



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 No.2542.38.010

January 27, 2020

Electronic Delivery Only

Erik Norberg  
Environmental Impact Analysis Manager  
Alaska Department of Transportation & Public Facilities  
3132 Channel Drive, MS-2500  
P. O. Box 112500  
Juneau, AK 99811-2500

Re: Decision Document: ADOT&PF Dutch Harbor-Airport Torpedo Building  
Cleanup Complete Determination

Dear Mr. Norberg:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Alaska Department of Transportation and Public Facilities (ADOT&PF) Dutch Harbor-Airport Torpedo Building located at the Unalaska Airport. 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 ADOT&PF Dutch Harbor-Airport Torpedo Building which is located in the ADEC office in Anchorage, Alaska. This decision letter summarizes the site history, cleanup actions and levels, and standard site closure conditions that apply.

**Site Name and Location:**

ADOT&PF Dutch Harbor-  
Airport Torpedo Building  
Southside of Unalaska Airport  
Unalaska, AK 99685

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

Erik Norberg  
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ADOT&PF  
3132 Channel Drive, MS-2500  
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Juneau, AK 99811-2500

**ADEC Site Identifiers:**

File No.: 2542.38.010  
Hazard ID.: 1328

**Regulatory Authority for Determination:**

18 AAC 75

## Site Description and Background

The Torpedo Building was constructed by at least 1942 for the purpose of preparing torpedoes for loading onto aircraft during World War II (WWII). In 1946, the building was decommissioned and used by the Navy for storage. Between 1959 and 1962, the property was leased to Alaska Barge and Transport. The Navy gave up ownership of the Torpedo Building to the Ounalashka Corporation in 1974 as part of the Alaska Native Claims Settlement Act. The building was deeded to the ADOT&PF in 1980, where it was used as a storage facility until 2001. ADOT&PF currently owns the property.

In 1991, soil and groundwater contaminated with diesel were encountered outside the Torpedo Building as well as significant petroleum and lead contamination inside it. Potential onsite source areas include a former fuel pipeline owned and operated by Frosty Fuels on the east side of the property (see site figure) and WWII military activities and lessees within and around the Torpedo Building itself. In 2016, the Torpedo Building was decommissioned and removed from site.

## Contaminants of Concern

During the site investigation and cleanup activities at this site, samples were collected from soil and groundwater and were analyzed for gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), Polychlorinated biphenyls (PCBs), pesticides, and metals. Based on these analyses, the following contaminants of concern were identified at the site:

- DRO
- ethylbenzene
- xylenes
- lead

## ADEC Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B1 and B2, *Over 40 Inch Zone*. The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels.

**Table 1- Approved Soil and Groundwater Cleanup Levels**

Contaminants of Concern	Soil (mg/kg)	Groundwater (µg/L)
DRO	230 <sup>1</sup>	1,500
ethylbenzene	0.13 <sup>1</sup>	15
xylenes	1.5 <sup>1</sup>	190
lead	400 <sup>2</sup>	15

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

<sup>1</sup>Soil cleanup level for the migration to groundwater pathway

<sup>2</sup>Soil cleanup level for the human health pathway

## Characterization and Cleanup Activities

In 1991, five subsurface discrete soil samples and three surface composite soil samples (SS1, SS2, and SS3) were collected. SS1 was collected from the surface of the concrete floor inside the Torpedo Building and contained total petroleum hydrocarbons (TPH) at 120,000 mg/kg (note: TPH is roughly equivalent to the summation of gasoline, diesel and residual range organics) and lead at 186,639 mg/kg. SS2 was collected west of 55-gallon barrels stored at the former North Air Cargo building (currently the Alaska Weather Operation Services Building) and contained TPH up to 2,410 mg/kg. SS3 was collected from a mound of soil with metal and wood debris on the southern side of the western entrance to the Torpedo Building and contained lead at 430.9 mg/kg. The subsurface investigation

consisted of five test pits (TP1–TP5) excavated to a depth of 9.5 feet below ground surface (bgs). TP1 and TP2 were located adjacent to the Frosty Fuels buried fuel line on the east side of the Torpedo Building. TP3, TP4, and TP5 were located in areas of potential contamination based off previous investigations. Only TP2 contained contamination above cleanup levels in samples collected 8.5 feet bgs at the groundwater interface. The soil sample collected contained TPH at 4,700 mg/kg and DRO at 2,750 mg/kg. The excavation water sample, which had free product, contained TPH at 2,130 mg/L, ethylbenzene at 2.4 mg/L, and xylenes at 9.6 mg/L.

In 1998, Frosty Fuels removed a regulated underground storage tank (UST) from the runway apron area and removed a portion of the pipeline located adjacent to the eastside of the Torpedo Building. Contamination was not encountered during the UST and pipeline removal and the contaminated site known as [Frosty Fuels Inc. Dutch Harbor \(Hazard ID 23778\)](#) was closed.

In 1999, twelve soil borings were advanced with five completed as monitoring wells (MW1–MW5) to further define the extent of contamination. Only two of the soil borings, which were located adjacent to the historic Frosty Fuel Pipeline, contained contaminant concentrations above cleanup levels. Soil samples collected 11 feet bgs at the groundwater interface contained DRO up to 993 mg/kg, ethylbenzene up to 0.3 mg/kg, and xylenes up to 2.6 mg/kg. Monitoring well MW-1 was completed in one of these two borings. Water samples from MW-1 contained DRO up to 55 mg/L. Monitoring wells MW-2, MW-3 (both sampled for metals including lead) and MW-4 did not contain contaminant concentrations above cleanup levels. MW-5 was dry and therefore not sampled.

