



THE STATE  
of **ALASKA**  
GOVERNOR MIKE DUNLEAVY

**Department of  
Environmental Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE  
Contaminated Sites Program

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File: 255.26.003

February 26, 2020

Michael McCrum  
Bureau of Land Management  
222 West 7th Avenue  
Anchorage, Alaska 99513

Re: Decision Document: BLM Tanacross Airfield USTs 1-3 Cleanup Complete Determination

Dear Mr. McCrum:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the BLM Tanacross Airfield USTs 1-3 (Underground Storage Tanks) located at Tanacross, 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 records for the BLM Tanacross Airfield USTs 1-3, which are 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:**

BLM Tanacross Airfield  
MP 1322 Alaska Hwy  
Tanacross, Alaska, 99776

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

Mr. Michael McCrum  
Bureau of Land Management  
222 West 7<sup>th</sup> Avenue  
Anchorage, Alaska 99513

**DEC Site Identifiers:**

File No.: 255.26.003  
Hazard ID.: 24732

**Regulatory Authority for Determination:**

18 AAC 78 and 18 AAC 75

### **Site Description and Background**

This site consists of three former underground storage tanks (USTs) at the Tanacross Airfield Site (TAS) located on the north side of the Alaska Highway near the Tanacross Airfield runway (Figure 1). Tanks #1 and #2 were used to store heating oil, and Tank #3 stored gasoline. The tanks were excavated and removed in September 1997.

#### *Tank #1*

Before tank excavation commenced, Tank #1 was found to be empty, but a high photoionization detector (PID) reading indicated the presence of remnant petroleum vapors. The tank was excavated and removed, and no stained soil or PID responses were observed on the walls or floor of the excavation at 8 feet below ground surface (bgs). Groundwater was present at the bottom of the excavation, although no sheen was seen. Two soil samples were taken from the bottom of the excavation, and analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX), gasoline range organics (GRO), diesel range organics (DRO), and lead. Soil samples showed contaminant concentrations below ADEC human health cleanup levels, but an exceedance of migration to groundwater cleanup levels was found for DRO (maximum concentration 2,110 mg/kg). The tank excavation was backfilled with native soil upon completion of the removal effort.

#### *Tank #2*

Before tank removal, the contents of Tank #2 were assessed. Liquid was still present in the tank, was pumped out, and a sample confirmed high levels of DRO. The tank was excavated and removed. Similar to Tank #1, no staining or PID detections were observed in the excavation side walls or floor at 8 ft bgs. Two soil samples were taken from the bottom of the excavation, and analyzed for BTEX, GRO, DRO, and lead. Soil samples showed contaminant concentrations below ADEC human health cleanup levels, but an exceedance of migration to groundwater cleanup levels was found for DRO (maximum concentration 3,240 mg/kg). The tank excavation was backfilled with native soil upon completion of the removal effort.

#### *Tank #3*

Similar to Tank #2, free product remained in Tank #3, was pumped out, and a sample taken for characterization confirmed high levels of GRO. The tank was excavated and removed, and no stained soil or positive PID readings were noted at the excavation floor, approximately 7 ft bgs. Two soil samples were taken from either end of the excavation floor and analyzed for BTEX, GRO, DRO, and lead. Soil samples showed contaminant concentrations below ADEC human health and migration to groundwater cleanup levels (GRO maximum concentration 1.8 mg/kg, DRO maximum concentration 31.8 mg/kg, lead maximum concentration 18.5 mg/kg). The tank excavation was backfilled with native soil upon completion of the removal effort.

### **Contaminants of Concern**

For Tanks #1 and 2, DRO contamination above 18 AAC 75.341, Table B1 and B2 migration to groundwater DEC cleanup levels was observed in the soil samples taken from the tank excavations. No other contaminants were found above migration to groundwater levels. For Tank #3, no contamination above 18 AAC 75.341, Table B1 and B2 migration to groundwater DEC cleanup levels was observed in the soil samples taken from the tank excavation.

### Cleanup Levels

The applicable cleanup levels for Tanks #1 and #2 are those found in 18 AAC 75.341 Tables B1 and B2 for the migration to groundwater and human health pathways in the under 40-inch precipitation zone. Groundwater contaminants were not found above 18 AAC 75.345 Table C cleanup levels, but the cleanup levels are included to evaluate cumulative risk and closure for this site (Table 1).

**Table 1 – Approved Cleanup Levels**

Contaminant	Soil migration to groundwater (mg/kg)	Soil ingestion (mg/kg)	Groundwater (µg/L)
DRO	250	10250	1500
GRO	300	1400	2200
Lead	NA	400	15

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

### Characterization and Cleanup Activities

Three monitoring wells were installed near the source areas of former Tanks #1 and #2, one upgradient and two downgradient. No additional characterization or cleanup activities were undertaken for Tank #3, because contaminants were not found above migration to groundwater cleanup levels.

A September 1997 groundwater sampling effort found no exceedances of ADEC groundwater cleanup levels in the three monitoring wells associated with Tanks #1 and 2. Additionally, a soil boring sample taken in the area of the tanks found no BTEX exceedances. In 2016 the three groundwater wells were re-sampled. Similar to the results from 1997, no exceedances of groundwater cleanup levels were observed (maximum DRO concentration 200 µg/L, GRO not detected). Additional soil samples were not taken after tank removal in 1997, and any remaining contaminated soil above migration to groundwater cleanup levels has likely attenuated, is not migrating to groundwater, and is likely a very small quantity.

