



THE STATE  
of ALASKA  
GOVERNOR MICHAEL J. DUNLEAVY

Department of  
Environmental Conservation

DIVISION OF SPILL PREVENTION AND RESPONSE  
Contaminated Sites Program

P.O. Box 111800  
Juneau, AK 99811-1800  
Phone: 907-465-5390  
Fax: 907-465-5218  
www.dec.alaska.gov

ADEC File # 2100.26.314

September 11, 2019

Willie O'Malley, AWWU  
Municipality of Anchorage  
P.O. Box 196626  
Anchorage, AK 99519

Re: Decision Document: MOA - AWWU - Anchorage Headquarters bldg.  
Cleanup Complete Determination

Dear Mr. O'Malley:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the MOA - AWWU - Anchorage Headquarters bldg. site located at 3000 Arctic Boulevard in Anchorage. 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 MOA - AWWU - Anchorage Headquarters bldg., which is located in the ADEC office in Juneau, Alaska. This decision letter summarizes the site history, cleanup actions and levels, and standard site closure conditions that apply.

**Site Name and Location:**

MOA - AWWU - Anchorage Headquarters bldg.  
3000 Arctic Boulevard  
Anchorage, AK 99503

**DEC Site Identifiers:**

File No.: 2100.26.314  
Hazard ID.: 23990

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

Willie O'Malley, AWWU  
Municipality of Anchorage  
P.O. Box 196626  
Anchorage, AK 99519

**Regulatory Authority for Determination:**

18 AAC 75 and 18 AAC 78

### Site Description and Background

This site is located within the parking lot of the Anchorage Water and Wastewater Utility (AWWU) Anchorage Headquarters building, nearest the Arctic Boulevard entrance. Three 4,000-gallon regulated underground storage tanks (USTs) were decommissioned from the property in April of 1993. Two of the tanks were used to store gasoline and one was used to store diesel. Observations of the USTs following removal revealed holes and severe pitting in the gasoline tanks, and contamination was noted in the excavation pit. In total, 630 tons of contaminated soil was excavated and disposed of offsite at Alaska Soil Recycling (ASR). This site was entered into the ADECs Contaminated Sites Database on April 14<sup>th</sup>, 1993.

### Contaminants of Concern

During the characterization activities at this site, samples were collected from soil and groundwater for analysis of gasoline range organics (GRO) by Alaska (AK) Method AK101, diesel range organics (DRO) by AK Method 102, residual range organics (RRO) by method AK103, and benzene, toluene, ethylbenzene, total xylenes (BTEX) by method EPA 8021B, polyaromatic hydrocarbons (PAH) by method EPA 8270, and volatile organic carbons (VOC) by method EPA 8260B. Based upon the results of these analyses, the following contaminants were detected above ADEC's Method Two Migration to Groundwater (MTG) soil cleanup levels or Table C groundwater cleanup levels and are considered Contaminants of Concern (COC) at this site:

- Benzene
- Tetrachloroethylene (PCE)

### Cleanup Levels

Contaminants of concern for this site are benzene and tetrachloroethylene. See Table 1, below. Benzene and tetrachloroethylene were detected in soil above the MTG cleanup levels for the Under 40-inch precipitation zone, established in 18 AAC 75.341(c), Table B1, and 18 AAC 75.341 (d), Table B2. Benzene remains in groundwater at the site, but at concentrations below the 18 AAC 75.345 (b)(1) Table C groundwater cleanup levels.

**Table 1 – Approved Cleanup Levels**

Contaminant	Soil - MTG (mg/kg)	Soil – Human Health (mg/kg)	Soil – Maximum Remaining (mg/kg)	Groundwater (µg/L)	Groundwater – Maximum Remaining (µg/L)
benzene	0.022	11	0.606	4.6	1.84
Tetrachloroethylene (PCE)	0.19	68	0.212	41	Not-detected

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

### Characterization and Cleanup Activities

A chronological history of the site is presented below, along with references to the reports where that information was obtained:

*“Site Assessment Report: Underground Storage Tank Removal, 3000 Arctic Boulevard”*

June 21, 1993 by Harding Lawson Associates

Three, ADEC-regulated, 4,000-gallon USTs, one diesel and two gasoline, were decommissioned and removed on April 13, 1993. During tank removal, visual observation and field-screening indicated a release from the two gasoline USTs. Harding Lawson Associates (HLA) staff inspected the USTs and revealed the presence of holes in the bottom of the gasoline tanks. No holes or leaks were observed in the diesel tank or in any associated fuel piping.

