



THE STATE  
of **ALASKA**  
GOVERNOR MIKE DUNLEAVY

**Department of Environmental  
Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE  
Contaminated Sites Program

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DEC File No: 102.38.159

June 27, 2024

Carlisle Transportation Systems  
Atten: Lisa Marquiss  
1800 East 1<sup>st</sup> Avenue  
Anchorage, AK 99501

Re: Decision Document: Carlisle Transportation Systems  
Cleanup Complete Determination

Dear Ms. Marquiss:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with the Carlisle Transportation Systems located at 1050 Aspen Street in Fairbanks. 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 Carlisle Transportation Systems maintained by DEC. This decision letter summarizes the site history, cleanup actions and levels, and site closure conditions that apply.

**Site Name and Location:**

Carlisle Transportation Systems  
1050 Aspen Street  
Fairbanks, AK 99701

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

Lisa Marquiss  
Carlisle Transportation Systems  
1800 East 1<sup>st</sup> Avenue  
Anchorage, AK 99501

**DEC Site Identifiers:**

File No.: 102.38.159  
Hazard ID.: 25482

**Regulatory Authority for Determination:**

18 Alaska Administrative Code (AAC) 75

### Site Description and Background

An injection well connected to an interior floor drain was identified in 2009, apparently installed at the time of building construction, and was in place when Carlisle Transportation Systems purchased the building in 2007. The injection well qualified as a Class V well subject to regulations established by the Environmental Protection Agency (EPA) Underground Injection Control (UIC) Program. The injection well consisted of a buried 4-foot diameter pipe extending approximately 7 feet below ground surface (bgs) located outside the shop facility (see Figure 1 for site map and well location). No fluids were documented as being discharged to the floor drain, but snow melt from vehicles stored indoors was likely. During September 2009, a soil sample was collected from 6 to 8 feet bgs from the center of the injection well. The soil sample contained diesel range organics (DRO), trichloroethylene (TCE), tetrachloroethylene (PCE), 1,1,2,2-tetrachloroethane, and arsenic above DEC's soil cleanup levels.

### Contaminants of Concern

During the initial site investigation in 2009, samples were collected from and analyzed for DRO, benzene, toluene, ethylbenzene, and xylenes (BTEX), and volatile organic compounds (VOC). 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
- TCE
- PCE
- 1,1,2,2-Tetrachloroethane

Arsenic detected in the 2009 soil sample was similar to naturally occurring background levels found throughout the regional area and not considered a contaminant for the site.

DEC's soil and groundwater regulations were revised a number of times between 2009 and 2024, resulting in new cleanup levels for some compounds previously detected at this site during 2009. The following additional compounds were detected in soil during 2009, above the current 2024 DEC soil cleanup levels:

- 1,2-cis-Dichloroethylene
- Ethylbenzene
- Xylenes
- Naphthalene
- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene

### Cleanup Levels

Soil cleanup levels applicable to the site are the most stringent Method 2 cleanup levels for the under 40-inches 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                       | 250          | 1,500              |
| TCE                       | 0.011        | 2.8                |
| PCE                       | 0.19         | 41                 |
| 1,2-cis-Dichloroethylene  | 0.12         | 36                 |
| 1,1,2,2-Tetrachloroethane | 0.003        | 0.76               |
| Ethylbenzene              | 0.13         | 15                 |
| Xylenes                   | 1.5          | 190                |
| Naphthalene               | 0.038        | 1.7                |
| 1,2,4-Trimethylbenzene    | 0.61         | 56                 |
| 1,3,5-Trimethylbenzene    | 0.66         | 60                 |

Notes:

1. mg/kg = milligrams per kilogram
2. µg/L = micrograms per liter

### Characterization and Cleanup Activities

In 2010, the injection well was removed and the floor drain plugged, and approximately 20 cubic yards of soil were excavated from the injection well location and thermally remediated at Organic Incineration Technologies (OIT) in Moose Creek. The excavation occurred to 12 feet bgs where groundwater was encountered. Three confirmation soil samples were collected from the base of the excavation and analyzed for gasoline range organics (GRO), DRO, residual range organics (RRO), VOCs, semi-volatile organic compounds (SVOCs) and Resource Conservation and Recovery Act (RCRA) metals. All compounds were below DEC's soil cleanup levels, except for arsenic. Arsenic detected during 2010 in soil was considered within the range of naturally occurring background arsenic concentrations common to the greater Fairbanks area, and was not considered a contaminant for the site. The following compounds had analytical limits of detection (LODs) higher than the DEC migration to groundwater but less than the human health soil cleanup levels: 1,1,2,2-tetrachloroethane, TCE, cis-1,2-dichloroethylene, vinyl chloride, and naphthalene.

