



# Department of Environmental Conservation

DIVISION OF SPILL PREVENTION AND RESPONSE

Contaminated Sites Program 410 Willoughby Avenue, Suite 303 P.O. Box 111800 Juneau, AK 99811-1800 Phone: 907-465-5250 Fax: 907-465-5218 www.dec.alaska.gov

> File: 1513.38.097 Hazard ID: 26468

November 14, 2023

Andrea DeWees 2822 Marsha Avenue Juneau, Alaska 99801 andrea.alaska@gmail.com

Re: Decision Document: Residence – 2822 Marsha Avenue Cleanup Complete Determination

Dear Ms. DeWees:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with the Residence – 2822 Marsha Avenue contaminated site located at 2822 Marsha Avenue in Juneau, 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 Residence – 2822 Marsha Avenue site, 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: Residence – 2822 Marsha Avenue 2822 Marsha Avenue Juneau, Alaska 99801

DEC Site Identifiers: CSP File No.: 1513.38.097 CSP Hazard ID.: 26468 PPR Spill No.: 13119919601 Name and Mailing Address of Contact Party: Andrea DeWees 2822 Marsha Avenue Juneau, Alaska 99801

**Regulatory Authority for Determination:** 18 AAC 75

## Site Description and Background

In June 2012, an estimated 250 gallons of diesel heating oil was released from an aboveground home heating oil tank (HHOT) at 2822 Marsha Avenue in Juneau, Alaska. The release was the result of a fuel line failure between the new aboveground HHOT and a decommissioned underground heating oil tank. The site is located on a residential property in Juneau's Mendenhall Valley and is located approximately 1,767 feet from the Mendenhall River and 2,208 feet from Jordan Creek. Initial field screening and analytical samples confirmed petroleum contamination of soils in the source area and crawlspace of the residence. This site was transferred from the Prevention, Preparedness, and Response (PPR) Program to the Contaminated Sites Program (CSP) for longer term management in November 2015.

## **Contaminants of Concern**

During the site investigation and cleanup activities at this site, samples were collected from soil and groundwater and analyzed for polyaromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), and diesel range organics (DRO). Based on these analyses, the following contaminants were detected above the applicable cleanup levels and are considered Contaminants of Concern (COCs) at this site:

• DRO

# **Cleanup Levels**

Soil cleanup levels applicable to the site are the most stringent Method 2 cleanup levels for the over 40inches of precipitation climate zone found in 18 AAC 75.341(c), Table B1 and 18 AAC 75.341(d), Table B2. Groundwater cleanup levels applicable to this site are found in 18 AAC 75.345, Table C.

#### Table 1 – Approved Cleanup Levels

Contaminant	Soil (mg/kg)	Groundwater (μg/L)
DRO	230	1,500

Notes:

1. mg/kg = milligrams per kilogram

2.  $\mu g/L = micrograms per liter$ 

#### **Characterization and Cleanup Activities**

After the discovery of the heating oil release in June 2012, several response actions were employed to contain and remove contaminated soils. Initial response actions included removing approximately 11 tons of contaminated soil adjacent to and underneath the home foundation's concrete footer and into the crawl space of the home. Contaminated soil was transported to Bicknell for treatment and disposal. Extensive field screening guided the excavation effort. The original vapor barrier and the top three inches (approximately 6 tons contaminated soil) of soil were removed from the crawlspace. Additionally, the decommissioned underground heating oil tank was removed and disposed of. The source area excavation reached around 5.5 feet below the ground surface (bgs). The excavation was backfilled with 2-inch crushed rock. A perforated 12-inch diameter sump was installed to a depth of six feet bgs. Shallow groundwater on the property necessitated a crawl space sump, that existed before the spill and remains in place.

Both the source area sump and existing crawl space sump were re-directed to an oil-water separator and a filtration barrel before being discharged into the City and Borough of Juneau (CBJ) storm drain. Some contaminated soil was also removed from the northwest corner of the property where the existing crawl space sump discharged prior to re-direction into the filtration barrel. A new vapor barrier was installed in the crawl space and several soil samples were collected prior to installation of the barrier. As seen in Figure

2, several soil samples were collected during this field effort. One soil sample was collected from the bottom of the excavation in the northwest corner of the property. This sample was analyzed for diesel range organics (DRO) and residual range organics (RRO) which were not detected. The second soil sample was collected from the crawl space at the edge of the source area excavation under the concrete footing and analyzed for DRO and RRO. DRO (1,060 mg/kg) exceeded the migration to groundwater (MTG) cleanup level of 250 mg/kg. The third soil sample was collected from the edge of the backfilled excavation and adjacent to the former location of the underground heating oil tank at 1.5 feet bgs. DRO and RRO were not detected.

In March 2022, Contaminated Sites Program (CSP) personnel conducted a Vapor Intrusion (VI) building survey and collected groundwater samples from the crawlspace and source area sumps.

The VI survey field screening results from the interior of the residence ranged from zero to 70 parts per billion (ppb) for volatiles. These detections are likely attributable to ambient volatile constituents such as paint and drywall materials that were stored inside the residence. The residence is a one-story structure with a crawl space underneath. The crawl space is lined with a new vapor barrier that was installed after the initial clean up actions in 2013.

Two groundwater samples were collected from the site as seen in Figure 2. One groundwater sample was collected from the outfall of the crawl space sump and the second from the source area sump. The samples were analyzed for DRO, VOCs, and PAHs. None of the sample analytes were detected above the most stringent cleanup level.

