Department of Environmental Conservation

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

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File: 102.26.176

October 27, 2021

Electronic Delivery Only

Janet Smith
Fairbanks North Star Borough Department of Public Works
P.O. Box 71267
Fairbanks AK, 99707

Re: Decision Document: FNSB – John Carlson Community Activity Center UST #1 Cleanup Complete Determination

Dear Ms. Smith:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Fairbanks North Star Borough (FNSB) John Carlson Community Activity Center (Carlson Center) Underground Storage Tank #1 (UST#1) located at 2010 Second Avenue in Fairbanks, Alaska. 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 FNSB - John Carlson Community Activity Center UST#1, 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:
FNSB – John Carlson Community
Activity Center UST #1
2010 Second Avenue
Fairbanks, AK 99701

Name and Mailing Address of Contact Party:
Janet Smith, Deputy Director
FNSB Department of Public Works
PO Box 71267
Fairbanks, Alaska 99707

ADEC Site Identifiers:
File No.: 102.26.176
Hazard ID.: 26244

Regulatory Authority for Determination:
18 AAC 75 and 18 AAC 78

Site Description and Background

In September of 2011, a change-in-service was performed on a regulated dual-use 12,000-gallon diesel underground storage tank (UST #1) which supplied fuel to the Carlson Center boilers and emergency generators. The UST was disconnected from the emergency generators, reclassifying it as an unregulated tank according to Alaska Statute 46.03.450. Soil contamination above the applicable cleanup levels was found in soils above the tank.

Contaminants of Concern

During tank closure and remediation activities at this site, soil samples collected from the excavation limits and stockpiles were analyzed for diesel range organics (DRO), benzene, toluene, ethylbenzene, xylenes (BTEX) and polynuclear aromatic hydrocarbons. Based on these analyses, the following contaminants were detected above the applicable cleanup levels and are considered contaminants of concern at this site:

- Diesel Range Organics (DRO)

Cleanup Levels

The most stringent Method Two cleanup level for the under 40-inch zone established in 18 AAC 75.341, Table B2 apply at this site. Diesel range organics were detected above the most stringent cleanup levels. The groundwater cleanup level established in 18 AAC 75.345 Table C apply at this site.

Contaminant	Table B2 Soil Migration to Groundwater (mg/kg)	Table B2 Soil Inhalation (mg/kg)	Table B2 Soil Ingestion (mg/kg)	Table C Groundwater (µg/L)
DRO	250	12,500	10,250	1,500

Characterization and Cleanup Activities

In September of 2011, the FNSB conducted a change-in-service on the 12,000-gallon diesel UST #1 installed in a man-made hill on the side of the Carlson Center. As part of the site characterization requirements for a change-in-service three test pits were excavated to uncover the fill, vent and fuel piping where they enter the tank. Deeper test pits were advanced to sample soils beneath the tank. No obvious soil contamination was encountered during tank investigation.

Test pit 1 reached 6 ft. bgs to uncover the fill, vent, and fuel lines on top of the tank. No fuel odors were noted and all heated headspace samples were 0-2 parts per million (ppm) on the photo-ionization detector. An estimated 2 cubic yards of soil excavated from the around the fill pipe were presumed clean and used to backfill the top of the tank. Analytical stockpile sample results received after the fact showed that this soil contained DRO at 401 mg/kg, in excess of the applicable cleanup level.

Test pits 2 and 3 reached 16 ft. bgs to collect samples from beneath the tank. All field screening results were 0 ppm and all three analytical samples collected from beneath the tank at 16 ft. bgs were below the cleanup levels for all contaminants.

Eight sets of fuel lines were uncovered during the change in service. All of the lines ran under a concrete stair set and sidewalk to where they enter the building through the first floor wall approximately 30 ft. away. Two sets of fuel lines supplying the emergency generator day-tanks were removed from service. The generator lines were cut, drained, and capped at the edge of the test pit excavation and on the inside

of the building. The six sets of fuel lines supplying the boilers remain in use. Samples collected from beneath the piping were below the cleanup levels for all contaminants.

After the change-in-service was complete, the excavation was backfilled and a new above ground storage tank was installed to supply the emergency generator.

Contamination above the migration to groundwater cleanup level remains in backfill on top of the now unregulated UST#1. Because the tank and all associated piping were installed into a hill against the side of the building, this contamination is approximately 10 ft. above the surrounding ground surface, and approximately 25 ft. above groundwater. Soil samples collected from beneath the tank in three locations did not contain detectable quantities of any contaminants.

Cumulative Risk Evaluation

Pursuant to 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 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 De Minimis Exposure. 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 soils (0-2 ft. bgs) but is below levels that are protective of the soil contact pathway.
Sub-Surface Soil Contact	De Minimis Exposure	Contamination is present in subsurface soils (2-15 ft. bgs) but is below levels that are protective of the soil contact pathway. the ingestion cleanup levels.
Inhalation – Outdoor Air	De Minimis Exposure	Contamination is present in surface soils (0-2 ft bgs) but is below the inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De Minimis Exposure	Remaining contamination is not expected to impact indoor air.
Groundwater Ingestion	De Minimis Exposure	Remaining contamination on top of UST #1 is not expected to reach groundwater.
Surface Water Ingestion	De Minimis Exposure	The nearest surface water is the Chena River, 400 feet away. Contamination is not expected to migrate.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Remaining contamination is not in an area where wild or farmed foods will be impacted.
Exposure to Ecological Receptors	Pathway Incomplete	Remaining contamination is not in an area where ecological receptors will be impacted.

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.

ADEC Decision

All soil contamination at this site is below the most stringent cleanup levels, with the exception of a small volume of soil on top of the UST which is below ingestion/inhalation levels but exceeds migration to groundwater cleanup levels. However, ADEC has determined that this remaining contamination does not pose a risk to human health or the environment, per the exposure pathway evaluation. 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 78.600(h). A "site" as defined by 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.

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.

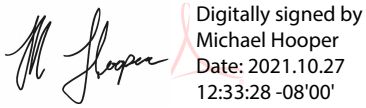
This determination is in accordance with 18 AAC 78.276(f) and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that contaminants at this site may pose an unacceptable risk to human health, safety, or welfare or to the environment.

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.

Sincerely,



Michael Hooper
Project Manager

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