To evaluate possible impacts to groundwater, three monitoring wells were installed during 2011 and sampled for GRO, DRO, RRO, and BTEX. All results were not detected or below DEC's groundwater cleanup levels.

Additional groundwater sampling from two wells occurred in 2015; a third well could no longer be sampled. PCE was detected in groundwater during 2015, but below DEC's groundwater cleanup levels. Its presence, and recognition that previous groundwater sampling in 2011 did not include analysis of PCE nor additional VOCs other than BTEX, raised concern that impacts to groundwater may have been missed. The groundwater flow direction was also questioned. Significant property improvements occurred during 2015 to 2019 and the remaining two monitoring wells sampled in 2015 were destroyed. Thus in 2019, three new groundwater monitoring wells (MW-1 in the source area of the former injection well, and MW-2 and MW-3 in apparent downgradient locations) were installed, and soil and groundwater from each well installation were sampled and analyzed for DRO and VOCs. Additionally, soil samples were also collected from the soil-water interface and the lowest interval (22 to 25 feet bgs) of the source area well (MW-1) installation. Results indicated that DRO and all VOCs were below DEC's soil cleanup levels in all locations. However, the compounds 1,1,2,2-tetrachloroethane, trichloroethene, and naphthalene had limits of detection (LODs) above DEC's migration to groundwater, but below human health soil cleanup levels. Similarly, groundwater

sample results were also below DEC's groundwater cleanup levels, but the compounds 1,1,2,2-tetrachloroethane and naphthalene had LODs above DEC's groundwater cleanup level.

The groundwater flow direction was calculated on September 19, 2019 and June 22, 2020 using all three wells. The calculated groundwater flow direction indicated that neither monitoring well MW-2 nor MW-3 were directly downgradient from the source area well (MW-1) at the time of the survey or at the time of groundwater sample collection. An additional groundwater monitoring well (MW-4) was installed during 2020 in a true downgradient location. Groundwater samples were once again collected from the source area well and from the true downgradient well and analyzed for DRO and VOCs. All contaminants were below DEC's soil cleanup levels. The compounds 1,1,2,2-tetrachloroethane and naphthalene had LODs above the migration to groundwater but below the human health soil cleanup levels.

Additional groundwater sampling occurred during 2021 from the same wells (MW-1 in the source area and MW-4 in the downgradient location) and samples were again analyzed for DRO and VOCs. All analytes were below DEC's groundwater cleanup levels and LODs were also below cleanup levels, indicating that there were no unacceptable impacts to groundwater.

### **Remaining Contamination**

Any contamination that may remain at the site in soil is below DEC's soil cleanup levels, indicating contaminants were removed during the 2010 excavation and there were no unacceptable impacts to groundwater.

### **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.

**Table 2 – Exposure Pathway Evaluation**

| <b>Pathway</b>                            | <b>Result</b>       | <b>Explanation</b>   |
|---|---------------------|--|
| Surface Soil Contact                      | Pathway Incomplete  | Contamination is not present in surface soil (0 to 2 feet bgs).  |
| Subsurface Soil Contact                   | De Minimis Exposure | Contamination remains in the subsurface below human health 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 (vapor intrusion) | Pathway Incomplete  | Groundwater contaminant data did not contain concentrations above vapor intrusion screening levels. Soil contamination is not expected to cause vapor intrusion. |
| Groundwater Ingestion                     | Pathway Incomplete  | Groundwater is not used as a drinking water source at the site. Groundwater sample results show contaminant concentration below 18 AAC 75.345, Table C values.   |
| Surface Water Ingestion                   | Pathway Incomplete  | Surface water is not used as a drinking water source in the vicinity of the site.  |
| 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  | De Minimis contamination remains in the subsurface soils and does not impact ecological receptors that may occasionally traverse across this industrial site.    |

## 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). Since the cleanup at this site met the most stringent cleanup levels of 18 AAC 75.341, Tables B1 and B2 and 18 AAC 75.345, Table C, this letter will serve as your approval for future movement and disposal of soil associated with this release.