Following the tank removal effort, soil samples were collected from the main UST excavation, as well from four additional exploratory test pits completed to delineate the release. The depth of excavation was generally limited by groundwater, which was encountered at about 9 feet below the ground surface (bgs). In addition to the soil samples, one grab-groundwater sample was collected from the pit water in the test pit located nearest the dispenser island. A total of 630 tons of contaminated soil was excavated and transported offsite for disposal at Alaska Soil Recycling.

Soil sample results varied, but confirmed remaining levels of benzene up to 0.606 mg/kg and PCE up to 0.212 mg/kg; both concentrations exceed the current MTG soil cleanup levels of 0.022 mg/kg and 0.19 mg/kg, respectively. The groundwater sample did not exhibit contaminant concentrations in excess of applicable cleanup levels.

*"2010 Site Characterization: Anchorage Water and Wastewater Utility: 3000 Arctic Boulevard"*  
December 2010 by BGES, Inc.

In June and July 2010, additional characterization (soil and groundwater) was conducted. Eight soil borings were advanced to depths between 7 and 15 feet bgs, and one that extended to 32 feet bgs (at the PCE-contaminated area). Three of the soil borings were completed as permanent groundwater monitoring wells (MW1, MW2, and MW3). Depth to groundwater during well completion varied between 7.40' to 8.11' bgs. Soil and groundwater samples were collected to characterize the extent of remaining soil and groundwater contamination. Laboratory results confirmed one soil sample (from the boring completed as MW3) exceeded MTG soil cleanup levels with 0.032 mg/kg benzene. DRO, RRO, GRO, PAH, and all other VOC's returned at non-detect in all other soil samples. Groundwater contamination was detected in only one of three monitoring wells (MW3) with 9.32 µg/L benzene. DRO, RRO, GRO, and other VOCs were not detected.

From 2010 to 2017, groundwater was sampled in a total of four monitoring wells placed within and around the 1993 excavation limits to delineate nature and extent of contamination. MW-1 and MW-2 were sampled twice a year from 2010 to 2012 and then removed from the sampling program in 2013 due to steady state concentrations of non-detect for GRO, DRO, RRO, and BTEX. DRO, GRO, and RRO were only analyzed in 2010. See Table 2, below, for groundwater data analyzed between 2010 and 2017.

## **Table 2 – Historical Groundwater Data**

**HISTORICAL GROUNDWATER DATA**

Monitoring Well	Date	Parameter Tested and Cleanup Level (µg/L)^						
		GRO 2,200	DRO 1,500	RRO 1,100	Benzene 4.6	Toluene 1,100	Ethylbenzene 15	Xylenes 190
MW-1	7/7/2010	<100	<385	<385	<0.500	<1.0	<1.0	<3.0
	6/29/2011	-	-	-	<0.500	<0.500	<0.500	<1.5
	10/22/2011	-	-	-	<0.500	<1.0	<1.0	<1.0
	3/10/2012	-	-	-	<0.500	<1.0	<1.0	<2.0
	9/22/2012	-	-	-	<0.500	<1.0	<1.0	<2.0
	Removed from sampling program in 2013							
MW-2	7/7/2010	<100	<385	<385	<0.500	<1.0	<1.0	<0.003
	6/29/2011	-	-	-	<0.500	<0.500	<0.500	<1.5
	10/22/2011	-	-	-	<0.500	<1.0	<1.0	<1.0
	3/10/2012	-	-	-	<0.500	<1.0	<1.0	<2.0
	9/22/2012	-	-	-	<0.500	<1.0	<1.0	<2.0
	Removed from sampling program in 2013							
MW-3	7/7/2010	<100	<385	<385	9.32	1.23	<1.0	<3.0
	6/29/2011*	-	-	-	7.71	<0.500	<0.500	<1.5
	10/22/2011*	-	-	-	11.4	<1.0	<1.0	<1.0
	3/10/2012*	-	-	-	10.7	<1.0	<1.0	<2.0
	9/22/2012*	-	-	-	9.69	<1.0	<1.0	<2.0
	9/29/2013*	-	-	-	2.92	<0.620	<0.620	<1.86
	8/30/2014*	-	-	-	5.47	<0.500	<0.500	<1.50
	11/22/2014*	-	-	-	4.12	<0.500	<0.500	<1.50
	3/30/2016*	-	-	-	5.90	<0.500	<0.500	<1.50
	6/22/2016*	-	-	-	7.28	<0.500	<0.500	<1.50
	9/28/2016*	-	-	-	6.77	3.80 J	<0.500	<1.50
	12/7/2016*	-	-	-	4.13	<0.500	<0.500	<1.50
	10/4/2017	-	-	-	1.84	<0.500	<0.500	<1.50
MW-4	10/4/2017	-	-	-	0.320 J	0.310 J	<0.500	<1.50

