



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 No: 320.38.004

November 29, 2016

Steven Mattson, USAF Environmental Restoration Chief
AFCEC/CZOP
1047 20th Street, Suite 337
JBER, Alaska 99506-2201

**Re: Decision Document: Lonely AFS Dewline - Beach Diesel SS003 (Tanks and Pumphouse),
Cleanup Complete Determination**

Dear Ms. Roy:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with the Lonely AFS Dewline – Beach Diesel (SS003) site at the U.S. Air Force (USAF) 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 – Beach Diesel SS003 site, 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 –Beach Diesel (SS003)
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

Lori Roy, USAF Remedial Project Manager
USAF – Elmendorf
611 CES/CEAR
1047 20th Street
Elmendorf AFB, JBER, Alaska 99506-2201

DEC Site Identifiers

File No: 320.38.004
Hazard ID: 2924

Regulatory Authority for Determination

18 AAC 75

Site Description and Background

The Point Lonely SRRS was constructed in 1953 as an auxiliary Distant Early Warning Line (DEW Line) Station and was active until 1989. In 1993, the Point Lonely installation was converted to an SRRS, which operated until 2005.

Site SS003 is one of twelve sites located at the Point Lonely SRRS. The ‘Beach Diesel Tanks’ site (SS003) consisted of two former diesel tanks in a bermed containment area, a pumphouse distribution facility located approximately 300 feet northwest of the tank farm, and a pipeline running from the tank farm to the beach. In 2002 and 2005 the diesel tanks, pumphouse, and piping were removed during remedial actions following the erosion of the coastline. Subsequent investigations occurred during cleanup actions to remove petroleum contaminated soil and various forms of debris.

Erosion in the site area was significant and by 2015 all of the site (including the pumphouse and pad, the beach tanks and the pipe) was completely eroded.

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 SS003 as summarized in the Characterization and Cleanup Activities section of this letter:

- Diesel Range Organics (DRO)

Cleanup Levels

Cleanup criteria for the SS003 are based upon a comparison of analytical results to the DEC Method One Cleanup Levels for the Arctic Zone for DRO per 18 AAC 75.340.

Table 1 – Approved Soil Cleanup Levels

Contaminant	Soil
DRO	200 mg/kg near areas of erosion, or 500 mg/kg if total BTEX is <15 mg/kg and benzene is <0.5 mg/kg (DEC Method 1 Cleanup Levels).

Notes:

mg/kg = milligrams per kilogram

BTEX refers to benzene, toluene, ethylbenzene, and xylenes

Characterization and Cleanup Activities

Remedial Investigations (RIs) were performed at SS003 in 1993 and 2005 with DRO being the contaminant of concern. During the 1993 RI, soil, sediment and surface water samples were collected around the pumphouse, the beach tanks, and the beach area where the fuel pipeline terminated. Samples were analyzed for compounds associated with diesel fuel. The maximum DRO concentration was 16,000 mg/kg collected on the bluff above the beach near a valve on the fuel pipeline and 6,300 mg/kg DRO in the pumphouse area. The maximum gasoline range organics (GRO) concentration was 1,000 mg/kg. Surface water was sampled but showed no exceedances.

At the beach diesel tanks, a stained area was noted between the two tanks where piping and valves were located. A risk assessment indicated minimal risk at the beach and the tank farm; however, both areas were recommended for remedial action to address DRO exceedances of DEC Method One cleanup levels.

A large storm event in August 2002 caused significant erosion of the coastline and the pumphouse fell off the bluff onto the beach. In 2005, the USAF removed the diesel tanks, pumphouse debris, and piping from the site when it returned to complete more field activities. In addition, approximately 200 cubic yards (yd³) of petroleum contaminated soil was excavated from within the tank farm. The average concentration of the containerized soil was approximately 1,000 mg/kg DRO (less than DEC Method Two cleanup levels for the Arctic Zone) based on five random samples collected from the supersacks in 2005. The removed soil was landspread in SS005 in 2008. Soil was spread in the southwest portion of the approved Landspread Area at SS005 over an area of about 13,000 square feet (ft² or 0.31 acres), approximately 0.5 feet thick, using heavy equipment. No additional petroleum contaminated soil was placed at the landspread area during the 2008 field season.

Following soil removal, soil samples were collected in the tank farm and along the former pipeline route. No contamination was detected along the former pipeline route to the beach. Three soil samples within the tank farm contained DRO above 500 mg/kg, with a maximum concentration of 4,270 mg/kg. Exceedances were limited to two locations within the tank farm. As part of this effort, soil, sediment and surface water samples were collected near the pumphouse as well. Soil samples were analyzed for DRO, GRO, residual range organics (RRO), benzene, toluene, ethylbenzene and xylenes (BTEX), and polyaromatic hydrocarbons (PAHs). Sediment and water samples were analyzed for BTEX and PAHs.

