THE STATE of ALASKA
GOVERNOR BILL WALKER

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

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File: 320.38.004

November 27 2017

Stephen Krause, USAF Remedial Project Manager
USAF - Elmendorf
611 CES/CEAR
10471 20th Street, Ste 348
Elmendorf AFB, JBER, Alaska 99506-2201

Re: Decision Document: Lonely AFS Dewline – Module Train SS012,
Cleanup Complete Determination

Dear Mr. Krause:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with the Lonely AFS Dewline – Module Train (SS012) site at the U.S. Air Force Point Lonely Short Range Radar Station (SRRS), located in Point Lonely, Alaska. Based on the information provided to date, it has been determined that the contaminant concentrations remaining on-site do not pose an unacceptable risk to human health or the environment and no further remedial action will be required unless new information becomes available that indicates residual contaminants may pose an unacceptable risk.

This Cleanup Complete determination is based on the administrative record for the Lonely AFS Dewline – Module Train SS012, which is located in the DEC office in Fairbanks, Alaska. This decision letter summarizes the site history, cleanup actions and levels, and standard site closure conditions that apply.

Site Name and Location:
Lonely AFS Dewline – Module Train SS012
Point Lonely SRRS
75 miles northwest of Nuiqsut, AK 99789
Section 17, Township 18 North,
Range 5 West, Umiat Meridian

Name and Mailing Address of Contact Party:
Stephen Krause, USAF Remedial Project Manager
USAF – Elmendorf
611 CES/CEAR
10471 20th Street, Ste. 348
Elmendorf AFB, JBER, Alaska 99506-2201

DEC Site Identifiers:
File No.: 320.38.004
Hazard ID.: 2936

Regulatory Authority for Determination:
18 AAC 75

Site Description and Background

The Point Lonely SRRS is located on the Arctic Coastal Plain adjacent to the Beaufort Sea. The facility was constructed in 1953 as an auxiliary Distant Early Warning Line Station and currently occupies approximately 1,800 acres of low-lying, undisturbed tundra and man-made gravel pads. The Point Lonely station was active until 1989, and in 1993 was converted to a SRRS which operated until 2005. The nearest communities are Nuiqsut, located 75 miles southeast, and Barrow, located approximately 85 miles northwest. Prudhoe Bay/Deadhorse is located approximately 150 miles to the southeast. The facility is located in an area of the National Petroleum Reserve-Alaska, and has been used as a staging area for oil and gas exploration. This use is likely to continue and potentially increase after Air Force departure from the site.

The Module Train site is located southwest of the main installation pad and consists of the gravel pad underneath and surrounding the module train. Power generation and fuel tanks were located inside the train at the eastern end of the building. The radome is located slightly east of the center of the building. Two electrical transformer stands are located on the north side of the building near its east end. Doors on the north and south sides of the building beneath the radome lead to the transmitter room. The transmitter room area contained multiple electrical transformers to support operation of the radar system. The gravel pad is approximately 3 to 4 feet thick in the area, but thins to only a few inches beneath the building, which is raised on wooden pilings.

An initial investigation of contamination at the site was conducted in response to a 1993 diesel fuel spill reported on the west end of the module train. No petroleum contamination above cleanup levels was documented and it was determined that no further action was necessary, however a follow up investigation in 2005 revealed no diesel tanks were present on the west end of the module train and the generator room was, in fact, located on the east end of the module train. Therefore, the initial investigation did not properly characterize the site, and it was determined that areas most likely to be contaminated from the 1993 release were not evaluated. Further investigation efforts are detailed in the Characterization and Cleanup Activities section of this letter.

Contaminants of Concern

The following contaminants of concern were reported above the approved cleanup levels during the course of the assessments and remedial actions conducted at Lonely AFS Dewline – Module Train SS012:

- Polychlorinated Biphenyls (PCBs)

Cleanup Levels

Cleanup criteria for SS012 were based upon a comparison of analytical results to the DEC Method Two Cleanup Levels for the Arctic Zone, per 18 AAC 75.340. DEC has determined that migration to groundwater standard is not applicable for SS012 as the underlying permafrost and freezing temperatures prevent the formation of a groundwater aquifer and restrict the vertical migration of contaminants. The soil cleanup levels for the COCs at SS012 are presented below.

Table 1 – Approved Cleanup Levels

Contaminant	Soil Cleanup Level (mg/kg)
PCBs	1[1]

Notes:
mg/kg = milligrams per kilogram
*[1]Ingestion Cleanup Level per Table B2. Method Two – Soil Cleanup Levels Table, Arctic Zone, 18 AAC 75.341.

Characterization and Cleanup Activities

A 2001 Clean Sweep Environmental Survey at Point Lonely, documented PCB contamination from the wood flooring in the central portion of the module train at 6.13 mg/kg total PCBs. Further site characterization, initiated in 2005 and targeted at the correct location of the 1993 diesel spill, did not find petroleum contamination above cleanup levels, however additional PCB contamination was documented in soil samples on the north side of the building at a maximum concentration of 34.6 mg/kg.

