



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: 630.38.004

October 25, 2021

Aemon Wetmore  
FAA Alaska Region  
222 West 7<sup>th</sup> Avenue, #14  
Anchorage, Alaska 99513

Re: **Decision Document: Cleanup Complete Determination**  
FAA Unalakleet – Communication Tower

Dear Mr. Wetmore,

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the FAA Unalakleet – Communication Tower (CT), located in Unalakleet, 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 FAA Unalakleet – CT, 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:**

FAA Unalakleet – CT  
2 miles east of Unalakleet  
63° 53' 6.49" N, 160° 44' 4.15" W  
Unalakleet, Alaska

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

Aemon Wetmore  
FAA Alaska Region  
222 West 7<sup>th</sup> Ave., #14  
Anchorage, AK 99513

**DEC Site Identifiers:**

File No.: 630.38.004  
Hazard ID.: 4233

**Regulatory Authority for Determination:**

18 AAC 75

**Site Description and Background**

Unalakleet is located in eastern Norton Sound, approximately 148 miles southeast of Nome and 395 miles northwest of Anchorage. The CT site is located approximately two miles southeast of the Unalakleet Regional Airport on 23 acres of land (Figure 1). When it was active, the CT facility consisted of a transmitter building and tuning house.

The FAA (formerly Civil Aeronautics Administration) has maintained and operated a station in Unalakleet since 1942. An environmental compliance investigation was performed at the Unalakleet FAA Facility in 1991 by the FAA. The results of this investigation were presented in the 1992 *Environmental Compliance Investigation Report*, which identified, the CT site as a potential source of contamination. During this effort, two oil-filled transformers were removed, one of which was found tipped over amongst the pilings of the previously removed CT transformer building. Infrastructure at the CT site in 1991 was documented to include a plank road turnaround area, pilings for the former transmitter building, pilings and concrete footers that supported two 150-foot towers and two 60-foot towers, along with miscellaneous metal and wood debris. At some point, the two 60-foot towers were relocated to an area approximately 1,700 feet southeast of the CT site. All remaining infrastructure and debris associated with the former CT facility was removed in 2015 and 2016.

In 2007, eight surface soil samples were collected from the area of the former CT transformer building to determine if soils located underneath the tipped over transformer were contaminated with polychlorinated biphenyls (PCBs). One sample detected a concentration of 1.05 mg/kg of PCBs. In 2015, soils samples were collected in a circular fashion, centered around the location of the 2007 PCB exceedance. The maximum concentration was 13.5 mg/kg. Approximately one cubic yard (CY) of contaminated soil was removed once to area of contaminated was believed defined. Confirmation samples were taken after excavation, with one sample detecting a concentration of 1.20 mg/kg.

The two 60-foot towers were removed as part of the spring 2016 decommissioning effort. Before removal, it was determined that lead based paint chips had flaked off onto the tundra surrounding the towers. In 2016, an investigation took place after towers were removed from the site to determine the extent to the lead contamination. Prior to demolition, the contractor marked the perimeter of the towers to define the perimeter to be investigated. The soils beneath the two CT towers exceeded the ADEC Method Two cleanup level for lead.

### Contaminants of Concern

During site characterization activities, soils near the former transformer area were analyzed for PCBs and soils near the downed towers were analyzed for total lead. There is no surface water located in the vicinity of the site. The following contaminants of concern (COCs) have been identified in soil at the CT site:

- PCBs
- Lead

### Cleanup Levels

The cleanup levels that apply at the CT site are the Method Two Under 40-Inch Zone migration to groundwater<sup>1</sup> and human health soil cleanup levels, established in 18 AAC 75.341. Surface water and groundwater have not been encountered during site characterization activities at the CT site. The applicable soil cleanup levels and residual concentrations at the CT are summarized in Table 1, below.