Only DRO exceeded Method 1 cleanup levels near three of the locations near the old pumphouse. The maximum DRO concentration detected was 28,000 mg/kg. This surface soil sample was collected from the estimated location where the pipeline had entered the building. DRO levels decreased toward the ocean, and were less than 100 mg/kg on the beach. A sediment sample collected near the pumphouse on top of the bluff exceeded some National Oceanic and Atmospheric Administration (NOAA) Screening Quick Reference Tables (SQuiRTs) for marine sediments; however, the ponds near the pumphouse were small and shallow and represented very limited aquatic habitat. In addition, the NOAA SQuiRT criteria are marine standards and the pond contains fresh or brackish water. The surface water sample at the same location did not exceed screening criteria. Two soil samples exceeded the DEC



Initial excavation of Beach Diesel Tank northern area was advanced to the frost line at approximately 2.5 feet below grade (2009 photo courtesy of BEM).

Method One cleanup level of 500 mg/kg for DRO at the tank farm with a maximum DRO concentration in the tank farm of 4,780 mg/kg.

Site inspections and sampling in 2008 showed that the soil originally planned for removal at the pumphouse area had eroded away and was no longer recoverable. Therefore, it was determined that further soil removal was not practical or necessary based on its small volume (5 to 10 CY).

During the 2009 field season, approximately 356 CY of petroleum-contaminated soil excavated from the southern excavation area and the northern excavation area of SS003 Beach Diesel Tanks was placed at the SS005 landspread area. This soil was spread in the eastern portion of the area approximately 0.5 feet thick using a loader and bulldozer. The soil was re-spread multiple times with heavy equipment during the field season to enhance the natural attenuation process. No additional soil was placed in the southwest portion where landspreading was conducted in 2008. Sampling conducted in 2009 confirmed that soil contained in the landspreading area was below DEC Method 2 cleanup criteria (the 2008 Decision Document required Method 1 cleanup levels for the SS003 site but allowed for Method 2 cleanup levels when soil was transferred inland to the SS005 location where it would be landspread and no longer pose a risk to surface water). All samples in the south excavation were below DD cleanup levels. One sample in the north excavation exceeded DD cleanup levels and contained GRO at a concentration of 120 mg/Kg, and DRO at a concentration of 3, 100 mg/Kg. All other samples were below DD cleanup levels and the location has since eroded making the pathway incomplete.

By 2014 the Beach Diesel Tank area was completely eroded. During the 2014 field season, a pipe of 3-inch diameter was identified protruding from the eroded side of the berm and into the ocean. This 100-foot length of piping was removed and cut up for recycling. Styrofoam that was identified beneath a berm layer was also falling into the ocean as the berm eroded. This material could not be removed during the 2014 field season and was subsequently collected from the beach and lagoon area during the 2015 field activities. Based upon the completion of the beach debris



Pipe protruding from berm at beach showing Styrofoam beneath surface of berm (2014 photo courtesy of BEM).

cleanup efforts and the fact that the entire gravel pad associated with the former beach tank area has eroded into the ocean, the demolition efforts are deemed complete for the Beach Diesel Tank Soil Berm. At this time, the entire site has eroded into the ocean.

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 non-carcinogenic 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 Pathway Incomplete. Two separate exposure pathways were identified for this project that separated the pump house and pipeline from the diesel tank pad location. A summary of this pathway evaluation is included in Table 2.

Table 2 – Exposure Pathway Evaluation

Pathway	Ranking	Notes
Direct Contact with Surface Soil:	Pathway Incomplete	The site has eroded completely and no contaminated soil remains. Final Air Force removal of soil was in 2009 and final debris removal in 2015.
Direct Contact with Subsurface Soil:	Pathway Incomplete	The site has eroded completely and no contaminated soil remains. Final Air Force removal of soil was in 2009 and final debris removal in 2015.
Outdoor Air Inhalation:	Pathway Incomplete	No volatile chemicals of concern are present.
Groundwater Ingestion:	Pathway Incomplete	Groundwater is not present at the site.
Surface Water Ingestion:	Pathway Incomplete	No surface water present for consumption.
Wild or Farmed Foods Ingestion:	Pathway Incomplete	The site has completely eroded.
Indoor Air Inhalation (Vapor Intrusion):	Pathway Incomplete	No volatile chemicals of concern are present and no buildings are planned.
Other Human Health:	Pathway Incomplete	None identified.
Ecological:	Pathway Incomplete	Bio-accumulating compounds are not present.

