



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: 2526.38.020

March 22, 2017

Richard Mauser
AFCEC/CZOP
10471 20th Street, Suite 347
JBER, AK 99506-2201

Re: Decision Document: Cape Romanzof SR018 Small Arms Use Area
Cleanup Complete Determination

Dear Mr. Mauser:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Small Arms Use Area (SR018) at Cape Romanzof Long Range Radar Site. 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 SR018 Small Arms Use Area, 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:

SR018 Small Arms Use Area
61°47'24.1"N, 165°58'17.8"W
Cape Romanzof LRRS, AK

Name and Mailing Address of Contact Party:

Richard Mauser
AFCEC/CZOP
10471 20th Street Suite 347
JBER AK 99506-2201

DEC Site Identifiers:

File No.: 2526.38.020
Hazard ID.: 25604

Regulatory Authority for Determination:

18 AAC 75

Site Description and Background

SR018 is a small non-permitted and abandoned recreational small arms shooting range located approximately 300 feet south of the access road between the Lower Camp and the airstrip, on an emergent wetland area located between the access road and one of the forks of Fowler Creek. This wetland is classified as a freshwater emergent (above water) wetland and is only saturated to the point of containing standing water for short duration each year during seasonal flooding. Covered with native grass, the site

contains a wooden firing pad, dilapidated wooden target frames, miscellaneous debris and an earthen backstop berm. The north end of the site, nearest the road, contains the former firing point. A large earthen horseshoe-shaped berm/impact area, approximately 140 feet (ft) long and 10 ft high, is located approximately 160 feet to south of the firing point.

Contaminant of Concern

During the site investigation at this site in 2011, ten samples were collected from soil at depths ranging from 0 to 18 inches below ground surface (bgs), for metals (lead and antimony). Based on these analyses, the following contaminant was detected above the applicable cleanup level at 6-12 inches bgs and considered a contaminant of concern at this site:

- Lead

Cleanup Levels

Method Two Human Health Cleanup level of 400 mg/kg for unrestricted use is the lead cleanup level at SR018.

Table 1 – Approved Cleanup Level

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

Characterization and cleanup activities conducted under the regulatory authority of the Contaminated Sites Program began in 2016. These activities are described below:

Ground-nesting bird surveys, excavation of the small arms debris and lead contaminated soils, confirmation discrete soil sample collection and analysis, site restoration, and offsite disposal of small arms debris lead-contaminated soils at the approved WM facility. The implementation of the SR018 activities did not result in the take or relocation of any nesting birds.

Soil investigation activities removed 10.75 tons of small arms debris and lead contaminated soil. Excavated small arms debris and soil contaminated with exceeding concentrations of lead was placed in supersacks, manifested, and disposed of offsite at WM's Arlington, OR facility. Confirmation samples of the excavation floors and sidewalls demonstrated that lead contaminated soil above the 400 mg/kg level is not present at SR018.

Summary of Post – Excavation Confirmation Soil Sample Results - Lead

Cleanup Level	16SR18-E2-FL01A-SO	16SR18-E2-FL02A-SO	16SR18-E2-SW01A-SO	16SR18-E2-SW02A-SO	16SR18-E2-SW03A-SO	16SR18-E2-SW10A-SO (Dup of SW03)	16SR18-E2-SW04A-SO
	Floor		Sidewall				
Concentrations in mg/Kg							
400	9.0	8.8	7.4	7.0	7.5	8.5	8.0

Cumulative Risk Evaluation

Pursuant to [18 AAC 75.325(g) or 18 AAC 78.600(d)], 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, ADEC 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 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 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 is not present in the sub-surface (2 to 15 feet below ground surface)
Inhalation – Outdoor Air	Pathway Incomplete	There is no inhalation level for lead which is not volatile.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There is no inhalation level for lead which is not volatile.
Groundwater Ingestion	Pathway Incomplete	Lead is below cleanup levels in soil and not likely to migrate to groundwater
Surface Water Ingestion	Pathway Incomplete	Lead is below cleanup levels in soil and not likely to migrate to surface water.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Contaminant of concern has been removed to below cleanup levels
Exposure to Ecological Receptors	Pathway Incomplete	Cleanup of lead contaminated soil to ecological cleanup level of 11 mg/kg has been achieved.

