AOC01) is situated about 2,000 feet northeast of High Hill alongside an unnamed stream (Figure 2-2). The pumphouse was constructed to provide water for the construction camp when Nikolski RRS was initially built. In 1995, four drums were identified in the vicinity, and were subsequently removed in 1997. The remnants of the collapsed pumphouse, pump, and piping were removed in 2007.

2.5.2 ERP Site LF001

The Landfill Disposal Area (LF001) is located northeast of High Hill (Figure 2-2). This site includes the old disposal area, likely used during facility operations, and the site demolition disposal area, used during the 1988 demolition of the RRS facility. The site demolition disposal area at LF001 also includes an asbestos disposal cell.

2.5.3 ERP Site SS002

The Former Water and Supply House and AST (SS002) was located next to a lake located 2.5 miles east-southeast of High Hill. The site supplied water for Nikolski RRS during operation. The pumphouse, concrete pad, and AST (that supplied fuel for the pump) have been removed from SS002.

2.5.4 ERP Site SS003

The POL Pipeline (SS003) is a 3-mile-long pipeline that was used to pump fuel from SS004 (POL Tank Area) to two 20,000 gallon USTs located at the main facility on High Hill. Beginning at the pumphouse at SS004, the pipeline ran approximately 100 feet east into a small wetland area, around SS004, and then in the direction of High Hill following the access road and Nikolski Bay shoreline (Figure 2-2). The aboveground portions of the pipe were

removed in 2007. Due to the steep terrain of the site and subsequent health and safety concerns, the underground portions of the pipeline have been capped and left in place.

2.5.5 ERP Site SS004

The POL Tank Area (SS004) is located approximately 1 mile north of the Village of Nikolski (Figure 2-2) and consists of an upland area where the POL tanks were housed, and a beach area where fuel barges landed. Fuel was transferred by piping from the fuel barges to the tank area, which consisted of ASTs and a concrete pumphouse. The 4.7-acre site is surrounded by wetlands to the north, east, and south, and by Nikolski Bay to the west. In 2007, three bulk diesel ASTs, two smaller railcar ASTs on the bluff above the beach area, the pumphouse, and associated piping were removed from SS004.

2.5.6 ERP Site SS005

The Runway Lighting Vault Building and UST (SS005) is located approximately 200 feet north of the west end of the airstrip (Figure 2-2). The 500-gallon UST and debris found in the Runway Lighting Vault was removed in 2007; however, the Runway Lighting Vault Building still remains.

2.5.7 Nature and Extent of Contamination

Environmental media affected by contamination at the former Nikolski RRS facility are surface and subsurface soil. Potential receptors are current and future human recreational visitors at all sites. In addition, there is a potential for future residential use of SS004. Potential exposure pathways for humans are soil ingestion and dermal exposure, as well as groundwater consumption.

Consumption of subsistence resources poses minimal risk to human health, because soils are too rocky to support substantive vegetative cover or optimal habitat for terrestrial omnivores.

ERP Site AOC01: This ERP site is located along an unnamed stream approximately 2,000 feet northeast of High Hill (Figure 2-2). The banks around the stream are covered by vegetation, except for areas that had been previously cleared for construction or in areas where the bank slope is steep and rocky soil is exposed.

Analytical results from historical environmental investigations indicate that extensive areas of contamination at the site are not present. Lead was detected at 427 mg/Kg at one soil sampling location, slightly above the ADEC Method Two soil cleanup level of 400 mg/Kg. No further action is required for AOC01.

ERP Site LF001: This ERP site is located approximately ¼-mile northeast of High Hill (Figure 2-2). The site includes a disposal area and a site demolition area, including an asbestos cell. The area is flat with little surface debris. The local lithology is approximately 4 feet of peat overlaying 6 inches of weathered bedrock rubble and andesite bedrock.

During the 2001 RI, DRO was found above the screening level of 603 mg/Kg for soils within the landfill. In addition, arsenic was detected at the site at 5 mg/Kg, which is above the screening level of 3.7 mg/Kg but below background levels for LF001.

ERP Site SS002: This ERP site is located at the base of a low grade, sloping hill along the shore of a lake east-southeast of High Hill (Figure 2-2). The area is flat, and part of the site is wet and marshy due to surface water flow from a seep on the slope.

During a 2001 RI, a small amount of DRO-contaminated soil (1,000 mg/Kg) was excavated from SS002. No other analytical results were found to be above soil cleanup levels. No further action is required for SS002.

ERP Site SS003: This ERP site consists of an approximately 3-mile long aboveground pipeline that ran from ERP Site SS004 to High Hill (Figure 2-2). The pipeline, which was removed in 2007, ran parallel to the shore of Nikolski Bay and the Bering Sea.

During the 2001 RI, DRO and RRO was detected at 59,800 mg/Kg and 22,800 mg/Kg, respectively. These results were above the ADEC Method Two Cleanup for ingestion in the over 40-inch zone level of 8,250 mg/Kg for DRO and 8,300 mg/Kg for RRO.

ERP Site SS004: This ERP site consists of 4.7 acres of land bordering Nikolski Bay. The site consists of a beach area and upland area where ASTs were located. A majority of SS004 is covered with low tundra vegetation. Wetlands surround the site to the north, south, and east; however, there is no surface water discharge to these areas from the site. Shallow groundwater located at SS004 generally flows towards Nikolski Bay, to the west.

During the 2001 RI and a subsequent subsurface soil investigation in 2010, maximum concentrations of GRO (6,100 mg/Kg), DRO (7,800 mg/Kg), ethylbenzene (65 mg/Kg), toluene (20 mg/Kg), xylene (940 mg/Kg), benzo(a)pyrene (3.2 mg/Kg) and dibenzo(a,h)anthracene (0.46 mg/Kg) were detected at SS004 above ADEC Method Two Cleanup Levels.

COC concentrations in groundwater at SS004 were stagnant or decreasing for three consecutive monitoring events in 2009 and 2010, with the exception of DRO in Well MW-8. Well MW-8 contained measurable diesel fuel free product during all sampling events and was, therefore, not analyzed by the laboratory for DRO.

ERP Site SS005: This ERP site is located north of the west end of the airstrip (Figure 2-2). The lithology of the site consists of weathered bedrock, covered by tundra vegetation. The Runway Lighting Vault is the only structure that remains at SS005 (all other structures were demolished in 1988). There is no residual contamination above applicable cleanup levels, and the former UST has been removed. No further action is required at SS005.

2.6 CURRENT AND POTENTIAL FUTURE LAND AND WATER USES

2.6.1 Land Use

When the installation was active, the land at the former Nikolski RRS was used for military purposes. Current land use of the Nikolski RRS land, including the top of High Hill, appears to be primarily for recreational purposes. After considering public comment on the Proposed Plans, and based on subsequent discussions between Chaluka Corporation and the Air Force, it is unlikely that there will be future residential land use of High Hill. However, the Chaluka Corporation is interested in ERP Site SS004 for potential residential purposes, due to its proximity to the Village of Nikolski and Nikolski Bay.

Public Land Order 2374, issued in 1961 by the U.S. Department of the Interior (DOI), withdrew public domain lands in the vicinity of the Native Village of Nikolski on Umnak Island, Alaska, for use by the Air Force as the Nikolski RRS. Subtitle D of Public Law 108-136, dated 24 November 2003, contains provisions for land conveyance between the Air Force and Native corporations established under the Alaska Native Claims Settlement Act (ANCSA). Specifically, Section 2862 of Public Law 108-136 contains an offer of conveyance of the surface and subsurface estates in the former Nikolski RRS to the Chaluka Corporation

and Aleut Corporation, respectively, by the Secretary of the Interior. Environmental restoration of specific parcels of lands defined as Phase II lands in Public Law 108-136 are the responsibility of the Air Force. Upon completion of environmental restoration of parcels of Phase II lands by the Air Force, the lands are to be conveyed to the Native corporations in accordance with applicable law. Upon conveyance of a parcel of land under Section 2862 of Public Law 108-136, the Secretary of the Interior will terminate the corresponding portion of Public Land Order 2374 relating to the parcel conveyed. Upon conveyance of all lands subject to conveyance under Section 2862 of Public Law 108-136, the Secretary of the Interior will terminate all remaining portions of Public Land Order 2374 as it pertains to Umnak Island, Alaska.

2.6.2 Groundwater and Surface Water Uses

A community water supply currently supplies the Village of Nikolski with its water. The water comes from a seep located approximately 1 mile southwest of the airstrip (USAF, 1995).

Surface water drains from High Hill in all directions: into Sheep Creek to the south and east, and into the Bering Sea to the north and west. Surface water from the Nikolski RRS travels over a drainage area of about 100 acres to the point of probable entry into Nikolski Bay, or over a drainage area of roughly 250 acres to the point of probable entry into Sheep Creek. Drinking water for the facility during its years of operation was obtained from a lake about half of a mile south of AOC01. This lake, about 300 feet above sea level (USAF, 1994), is the headwater of Sheep Creek, which flows westward into Nikolski Bay and discharges about 800 feet north of SS004 (USAF, 1997a). The Village of Nikolski is not in the same watershed as the former Nikolski RRS facility (USAF, 1994).

