



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: 100.38.247

May 16, 2018

Janet Smith, Deputy Director  
Fairbanks North Star Borough  
Department of Public Works  
P.O. Box 71267  
Fairbanks, AK, 99709-1267

**Re: Decision Document: FNSB - Salcha Elementary School Music and Ski Bldgs. HOTs  
Cleanup Complete Determination**

Dear Ms. Smith

The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program has completed a review of the environmental records associated with the Salcha Elementary School Music and Ski Bldgs. located at 8530 Richardson Highway. 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 Salcha Elementary School Music and Ski Buildings, 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:**

Salcha Elementary School Music and Ski Bldgs.  
8530 Richardson Highway  
Salcha, AK, 99714

**Name and Mailing Address of Contact Party:**

Janet Smith  
P.O. Box 71267  
Fairbanks, AK, 99709-1267

**DEC Site Identifiers:**

File No.: 100.38.247  
Hazard ID.: 26253

**Regulatory Authority for Determination:**

18 AAC 75

### Site Description and Background

Contamination was discovered during the removal of a 600-gallon buried heating oil tank at the Salcha Elementary School Music Building. During tank removal and site characterization activities one cubic yard of contaminated soil was recycled at an asphalt plant, and 10 cubic yards of excavated soil were used to backfill the excavation. Clean excavation limits were reached at eight feet below ground surface (ft. bgs) but it was later discovered that the soil used as backfill was contaminated with diesel.

### Contaminants of Concern

During the site assessment and tank removal at this site, samples collected from soil were analyzed for diesel range organics (DRO), benzene, toluene, ethylbenzene, and xylenes (BTEX), and polycyclic aromatic hydrocarbons (PAHs). Based on these analyses, the following contaminants were detected above the applicable cleanup levels and are considered Contaminants of Concern at this site:

- DRO

### Cleanup Levels

Diesel range organics (DRO) were detected in soils at concentrations exceeding the migration to groundwater cleanup level established in 18 AAC 75.341(d) table B2.

**Table 1 – Approved Cleanup Levels**

Contaminant	Soil (mg/kg)
DRO	250

mg/kg = milligrams per kilogram

### Characterization and Cleanup Activities

In June 2011, two buried heating oil tanks were removed from the Salcha Elementary School; a 500-gallon tank at the portable ski building and a 600-gallon tank at the portable music building. The site assessment on the 500-gallon tank did not discover any contaminated soil.

The 600-gallon tank was found to have a loose fitting on one of the heating oil supply lines which had released diesel fuel to a small area of soil around the top of the tank. Approximately one cubic yard (cy) of contaminated soil was removed from the site and recycled by the Great Northwest, Inc. asphalt plant. Ten cubic yards of soil were stockpiled on site and assumed to be clean based on heated headspace field screening readings.

Analytical samples confirmed that clean limits were reached on each side of the excavation. The tank impression was filled with clean gravel and the soil from the clean stockpile was placed on top of the clean fill. One of two analytical samples collected from the “clean” stockpile indicated DRO to be present at 539 mg/kg, in excess of the approved soil cleanup level. The other stockpile sample was below the cleanup level.

This stockpiled soil was placed on top of more than 5 feet of clean gravel within the clean excavation. Depth to groundwater is expected to be around 30 ft. bgs based on well logs and the levels of the Salcha and Tanana Rivers. Contamination was shown not to extend to groundwater during the initial excavation and remaining contamination is not expected to migrate.

A well located on the Salcha Elementary property supplies non-potable water to the school. This well is screened at 160 ft. bgs with a static water level of 27 ft. bgs, indicating that the aquifer is pressurized. All potable water used on site is delivered to a holding tank by Pioneer Wells. There is also an inactive well which was welded shut at the casing and abandoned.

### **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 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 unrestricted 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**

<b>Pathway</b>	<b>Result</b>	<b>Explanation</b>
Surface Soil Contact	De Minimis Exposure	Some contaminated soil was backfilled into the excavation but all concentrations in the surface soils are below the ingestion and human health cleanup levels.
Sub-Surface Soil Contact	De Minimis Exposure	Some contaminated soil was backfilled into the excavation but all concentrations in the subsurface soils are below the ingestion and human health cleanup levels.
Inhalation – Outdoor Air	De Minimis Exposure	Remaining soil contamination is below human health and inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De Minimis Exposure	Contaminated soils containing weathered heating oil were spread on top of the excavation next to the portable music building. Indoor air quality is not expected to be impacted.
Groundwater Ingestion	De Minimis Exposure	All contamination was removed from the subsurface until clean limits were reached at 8 ft. bgs. Less than 10 cy of soil above migration to groundwater was mistakenly backfilled in the excavation near the ground surface. Contamination is not expected to migrate.
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	The site is not used for hunting, gathering, or farming.
Exposure to Ecological Receptors	Pathway Incomplete	There are no ecological receptors in the vicinity of the site.

**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 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 questions about this closure decision, please feel free to contact me at (907) 451-5174 or via email at [michael.hooper@alaska.gov](mailto:michael.hooper@alaska.gov)

Sincerely,



Michael Hooper  
Project Manager

cc (via email): Spill Prevention and Response, Cost Recovery Unit