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: 2655.38.018

August 28, 2017

Robert Johnston
AFCEC/CZOP
10471 20th Street, Suite 347
JBER, AK 99506-2201

Re: Decision Document: Tatalina LRRS SR001 Small Arms Use Area Cleanup Complete Determination

Dear Mr. Johnston

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the SR001 at Tatlalina Long Range Radar Site (LRRS). Based on the information provided to date, ADEC has been determined the contaminant concentrations remaining on site do not pose an unacceptable risk to human health or the environment. No further remedial action will be required unless new information becomes available that indicates residual contaminants may pose an unacceptable risk to human health, welfare, safety or the environment.

This cleanup complete determination is based on the administrative record for the SR001, which is located in the ADEC office in Anchorage, Alaska. This decision letter summarizes the site history, cleanup actions and levels, and standard site closure conditions that apply.

Site Name and Location:
Tatalina LRRS SR001 Small Arms Use Area
13.5 Miles Southwest of McGrath
McGrath, AK 99627
Section 36, Township 033, Range 036
Seward Meridian

Name and Mailing Address of Contact Party:
Robert Johnston
AFCEC/CZOP
10471 20th Street, Suite 347
JBER, AK 99506-2201

DEC Site Identifiers:
File No.: 2655.38.018
Hazard ID.: 25601

Regulatory Authority for Determination:
18 AAC 75 (amended as of July 1, 2017)

Site Description and Background
SR001 is located approximately 0.25 miles southeast of the Lower Camp installation and just south of the access road between the Lower Camp and the airstrip. The site consists of a man-made clearing covered with native grasses and shrubs. The north end of the clearing nearest the road is the firing point; the south end of the clearing has a large berm/impact area. Through further records review, field reconnaissance, and

visual surveys of Site SR001 during the Comprehensive Site Evaluation (CSE) Phase I/II, it was concluded that Site SR001 is a recreational small arms use area and not eligible for investigation under the USAF Military Munitions Response Program, but is under the Environmental Restoration Program. The land use is commercial/industrial.

Contaminants of Concern
Lead

Cleanup Levels
400 mg/kg in soil.

Table 1 – Approved Cleanup Levels

Contaminant	Soil (mg/kg)	Groundwater (mg/L)	Surface Water (ug/L)
Lead	400	N/A	N/A

mg/kg = milligrams per kilogram
mg/L = milligrams per liter
ug/L = micrograms per liter

Characterization and Cleanup Activities
In 2016, Free Flow 300®[1], a lead immobilization product, was added to the surface of the excavation areas associated with SR001 and mixed to 1-foot bgs with an excavator. Waste characterization samples were collected from the treated areas and were submitted for Toxic Characteristic Leaching Procedure (TCLP) for lead. All results were less than the regulated level of U.S. Environmental Protection Agency-regulated level of 5 mg/l.

The treated soil was excavated (16 cubic yards total) and transported for on-site disposal at the Tatalina LRRS permitted landfill at LF004. Confirmation samples were then collected, and analytical results indicated the three areas no longer exceeded the ADEC Table B1 Method Two Soil Cleanup Level for lead (400 mg/kg). The concentration of lead detected in the excavation ranged from 15.9 mg/kg to 94.6 mg/kg. The excavations were lined with a 10-mil liner, backfilled with locally available clean soil, and regraded to match the surrounding topography.

Cumulative Risk Evaluation
Pursuant to 18 AAC 75.325(g)[2], 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.

[1] Disclaimer: The use of trade names of commercial products in this document does not constitute endorsement or recommendation for use by the state government.

[2] If using method two or method three for determining the applicable soil cleanup levels as described in 18 AAC 75.340 and 18 AAC 75.341, or if applying the groundwater cleanup levels at Table C in 18 AAC 75.345, a responsible person shall ensure that, after completing site cleanup, 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, reported to one significant figure, across all exposure pathways.

Based on a review of the environmental record, ADEC has determined that residual contaminant concentrations of lead (94.6 mg/kg or less) in soil 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 ADEC'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, Exposure Controlled, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 2.

Table 2 – Exposure Pathway Evaluation

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	Pathway Incomplete	Contamination below most stringent cleanup levels.
Inhalation – Outdoor Air	Pathway Incomplete	Contamination below most stringent cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Contamination below most stringent cleanup levels
Groundwater Ingestion	Pathway Incomplete	Contamination below most stringent cleanup levels
Surface Water Ingestion	Pathway Incomplete	Surface water is not used as a drinking water source in the vicinity of the site.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Contaminant of concern do not have the potential to bioaccumulate in plants or animals.
Exposure to Ecological Receptors	Pathway Incomplete	Contamination below most stringent cleanup levels

Notes to Table 2: "De-Minimis Exposure" means that in ADEC's judgment receptors are unlikely to be adversely affected by the minimal volume or concentration of remaining contamination. "Pathway Incomplete" means that in ADEC's judgment contamination has no potential to contact receptors. "Exposure Controlled" means there is an institutional control in place limiting land or groundwater use and there may be a physical barrier in place that prevents contact with residual contamination.