ERP Site SS003 is not considered to be a potential source of future drinking water, because groundwater has not been encountered in any borings at the site. In addition, if groundwater was present, it would be impacted by saltwater intrusion from Nikolski Bay. An approved Groundwater Use Determination for SS003 has been completed pursuant to 18 AAC 75.350 (USAF, 2002a).

Wetlands are located around SS004 to the north, south, and east. There is no surface water discharge from SS004 to these wetlands. Groundwater and surface water flow is generally towards Nikolski Bay to the west.

2.7 SUMMARY OF SITE RISKS

This section summarizes the human health and ecological risk evaluations that have been performed for ERP Sites AOC01, LF001, SS002, SS003, SS004, and SS005. The COCs associated with unacceptable site risk are identified, as well as the potentially exposed populations and exposure pathways of primary concern. A summary of the findings of the ecological risk are also presented. Based on the presence of unacceptable risk to residents, LUCs are being recommended to reduce risk at LF001.

2.7.1 ERP Site AOC01

2.7.1.1 Summary of Human Health and Ecological Risk Assessments

No human health risk assessment or ecological risk evaluation has been conducted at AOC01. The site does not pose an unacceptable risk to human health or the environment, based on historical investigation results. There are no site contaminants that remain at AOC01 above state cleanup levels.

2.7.1.2 Basis for Action

Contaminant concentrations did not exceed applicable ADEC Method Two soil cleanup levels. Therefore, unacceptable exposure to hazardous substances at AOC01 does not occur and will not occur in the future. The site does not pose a current or future unacceptable risk, and no response action is necessary.

2.7.2 ERP Site LF001

2.7.2.1 Summary of Human Health and Ecological Risk Assessments

No human health risk assessment or ecological risk evaluation has been conducted at LF001. The site does not have site-specific RAOs. LF001 is listed as a closed landfill under the ADEC Solid Waste program and contains an asbestos disposal area. LF001 has DRO contamination above screening levels.

2.7.2.2 Basis for Action

LF001 is listed as a closed landfill under the ADEC Solid Waste program. Since the landfill has DRO contamination above screening levels and contains an asbestos disposal area, the response action of LUCs selected in this ROD is necessary to protect human health or the environment from unacceptable exposure to site contaminants.

2.7.3 ERP Site SS002

2.7.3.1 Summary of Human Health and Ecological Risk Assessments

No human health risk assessment or ecological risk evaluation has been conducted at SS002. The site does not pose an unacceptable risk to human health or the environment, based on historical investigation results. There are no site contaminants that remain at SS002 above state cleanup levels.

2.7.3.2 Basis for Action

Contaminant concentrations at SS002 did not exceed applicable ADEC Method Two soil cleanup levels. Therefore, unacceptable exposure to hazardous substances does not occur and will not occur in the future. The site does not pose a current or future unacceptable risk, and no response action is necessary.

2.7.4 ERP Site SS003

2.7.4.1 Summary of Human Health and Ecological Risk Assessments

A human health risk assessment and ecological risk evaluation was completed for SS003 in the BRA (USAF, 2004). The risk assessment was performed under the assumption that future residential development is not feasible for SS003 due to storm tides that occasionally inundate the site, and there is no source of drinking water available at the site (no groundwater has been encountered in borings at SS003).

Results of the human health risk assessment for SS003 indicate that the Hazard Index (HI) and Excess Lifetime Cancer Risk (ELCR) were less than ADEC target values of 1.0 and 1×10^{-5} , respectively, and no further action is required at this site. For the assessment of human

health risk, POLs (DRO, GRO, and RRO) and a PAH (benzo(a)pyrene) were evaluated using the exposure routes of inhalation, ingestion, and dermal exposure.

Results of the ecological risk evaluation for SS003 indicate that the Hazard Quotient (HQ) was calculated to be less than 1.0. POLs (DRO, GRO, and RRO), barium, and the volatile organic compounds (VOCs) ethylbenzene, toluene, and total xylenes were evaluated using the exposure routes of inhalation, ingestion, and dermal exposure.

2.7.4.2 Basis for Action

Although the BRA indicates that residual site contamination does not pose a human health risk or ecological risk, historical analytical results indicate that DRO and RRO contamination are present above 18 AAC 75 clean up levels. Therefore, the response action of excavation and offsite disposal of contaminated soils is necessary to protect human health or the environment from unacceptable exposure to site contaminants.

2.7.5 ERP Site SS004

2.7.5.1 Summary of Human Health and Ecological Risk Assessments

A human health risk assessment and ecological risk evaluation was completed for SS004 in the BRA (USAF, 2004). The risk assessment was performed with the assumption that SS004 will be potentially used in the future for residential development. This represents the most protective assumptions for the assessment.

Results of the human health risk assessment indicate that the HIs for DRO are above the ADEC target value of 1.0. Specifically, the HI is 56 for DRO in soil, 2.3 for DRO in surface water, and 5.4 for DRO in groundwater. The ELCR, however, was calculated to be less than the ADEC target value of 1×10^{-5} . The constituents GRO, RRO, and lead were evaluated assuming exposure routes of inhalation, ingestion, and dermal exposure, but had HIs below the ADEC target value.

Results of the ecological risk evaluation for SS004 indicate that the HQ for total xylenes was calculated to be 200 and the HQ for lead was calculated to be 4, above the ADEC target value of 1.0. The constituents of barium, POLs (DRO, GRO, RRO), and VOCs (ethylbenzene,

toluene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene) were also evaluated, and had HQs below the ADEC target value.

2.7.5.2 Basis for Action

The BRA indicates that site contamination does pose human health and ecological risks, as discussed above. Contamination is present at SS004 above 18 AAC 75 cleanup levels. Since there is a potential of residential land use of SS004 in the future, the response action of excavation, offsite disposal of contaminated soils, and groundwater monitoring is necessary to protect human health or the environment from unacceptable exposure to site contaminants. LUCs are necessary to prevent use of groundwater for drinking water until it meets cleanup levels.

2.7.6 ERP Site SS005

2.7.6.1 Summary of Human Health and Ecological Risk Assessments

No human health risk assessment or ecological risk evaluation has been conducted at SS005. The site does not pose an unacceptable risk to human health or the environment, based on historical investigation results. There are no contaminants at SS005 that remain above state cleanup levels.

2.7.6.2 Basis for Action

Contaminant concentrations at SS005 did not exceed applicable ADEC Method Two soil cleanup levels. Therefore, unacceptable exposure to hazardous substances does not occur and will not occur in the future. The site does not pose a current or future unacceptable risk, and no response action is necessary.

2.8 REMEDIAL ACTION OBJECTIVES

RAOs provide a general description of what remedial action will accomplish. These goals typically serve as the design basis for remedial alternatives, which are described in greater detail in the FS (USAF, 2003). Historical investigations, including the RI (USAF, 2002a), concluded that environmental contaminants remain at Nikolski RRS at several ERP sites,

including SS003 and SS004. The RAOs for ERP sites at Nikolski RRS sites are protection of human health and the environment. Site-specific RAOs exist for SS003 and SS004, including:

- SS003:
 - Prevent ingestion or inhalation of soil containing DRO in excess of 8,250 mg/Kg.
 - Prevent ingestion or inhalation of soil containing RRO in excess of 8,300 mg/Kg.
- SS004:
 - Prevent migration of DRO in excess of 230 mg/Kg from soil to groundwater.
 - Prevent migration of benzene in excess of 0.025 mg/Kg, toluene in excess of 6.5 mg/Kg, ethylbenzene in excess of 6.9 mg/Kg, and xylenes in excess of 63 mg/Kg from soil to groundwater.
 - Prevent direct contact of soil containing benzo(a)pyrene or dibenzo(a,h)anthracene in excess of 0.40 mg/Kg.
 - Restore the aquifer to 1.5 mg/L for DRO.

ERP Sites AOC01, LF001, SS002, and SS005 do not have site-specific RAOs. The general RAO for Nikolski ERP sites is protection of human health and the environment.

2.9 SELECTED REMEDIES AND DESCRIPTION OF ALTERNATIVES

The CERCLA remedies for ERP sites AOC01 (Action Not Necessary for Protection), LF001 (No CERCLA Authority to Take Action), SS002 (NFA), SS003 (No CERCLA Authority to Take Action), SS004 (No CERCLA Authority to Take Action), and SS005 (NFA) that are addressed in this ROD have been selected given that CERCLA contaminants are not present, or are below 18 AAC 75 soil cleanup levels. Due to the petroleum exclusion in the CERCLA definition of hazardous substances, petroleum contamination is not subject to CERCLA. For LF001, SS003, and SS004, additional remedies are required under State of Alaska regulations. LF001 is a closed solid waste landfill, and SS003 and SS004 have petroleum contamination above applicable 18 AAC cleanup levels. The proposed remedial actions selected for these three sites are acceptable to ADEC.

