THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation

SPILL PREVENTION & RESPONSE
Contaminated Sites Program

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File No.: 151.38.001

May 11, 2020

Electronic Delivery Only
Steven J. Mattson
Chief, Environmental Restoration
PRSC Installations Remote & JBER
AFCEC/CZOP
10471 20th St. Suite 347
JBER AK 99506-2201

Subject: **DECISION DOCUMENT: CLEANUP COMPLETE DETERMINATION**
Site 22 (SS022)/Building 51 Auto Hobby Shop, Clear Air Force Station, Alaska

Dear Mr. Mattson,

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with Site SS022, also known as the Building 51 Auto Hobby Shop, located at Clear Air Force Station (AFS). 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 information becomes available that indicates residual contaminants may pose an unacceptable risk.

This Cleanup Complete determination is based on the administrative record for the Site SS022, which is located in the ADEC 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:
Clear AFS Site 22 SS022
64º 16' 58.6" N, 149º 9' 49.5" W
Building 51, Clear Air Force Station

Name and Mailing Address of Contact Party:
Steven J. Mattson, Chief, Environmental Restoration
PRSC Installations Remote & JBER
AFCEC/CZOP
10471 20th St., Suite 347
JBER AK 99506-2201

DEC Site Identifiers
Hazard ID: 1664
File No.: 151.38.001

Regulatory Authority for Determination:
18 AAC 75

Site Description and Background

Clear Air Force Station (AFS) is located approximately 78 miles southwest of Fairbanks and 300 miles north of Anchorage, along the Parks Highway in central Alaska. Site SS022 is located in the Old Camp Area of Clear AFS (see attached figure) and was historically available for installation employees to work on personal vehicles.

Contaminants of Concern and Cleanup Levels:
A Record of Decision (ROD) for Site SS022 was finalized in 2011. Compounds that were present in soil exceeding the Table B1 and B2 soil cleanup levels and identified in the ROD are shown in Table 1.

On January 31, 2019, the Alaska Department of Environmental Conservation (DEC) approved the Explanation of Significant Differences (ESD) for Site SS022, Building 51/Auto Hobby Shop, dated June 2018. The ESD was prepared to facilitate the increase in cleanup levels from the 2008 Method Two, Tables B1 and B2, Under 40-inch Zone Migration to Groundwater cleanup levels to site-specific Method Three alternative cleanup levels (ACLs) for all constituents except hexavalent chromium. The hexavalent chromium cleanup level was changed to the 2016 Method Two, Table B1, Human Health cleanup level. All residual contamination at Site SS022 is below the updated cleanup levels.

Table 1 identifies the maximum concentrations remaining at Site SS022, the ROD cleanup levels, and the revised site-specific cleanup levels approved in the ESD.

Table 1. Summary of Maximum Residual Concentrations, ROD Cleanup Levels, and Site-Specific ACLs

Compound	Max Concentration Remaining Onsite (mg/kg)	2008 ADEC Method Two, Tables B1 and B2[a] (mg/kg)	Site-Specific ACLs (mg/kg)
Methylene Chloride	0.674	0.016	3.2[b]
Tetrachloroethylene (PCE)	0.422	0.024	1.9[b]
Trichloroethylene (TCE)	0.0829	0.020	0.11[b]
Diesel Range Organics (DRO)	594	250	800[b]
Total Chromium[c]	89.5	100,000	100,000[b]
Hexavalent Chromium (Chromium VI)	2	25	3.9[d]
Selenium	5.64	3.4	66[b]
Lead[e]	103	400[f]	N/A

Table Notes:

a. ROD Cleanup Levels: Tables B1 and B2, Under 40-inch Zone, Migration to Groundwater Cleanup Level
b. Approved site-specific Method Three Alternate Cleanup Levels
c. The chromium cleanup level implemented in the ROD was for total chromium. 18 AAC 75 Table B1 identifies cleanup levels for Chromium III and Chromium VI.
d. The DEC Method Two Human Health Cleanup Level for Chromium VI was applied because the exceedance was located in surface soil, the chromium at the site does not appear to be leaching as indicated by a toxicity characteristic leaching procedure sample, and well-spaced chromium samples at the site indicate that the mass of hexavalent chromium remaining above the migration to groundwater cleanup level is de minimis.
e. Although lead was identified at the site during the investigation phase, it was not considered a COC in the ROD.

mg/kg = milligrams per kilogram
N/A = not applicable

Characterization and Cleanup Activities
A Remedial Investigation was conducted at Site SS022 in 1994 and Site Investigations were conducted in 2006, 2007 and 2008 to further delineate the nature and extent of contamination. Based on these assessments and investigations, DRO, PCE, TCE, methylene chloride, arsenic, chromium, cadmium, and selenium constituents were detected above the 2008 migration to groundwater cleanup levels. Lead was detected at a maximum concentration of 1,220 mg/kg.

In 2016, a Data Gap and Remedial Investigation was conducted at Site SS022 to develop ACLs and to address the remaining surface lead contamination. Surface soil was excavated where elevated lead concentrations were detected in 2008. Following the excavation, confirmation samples had a maximum concentration of 103 mg/kg, below the current Table B1 Human Health cleanup level of 400 mg/kg.

Groundwater sampling was conducted in 2006, 2007, and 2008. Some detectable chemical constituents are present in SS022 groundwater; however, no contaminants have been detected at concentrations that exceed the Table C groundwater cleanup levels.

Cumulative Risk Evaluation:
Pursuant to 18 AAC 75.325(g), when detectable contamination remains onsite 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, 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 either De Minimis Exposure 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	De Minimis	Contamination is not present in surface soil above the approved cleanup levels.
Sub-Surface Soil Contact	De Minimis	Remaining contamination does not exceed the Table B1 Human Health cleanup levels.
Inhalation Outdoor Air	De Minimis	Remaining contamination is not present in soil above outdoor action levels.
Groundwater Ingestion	De Minimis	Groundwater contamination has not been detected above Table C cleanup levels.
Inhalation Indoor Air (vapor intrusion)	De Minimis	Contamination is not present at concentrations that would pose a vapor intrusion risk.
Surface Water Ingestion	Pathway Incomplete	Surface water is not present at Site SS022.
Wild and Farmed Foods Ingestion	Pathway Incomplete	The site is located at an Air Force Station. The area is not used for the harvest of wild or farmed foods.
Exposure to Ecological Receptors	Pathway Incomplete	The site is located at an Air Force Station. There are no other ecological concerns.

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.

DEC Decision

Soil and groundwater 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."

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 20 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 any questions, please do not hesitate to contact me at (907) 451-5175, or via email at jamie.mckellar@alaska.gov.

Sincerely,

Jamie McKellar
DEC Project Manager

Enclosure: SS022 Site Figure

cc, via email: Glen Verplancke, USAF
Kevin Thomas, USAF
Eric Breitenberger, DEC
DEC Spill Prevention and Response, Cost Recovery Unit

Notes:
SSPARS = Solid State Phased Array Radar System

Approximate Scale

0 1,000 2,000 Feet

Clear AFS, Alaska

JOB NO:	60271696	DRAWN:	
DATE:	8/6/2013	FILE:	