



THE STATE
of **ALASKA**
GOVERNOR MICHAEL J. DUNLEAVY

**Department of
Environmental Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

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File: 1517.38.018

November 26, 2019

Sent via electronic mail only

Larry Beck
Bureau of Land Management
4700 BLM Road
Anchorage, AK 99507

Re: Decision Document: BLM Cape Pole Logging Camp
Cleanup Complete Determination

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Bureau of Land Management (BLM) Cape Pole Logging Camp located on Kosciusko Island, adjacent to Fishermans Harbor, five miles west of Edna Bay. 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 contamination poses an unacceptable risk.

This Cleanup Complete determination is based on the administrative record for the BLM Cape Pole Logging Camp which is located in the ADEC office in Juneau, Alaska. This decision letter summarizes the site history, cleanup actions and levels, and standard site closure conditions that apply.

Site Name and Location:

BLM Cape Pole Logging Camp
Kosciusko Island, Fishermans Harbor
5 miles west of Edna Bay
Klawock, AK 99925

Name and Mailing Address of Contact Party:

Larry Beck
Bureau of Land Management
4700 BLM Road
Anchorage, AK 99507

ADEC Site Identifiers:

File No.: 1517.38.018
Hazard ID: 26851

Regulatory Authority for Determination:

18 AAC 75

Site Description and Background

In 2016, during assessment of cabins at the Cape Pole abandoned logging camp Lots 2, 12 and 14; petroleum stained soil was discovered inside a former generator shed within an earthen floor located at BLM Lot 2.

The logging camp was abandoned without record of occupancy with BLM, but is thought to have operated until the 1970s. It is assumed former logging operations resulted in soil contamination within the footprint of the former generator shed. The generator shed was deconstructed and removed from the site in 2019. This site is on a forested island within the Tongass National Forest in a maritime climate zone. It is located 300 feet from Fishermans Harbor.

Contaminants of Concern

During the site investigations, soil samples were collected and analyzed for gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and lead. Based on these analyses, the following contaminants of concern were identified at the site:

- DRO
- Benzo(a)anthracene
- Naphthalene
- Lead

ADEC Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, *Over 40 Inch Zone* for the migration to groundwater pathway level listed in Tables B1 and B2. Site-specific Method Three, *Over 40 Inch Zone* soil cleanup levels for the migration to groundwater pathway have also been calculated for DRO at this site. The appropriate cleanup levels are listed in the table below.

Table 1- Approved Soil Cleanup Levels

Contaminant	Soil (mg/kg)
DRO	12,500*
Benzo(a)anthracene	0.70
Naphthalene	0.038
Lead	400**

Note to Table 1:

mg/kg = milligrams per kilogram

* Method 3 cleanup level for residential use based on the migration to groundwater pathway. The initial number calculated was 22,800 mg/kg, therefore the maximum allowable number of 12,500 mg/kg was used.

** This is the human health cleanup level; there is no cleanup level for lead based on the migration to groundwater pathway

Characterization and Cleanup Activities

In 2016 and 2018, soil samples were collected from the surface stain inside the Lot 2 former generator shed. These soil samples contained DRO up to 4,290 mg/kg, benzo(a)anthracene up to 302 mg/kg, naphthalene up to up to 0.0385mg/kg, and lead up to 7,700 mg/kg.

In 2019, a total of 63 cubic yards of contaminated soil was excavated beneath the former generator shed from the surface stained area to a depth of 3 feet below ground surface (bgs) where it was limited by bedrock. Three of eleven confirmation soil samples collected from the excavation 0.5 to 3.0 feet bgs contained DRO up to 620 mg/kg. It was suspected during soil sampling that the DRO sample results might be biased high due to the presence of naturally occurring organic material within the forested floor. Therefore a silica gel cleanup was conducted on all eleven soil samples to determine the impact of biogenic interference on the DRO results. Only one of these silica gel soil samples contained a DRO concentration above ADEC's default soil cleanup level at 290 mg/kg. The 63 cubic yards of contaminated soil was transported off site to Columbia Ridge landfill in Oregon and the excavation was capped with clean fill and brought to grade.

To determine the influence of site-specific total organic carbon content of the soil affecting the DRO sample results, six test pits were excavated 1 to 2 feet bgs adjacent, but away from the generator shed area and 11 soil samples were collected (see attached figure). The site-specific carbon content from these 11 soil samples of 0.1040275 g/g was determined by calculating the statistical 95 percent lower confidence limit of the mean. The 0.1040275 g/g value was then applied to the ADEC [method three petroleum cleanup level calculator](#), which ultimately resulted in the site-specific soil cleanup level of 12,500 mg/kg for DRO.

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, 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 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	De-Minimis Exposure	Any remaining surface soil contamination is below human health and ingestion/inhalation cleanup levels
Sub-Surface Soil Contact	De-Minimis Exposure	Any remaining subsurface soil contamination is below human health and ingestion/inhalation cleanup levels
Inhalation – Outdoor Air	De-Minimis Exposure	Any remaining surface soil contamination is below human health and ingestion/inhalation cleanup levels
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	The generator shed was removed from the site and any remaining contaminant concentrations in soil are considered de minimis for vapor intrusion
Groundwater Ingestion	De-Minimis Exposure	Remaining soil contamination is below ADEC approved soil cleanup levels. This site is underlain by shallow bedrock and is located 300 feet from

		Fishermans Harbor. Practicable groundwater use is unlikely
Surface Water Ingestion	De-Minimis Exposure	Remaining soil contamination is below ADEC approved soil cleanup levels. Surface water is not a known drinking water source in the vicinity of the site.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.
Exposure to Ecological Receptors	De-Minimis Exposure	Remaining soil contamination is below ADEC approved soil cleanup levels and ecological receptors are not expected to encounter site contamination

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

Remaining detectable concentrations of contaminants are below ADEC approved soil cleanup levels. This site will receive a “Cleanup Complete” designation on the Contaminated Sites Database, subject to the following conditions.

Standard Conditions

1. Any proposal to transport soil or groundwater from a site that is subject to the site cleanup rules or for which a written determination from the department has been made under 18 AAC 75.380(d)(1) that allows contamination to remain at the site above method two soil cleanup levels or groundwater cleanup levels listed in Table C requires DEC approval in accordance with [18 AAC 75.325(i) or 18 AAC 78.600(h)]. A “site” [as defined by 18 AAC 75.990 (115) or 18 AAC 78.995(134)] 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) 269-8685 or email at grant.lidren@alaska.gov.

Sincerely,

A handwritten signature in blue ink that reads "Grant Lidren" followed by a long horizontal flourish.

Grant Lidren
Project Manager

Site Figure