### 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 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 DRO soil and groundwater concentrations meet the human health cumulative risk criteria for residential land use. Although DRO contamination exceeded migration to groundwater cleanup levels in soil, ADEC has determined that residual contamination will not migrate to groundwater

### 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 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	Pathway incomplete	Contamination is not present in surface soil (0 to 2 feet below ground surface).
Sub-Surface Soil Contact	De Minimis Exposure	The small volume of contamination remaining in subsurface soil is below human health cleanup levels.
Inhalation – Outdoor Air	Pathway Incomplete	No contaminants are present above inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	No contaminants are present above inhalation cleanup levels.
Groundwater Ingestion	De Minimis Exposure	Subsurface soil samples showed DRO levels above migration to groundwater cleanup levels, but groundwater sampling in 1997 and 2016 has confirmed that migration to groundwater will not occur.
Surface Water Ingestion	Pathway Incomplete	The small amount of contamination remaining in the soil is not likely to impact the Tanana River, 0.5 miles away.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Contamination is not present in surface soil.
Exposure to Ecological Receptors	Pathway Incomplete	Contamination is not present in surface soil. There is no potential for exposure to ecological receptors

**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

Soil and groundwater contamination at the site are at concentrations below the approved human health cleanup levels suitable for residential land use. Although contamination exceeded migration to groundwater cleanup levels in soil at Tanks #1 and 2, ADEC has determined that residual contamination will not migrate to groundwater. Contamination was never found above the most stringent levels in soil at Tank #3. Thus, the Tanacross TAS UST 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. (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 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) 451-2104, or email at [kevin.fraley@alaska.gov](mailto:kevin.fraley@alaska.gov).

Sincerely,

Kevin Fraley  
Project Manager

cc: Spill Prevention and Response, Cost Recovery Unit  
Eric Breitenberger, DEC  
Bill O'Connell, DEC  
Melody Debenham, BLM

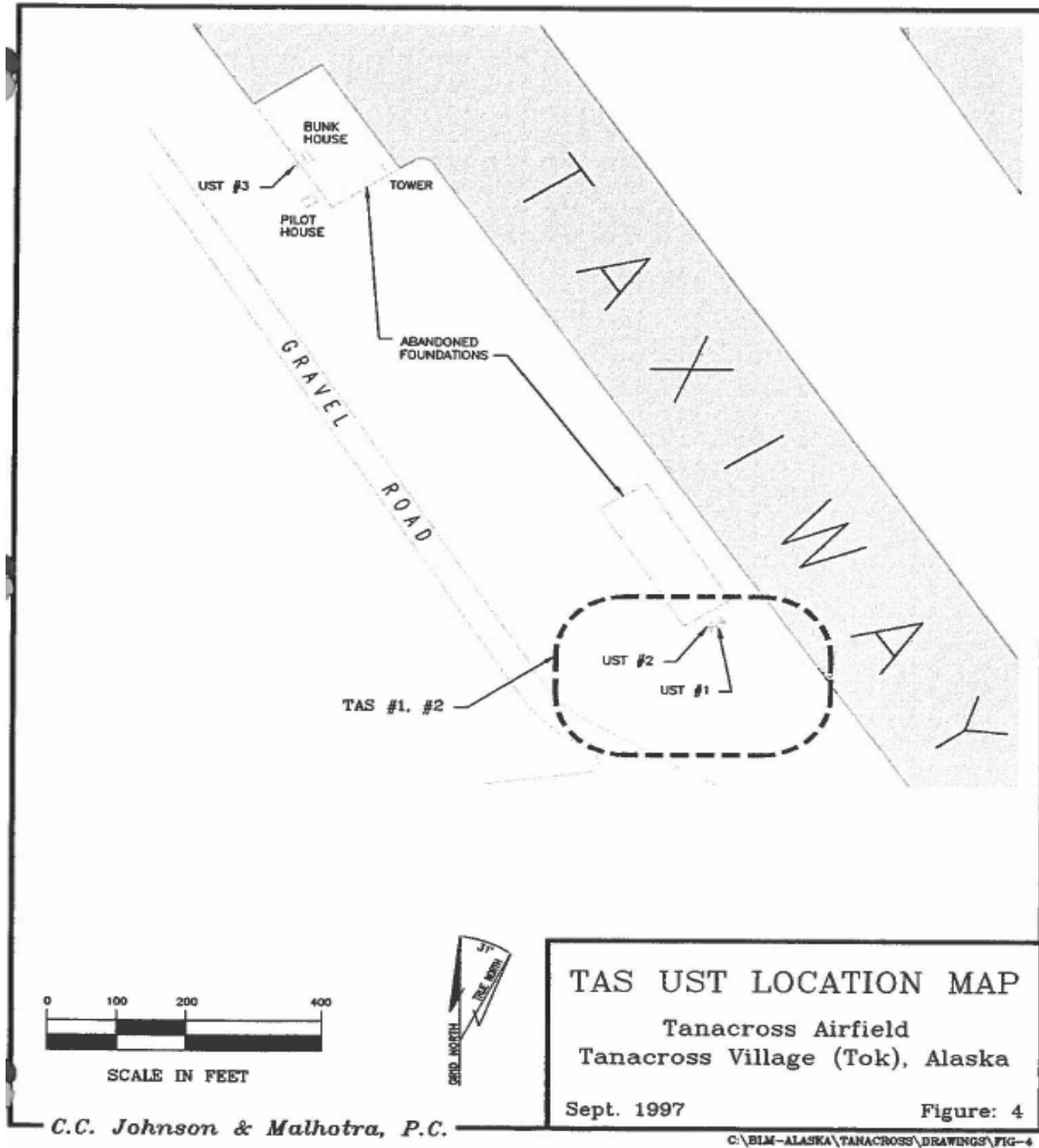


Figure 1: TAS USTs #1-3 location map