



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

**Department of Environmental
Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

610 University Avenue
Fairbanks, AK 99709-3643
Phone: 907-451-2143
Fax: 907-451-2155
www.dec.alaska.gov

File: 1529.38.011

September 17, 2020

Lisa Ebbs
Federal Aviation Administration
222 West 7th Avenue, Box 14
Anchorage, AK, 99513-7587

Re: Decision Document: FAA Level Island Drum Storage
Cleanup Complete Determination

Dear Ms. Ebbs,

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the FAA Level Island Drum Storage Area, located on Big Level Island, approximately 27 miles west of Wrangell, 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 Level Island Drum Storage, 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 Level Island Drum Storage
Big Level Island
Approximately 27mi west of Wrangell, AK
Lat: 56.46654 Long: -133.09482

Name and Mailing Address of Contact Party:

Lisa Ebbs
Federal Aviation Administration
222 West 7th Ave, Box 14
Anchorage, AK, 99513-7587

DEC Site Identifiers:

File No.: 1529.38.011
Hazard ID.: 1458

Regulatory Authority for Determination:

18 AAC 75

Site Description and Background

The Level Island FAA facility is located on United States Forest Service (USFS) land on Big Level Island near Wrangell, Alaska. Since 1964, a pullout located on the main access road 400ft northeast of the FAA main shop was used for storage of petroleum products in 55-gallon drums. Initial site

investigation in 1992 discovered leaking oil drums and soil staining. In 1998 the contaminated surface soils were excavated and landspread in place.

Contaminants of Concern

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

- GRO
- DRO
- benzene

Cleanup Levels

The most conservative Method Two cleanup levels for the over 40-inch zone apply at this site. Method Two soil cleanup levels can be found in 18 AAC 75.341 Tables B1 & B2. The applicable groundwater cleanup levels can be found in 18 AAC 75.345 Table C.

The approved cleanup levels for the FAA Level Island Drum Storage Area are summarized in Table 1, below.

Table 1 – Approved Cleanup Levels

Contaminant	Soil (mg/kg)	Groundwater (µg/L)
GRO	260	2200
DRO	230	1500
benzene	0.022	4.6

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

Characterization and Cleanup Activities

Initial Investigation in 1992 discovered 19 drums of fuel, hydraulic oil, and motor oil northeast of the FAA Shop building on a road pullout surrounded by dense vegetation. Many of the drums were rusting or bulging and the surrounding soil was stained. Analytical samples confirmed that petroleum contamination was present in surface soils.

In 1995, additional environmental investigation was conducted. Four remaining abandoned drums were removed and soil contamination was investigated through hand auger borings. A total of 27 field screening samples were collected from 0 to 2.5 feet below ground surface (ft bgs), analytical samples were collected from seven of these locations. Three analytical soil samples exceeded the cleanup levels with concentrations of GRO, DRO, and benzene of up to 3,500 mg/kg, 230 mg/kg, and 1.2 mg/kg, respectively. An abandoned sandpoint water supply well located 70 ft down-gradient was sampled and benzene was found in groundwater in excess of the cleanup levels at 13 µg/L.

In 1998, additional environmental investigation occurred. Soil boring samples were field screened for petroleum contamination surrounding the drum storage area and hand augers were used to collect samples within the former drum storage area. Perched groundwater was found at 1.5 to 3.5 ft bgs, underlain by bedrock at 4 to 7.5 ft bgs. After determining that petroleum contamination was limited to a 13 by 26 foot area, and with approval from the FAA and USFS, the contaminated soil was excavated, mixed with fertilizer and landspread in place. Because of very shallow depth to bedrock and some of the borings being dry, monitoring wells could not be installed near the drum storage area for collection of analytical groundwater samples.

In 2009, nine ultra-violet optical screening tool (UVOST) borings were advanced to characterize soil petroleum contamination surrounding the former drum area. UVOST results did not identify any contamination. Four analytical soil samples were collected from the previously landspread soils. All analytical samples were either non-detect or far below the cleanup levels for all contaminants of concern. A temporary well point was installed at the location of the former sandpoint well and a water sample was collected. This groundwater sample contained benzene far below the cleanup level and all other analytes were non-detect.

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 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 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 remaining in surface soils (0-2 ft bgs) is below the applicable cleanup levels.
Sub-Surface Soil Contact	De Minimis Exposure	Contamination remaining in surface soils (2-15 ft bgs) is below the applicable cleanup levels.
Inhalation – Outdoor Air	De Minimis Exposure	Contamination remaining in soil is below the applicable cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De Minimis Exposure	Contamination is below the most stringent cleanup levels and there are no buildings in the vicinity of the drum storage area.

Pathway	Result	Explanation
Groundwater Ingestion	De Minimis Exposure	Contamination remaining in groundwater is below the applicable cleanup levels.
Surface Water Ingestion	Pathway Incomplete	The nearest surface water, the Sumner Strait, is located 700 ft upgradient and residual contamination is not expected to migrate.
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	Remaining contamination is not expected to impact 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 at the FAA Level Island Drum Storage Area had been impacted by petroleum contamination from abandoned drums. This contamination was treated in situ through landspreading with the addition of fertilizer and has attenuated to below the cleanup levels suitable residential land use. The FAA Level Island Drum Storage Area, tracked under File No. 1529.38.011 and Hazard ID 1458 will be given a Cleanup Complete status in the Contaminated Sites Database¹, 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.

¹ DEC Contaminated Sites Database: <https://dec.alaska.gov/Applications/SPAR/PublicMVC/CSP/Search>

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

Sincerely,

Michael Hooper
Project Manager

cc (via email): Spill Prevention and Response, Cost Recovery Unit
 Eric Breitenberger, DEC
 Kara Kusche, DEC
 Linda Riddle, USFS