In 2008, further surface soil sampling was conducted on the north side module train, on the east and west side of the entry way stairs. PCB wipe sampling was also conducted on both the transmitter room and the radar room floors. PCBs were detected in the wipe sampling, but results were below DEC cleanup levels.

Excavation of PCB contaminated soil began in 2009 on both sides of the entry stairs, located on the north of the building, and produced approximately 11 cubic yards (cy) of contaminated soil. Following the excavation, discrete sampling documented 3.4 mg/kg PCB in samples. As such, the excavation was extended by approximately ten feet, for an additional removal of nine cy of contaminated soil. PCB contaminated soil was shipped off-site for proper disposal. Final confirmation sampling found PCBs to be below cleanup levels.

In 2009, a diesel oil spill originating from the generator room, estimated to be 50 gallons or less, was discovered on a pond of melt water beneath the eastern end of the module train. Cleanup activities included sorbent booms and sorbent pads that were used until visible oil was removed from the water surface and impacts were determined to be of minimal impact due to the ground being frozen and covered with snow. An oil sample was collected from the recovery drums to characterize the product and sorbents and were shipped off-site for proper disposal.

The module train was demolished in 2015 and segregated for off-site disposal. Soil within the footprint was excavated to 6–12 inches below ground surface. After the initial excavation, a revised sampling approach was implemented that consisted of dividing the footprint into five decision units (DU), each approximately 2,500 square feet in size and taking the 95% Upper Confidence Limit (UCL) of the mean sample results for each unit. Samples were collected and analyzed for PCBs, and all 5 DUs exceeded the 95% UCL of the mean exceeding the cleanup criteria. A second round of excavation, removing another six inches of soil was conducted at DU02 and DU03. DU01, DU04, and DU05 were not included in the excavation because the raw sample results were not above cleanup levels. These DUs were resampled for a duplicate and triplicate dataset. After the second excavation, 30 discrete samples were taken within each DU and found PCB in exceedance of the cleanup level ranging 1.087–10.04 mg/kg. Because PCB levels remained in exceedance, the numerous discrete surface soil samples were used to determine "hot spots" contributing to the exceeding PCB levels. Twenty-three sub-area "hot spots" were identified and targeted for excavation by removing 4–6 inches of soil for off-site disposal. Further discrete post-excavation samples collected in 2015 documented PCB concentrations below the cleanup level, with the highest concertation remaining at 0.25 mg/kg.

Cumulative Risk Evaluation
Pursuant to 18 AAC 75.325(g), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be made that the risk from hazardous substances does not exceed a cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and does not exceed a cumulative noncarcinogenic risk standard at a hazard index of one across all exposure pathways.

Based on a review of the environmental record, DEC has determined that residual contaminant concentrations meet the human health cumulative risk criteria for residential land use.

Exposure Pathway Evaluation
Following investigation and cleanup at the site, exposure to the remaining contaminants was evaluated using DEC's Exposure Tracking Model (ETM). Exposure pathways are the conduits by which contamination may reach human or ecological receptors. ETM results show all pathways to be one of the following: De Minimis Exposure, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 2.

Pathway	Result	Explanation
Surface Soil Contact	Pathway Incomplete	Contamination is not present in surface soil (0 to 2 feet below ground surface).
Sub-Surface Soil Contact	De Minimis Exposure	Contamination remaining in the sub-surface is below cleanup levels.
Inhalation – Outdoor Air	De Minimis Exposure	Contamination remaining in the sub-surface is below cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	The building associated with this site has been demolished.
Groundwater Ingestion	Pathway Incomplete	Supra-permafrost groundwater is not a potential drinking water source.
Surface Water Ingestion	Pathway Incomplete	Surface water is not used as a drinking water source in the vicinity of the site and the contamination in the melt water pond on site has been cleaned up.
Wild and Farmed Foods Ingestion	De Minimis Exposure	Contaminants of concern do have the potential to bioaccumulate in plants or animals, but are below cleanup levels and relegated to the subsurface.
Exposure to Ecological Receptors	De Minimis Exposure	Contaminants of concern do have the potential to bioaccumulate in plants or animals, but are below cleanup levels and relegated to the subsurface.

Notes to Table 2: "De Minimis Exposure" means that in DEC's judgment receptors are unlikely to be adversely affected by the minimal volume or concentration of remaining contamination. "Pathway Incomplete" means that in DEC's judgment contamination has no potential to contact receptors

DEC Decision
Remaining soil contaminant concentrations at this site are below the approved cleanup levels. This site will receive a "Cleanup Complete" designation on the Contaminated Sites Database, subject to the following standard conditions:

Standard Conditions

1. Any proposal to transport soil or groundwater off-site requires DEC approval in accordance with 18 AAC 75.325(i). A "site" as defined by 18 AAC 75.990 (115) means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership.

2. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

This determination is in accordance with 18 AAC 75.380 and does not preclude DEC from requiring additional assessment and/or cleanup action if future information indicates that contaminants at this site may pose an unacceptable risk to human health, safety, or welfare or to the environment.

Appeal

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Division Director, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99811-1800, within 15 days after receiving the department's decision reviewable under this section. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99811-1800, within 30 days after the date of issuance of this letter, or within 30 days after the department issues a final decision under 18 AAC 15.185. If a hearing is not requested within 30 days, the right to appeal is waived.

If you have questions about this closure decision, please feel free to contact me at (907) 451-2166 or email at john.carnahan@alaska.gov.

Sincerely,

Digitally signed by John Carnahan
DN: cn=John Carnahan,
o=Contaminated Sites Program, ou=DEC Division of SPAR,
email=john.carnahan@alaska.gov, c=US
Date: 2017.11.27 10:33:08 -09'00'

John B. Carnahan
Environmental Program Specialist

cc: Spill Prevention and Response, Cost Recovery Unit

Attachments: Site Figures

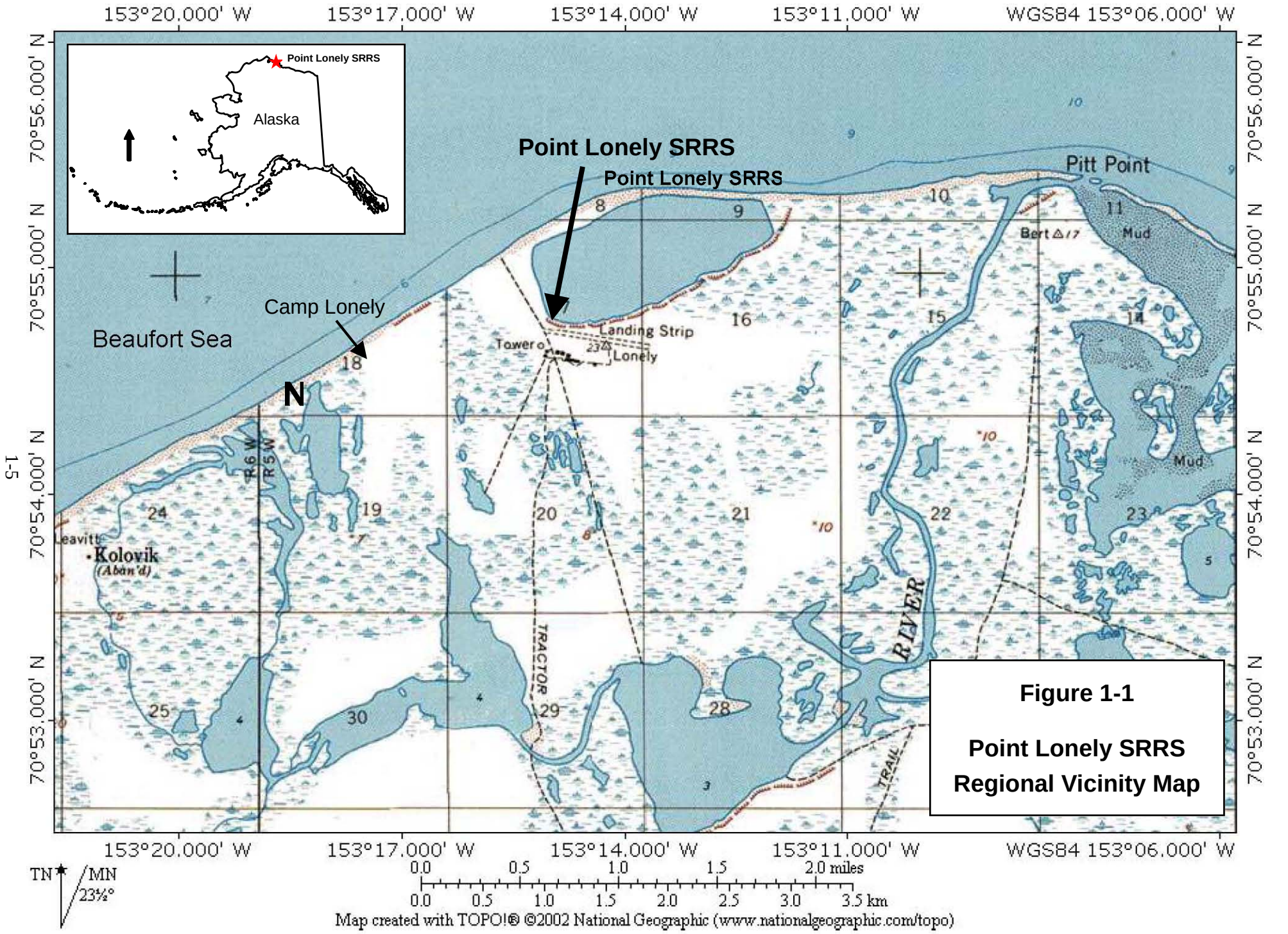
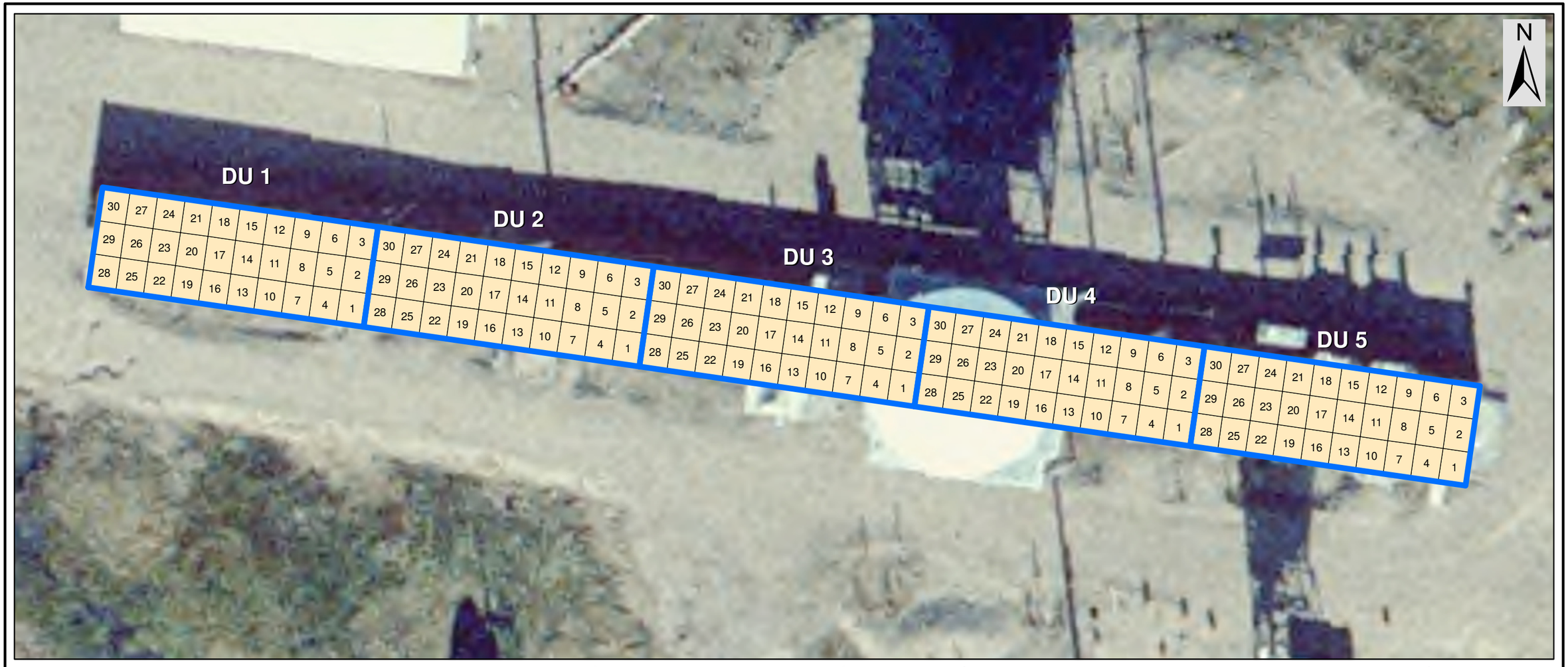


Figure 1-1

Point Lonely SRRS
Regional Vicinity Map


Sewage Disposal Area
SS001
Drum Storage Area
SS002
Beach Diesel Tanks
and Pumphouse
SS003
N
0 200 400 600 800
Feet
Old Dump Site No. 1
LF007
POL Storage Area
SS004
Garage
SS009
Diesel Spills
SS005
Module Train
SS012
Diesel Tank
SS010
Hangar Pad Area
SS013
Inactive Landfill/Vehicle Storage Area
LF011/SS006
Figure 1-2
Point Lonely SRRS
ERP Site Locations
Photo Date: 2001



Discrete Sampling Cell

MI Sampling Decision Unit Group
2,490 ft^2 each

Aerial Coverage: United States Air Force (2007)

0 30 60
Feet

AIR FORCE CIVIL ENGINEER CENTER

North Slope PBR

Point Lonely SRRS, Alaska
Modular Train Discrete Sampling

Decision Unit Discrete Sampling Location Map

PROJECT NO:
09-WERC04NWF

DATE:
September 2015