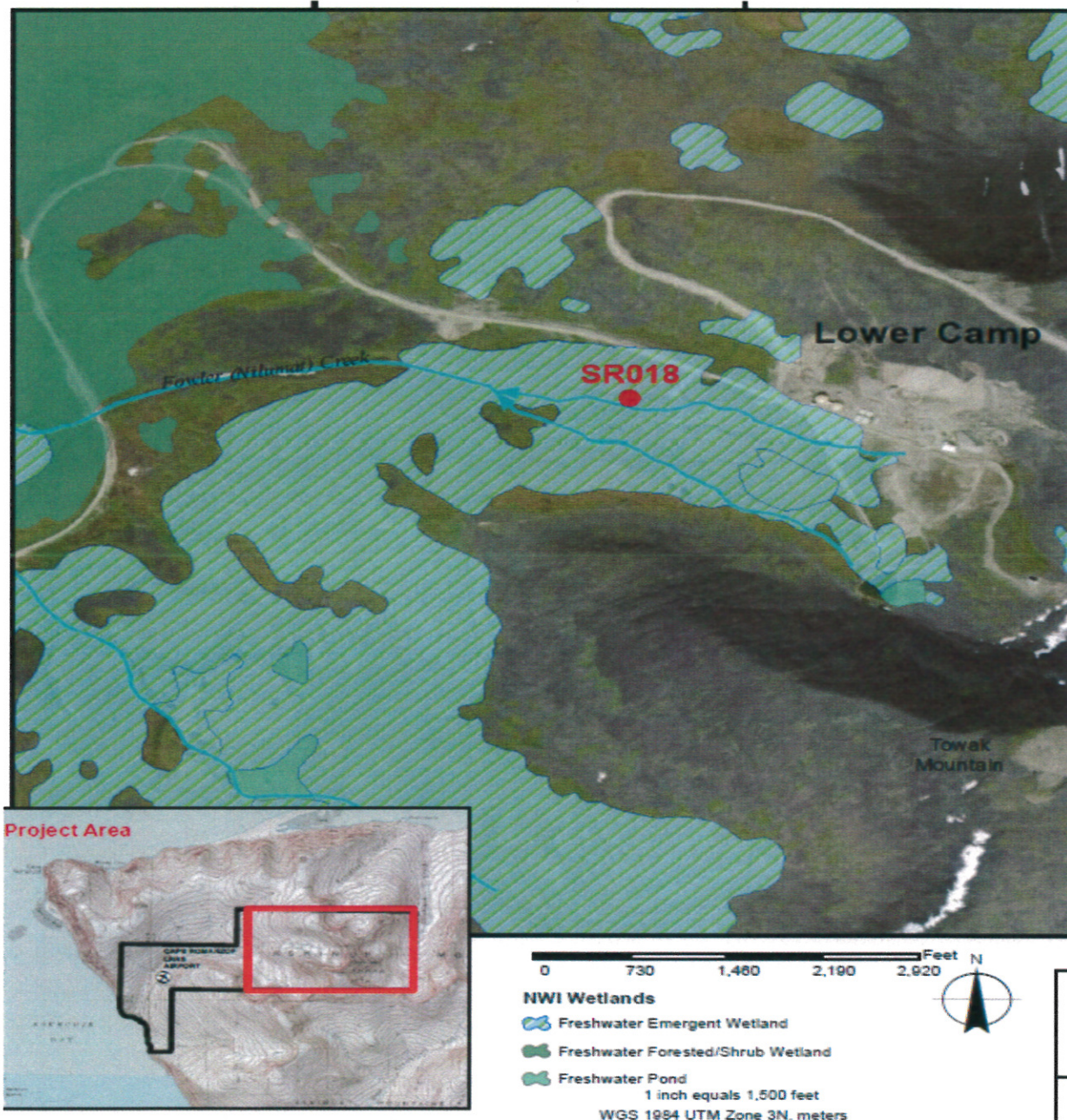
Notes to Table 2: “Pathway Incomplete” means that in ADEC’s judgment contamination has no potential to contact receptors.

ADEC Decision

Soil contamination at the site have 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 figure.)



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.

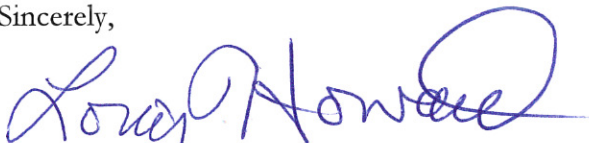
This determination is in accordance with 18 AAC 75.380 and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that contaminants at this site may pose an unacceptable risk to human health, safety, or welfare or to the environment.

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 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 me at louis.howard@alaska.gov.

Sincerely,



Louis Howard
Project Manager

cc: Kim DeRuyter via email