**Table 1 – Approved Soil Cleanup Levels**

Contaminant	Table B1 Under 40-Inch Human Health/Ingestion Cleanup Levels (mg/kg)	Maximum Remaining Concentration (mg/kg)
PCBs	1.0	0.226
Total lead	400	154

mg/kg = milligrams per kilogram

<sup>1</sup> PCBs and lead do not have an applicable 18 AAC 75 Table B1 migration to groundwater cleanup level

### **Characterization and Cleanup Activities**

Characterization and cleanup activities began at the CT site in 1992 with an environmental compliance investigation conducted by FAA. Two oil-filled transformers were identified as possible sources of contamination at the CT site. Both transformers were removed during the 1992 field activities. One transformer was found tipped over in the footprint of the former CT transformer building.

The two 60-foot CT towers were dismantled and removed in the spring of 2016. Flaking lead-based paint (LBP) chips were observed beneath the towers. Prior to demolition of the towers, the perimeter was marked to define the area of contamination to be investigated in the future. After removal, 100 field screening samples were analyzed for lead using an x-ray fluorescence (XRF) field analyzer. Eight field screening samples exceeded the ADEC Method Two cleanup level for lead. The five highest field screening samples were submitted for lead analysis; four of the five samples exceeded the 400 mg/kg cleanup level. High efficiency particulate air (HEPA) vacuum units were used to remove the LBP chips from the tundra vegetation. Approximately 10 gallons of LBP chips were collected and disposed of by NRC Alaska. After the LBP remedial action was completed, incremental sampling methodology (ISM) samples were collected from the area beneath the former towers. The global positioning system (GPS) data from the 2016 field effort to define the perimeter of contamination around the towers was used to construct a single decision unit (DU). The resulting DU encompassed the affected area. The maximum remaining concentration detected was 154 mg/kg.

In 2016, one confirmation soil sample collected from a small excavation at the former CT transformer building footprint detected PCBs at a concentration of 1.20 mg/kg. In 2018, additional step out soil samples were taken beyond the limits of the 2016 excavation to determine the extent of the remaining contamination. The results indicated that PCB concentrations exceeded the ADEC Method Two cleanup level of 1 milligram per kilogram (mg/kg) with a maximum concentration of 14.3 mg/kg. In 2020, an additional remedial action took place to remove the remaining PCB-impacted soil. Approximately 9.5 CY of soil was removed. Confirmation samples from the final excavation were well below the applicable cleanup level of 1.0 mg/kg. The highest result had a concentration of 0.226 mg/kg.

### **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 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	Residual lead contamination in surface soils is below human health cleanup levels.
Sub-Surface Soil Contact	De Minimis Exposure	Residual lead and PCB contamination in subsurface soil is below human health cleanup levels.
Inhalation – Outdoor Air	De Minimis	Residual contamination remains in sub-surface soils, but is below human health cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	No structures remain at this site and residual soil contamination is below human health cleanup levels.
Groundwater Ingestion	Pathway Incomplete	During site characterization activities, groundwater was not encountered.
Surface Water Ingestion	Pathway Incomplete	Surface water is not used as a drinking water source in the vicinity of this site.
Wild and Farmed Foods Ingestion	De Minimis	Contaminants of concern (lead and PCBs) are present at levels below human health cleanup levels. Additionally, this area is unlikely to be habitat for plants or animals which are a food source.
Exposure to Ecological Receptors	Pathway Incomplete	Ecological receptors are unlikely to come into contact with the remaining contamination. Additionally, this area is close to the airport and is unsuitable habitat for valued species, as determined by an ecoscoping evaluation.

**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 contamination remaining at the FAA Unalakleet – CT site is below the approved cleanup levels suitable for residential land use. The FAA Unalakleet – CT contaminated site will receive a “Cleanup Complete” designation on the Contaminated Sites Database<sup>2</sup>, subject to the standard conditions below.

### **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. (Figure 1)
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

<sup>2</sup> <https://dec.alaska.gov/Applications/SPAR/PublicMVC/CSP/SiteReport/4233>

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.

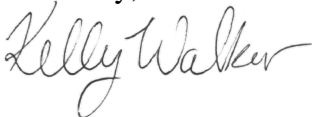
This determination is in accordance with 18 AAC 75.380 and does not preclude ADEC from requiring additional assessment and/or cleanup action if information indicates that contaminants at this site may pose an unacceptable risk to human health, safety, or welfare or to the environment.