Notes to Table 2: “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(j). 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, 555 Cordova Street, Anchorage, Alaska 99501-2617, 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 letter, you may contact me at (907) 451-2166 or email at john.carnahan@alaska.gov.

Sincerely,

John B. Carnahan
Environmental Program Specialist

Attach: Site Figures

cc: Spill Prevention and Response, Cost Recovery Unit

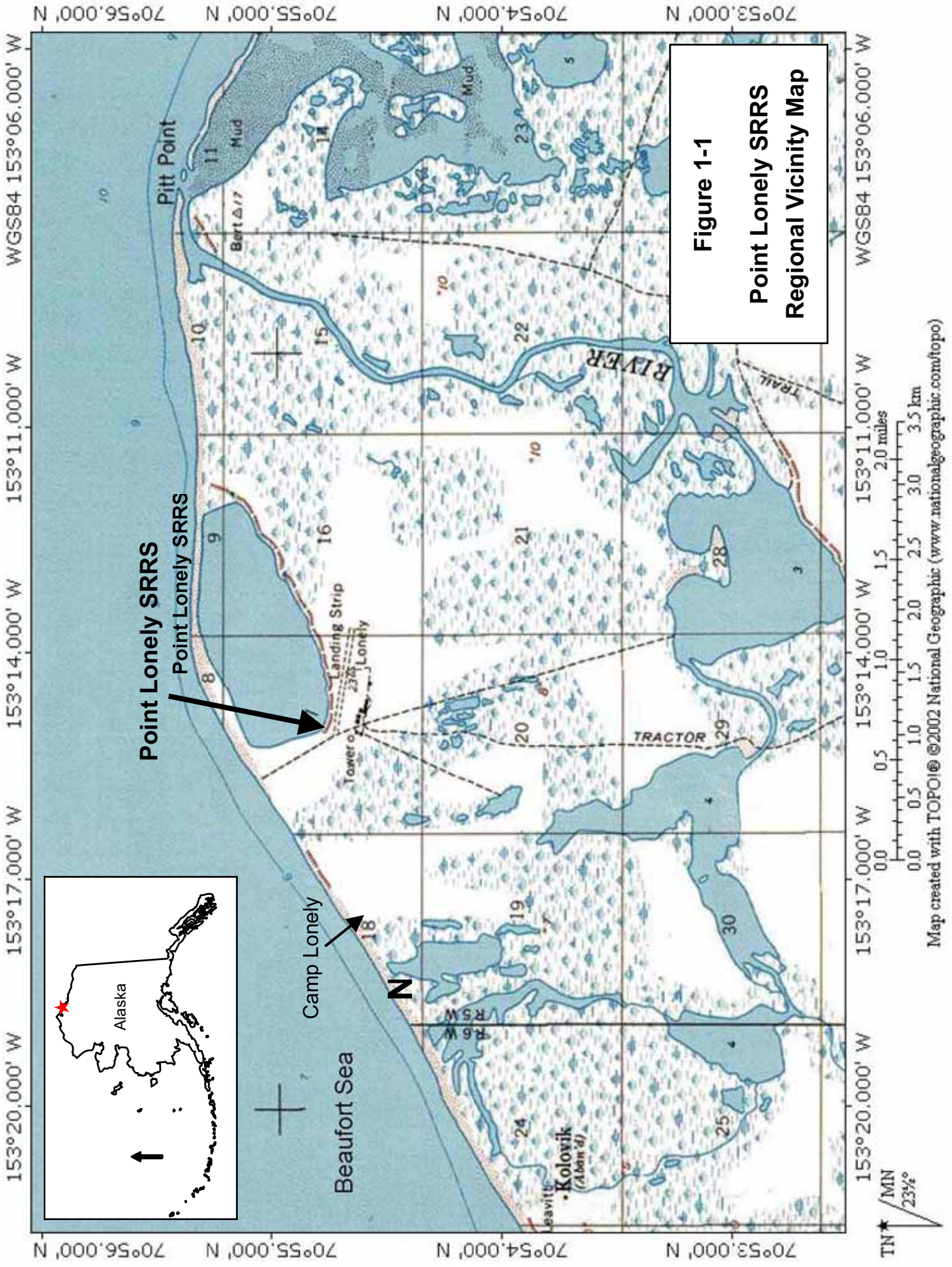


Figure 1-1
Point Lonely SRRS
Regional Vicinity Map

Map created with TOPO!® ©2002 National Geographic (www.nationalgeographic.com/topo)



Figure 2-1
Point Lonely SRRS
ERP Site Locations
 Photo Date: 2001