In 2001, solid waste cleanup inside the Torpedo Building and groundwater monitoring was conducted. The solid waste cleanup was limited to removing miscellaneous drums, solid waste, and all lead impacted sediments from the concrete floor. Hazardous waste including a total of 74 drums of lead impacted sediment, a drum of motor oil, a drum of used sorbent pads, used oil filters, and oily sludge were removed from inside the building and properly disposed of at the permitted Burlington Environmental Inc. facility in Kent, Washington. Additionally, approximately 9.78 tons of nonhazardous solid waste was disposed of at the City of Unalaska Landfill. A groundwater sample collected from MW1 contained DRO at 9.49 mg/L. Groundwater sampled from MW3 and MW4 did not contain detectable concentrations of contaminants.

In 2015, a baseline assessment was conducted to the west and northwest immediately adjacent of the Torpedo Building. Eight test pits were advanced in areas of potential contamination. Five test pits were excavated to 3 feet bgs and three were excavated 8 to 10 feet bgs at the groundwater interface with wellpoints installed. Only two of the eight test pits contained contaminant concentrations above cleanup levels; soil samples collected at 2.5 feet bgs and 2.0 feet bgs contained DRO at 253 mg/kg and 271 mg/kg, respectively. None of the groundwater samples collected from the three wellpoints contained detectable concentrations of contaminants.

In preparation to decommission the Torpedo Building in 2016, a 210 cubic yard (cy) pile of soil and debris including large boulders, tires, scrap metal, car parts, etc. was generated. A total of 100 cubic yards of debris was removed from the pile and disposed of at the City of Unalaska landfill. The remaining 110 cy soil pile was put into six stockpiles onsite; approximately 15 to 20 cy each. Five soil samples collected in the footprint beneath the former 110 cy soil pile footprint contained DRO up to 294 mg/kg. A total of 14 soil samples collected from the six stockpiles did not contain contaminant concentrations above cleanup levels, except for one discrete soil sample collected from stockpile 4 which contained DRO at 271 mg/kg and one composite soil sample collected from stockpile 3 which contained lead at 462 mg/kg. A monitoring well reconnaissance and sampling of MW-1 was also performed. MW-1 was found intact with a destroyed cover; MW-2 was found to be paved over and presumed destroyed; MW-3 was verified destroyed; MW-4 could not be located but is presumed destroyed; MW-5 was verified destroyed. Two groundwater samples collected from MW-1 contained detectable concentrations of contaminants, but below Table C groundwater cleanup levels.

In 2017, all the soil stockpiles were transported to the City of Unalaska Landfill accept stockpile 3 due to a maximum lead concentration detected of 462 mg/kg. However, the mean lead soil concentration at the 95<sup>th</sup> percent upper confidence limit (95% UCL) for lead from seven soil samples collected from the six stockpiles was calculated

to be 363 mg/kg. This 95% UCL was calculated with the EPA ProUCL statistical software using the Student's t-test. Stockpile 3 has been put into 18 supersack bags and is currently on site pending onsite reuse or removal to an offsite location after obtaining ADEC's approval to transport.

A final mobilization occurred in 2019 to decommission all remaining monitoring wells. Monitoring wells MW-1 and MW-3 were decommissioned. Monitoring wells MW-2, MW-4, and MW-5 were verified destroyed and could not be decommissioned.

### 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, Exposure Controlled, 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	Remaining surface soil contamination is below ingestion/inhalation and human health cleanup levels
Sub-Surface Soil Contact	De-Minimis Exposure	Remaining surface soil contamination is below ingestion/inhalation and human health cleanup levels
Inhalation – Outdoor Air	De-Minimis Exposure	Remaining soil contamination is below ingestion/inhalation and human health cleanup levels
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There are no buildings on site and remaining contamination is not volatile
Groundwater Ingestion	De-Minimis Exposure	The latest groundwater sampling event was below table C cleanup levels. This site is located within the Unalaska Airport and the groundwater is tidally influenced and not a likely source of future drinking water.
Surface Water Ingestion	Pathway Incomplete	This site is located within the Unalaska Airport. This site is not located near surface water intakes
Wild and Farmed Foods Ingestion	Pathway Incomplete	This site is located within the Unalaska Airport. It is not in an area of subsistence or farming
Exposure to Ecological Receptors	Exposure controlled	This site is located within the Unalaska Airport. Significant impacts to ecological receptors is unlikely.

**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**

Remaining contaminant concentrations in groundwater have decreased from 1991 to 2016 to below ADEC Table C groundwater cleanup levels. All remaining contaminant concentrations in the soil are below human health and ingestion and inhalation cleanup levels. 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 75.325(i) or 18 AAC 78.600(h)]. A “site” [as defined by 18 AAC 75.990 (115) or 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 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 15 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) 269-8685 or email at [grant.lidren@alaska.gov](mailto:grant.lidren@alaska.gov).

Sincerely,



Grant Lidren  
Project Manager

Site Figure