### **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, 610 University Avenue, Fairbanks, AK 99709, 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) 451-2166, or email at [kelly.walker@alaska.gov](mailto:kelly.walker@alaska.gov).

Sincerely,



Kelly Walker  
Project Manager

cc, via email: Spill Prevention and Response, Cost Recovery Unit  
Jamie McKellar, DEC  
Nick Waldo, DEC

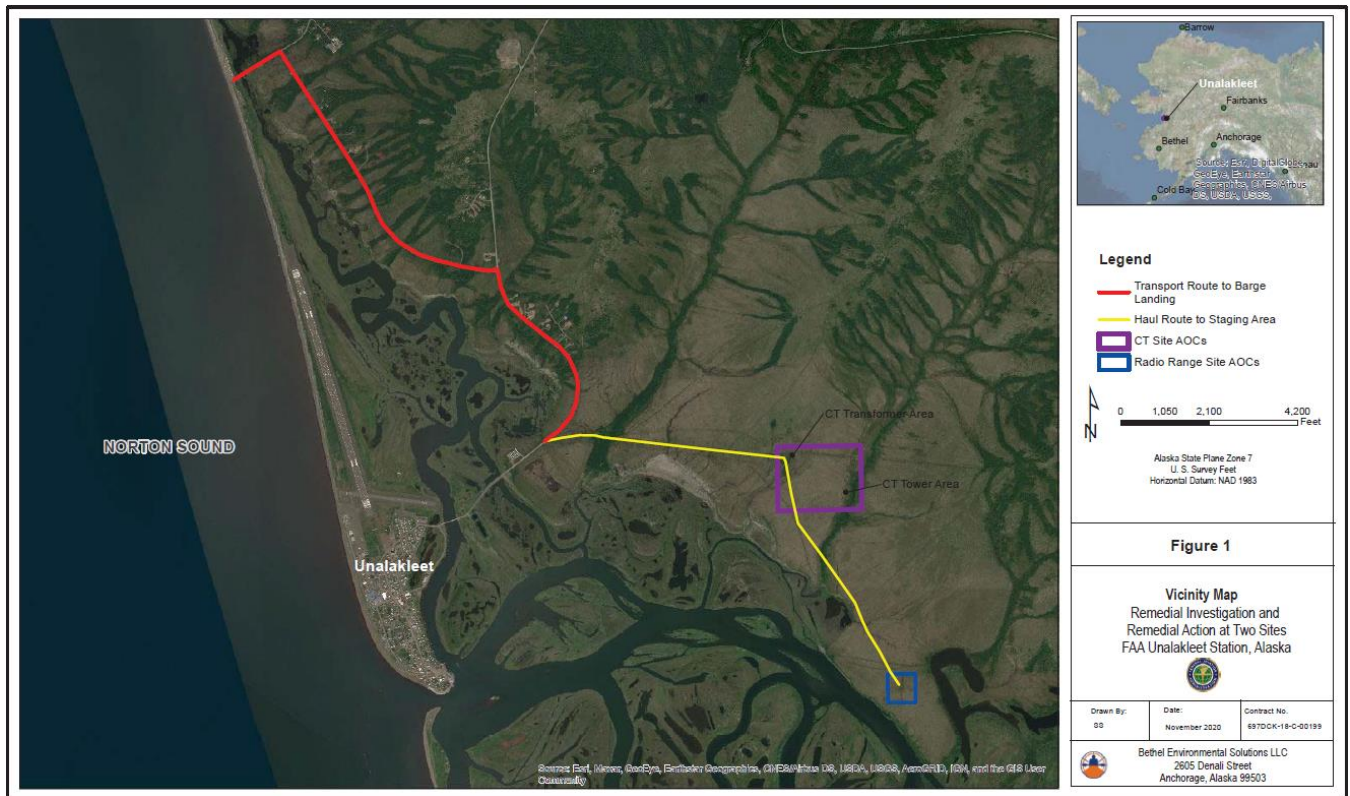


Figure 1. FAA Unalakleet vicinity map - CT site location (purple box)