2.9.1 ERP Site AOC01

The Air Force has selected Action Not Necessary for Protection as the CERCLA remedy for AOC01, and no further action is necessary under State of Alaska laws and regulations. Analytical results indicate that there is no remaining site contamination above cleanup levels.

2.9.2 ERP Site LF001

The Air Force has selected No CERCLA Authority to Take Action as the CERCLA remedy for LF001, because DRO is excluded from the CERCLA definition of hazardous substances, pollutants, or contaminants. However, since the closed solid waste landfill does have DRO contamination remaining over 18 AAC 75 cleanup levels, and an asbestos cell, the selected remedy is implementation of LUCs in accordance with State of Alaska solid waste regulations (18 AAC 60). The Air Force will be responsible for implementing, maintaining, monitoring, reporting and enforcing the remedial actions identified for the duration of the remedy selected in this decision document. The LUCs are designed to prevent activities that could affect the performance of the other components of the selected remedy, and to limit resource use and prevent or control exposure at LF001 to protect human health and the environment. Specific elements of the selected remedy include:

- Excavation of POL-contaminated soils and transport offsite for disposal at an approval facility.
- LUCs to prevent residential use and restrict surface excavation activities at LF001 will be developed for an area described as Tract 37A, covering approximately 9.64 acres. A figure indicating the location of the tract is provided in **Appendix A**. A Notice of Environmental Contamination will be placed in the Alaska Department of Natural Resources' land records.
- The Air Force will have the right to control road access within Tract 37A.
- The Air Force will prohibit residential use and occupancy within Tract 37A in excess of 335 hours per year by any one individual.
- The Air Force will require all surface excavation or digging activities within Tract 37A to be subject to ADEC approval, as required by State of Alaska regulations (e.g., 18 AAC 75.325(i)).

- Initially, the Air Force will conduct periodic monitoring annually for 5 years and take prompt action to restore, repair, or correct any LUC deficiencies or failures identified at LF001. Afterwards, the monitoring frequency will be at 5-year intervals.
- The Air Force will timely submit to ADEC periodic LUC monitoring reports on the status of LUCs. The report will contain:
 - A statement as to whether all LUC objectives defined herein are being met, including summary results of verifications and inspections of all areas subject to use restrictions; and
 - A description of any deficiencies in the LUCs and what efforts or corrective measures have been or will be taken to correct these deficiencies.
 - The Air Force will provide notice to ADEC as soon as practicable, but no later than, 10 days after discovery of any activity that is inconsistent with the LUC requirements, objectives or controls, or any action that may interfere with the effectiveness of the LUCs. The Air Force will include in such notice a list of corrective actions taken or planned to address such deficiency or failure.
 - Reviews of these LUCs will be required every 5 years.

2.9.3 ERP Site SS002

The Air Force has selected NFA as the CERCLA remedy for SS002, and no further action is necessary under State of Alaska laws and regulations. Analytical results indicate that there is no remaining site contamination above cleanup levels.

2.9.4 ERP Site SS003

The Air Force has selected No CERCLA Authority to Take Action as the CERCLA remedy for SS003, because DRO and RRO are excluded from the CERCLA definition of hazardous substances, pollutants, or contaminants. However, since these contaminants are present at SS003 at levels above 18 AAC 75 cleanup levels, the selected remedy for SS003 is excavation and offsite disposal of POL-contaminated soil, which is required under State of Alaska regulations at 18 AAC 75. No LUCs are applicable to this remedy, because POL-contaminated soils above applicable regulatory limits will be excavated and shipped offsite for disposal. The Air Force will be responsible for implementing, maintaining, monitoring, reporting, and enforcing the remedial actions identified for the duration of the remedy selected in this Decision Document. Specific elements of the selected remedy include:

- Excavation of POL-contaminated soils and transport offsite for disposal at an approved facility

The proposed remedial action will be implemented following a work plan developed by the Air Force and approved by ADEC.

The estimated volume of soil to be excavated at SS003 is approximately 500 cubic yards. Following excavation, no hazardous substances would remain onsite above 18 AAC 75 cleanup levels. Clean fill will be utilized to backfill the site following excavation of contaminated soils. The estimated costs to complete the selected remedy for SS003 are:

- Estimated Capital Cost = \$1,000,000
- Estimated Annual Overhead and Maintenance Cost = \$150,000
- Estimated Total Cost = \$1,150,000

It is anticipated that construction efforts to achieve the selected RAOs described for SS003 in Section 2.8 will be 1 year.

2.9.5 ERP Site SS004

The Air Force has selected No CERCLA Authority to Take Action as the CERCLA remedy for SS004, because petroleum contaminants are excluded from the CERCLA definition of hazardous substances, pollutants, or contaminants. However, these contaminants are present at SS004 at levels above 18 AAC 75 cleanup levels and the land is planned for conveyance between the Air Force and Chaluka Corporation. Therefore, the selected remedy for SS004 is excavation and offsite disposal of POL-contaminated soil, and long-term groundwater monitoring under State of Alaska regulations at 18 AAC 75. The Air Force will be responsible for implementing, maintaining, monitoring, reporting, and enforcing the remedial actions identified for the duration of the remedy selected in this Decision Document. LUCs are an integral part of the selected remedy. The LUCs are designed to limit resource use and prevent or control exposure at SS004 to protect human health and the environment. Specific elements of the selected remedy include:

- Excavation of POL-contaminated soils and transport offsite for disposal at an approved facility.

- LUCs to prohibit the use of groundwater for drinking water. Warning signs will be posted to implement this LUC. LUCs will be incorporated into the 611th CES LUC Management Plan. A Notice of Environmental Contamination will be placed in the Alaska Department of Natural Resources' land records.
- Groundwater monitoring of petroleum contaminants migrating from soil to groundwater occur annually for 5 years. Groundwater monitoring will occur at Well MW-08 and will cease once monitoring results indicate that POL contaminants have attenuated below applicable regulatory limits for groundwater.
- The Air Force will timely submit to ADEC periodic monitoring reports on the status of LUCs and groundwater monitoring, and natural attenuation. The report will contain:
 - A summary of groundwater monitoring results and natural attenuation of groundwater contamination.
 - A description of any deficiencies in the LUCs and what efforts or corrective measures have been or will be taken to correct these deficiencies.
- The Air Force will provide notice to ADEC as soon as practicable, but no later than 10 days, after discovery of any activity that is inconsistent with the LUC requirements, objectives or controls, or any action that may interfere with the effectiveness of the LUCs. The Air Force will include in such notice a list of corrective actions taken or planned to address such deficiency or failure.
- The Air Force will seek prior concurrence from ADEC to terminate the LUCs and cease groundwater monitoring.

The proposed remedial action will be implemented following a work plan developed by the Air Force and approved by ADEC.

The estimated volume of soil to be excavated at SS004 is approximately 2,300 cubic yards. Following excavation, no hazardous substances would remain onsite above 18 AAC 75 cleanup levels. Clean fill will be utilized to backfill the site following excavation of contaminated soils.

Groundwater monitoring will be conducted every year for 5 years at Well MW08, followed by 5-year reviews. At that point, the groundwater monitoring frequency would be adjusted or eliminated according to the amount of natural attenuation achieved by the soil remedy. The

cost for groundwater monitoring included \$40,000 per year for 5 years, or a net present value of \$164,000.

The estimated costs to complete the selected remedy at SS004 are:

- Estimated Capital Cost = \$3,300,000
- Estimated Annual Overhead and Maintenance Cost = \$140,000
- Estimated Total Cost = \$3,564,000

It is anticipated that construction efforts to achieve the selected RAOs described for SS004 in Section 2.8 will be 1 year for soil and 5 years for groundwater.

2.9.6 ERP Site SS005

The Air Force has selected NFA as the CERCLA remedy for SS005, and no further action is necessary under State of Alaska laws and regulations. Analytical results indicate that there is no remaining site contamination above cleanup levels.

2.10 SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES

No comparative analysis under the CERCLA threshold, balancing, and modifying criteria is required, because the Air Force is not selecting a CERCLA action alternative for any of the ERP sites addressed in this ROD. ERP Sites LF001, SS003, and SS004 each have a proposed remedial action that has been selected under State of Alaska regulations. Responses to ADEC comments are provided in **Appendix B**.

2.11 DOCUMENTATION OF SIGNIFICANT CHANGES

No significant changes have occurred in the final determination of the proposed action specified in the Proposed Plans for ERP Sites AOC01, LF001, SS002, SS003, SS004, and SS005. The proposed action specified for SS004 has been modified to include a LUC restricting groundwater consumption for drinking water, and annual groundwater monitoring for 5 years to monitor natural attenuation of groundwater attenuation following excavation and offsite disposal of POL-contaminated soil.

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PART 3. RESPONSIVENESS SUMMARY

The Proposed Plan and supporting documents for ERP Site SS005 were made available to the public in March 2007, and the public review and comment period for this proposed plan was 22 March to 18 April 2007. The public comment period was extended to 21 May 2007 at the request of stakeholders. A public meeting on the proposed plan for SS005 was held on 6 April 2007.