ADEC Decision

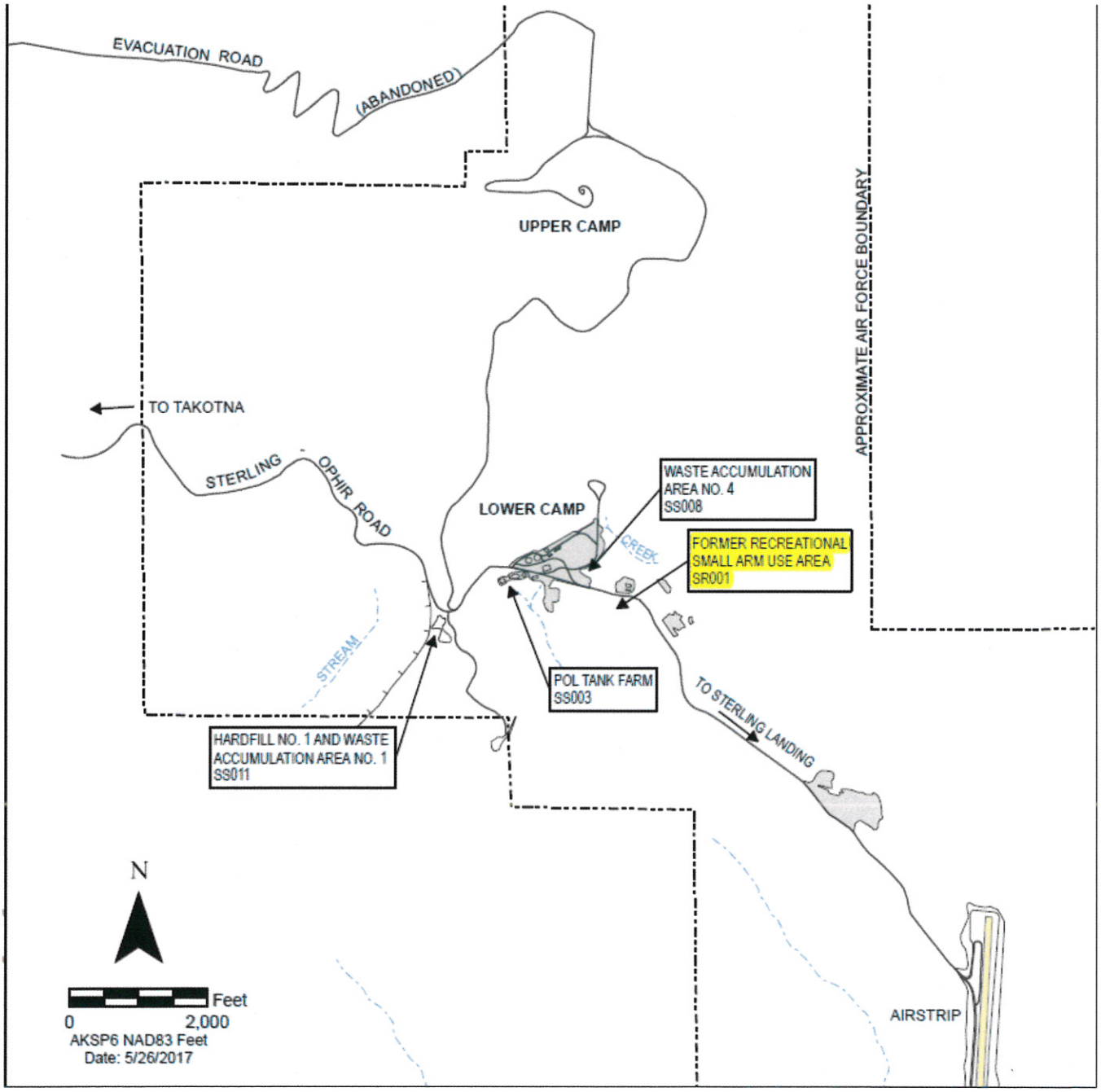
Soil contamination at the site has been cleaned up to concentrations below the approved cleanup levels suitable for residential land use. This site will receive a "Cleanup Complete" designation on the Contaminated Sites Database, subject to the following standard conditions.