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 <https://dec.alaska.gov/commish/review-guidance/> 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) 451-2117, or email at [james.fish@alaska.gov](mailto:james.fish@alaska.gov).

Sincerely,

James Fish  
Project Manager

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

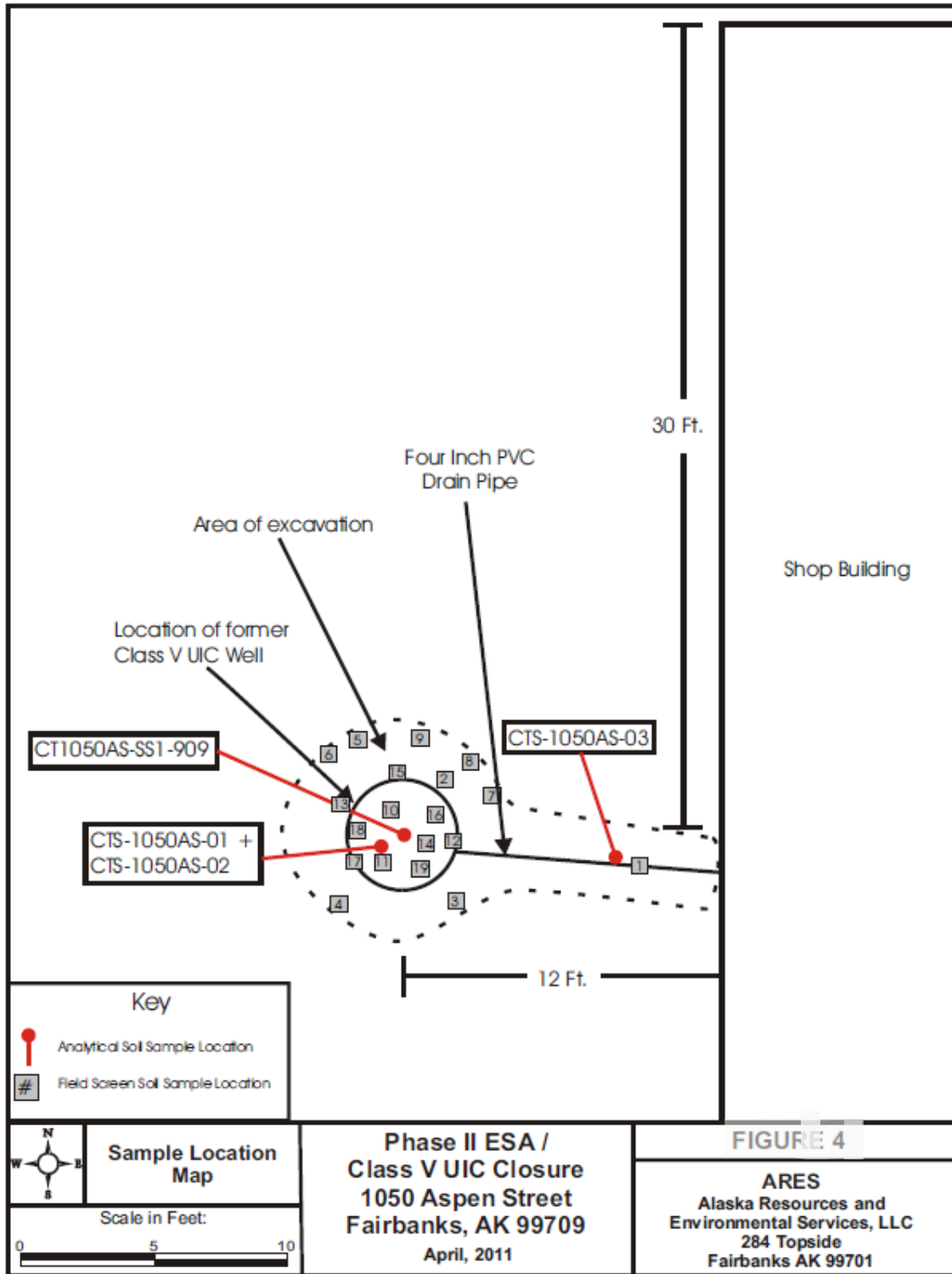


Figure 1. Location of Class V UIC and locations of post-excavation confirmation soil samples collected during 2010.