The Proposed Plans and supporting documents for ERP Sites AOC01, LF001, SS002, SS003, and SS004 were made available to the public in February 2012, and the public review and comment period for these proposed plans was 16 February to 17 March 2012. A public meeting on the proposed plans for AOC01, LF001, SS002, SS003, and SS004 was held on 1 March 2012. At the request of the ADEC, the public comment period was extended by 30 days to 17 April 2012.

This section provides a summary of the public comments regarding the Proposed Plans for remedial action at AOC01, LF001, SS002, SS003, SS004, and SS005, at Nikolski RRS.

3.1 2012 PUBLIC INVOLVEMENT

3.1.1 March 2012 Public Meeting

The following comments were provided at the March 2012 public meeting:

Chaluka, Inc. Representative asked for addition information regarding the remaining steps in the CERCLA process.

Air Force Response: Mr. Steven Hunt (Air Force Remedial Project Manager) explained the next step in the CERCLA process was drafting the ROD document. The content of the ROD was also discussed in general terms.

Chaluka, Inc. Representative asked for addition information regarding how the contaminated soil removed from Mona Lisa Beach would be stored prior to disposal.

Air Force Response: Mr. Steven Hunt (Air Force Remedial Project Manager) explained the soil would not be burned onsite or be stored on-site for a long duration, but rather would be containerized and shipped to a remediation facility in a timely manner.

Chaluka, Inc. Representative asked if material from the local borrow pit would be used to back fill the Mona Lisa Beach excavation.

Air Force Response: Mr. Steven Hunt (Air Force Remedial Project Manager) responded the Air Force was planning on using local resources to complete the project when possible.

Chaluka, Inc. Representative asked if equipment used by the Air Force to complete the work outlined in the proposed plans could be used for maintenance projects in the village of Nikolski.

Air Force Response: Mr. Steven Hunt (Air Force Remedial Project Manager) responded that he would look into the possibility, and he would have a better idea if that was possible closer to the time of the field work.

3.1.2 Public Comment Period

No additional comments were received on the Proposed Plan from the public during the public comment period that ended on 21 May 2012. Responses to written comments received on the proposed plan for SS005 are provided in the next section (see Air Force response to Comments Submitted on Behalf of Chaluka, Inc. from Seaver & Wagner, LLC, Attorneys for Chaluka Corporation).

3.2 2007 PUBLIC INVOLVEMENT

The following written comments were received during the 2007 public comment period for ERP Sites SS005, OT001, WP007, ST017, OT010, and ST018.

ADEC Comments: All of the draft Proposed Plans state the EPA has not provided comment on the recent studies or the Proposed Plans. They also include a section indicating that the EPA issued a No Further Remedial Action Planned (NFRAP) determination in 1994. ADEC is unaware of the submittal of any documents to the EPA for review since the NFRAP decision was issued. Please revise, as necessary, to be consistent with actions.

Air Force Response: The statement in the Proposed Plan is correct in that EPA has not provided comments on any of the recent reports. Reference to EPA review of, or comment on, the Proposed Plans will be removed. Copies of the Final RI Report (February 2002), Supplemental RI for AOC-07 and SS-004 (October 2002), Final FS Report (March 2003), and the BRA (July 2004), were provided to the EPA in accordance with 10 USC 2705, on 31 May 2006. At the same time, a copy of the ADEC letter dated 6 August 2004, indicating ADEC had reviewed and concurred with the findings of the BRA, was provided to the EPA. No comments have been provided by the EPA. In addition, the EPA has previously stated to the Air Force that it will not review information for the remote sites for which it has already issued a NFRAP, including the Nikolski RRS.

ADEC Response to USAF Response: ADEC accepts this response, pending acceptable incorporation into the Proposed Plan.

ADEC Comment: ADEC does not concur with the proposed “no action required” status for this site. Establishing and enforcing ICs and conducting 5-year reviews are actions that are required to prevent exposure to contamination.

Air Force Response: The BRA concluded that no action is required to address human health risk based upon the current site land use at OT001. The BRA also concluded no further action is required to address ecological impacts due to site contaminants. In a letter dated 6 August 2004, ADEC indicated it concurs with the risk assessment conclusions for this area. The Air Force agrees to implement institutional controls and will be performing Five-Year Reviews.

ADEC Response to Air Force Response: Please clarify that the Proposed Plan will be modified to indicate that action is required at this site.

ADEC Comment:

1. ADEC does not concur with the proposed no action required for this site [OT-001].
 - a) Establishing and enforcing ICs and conducting 5-year reviews are actions that are required to prevent exposure to contamination.
 - i. The EPA, in *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and other Remedy Selection Decision Documents* (EPA 540-R-98-031), Section 8.1 *Documenting No Action Decisions* starts out: "The lead

agency may determine that no action (i.e., no treatment, engineering controls, or institutional controls) is warranted....

- ii. The DOD has also supported this in the *Memorandum Interim Guidance on Environmental Restoration Record of Decision* (4 June 2002). In the second paragraph: "When a remedial action is taken, it must be documented in a ROD as required by CERCLA and its implementing regulation, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This requirement fully applies to remedies that have a use restriction component."

2. The Proposed Plan does not present the remedial alternatives that were analyzed for the site. [40 CFR 300.430 (f) (2)].

Air Force Response:

Comment 1: Based on the results of the ADEC-approved BRA for OT-001, the site does not pose an unacceptable risk to human health or the environment under the current or reasonably anticipated recreational use. The Air Force, as the lead agency, has selected NFA under CERCLA for OT-001, as no CERCLA COCs are present at the site above 18 AAC soil cleanup levels. Institutional controls (ICs) will be established under state law for OT-001 to prevent exposure to State of Alaska COCs present onsite. The Air Force has selected ICs as a CERCLA remedy for WP-007, which meets all applicable requirements of the State of Alaska – including, but not limited to, 18 AAC 75.

Comment 2: Based on the results of the ADEC-approved BRA for OT001, the site does not pose an unacceptable risk to human health or the environment under the current or reasonably anticipated recreational use. ADEC concurred with that conclusion. The Air Force, as the lead agency, has determined that no action is necessary because the site poses no unacceptable risk to human health or the environment. In cases where no action is warranted, presentation of remedial alternatives in the Proposed Plan is not required.

Comments from Dora Johnson: After many discussions regarding the Air Force cleanup proposed for Nikolski, I would like to comment on what I have learned.

When the Air Force first came to the community, a meeting was held to discuss the cleanup. At that time, the people in the community wanted it cleaned up for residential use. Now it is going to be cleaned for recreational use. Who decided this when the community wanted

residential? So much for listening to the people residing in Nikolski. Before the Air Force took up residence in Nikolski, the people utilized these lands.

Granted, residents of Nikolski would not live on High Hill. There isn't any way to get electricity and water up there without spending a lot of money to make it work. At Lower Camp, it could be used for residential, but I don't think people would live there. They may go there for gathering berries or other plants for medicinal purposes.

My main concern is Mona Lisa Beach – what is known as the POL, where the fuel storage tanks are. This area is ideal for residential use. Looking at it from my viewpoint, there is fresh water nearby, subsistence right out your front door, shelter from storms, the reef right out front. It isn't that far from the main village to get electricity for houses. It is also the deepest cove in the community for boats to utilize and easier for us to offload due to lack of a dock.

I have also learned that the Air Force is probably going to withdraw Mona Lisa Beach lands for transferring to the corporation. I feel that this is not right. The village corporation had to give up lands to get the lands that the Air Force has claimed. Besides, after legislation passed, in order to make changes, isn't there some kind of process that has to be done in order to make them? If memory serves me correctly, all the land that the Air Force owns has to be cleaned up before transferring them to the corporation. It sounds as if it is not going to happen. Why not?

Air Force Response: As noted in the comment from Dora Johnson, it is not probable that residents of Nikolski would establish residences on High Hill because of the expenses to provide water and electrical service to that area. However, Ms. Johnson also commented that the Mona Lisa Beach area, location of the SS004 POL Tank Farm site, is ideal for residential use. Discussions between Chaluka Corporation and the Air Force in 2008 and 2009 have resulted in mutual understanding regarding future land uses at High Hill and Mona Lisa Beach. Consequently, the Air Force is proceeding with plans to clean up the SS004 POL Tank Farm area to enable future residential land use; Chaluka Corporation has indicated that it is willing to provide concurrence with Air Force plans to establish ICs as a remedy for those sites where future land use is not anticipated to be residential, such as OT001 and WP007 on High Hill. Air Force policy provides that the future land use can be assumed, to the extent consistent with applicable law, to be the same category of use that occurred when the property was part of an active installation.

Comments submitted on behalf of Chaluka, Inc. from Seaver & Wagner, LLC, Attorneys for Chaluka Corporation: Of the six Proposed Plans issued by the Air Force, four involve land to be conveyed to Chaluka pursuant to special legislation enacted by the U.S. Congress in 2003 (hereinafter “Airport Legislation”). In three of those four Proposed Plans, the Air Force proposes to place restrictions on the use of the land. The bulk of Chaluka’s comments are directed to these three Proposed Plans (Site SS010, Site WP007, and Site OT001).