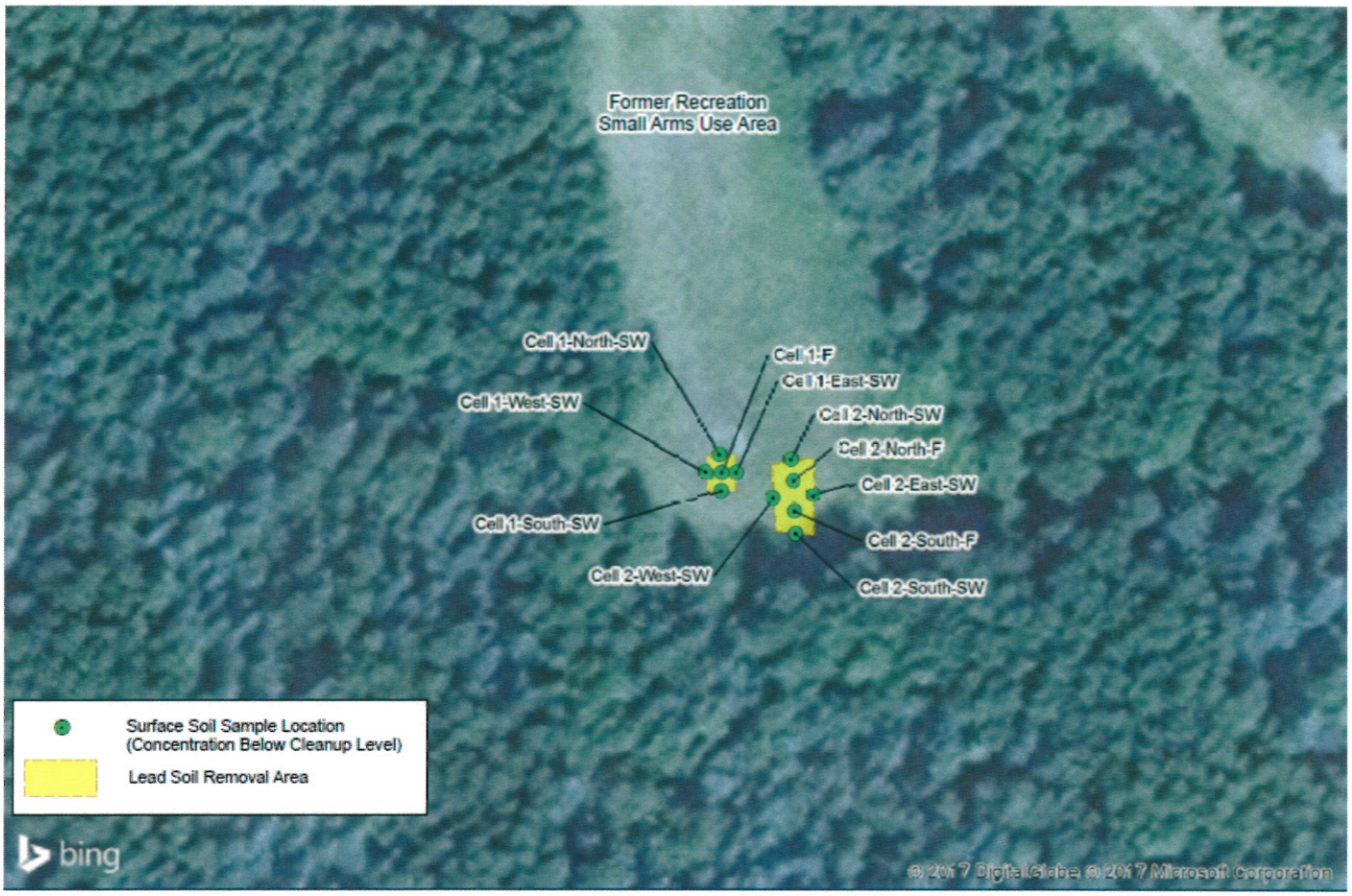
Standard Conditions

1. Any proposal to transport soil or groundwater off-site requires ADEC 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. (See attached site figures.)

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

3. Groundwater throughout Alaska is protected for use as a water supply for drinking, culinary and food processing, agriculture including irrigation and stock watering, aquaculture, and industrial use. Contaminated site cleanup complete determinations are based on groundwater being considered a potential drinking water source. In the event that groundwater from this site is to be used for other purposes in the future, such as aquaculture, additional testing and treatment may be required to ensure the water is suitable for its intended use.





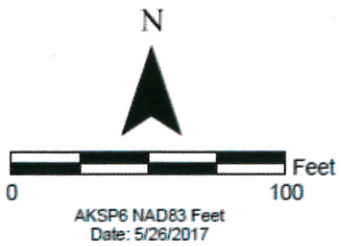


Figure 7

SITE SR001 LEAD SOIL REMOVAL AREAS

2016 REMEDIAL ACTION CONSTRUCTION REPORT
SS003, SS008, SS011, AND SR001
United States Air Force - Tatalina LRRS, Alaska

This determination is in accordance with 18 AAC 75.380[3] and does not preclude ADEC 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, P.O. Box 111800, Juneau, Alaska 99811-1800, within 30 days after the date of issuance of this letter, or within 30 days after the department issues a

[3] Final reporting requirements and site closure.

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) 269-7552, or email at louis.howard@alaska.gov.

Sincerely,

Louis Howard
Project Manager

cc: Kim DeRuyter via email