



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: 400.38.046

June 27, 2019

Frances Isgrigg
University of Alaska Fairbanks
Environmental Health, Safety, & Risk Management
P.O. Box 758145
Fairbanks, AK 99775

Re: Decision Document: UAF Northwest Campus Parking
Cleanup Complete Determination

Dear Mr. Krause:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the UAF Northwest Campus Parking at East Front Street between Moore Way and Campbell Way in Nome. 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 UAF Northwest Campus Parking, 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:

UAF Northwest Campus Parking
East Front Street
(between Moore Way and Campbell Way)
Nome, Alaska 99762

Name and Mailing Address of Contact Party:

Frances Isgrigg
University of Alaska Fairbanks
Environmental Health, Safety, & Risk Management
P.O. Box 758145
Fairbanks, Alaska 99709

ADEC Site Identifiers:

File No.: 400.38.046
Hazard ID.: 25486

Regulatory Authority for Determination:

18 AAC 75

Site Description and Background

The UAF Northwest Campus Parking site is part of the UAF Northwest Campus located in Nome, Alaska. The campus was constructed in the 1970s and is located in a well-developed part of Nome, in an area with mixed use, primarily commercial and business. Norton Sound is located approximately 300 feet south of the site. The subsurface conditions consists of slightly silty to silty, sandy gravel and/or coarse mine tailings underlain by peaty silt ranging in thickness from 3 to 5.5 feet. These soils are underlain by a variety of soils including scattered gravel with silty to silty fine sands. Bedrock is present at depths from 52 to 74 feet. Permafrost is present throughout the site between 5 to 51.5 feet in depth. A geotechnical study was performed in 2008 to develop recommendations for new foundations for the main university building and library. Contamination was discovered during the project in soil borings drilled in the parking lot area.

Contaminants of Concern

During the site characterization at this site, samples were collected from soil and analyzed for diesel range organics (DRO), residual range organics (RRO), gasoline range organics (GRO), benzene, toluene, ethylbenzene, and xylenes (BTEX). Based on these analyses, the following contaminants were detected above the Method 2 Soil Migration to Groundwater Cleanup Levels but did not exceed Method 2 Soil Inhalation or Ingestion Cleanup Levels. The Contaminants of Concern (COCs) at this site are:

- DRO
- RRO

Cleanup Levels

DRO and RRO were detected in soil below the approved Method 2 inhalation and ingestion cleanup levels for the arctic zone, established in 18 AAC 75,341(c), Table B1 and 18 AAC 75.341(d), Table B2. ADEC approved the use of arctic zone cleanup levels under 18 AAC 75.990 because the site is underlain by continuous permafrost. Migration to groundwater soil cleanup levels do not apply in the arctic zone.

Table 1 – Approved Cleanup Levels

Contaminant	Soil (mg/kg)
DRO	12,500 ¹
RRO	13,700 ²

mg/kg = milligrams per kilogram

¹Ingestion and inhalation pathway

²Ingestion pathway

Characterization and Cleanup Activities

During a geotechnical study performed by Shannon and Wilson in 2008 to develop geotechnical design recommendations for new foundations for the main university building and the library, seven borings were drilled and samples collected. Soil borings were screened with a photo ionization detector (PID) and laboratory confirmation samples collected from areas with highest PID readings. Potential surface soil contamination was found within the parking lot area. Select samples were analyzed for GRO, DRO, RRO, and BTEX constituents. Total depth of borings was between 35 and 75 feet below ground surface

(ft bgs). Permafrost was present in all soil borings and estimated to occur at approximately 5 to 50 ft bgs. Groundwater was encountered below the permafrost. Soils were field screened above the permafrost in six of the seven borings with field screening results ranging from 2 parts per million (ppm) to 650 ppm. Concentrations of DRO and RRO in soil were found to range from 98.7 mg/kg to 1,140 mg/kg and 961 mg/kg to 3,390 mg/kg, respectively, at depths from 0.5 to 10 ft bgs. Soil borings with the highest concentrations were from the former parking lot area and are now either underneath a raised building or in a parking lot.

Table 2 – Highest Concentrations of Contamination Remaining Onsite

Contaminant	ADEC Clean Up Level Soil* (mg/kg)	Contamination Remaining Soil (mg/kg)
DRO	12,500	1,140
RRO	13,700	3,390

*Arctic Zone Method Two Soil Cleanup Levels
mg/kg = milligrams per kilogram

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 did not exceed the screening levels needed to conduct a cumulative risk evaluation.

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	Contamination is present in surface soil (0 to 2 feet below the ground surface) but well below Table B1 human health and Table B2 ingestion cleanup levels.
Sub-Surface Soil Contact	De Minimis Exposure	Contamination remains in the sub-surface, but is below Table B1 human health and Table B2 ingestion cleanup levels.

Inhalation – Outdoor Air	De Minimis Exposure	Volatile compounds detected are below the Table B1 human health and Table B2 inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De Minimis Exposure	Volatile compounds detected are below the most stringent cleanup levels. Additionally, buildings above and near the remaining contamination are on pilings.
Groundwater Ingestion	Pathway Incomplete	The site is underlain by continuous permafrost and due to naturally occurring arsenic and saltwater intrusion, the city’s drinking water source is located outside of city limits.
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	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.
Exposure to Ecological Receptors	Pathway Incomplete	The site does not contain viable terrestrial or aquatic habitat.

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 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 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). 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 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 questions about this closure decision, please feel free to contact me at (907) 451-2131, or email at megan.roberts@alaska.gov.

Sincerely,



Megan Roberts
Project Manager

cc: Spill Prevention and Response, Cost Recovery Unit



Figure 1. Site figure with stars indicating approximate locations of soil borings where contamination was detected.