The central purpose of the Airport Legislation was to enable Chaluka to obtain the surface estate of certain land previously withdrawn by the Air Force and to finalize Chaluka’s land selection under ANCSA. The withdrawn land included an airstrip used by the village of Nikolski, as well as other land in relatively close proximity to the village. In exchange for receipt of the withdrawn land, the legislation required Chaluka to relinquish certain land of approximately equal acreage that Chaluka had previously selected as part of its ANCSA allotment (hereinafter “the Exchanged Land”). The Airport Legislation also required Chaluka to confirm its final entitlement to land under ANCSA. The relinquished land was of particular value to the federal government because of its biological significance. Because ANCSA requires that land exchanges be based on parity of value and not simply parity of acreage, implicit in the legislation was the assumption that the exchanged parcels were of approximately equal value [43 USCA §1621(f)].

The Airport Legislation also provided that the conveyance of the withdrawn land would occur in two phases. Under this two-phased approach, Chaluka was to receive conveyance of the airstrip “as soon as practicable” after relinquishing the Exchange Land and confirming Chaluka’s final entitlement to land under ANSCA. The second phase was to occur only after the Air Force completed “environmental restoration (of the Phase II lands) in accordance with applicable law” (Section 190(c)(1)(B)). The Airport Legislation also provided that “[c]onveyances made under [the legislation] shall be considered to be conveyances under ANSCA...and are subject to the provisions of that Act...”

The U.S. Supreme Court has offered the following explanation of ANCSA’s purpose:

“In enacting ANCSA, Congress sought to end the sort of federal supervision over Indian affairs that had previously marked federal Indian policy. ANCSA’s text states that the settlement of the land claims was to accomplish “without litigation, with maximum participation by Natives in

decisions affecting their rights and property, without establishing any permanent racially defined institutions, rights, privileges, or obligations, [and] *without creating a reservation system or lengthy wardship or trusteeship.*” §1601(b) (emphasis added).

To this end, ANCSA revoked “the various reserves set aside ... for Native use” by legislative or executive action, except for the Annette Island Reserve inhabited by Metlakatla Indians, and completely extinguished all aboriginal claims to Alaska land. §§1602, 1618(a). In return, Congress authorized the transfer of \$962.5 million in federal funds and approximately 44 million acres of Alaska land to state chartered private business corporations that were to be formed pursuant to the statute; all the shareholders of these corporations were required to be Alaska Natives. §§1605, 1607, 1613. The ANCSA corporations received title to the transferred land in fee simple, no federal restrictions applied to subsequent land transfers by them.”

As this language demonstrates, the intent of ANCSA was not only to completely extinguish Alaska Native’s claims to aboriginal lands, but also established a scheme that avoided ongoing federal involvement in Alaska Native affairs. Most importantly, the mechanism for accomplishing both of these goals was the grant in “fee simple” without restriction.

Black’s Law Dictionary, one of the most accepted treaties for legal terms, explains that, “typically, [the] words ‘fee simple’ standing alone create an *absolute* estate in devisee....” Black’s goes on to explain that “fee simple signifies a pure fee.... It is the largest estate and most extensive interest that can be enjoyed in any land.”

In the comments submitted by the DOI, the DOI states that “...we know of no statutory authority that allows the Secretary of the Interior to encumber land transferred pursuant to ANCSA with land use controls such as the institutional controls apparently contemplated by the Air Force.” Chaluka certainly concurs with DOI’s conclusion. But Chaluka would submit further that not only is there no authority for such restrictions, but that ANCSA, in fact, prohibits such restrictions. In sum, placing restrictions on the use of the land is antithetical to ANCSA’s requirement that land be conveyed in “fee simple.”

As a justification for its intent to place use restrictions on the Phase II lands, the Air Force apparently relies on the language in Section 190(c)(1)(B) of the Airport Legislation. As stated above, that section provides that the Phase II lands shall be conveyed to Chaluka “upon completion of environmental restoration...in accordance with applicable law.” The Air Force apparently holds that “applicable law” allows it to take into consideration the “current and future land use” in determining the necessary level of “environmental restoration.” This argument elevates the general and ambiguous reference to “applicable law” over the specific and plain statement that conveyance under the Airport Legislation “shall be considered to be conveyances under the Alaska Native Claims Settlement Act....”

It is a well-settled rule of statutory interpretation that “interpretation of a word or phrase depends upon reading the whole statutory text, considering the purpose and context of the statute and consulting any precedents or authorities that inform the analysis.” In light of this rule, there is no reason to believe that the phrase “applicable law” allows for restoration to some level below that necessary for unrestricted use. On the contrary, the obvious meaning of that phrase is that Phase II land needed to be cleaned up pursuant to “applicable law” to a degree that would allow an unrestricted transfer of property as required by ANCSA.

This conclusion is further bolstered by the fact that the legislation included an exchange of land of presumed equal value. There can be no dispute that the land Chaluka relinquished pursuant to the Airport Legislation is free of contamination and included no restrictions on its use. Thus, to force Chaluka to receive contaminated and restricted land in exchange for the relinquished land is to give Chaluka less than Congress expressly intended for them to receive.

The Air Force’s Proposed Plans suffer from the additional problem that Chaluka has already carried out the obligations required of it by the statute. Chaluka has already relinquished the Exchange Lands and has received patent to the Phase I lands under the Airport Legislation. In effect, Chaluka has carried out its side of the bargain, it should not now be forced to accept something less than what was originally promised.

For all the above reasons, Chaluka objects to the Air Force’s Proposed Plans regarding Site SS010, Site WP007, and Site OT001. Chaluka submits that those lands should be restored to a condition in which they can be conveyed without restriction pursuant to “applicable law.” Anything less is contrary to Congress’s clear mandate as expressed in the Airport Legislation.

In addition to the above comments, Chaluka concurs with and incorporates, by reference, ADEC's objections to the Proposed Plans regarding Site SS010, Site WP007, and Site OT001.

As for the Proposed Plans for ST018 and SS005, based on the Air Force's assurance that no use restrictions will be placed on those sites and based on its proposed actions for ST018, Chaluka offers no additional comment on those plans.

Regarding the Proposed Plan for Site ST017, Chaluka concurs with and incorporates, by reference, ADEC's objections to the Proposed Plans for that site.

Air Force Response: No use restrictions are under consideration for ERP Site SS005. As indicated in this ROD, the CERCLA selected remedy for SS005 is NFA. In addition, no remedy is being selected for SS005 under State of Alaska regulations.

As stated in its letter of 12 November 2008 to the Air Force, ADEC has not previously concurred with the selected remedy at ST017 because of unresolved issues regarding land ownership and establishment of ICs. However, discussions between Chaluka Corporation and the Air Force in 2008 and 2009 regarding the establishment of ICs have resulted in a mutual understanding that will enable the Air Force to establish ICs as a remedy at specific environmental restoration sites, such as OT001 and WP007, where future land use is not anticipated to be residential. Regarding ST017, please note that the ROD for ST017 was signed by Air Force and ADEC in May 2010; the CERCLA-selected remedy for ST017 is ICs (sign placement) and long-term water quality monitoring. The ICs will be removed after monitoring determines that the trichloroethene (TCE) concentrations in the seep water downslope from ST017 are below the maximum containment level (MCL) of 5 parts per billion. Regarding SS010, the Air Force is also proceeding with plans to remove soils contaminated with PCBs at levels in excess of the ADEC cleanup level of 1 mg/Kg. Also, please see the response to the comment from Dora Johnson.

Comment from George Bezezekoff: The presentation on Proposed Plans on six sites were informational. It clarify what the work that will be accomplished.

The beach front of airstrip to High Hill is a primary subsistence area. In summer, various species of fish are caught at Sheep Creek. In winter, various species of ducks and harbor seals are hunted, from Sheep Creek to High Hill and beyond. There is streams within these areas where hunting exists.

At Mona Lisa Beach, there are storage tanks with streams around the location. It has been addressed there is no alarm for health hazard. This area is heavily used for winter hunts, as well as cattle roam the area.

During presentation, the areas cleaned were set for recreation usage. At no time industrial usage was discussed. Mona Lisa area would be a good place to set a home or scenic viewing area.

There will be monitoring in progress after 5 years of cleanup. I would address let the entities in the Native Village of Nikolski be advised ... as well the Chaluka Corporation.

The land was pristine before development...let's leave it to its original format. The land is of rich resource for subsistence use, year round. Have a good summer.

Air Force Response: The selected remedy of excavation of PCB-contaminated soils above 1 mg/Kg for Site OT010 will not require restrictions on future subsistence or other land uses at the site.