Soil contamination above the MTG but below human health cleanup levels for DRO remains near the source area. Contaminants of concern were not detected in either groundwater sample above DEC Table C groundwater cleanup levels or vapor intrusion target levels.

# **Remaining Contamination**

The maximum concentrations of contaminants remaining at the site are shown in Tables 2a and 2b. These concentrations are all below their respective approved cleanup levels. Sample locations referred to in Tables 2a and 2b are shown in the attached site figure.

Table 2a – Maximum Contaminant	t Concentrations	Remaining	in Soil
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Contaminant	Soil (mg/kg)	Sample Location	Date Sampled
DRO	1,050	003	1/29/2014

#### Table 2b – Maximum Contaminant Concentrations Remaining in Groundwater

Contaminant	Groundwater (µg/L)	Sample Location	Date Sampled
DRO	578	SA32522	3/25/2022

#### **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 (HI) of 1 across all exposure pathways.

Based on a review of the environmental record, DEC 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 DEC'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.

Pathway	Result	Explanation
Surface Soil Contact	De Minimis Exposure	Soil sample results from 2014 indicate soil
		contamination is below human health and MTG
		cleanup levels directly adjacent to the source area
		(1.5 ft bgs) and at the crawlspace sump outfall in
		the NW corner of the property.
Subsurface Soil Contact	De Minimis Exposure	Contamination remains in the subsurface below
		human health (inclusive of direct contact) and
		ingestion levels in 18 AAC 75.341, Tables B1 and
		B2.
Inhalation – Outdoor Air	De Minimis Exposure	Contamination remains in the subsurface below
		human health and inhalation levels in 18 AAC
		75.341, Tables B1 and B2.
Inhalation – Indoor Air	De Minimis Exposure	Groundwater does not contain contaminant
(vapor intrusion)		concentrations above vapor intrusion screening
		levels.
Groundwater Ingestion	De Minimis Exposure	Two groundwater samples were collected in the
		spring of 2022. All analytical results were non-
		detect or below 18 AAC 75.345, Table C values.
Surface Water Ingestion	Pathway Incomplete	There are no surface water bodies within 100 feet
		of this site. Furthermore, surface water is not used
		as a drinking water source in the vicinity of the
		site.
Wild and Farmed Foods	Pathway Incomplete	Contaminants of concern do not have the
Ingestion		potential to bioaccumulate in plants or animals.
		Furthermore, this site is not used for hunting,
		fishing, or the cultivation and harvest of wild
		and/or farmed foods. This site is not expected to
		be used for these purposes in the future.
Exposure to Ecological	Pathway Incomplete	Contamination does not habitats where terrestrial
Receptors		or aquatic life could be affected, as documented by
		the soil and groundwater sampling results. Direct
		ecological effects are not expected.

#### Table 2 – Exposure Pathway Evaluation

Notes:

- 1. "De Minimis Exposure" means that, in DEC's judgment, the receptors are unlikely to be adversely affected by the minimal volume or concentration of remaining contamination.
- 2. "Pathway Incomplete" means that, in DEC's judgment, the contamination has no potential to contact receptors.
- 3. "Exposure Controlled" means there is an IC in place limiting land or groundwater use and there may be a physical barrier in place that prevents contact with residual contamination.

#### **DEC** Decision

Soil and groundwater contamination at the site have been cleaned up to concentrations below the approved cleanup levels suitable for residential land use. This site will receive a "Cleanup Complete" designation on the Contaminated Sites Database.

DEC approval is required for movement and disposal of soil and/or groundwater subject to the Site Cleanup Rules, in accordance with 18 AAC 75.325(i). Please contact DEC for information about applicable regulations and requirements. A "site", as defined by 18 AAC 75.990, means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership.

Movement or use of contaminated material in an ecologically sensitive area or in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited. Furthermore, 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. If, in the future, groundwater from this site is to be used for other purposes, 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 DEC 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.

#### Informal Reviews and Adjudicatory Hearings

A person authorized under a provision of 18 AAC 15 may request an informal review of a contested decision by the Division Director in accordance with 18 AAC 15.185 and/or an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340. See DEC's "Appeal a DEC Decision" web page <u>https://dec.alaska.gov/commish/review-guidance/</u> for access to the required forms and guidance on the appeal process. Please provide a courtesy copy of the adjudicatory hearing request in an electronic format to the parties required to be served under 18 AAC 15.200. Requests must be submitted no later than the deadline specified in 18 AAC 15.

If you have questions about this closure decision, please feel free to contact me at (907) 451-5174, or email at <u>andrea.carlson@alaska.gov</u>.

Sincerely, Docusigned by: Andrea Carlson Andrea Carlson Andrea Carlson Contaminated Sites Project Manager Enclosure: Attachment 1: Site Figures

cc: Spill Prevention and Response, Cost Recovery Unit, via <u>dec.spar.cr@alaska.gov</u> Lisa Krebs-Barsis, ADEC, via <u>lisa.krebs-barsis@alaska.gov</u>

# **Attachment 1: Site Figures**



**Figure 1.** The site location at 2822 Marsha Ave. in Juneau, Alaska. The site parcel is outlined in red. The source area is represented by the yellow dot.



**Figure 2.** A site figure prepared by Carson Dorn in 2014. The two blue circles represent the two sumps. The yellow circle represents analytical soil samples that were above the migration to groundwater (MTG) cleanup level. The black circles represent soil samples that were below the MTG cleanup level.