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: 2333.38.031

April 10, 2023

Sent via electronic mail only
Ms. Karen Carpenter
P.O. Box 77
Anchor Point, AK 99556
karen_carpenter_cpk@yahoo.com

Re: Decision Document: Carpenter Residence
Cleanup Complete Determination

Dear Ms. Carpenter,

The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program (CSP) has completed a review of the environmental records associated with the Carpenter Residence located at 70715 Stoddard Avenue (Mile 150 Sterling Highway) in Anchor Point, 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. 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 Carpenter Residence maintained by ADEC. This decision letter summarizes the site history, cleanup actions and levels, and site closure conditions that apply.

Site Name and Location:
Carpenter Residence
70715 Stoddard Avenue
Mile 150 Sterling Highway
Anchor Point, AK 99556

Name and Mailing Address of Contact Party:
Ms. Karen Carpenter
P.O. Box 77
Anchor Point, AK 99556

DEC Site Identifiers:
File No.: 2333.38.031
Hazard ID.: 173

Regulatory Authority for Determination:
18 Alaska Administrative Code (AAC) 75

Site Description and Background
In March 1985, an approximately 50-200-gallon heating oil release occurred caused by a split in the copper tubing between the home heating oil tank and the wall on the west side of the residence. The copper tubing angled down from the tank to the wall leading to the basement, the release impacted the snow and dirt beneath the tank to the wall and extended down the side of the building where it was absorbed by the

house's insulation. The release impacted the hand-dug drinking water well at the residence, located at approximately 20 feet northeast of the heating oil tank at around 17 feet deep. Oily water was produced from the drinking water well immediately following the release.

Contaminants of Concern
No site investigation or cleanup activities occurred at this site prior to 2022 and no contaminants have ever been detected above the applicable cleanup levels at the site.

Cleanup Levels
Soil cleanup levels applicable to the site are the most stringent ADEC Method 2 cleanup levels for the under 40-inch precipitation 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
GRO	300	2,200
Benzene	0.022	4.6
Toluene	6.7	1,100
Ethylbenzene	0.13	15
Xylenes	1.5	190

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

Samples collected at this site were analyzed for diesel range organics (DRO), gasoline range organics (GRO), volatile organic compounds (VOCs), and polycyclic aromatic hydrocarbons (PAHs). No soil results exceeded the most stringent Method 2 cleanup levels for the under 40-inches of precipitation climate zone established 18 AAC 75.341(c), Table B1 and 18 AAC 75.341(d), Table B2.

Characterization and Cleanup Activities
The initial response to the March 1985 heating oil spill included a site visit by ADEC. The ADEC representative at that time encouraged the homeowners to "pump out well as much as possible" to recover product. Because the drinking water well was impacted with oil, the residents did not drink from the well for around six to eight months following the release. Over time, the residents had the well tested and it was deemed safe to use for drinking water. The residents did not keep record of these test results. They also removed the house's insulation that had soaked up heating oil and replaced it with spray foam. The original 200-gallon heating oil tank was also replaced with a 500-gallon tank.

To characterize the nature and extent of contamination at the site, LeMay Engineering & Consulting, Inc. (LeMay) on behalf of the Carpenters, performed soil sampling via excavation test pits under the work plan approved by ADEC in May, 2022. Three test pits were advanced to 10 feet below ground surface (bgs) in the vicinity of the former tank, groundwater was not encountered. LeMay screened the soils at one-foot intervals, screening reselts revealed 0.0 parts per million (ppm) for all locations. No visual or olfactory signs of contamination were evident. Two soil samples were collected from each test pit at varying depths in order to adequately characterize the site (see attached figure). Six soil samples plus one duplicate were collected and analyzed for DRO, GRO, VOCs, and PAHs. Laboratory analytical results revealed that all concentrations were either non-detect or detected below the most restrictive ADEC Method 2 soil cleanup levels. Detectable results included estimated concentrations of GRO up to 3.71 miligrams per kilogram

(mg/kg) and DRO up to 25.6 mg/kg. Because no concentrations exceeded migration to groundwater cleanup levels, groundwater was not investigated at the site.

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 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 one either 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	Pathway Incomplete	Contamination is not present in surface soil (0 to 2 feet below ground surface).
Subsurface Soil Contact	Pathway Incomplete	Contamination is not present in the subsurface soil (2-15 feet bgs.) above human health cleanup levels.
Inhalation – Outdoor Air	Pathway Incomplete	No volatile contaminants were present in the subsurface.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	No volatile contaminants were present in the subsurface.
Groundwater Ingestion	De Minimis Exposure	Contamination is not present above soil migration to groundwater cleanup levels.
Surface Water Ingestion	Pathway Incomplete	Contamination is not present above soil migration to groundwater cleanup levels, which also apply to surface water.
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	Contamination does not reach nearby ecological receptors.

Notes:
1. "De Minimis Exposure" means that, in ADEC's judgement, the receptors are unlikely to be adversely affected by the minimal volume or concentration of remaining contamination.
2. "Pathway Incomplete" means that, in ADEC's judgment, the contamination has no potential to contact receptors.

ADEC 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.

ADEC 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.

This determination is in accordance with 18 AAC 75.380 and does not preclude ADEC 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 ADEC'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) 269-7527, or email at naomi.mason@alaska.gov.

Sincerely,

DocuSigned by:
Naomi Mason
F3456981E91240C...

Naomi Mason
Environmental Program Specialist

Enclosed: Site Figure

cc: Lisa Krebs-Barsis, ADEC, lisa.krebs-barsis@alaska.gov
Bill O'Connell, ADEC, bill.oconnell@alaska.gov
ADEC Cost Recovery Unit, dec.spar.cr@alaska.gov

Figure 4. Test Pit Locations