Comments from Ramona Chinn, Deputy State Director, Conveyance Management, U.S. Bureau of Land Management (BLM): Thank you for providing an opportunity to comment on six CERCLA Proposed Plans at Nikolski, Alaska. The lands included in these plans are within the Alaska Maritime National Wildlife Refuge (NWR), were withdrawn under Public Land Order No. 2374 in 1961 for the Nikolski RRS, and remain withdrawn for and under the administrative jurisdiction of the Air Force. The BLM's role with respect to these lands is limited to implementation of special legislation enacted in 2003. Under that legislation, the Secretary of Interior is directed to convey "each parcel of Phase II lands upon completion by the Department of the Air Force of environmental restoration of Phase II lands in accordance with applicable law". Two Native corporations, Chaluka Corporation (Chaluka) and The Aleut Corporation were offered conveyance of these lands in exchange for relinquishing acres owed to them under ANCSA. The corporations accepted the offer and performed the actions required of them and have, thus, gained an equitable interest in all Phase II lands.

The Air Force has characterized the future use of these lands as "recreational". Based on this characterization, the Air Force proposes to leave contamination in place utilizing land use controls to protect human health, welfare, and the environment. According to the plans, such

ICs are necessary to ensure that the exposure assumptions, on which the plans are based, remain valid.

The Proposed Plans indicate that several sites contain significant COCs, as well as high levels of petroleum contamination. However, the information provided in the Proposed Plans is insufficient for us to understand the volume, nature, and extent of the existing contamination.

The chart below reflects BLM’s current understanding of the individual contaminated sites within the Phase II lands.

Site ID	Facility Name	PLO 2374	Survey	LUC (Yes/No)	Total Acres	Estimated LUC Acres ¹
N/A	Landfill	Tract A	Tract 37A	Unknown	9.64	Unknown
ST017	Construction Camp Septic Tank	Tract A	Tract 37	Yes	200.39	40
OT001	Composite Building – White Alice Arrays	Tract A	Tract 37	Yes	0	(included in 40 acres above)
SS010	Composite Building – POL Outfall	Tract A	Tract 37	Yes	0	(included in 40 acres above)
ST018	Composite Building – Septic Tank and Outfall	Tract A	Tract 37	No	0	None
WP007	Transformer Building and White Alice Arrays	Tract A	Tract 37	Yes	0	(included in 40 acres above)
SS004	POL Tank Area	Tract C	Tract 38		22.95	“small portion”
Total					232.98	Unknown

Key:
 1 – Based on U.S. Air Force site maps.
 LUC – land use control
 N/A – not applicable
 PLO – Public Land Order
 POL – Petroleum, Oil, and Lubricants

Note that our comments do not address the portion of ST017 or SS005 (Construction Camp Septic Tank and Runway Lighting Vault/UST) located on lands previously conveyed to Chaluka Corporation and to The Aleut Corporation. The chart does include SS004 (POL Tank Farm), because it is located on Phase II lands to be conveyed and land use controls are apparently under consideration. The chart also includes Tract 37A, which is not addressed in the Proposed Plans, but which we had previously understood to contain a solid waste landfill.

The Proposed Plans fail to acknowledge that the federal government, via acts of Congress, has committed to transferring these land to Alaska Native corporations, or that Congress has

directed these conveyances be treated as though they were made pursuant to ANCSA. Lands conveyed under ANCSA must include all right, title, and interest of the United States. We know of no statutory authority that allows the Secretary of the Interior to encumber lands transferred pursuant to ANCSA with land use controls such as the ICs apparently contemplated by the Air Force. Further, the transfer of contaminated lands via ANCSA has been a sensitive issue for corporations and the DOI. In a report to Congress dated December 1988, DOI made the following pledge, “With respect to lands yet to be conveyed, we will take all practical steps to avert the future conveyance of contaminated land.”

We do not recall any discussions with the corporations prior to their acceptance of the exchange offer that would have put them on notice that the Air Force would subsequently interpret “environmental restoration” to mean leaving contaminants in place. The decision by the Air Force to apply its 2004 *Performance Based Management Policy* to these lands ignores the requirements of the 2003-enacted legislation and appears to disregard the parties’ understanding that DOI would be transferring and the corporations would be receiving clean lands with unrestricted use.

There is no indication that future landowners Chaluka and The Aleut Corporation have concurred with the use of ICs. It is our understanding that their concurrence is a requirement that must precede concurrence from ADEC.

It is our belief that your plans to place ICs on Phase II lands on the Nikolski RRS are inconsistent with the disposition of these lands as directed by Congress. Therefore, the BLM objects to those plans.

Air Force Response: Discussions between Chaluka Corporation and the Air Force in 2008 and 2009 have resulted in a mutual understanding regarding future land uses at High Hill and Mona Lisa Beach. Consequently, the Air Force is proceeding with plans to clean up the SS004 POL Tank Farm area to enable future residential land use. Chaluka Corporation has indicated that it is willing to provide concurrence with Air Force plans to establish ICs as a remedy for those sites where future land use is not anticipated to be residential, such as OT001 and WP007 on High Hill. The Air Force has lead agency authority under CERCLA pursuant to Executive Order 12580, and the Air Force is exercising its authority consistent with applicable law. Public Law 108-176, Section 2862, relating to the cleanup and transfer of property at Nikolski, specifically states in Section 2862(e), "Nothing in this section affects the requirements and responsibilities of the United States under Section 120(h)

of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 [42 USC 9620(h)] or other applicable law.”

Subsequent discussions between Chaluka Corporation, corporate legal counsel, ADEC, and the Air Force in 2008 and 2009 have resulted in a mutual agreement that future, long-term land use in the High Hill area is not expected to be residential. However, Site SS004 at Mona Lisa Beach will be cleaned up for future residential land use as a condition of the corporation's concurrence with the application of ICs as a remedy for those sites where the future land use is not expected to be residential. Also, please see the responses to comments from Dora Johnson, George Bezezekoff, and Seaver and Wagner, LLC, Attorneys for Chaluka Corporation.

Comment from Greg Siekaniec, Refuge Manager, Alaska Maritime NWR, U.S. Fish and Wildlife Service (USFWS): The USFWS recently reviewed six Proposed Plans for sites associated with the former Nikolski RRS on Umnak Island, Alaska.

The lands included in the Proposed Plans are located within the exterior boundaries of the Alaska Maritime NWR and were withdrawn under Public Land Order No. 2374. The USFWS is concerned that the Air Force proposes minimal or no removal of contamination at several sites. Our review of the Proposed Plans and the 2003 FS indicate contamination in soils and/or water exceed levels associated with unlimited use at sites OT001, WP007, SS010, and ST017. Should the Air Force leave contamination in place with ICs, the USFWS could not fulfill its obligation to Chaluka Corporation under Public Law 108-176. This legislation permits direct conveyance by the BLM from the Air Force to the Chaluka Corporation “upon completion of environmental restoration of the Phase II lands in accordance with applicable law” (Section 190(c)(1)). Should the Air Force decide to retain these lands under their jurisdiction rather than completing the cleanup as required by the legislation, the USFWS would actively resist further attempts to accept these lands for management under the NWR System.

Air Force Response: Discussions between Chaluka Corporation and the Air Force in 2008 and 2009 have resulted in a mutual understanding regarding future land uses at High Hill and Mona Lisa Beach. Consequently, the Air Force is proceeding with plans to clean up the SS004 POL Tank Farm area to enable future residential land use. Chaluka Corporation has indicated that it is willing to provide concurrence with Air Force plans to establish ICs as a remedy for those sites where future land use is not anticipated to be residential, such as

OT001 and WP007 on High Hill. The Air Force has lead agency authority under CERCLA pursuant to Executive Order 12580, and the Air Force is exercising its authority consistent with applicable law. Public Law 108-176, Section 2862, relating to the cleanup and transfer of property at Nikolski, specifically states in Section 2862(e), "Nothing in this section affects the requirements and responsibilities of the United States under Section 120(h) of the Comprehensive Environmental Response, compensation, and Liability Act of 1980 [42 USC 9620(h)] or other applicable law."

Subsequent discussions between Chaluka Corporation, corporate legal counsel, ADEC, and the Air Force in 2008 and 2009 have resulted in mutual agreement that future, long-term land use in the High Hill area is not expected to be residential. However, Site SS004 at Mona Lisa Beach will be cleaned up for future residential land use as a condition of the corporation's concurrence with the application of ICs as a remedy for those sites where the future land use is not expected to be residential. Also, please see the responses to comments from Dora Johnson, George Bezezekoff, and Seaver and Wagner, LLC, Attorneys for Chaluka Corporation.

PART 4. REFERENCES

- Alaska Department of Environmental Conservation (ADEC). 2000. Installer's Manual for Conventional Onsite Domestic Wastewater Treatment and Disposal Systems.
- ADEC. 2002. Underground Storage Tanks Procedures Manual. Guidance for Treatment of Petroleum-Contaminated Soil and Water and Standard Sampling Procedures. 7 November.
- ADEC. 2006. Letter from ADEC to The U.S. Fish and Wildlife Service. 6 January.
- U.S. Air Force (USAF). 1988. Nikolski RRS 1988 Site Demolition binder obtained from 611th CES archives. The binder contains an informal collection of historical documents including photographs, the after action report dated 21 June 1988, and daily logs from the site demolition.
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- USAF. 1997b. Transportation and Disposal Plan, Nikolski Drum Removal, Nikolski, Alaska. Prepared for USAF 611th Air Support Group, 611th Civil Engineer Squadron, Elmendorf AFB. October.
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USAF. 2002a. Remedial Investigation, Nikolski RRS, Alaska. Final. Prepared for USAF 611th Air Support Group, 611th Civil Engineer Squadron, JBER. February.