**Notes:**

Groundwater concentrations measured prior to September 2013 are reported by others

^ = Groundwater cleanup levels based on 18 AAC 75.345 Table C, 18 AAC 75 (November 2017)

\* = higher analytical result of the sample and duplicate is reported

- = not applicable or sample not tested for this parameter

9.32 = reported concentration exceeds the regulated cleanup level

1.23 = analyte detected

&lt;1.0 = analyte not detected; laboratory reporting limit of 0.100 mg/L

J = concentration is an estimate less than the laboratory limit of quantitation (LOQ). See the SGS laboratory

µg/L = micrograms per liter

*Additional Site Characterization Activities, 3000 Arctic Boulevard, Anchorage, Alaska* by Shannon & Wilson, Inc. (February 13, 2018)

**Cumulative Risk Evaluation**

Pursuant to 18 AAS 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 cumulative risk criteria for human health.

**Exposure Pathway Evaluation**

Exposure pathways are the conduits by which contamination may reach human or ecological receptors. ADEC's exposure tracking model (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 3.

**Table 3 – Exposure Pathway Evaluation**

<b>Pathway</b>	<b>Result</b>	<b>Explanation</b>
Surface Soil Contact	Pathway Incomplete	Contamination is not present in the surface soil.
Sub-Surface Soil Contact	De-Minimis Exposure	Benzene and PCE contaminated soil remain in the subsurface, but below human health levels; 0.212 mg/kg PCE and 0.606 mg/kg benzene at eight feet bgs in the main UST excavation & 0.114 mg/kg benzene in soil at four feet bgs, near the former dispenser area.
Inhalation – Outdoor Air	De-Minimis Exposure	Benzene and PCE contaminated soil remain in the subsurface but below human health levels; 0.212 mg/kg PCE and 0.606 mg/kg benzene at eight feet bgs in the main UST excavation & 0.114 mg/kg benzene in soil at four feet bgs, near the former dispenser area. Also, the site is paved with asphalt and landscaped.
Inhalation – Indoor Air (vapor intrusion)	De-Minimis Exposure	Contamination in groundwater is below ADEC vapor intrusion target levels.
Groundwater Ingestion	Pathway Incomplete	Groundwater contamination is no longer above Table C groundwater cleanup levels. Additionally, drinking water is provided to the area by AWWU.
Surface Water Ingestion	Pathway Incomplete	Site is capped with asphalt or landscaped. No surface water bodies exist at the site. Nearest creek is 1/4 mile to southwest and was not impacted by contamination.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Site is commercially-zoned with an office building. Area around office building is paved with asphalt or landscaped.
Exposure to Ecological Receptors	Pathway Incomplete	Site is commercially-zoned with an office building. Area around office building is paved with asphalt or landscaped.

**Notes to Table 3:** “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**

Petroleum contamination remains in the subsurface soil above MTG soil cleanup levels, but below Human Health soil cleanup levels. Benzene remains in groundwater, but at concentrations below Table C groundwater cleanup levels. Remaining soil contamination has been demonstrated to not pose a migration to groundwater risk. 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 78.600(h) that allows contamination to remain at the site above method two soil cleanup levels or groundwater cleanup levels listed in Table C requires ADEC approval in accordance with 18 AAC 78.600(h). A "site" as defined by 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 Alaska Water Quality Standards (18 AAC 70) 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, 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) 465-5368 or email at [amy.rodman@alaska.gov](mailto:amy.rodman@alaska.gov).

Sincerely,



Amy Rodman  
Project Manager

**This letter is being transmitted to you in electronic format only. If you require a paper copy, let us know and we will be happy to provide one to you. In the interest of reducing file space, the Division of SPAR/Contaminated Sites Program is transitioning to electronic transmission of project correspondence.**

cc: ADEC Division of Spill Prevention and Response, Cost Recovery Unit