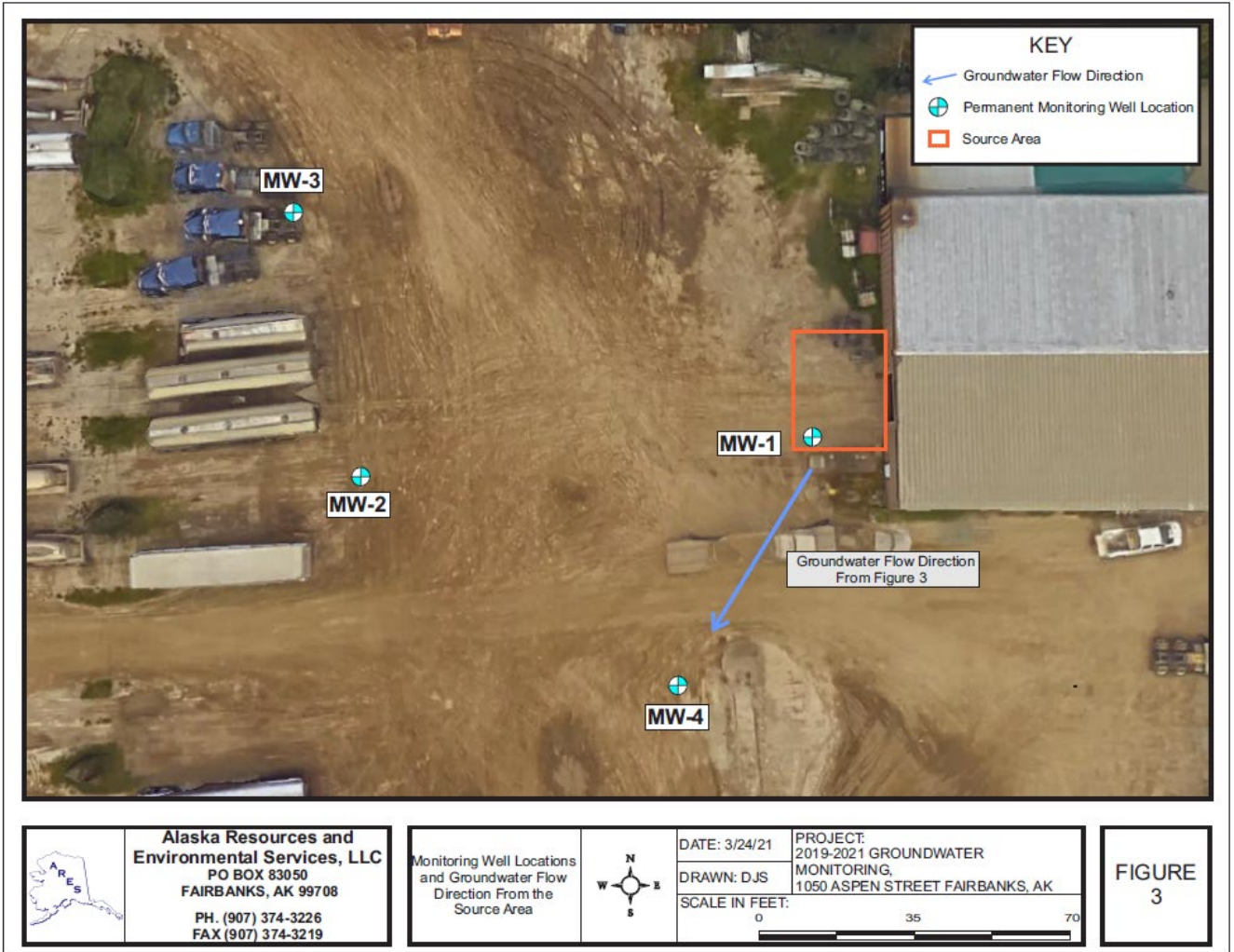


Figure 2. Groundwater well locations installed during 2020 and samples 2020-2021.