USAF. 2002b. Supplemental Remedial Investigation for Sites AOC07 and SS004, Nikolski RRS, Alaska. Final. Prepared for USAF 611th Air Support Group, 611th Civil Engineer Squadron, JBER. October.

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USAF. 2008. Cleanup Report for SS004: POL Tank Area, Draft Final. July

USAF. 2010a. Site Investigation Report for SS005: Runway Lighting Vault UST, Final. March.

USAF. 2010b. Site Investigation Report for TU019; Two 20,000-Gallon USTs, Final. March

USAF. 2012. SS004 Combined Groundwater and Soil Sample results September 2009, May 2010, and September 2010, Final. August.

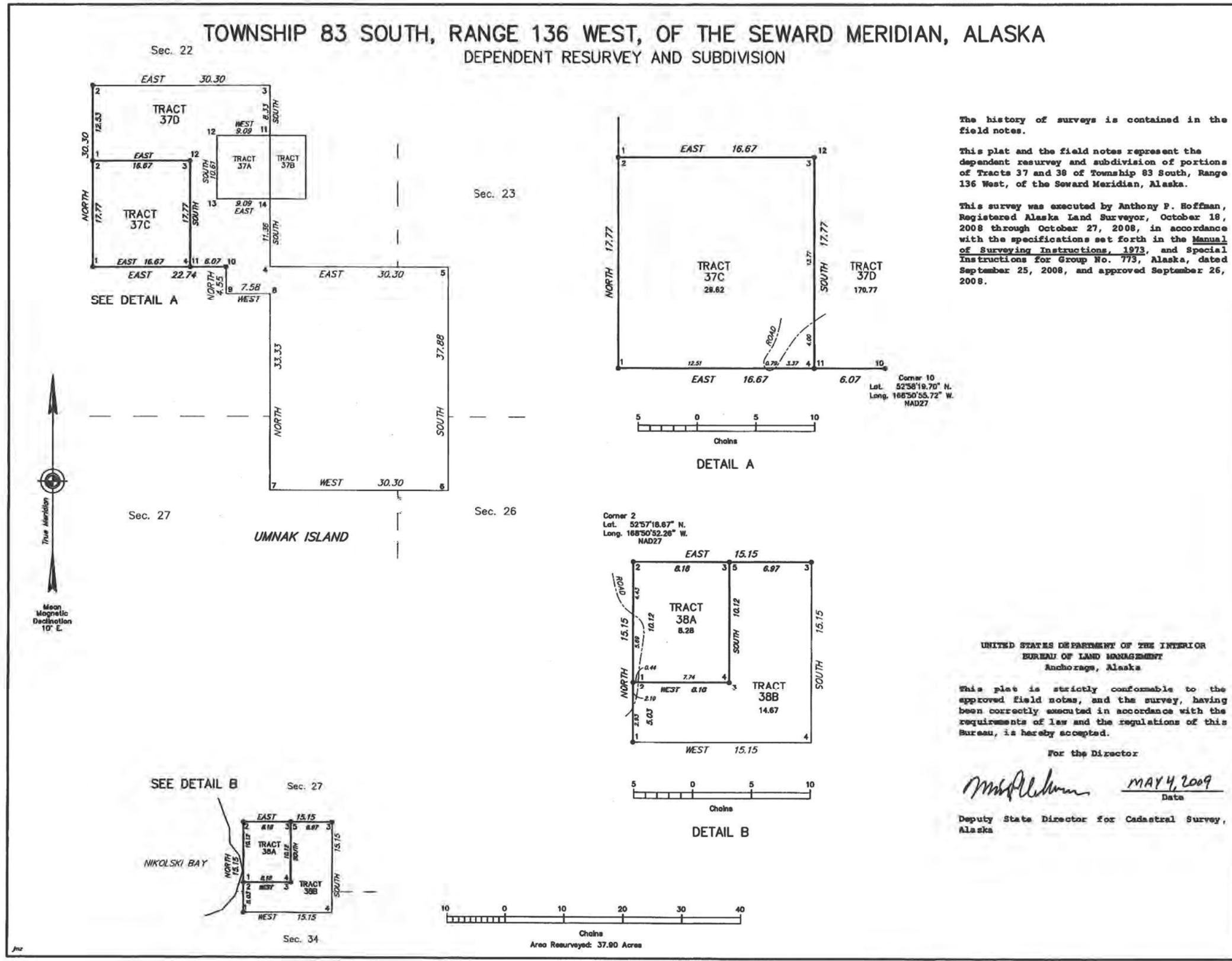
APPENDIX A

Land Surveys



FIGURE A-1
U.S. AIR FORCE - NIKOLSKI LRRS, ALASKA
RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005
**INSTITUTIONAL CONTROL DIAGRAM
SUBDIVISION OF TRACTS 37, 38, AND 39**

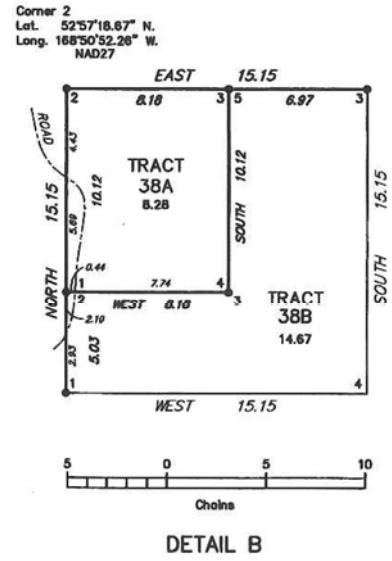
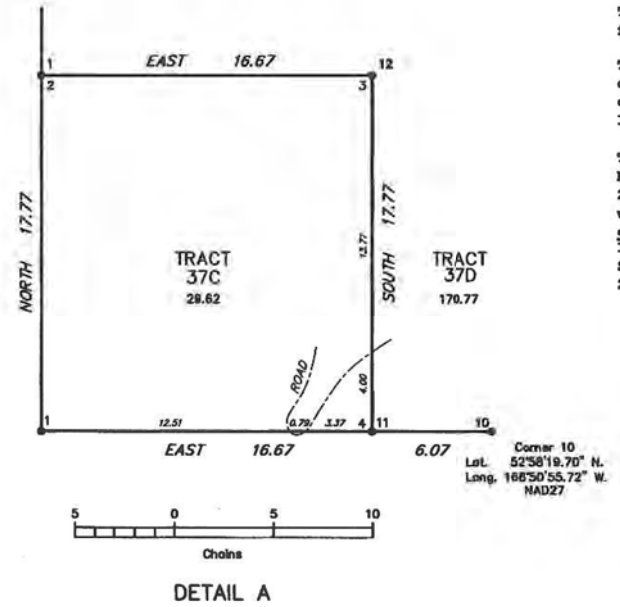
TOWNSHIP 83 SOUTH, RANGE 136 WEST, OF THE SEWARD MERIDIAN, ALASKA DEPENDENT RESURVEY AND SUBDIVISION



The history of surveys is contained in the field notes.

This plat and the field notes represent the dependent resurvey and subdivision of portions of Tracts 37 and 38 of Township 83 South, Range 136 West, of the Seward Meridian, Alaska.

This survey was executed by Anthony P. Hoffman, Registered Alaska Land Surveyor, October 18, 2008 through October 27, 2008, in accordance with the specifications set forth in the Manual of Surveying Instructions, 1973, and Special Instructions for Group No. 773, Alaska, dated September 25, 2008, and approved September 26, 2008.



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Anchorage, Alaska

This plat is strictly conformable to the approved field notes, and the survey, having been correctly executed in accordance with the requirements of law and the regulations of this Bureau, is hereby accepted.

For the Director
Anthony P. Hoffman MAY 4, 2009
Date
Deputy State Director for Cadastral Survey,
Alaska

S.D.R.

FILE: D:\CAD\Drawings\AFCEE\Nikolski\2012 ROD\6-shes (AOC01-LF001-SS002-SS003-SS004-SS005)\prelim draft\appndx.AMap Ac2.dgn
TIME: 11-JUL-2012 14:07
JOB No. 1012609-392020401

FIGURE A-2
U.S. AIR FORCE - NIKOLSKI LRRS, ALASKA
RECORD OF DECISION FOR AOC01, LF001, SS002, SS003, SS004, AND SS005
**INSTITUTIONAL CONTROL DIAGRAM
SUBDIVISION OF TRACTS 37, 38, AND 39**

APPENDIX B

Response to Comments

Comments on:

CERCLA ROD, Nikolski AOC01, LF001, SS002, SS003, SS004 and SS005, January 2013

Comment No.	Page	Section	Comment / Recommendation	Air Force Response
1.	1-4	1.2.2	...being addressed consistent with Title 46 of the Alaska Statutes and 18 AAC "Chapters 60" and 75 promulgated thereunder. The State of Alaska agrees that the selected remedy, "when properly implemented" will meet the State of Alaska regulatory requirements.	Agree. The text has been modified as requested.
2.	1-4	1.3.2	ERP Sites AOC01, SS002, and SS005, "this" should be these.	Agree. The text has been modified as requested.
3.	1-4	1.3.2	ERP Site LF001. The appropriate regulations for this are 18 AAC 60, 18 AAC 75.325(i) does not apply. Please review 60.270, 60.390 and .396 for more specific requirements.	Agree. The reference to 18 AAC 75.325(i) has been removed because 18 AAC 60 is referenced earlier in the paragraph.
4.	1-6	1.4.2	Please add to the first bullet, entry of the land use restrictions in the state land records.	Agree. The statement will be added to the first bullet.
5.	1-6	1.4.3	3rd paragraph. Please delete the last sentence, since the COPC was petroleum, NFA under CERCLA doesn't necessarily mean it meets state cleanup requirements and replace it with "DEC has determined the site meets applicable cleanup levels defined in 18 AAC 75."	Agree. The text has been modified as requested.
6.	1-7	1.4.4	3rd paragraph, excavation and off-site disposal is not required under state regulations, the Air Force has chosen this remedy to meet the state regulation that releases be cleaned up to applicable levels. Rephrase to say "in accordance with" instead of required by.	Agree. The text has been modified as requested.

Comment No.	Page	Section	Comment / Recommendation	Air Force Response
7.	1-7	1.4.5	Please add long term monitoring of the groundwater to the summary of the remedy in the first paragraph.	Agree. The text has been modified as requested.
8.	1-8	1.4.5	Please add to the first bullet, entry of the land use restrictions in the state land records.	Agree. The statement will be added to the second bullet.
9.	1-8	1.4.5	1 st paragraph this page, excavation and off-site disposal is not required under state regulations, the Air Force has chosen this remedy to meet the state regulation that releases be cleaned up to applicable levels. Rephrase to say “in accordance with” instead of required by.1-8	Agree. The text has been modified as requested.
10.	1-8	1.4.5	2 nd bullet, add that the AF will also incorporate the restriction in the 611 CES LUCMP	Agree. The text has been modified as requested.
11.	1-8	1.4.5	4 th bullet, include the frequency of the reports.	Agree. An annual reporting requirement has been added to the text.
12.	1-8	1.4.5	6th bullet, please change “seek” to “obtain”.	Agree. The text has been modified as requested.
13.	1-9	1.4.6	Remedy Required under State of Alaska Regulations. No remedy is required for SS005 under State of Alaska Regulations. Delete “The Air Force has selected a CERCLA remedy for this site that meets” and replace with “Prior environmental response actions implemented by the Air Force have met”	Agree. The text has been modified as requested.
14.	1-9	1.5	3 rd paragraph, this needs to be expanded to state that remedial action is required under State law.	Agree. The following sentence has been added: “However, the selected remedies for ERP Sites LF001, SS003, and SS004 require further action under State of Alaska Regulations.”
15.	1-9	1.5	4 th paragraph, this incorrectly implies that excavation and off-site disposal is treatment.	Agree. “Treatment” has been changed to “remedial action.”

Comment No.	Page	Section	Comment / Recommendation	Air Force Response
16.	1-10	Table 1-1	This table does not agree with 2.4.4. The cleanup levels should be the ingestion pathway for the over 40" zone of 8250 and 8300.	Agree. The text has been modified as requested.
17.	2-2	2.1.2	If the area outlined on Fig 2-4 is the landfill, then Tract 37A does not appear to include the entire area.	The area outlined on Figure 2-4 is incorrect. The document should have depicted Tract 37A instead. This will be corrected in the revised document. In addition, we will also revise Figure 2-2 Site Map as well.
18.	2-22	2.2	USAF 2010a is not in the reference section and USAF 2010 is not the document in reference section.	In the revised document, reference 2010a will be <i>USAF. 2010a. Final Site Investigation Report for TU019; Two 20,000-Gallon USTs, March. Reference 2010 will be Final Site Investigation Report for SS005: Runway Lighting Vault UST, March.</i>
19.	2-24	2.2.5	(USAF, 2008) is not in the references.	In the revised document, reference 2008 will be <i>USAF. 2008. Draft Final Cleanup Report for SS004: POL Tank Area, July.</i>
20.	2-25	2.2.5	SS004 Groundwater Conclusions, last sentence, please insert three consecutive "annual" monitoring events and include that the schedule will not be altered without prior ADEC approval.	Agree. The text has been modified as requested.
21.	2-32	2.2.5	Former Pumphouse Excavation. The second sentence of the first paragraph and the first sentence of the second paragraph are redundant. Please remove one.	Agree. The second instance of this sentence has been removed.
22.	2-41	2.2.6	Paragraph after bullets, the first sentence is missing a space.	Agree. The missing space has been inserted.
23.	2-47	2.5.7	ERP Site SS003, incorrect cleanup levels, should be 8250 DRO and 8300 RRO	Agree. The text has been modified as requested.

Comment No.	Page	Section	Comment / Recommendation	Air Force Response
24.	2-47	2.5.7	ERP Site SS004, please add the groundwater impacts.	Agree. A short discussion about groundwater contamination has been added to this section.
25.	2-48	2.6.1	This section should explicitly state which parcels are being transferred and which are being retained. It should also include who will be responsible for the long term monitoring and maintenance of the LUCs and the submission of the reports.	<p>Section 2.6.1 is identical to the land use description that was published in the executed September 2011 Final ROD for sites OT001, ST018, and WP007. The Phase II lands pending conveyance to the Native corporations are Tract 37A, Tract 37C, Tract 37D, Tract 38A, Tract 38B, and Tract 39A. As stated in the text, environmental restoration of the Phase II lands is the responsibility of the Air Force. Upon completion of environmental restoration of the Phase II lands, the lands are to be conveyed to the Native corporations in accordance with applicable law.</p> <p>In regard to responsibility for long term monitoring, maintenance, and reporting on land use controls, that is the responsibility of the Air Force as already indicated in Section 1.4 Description of the Selected Remedies.</p>
26.	2-51	2.7.5.2	Please add: LUCs are necessary to prevent use of groundwater for drinking water until it meets cleanup levels.	Agree. The text has been modified as requested.
27.	2-53	2.9.2	Add to the 1 st bullet record the LUCs in the state land records and specifically state if the AF is maintaining ownership or transferring it. If transferring include who will be responsible for maintenance of the LUCs.	Agree. See response to Comment #8. In regard to the property transfer, see response to comment # 25.

Comment No.	Page	Section	Comment / Recommendation	Air Force Response
28.	2-53	2.9.2	4 th bullet, please explain why TSCA applies to the landfill.	The reference to 40 CFR 761.3 has been removed.
29.	2-55	2.9.5	2nd bullet, please add LUCs will be incorporated into the 611 CES LUCMP.	Agree. The text has been modified as requested.
30.	2-55	2.9.5	Include the LUCs will be placed in the state land records and that the land is planned for transfer.	Agree. The text has been modified as requested.
31.	3-2	3.2	The responsiveness summary should be edited to remove comments on sites not covered by this ROD.	Given that the public involvement process for proposed plans for Nikolski RRS sites did not occur simultaneously but in different calendar years, for consistency purposes, the Air Force would prefer to keep the comments in the ROD, as was done for the September 2011 ROD.
32.		Appendix A	This should be titled land surveys. There needs to be a section describing the LUCs for each TRACT and an IC implementation plan developed.	Agree, the appendix will be titled Land Surveys. The other information describing LUCs and implementation of LUCs will be provided in the final 611 th Air Support Group Land Use Control Management Plan. A courtesy copy of the final December 2012 LUCMP was provided to ADEC (John Halverson). The LUCMP will be updated annually to account for new LUCs established in executed RODs and decision documents for 611 ASG installations.
33.		Figure A-1	Provide a North indicator. Also it would be great if all figures had North in the same orientation.	Agree. A North indicator will be added to Figure A-1. CADD has oriented the North arrow on figures in the same direction to the extent possible.

Comment No.	Page	Section	Comment / Recommendation	Air Force Response
34.		Figure A-2	This is not a diagram of ICs. My understanding is there is no limit on use of Tract 37D. Only 37B is listed for the landfill. No mention of 38A or 38B in the ROD or 37C.	<p>Figure A-2 will be relabeled as a survey plat for the depicted tracts of property. Tract 37A encompasses site LF001. Tract 37C encompasses the ERP sites on High Hill addressed in the September 2011 ROD. To the best of our knowledge, Tract 37D is Phase II lands but does not encompass any known ERP sites other than ST017 (has an executed ROD) and SS002 (in this ROD). Tract 37B is neither Air Force property nor Phase II lands.</p> <p>Tract 38A encompasses SS004 and will be referenced in the description of the selected remedy for that ERP site.</p>