

STATE OF ALASKA

**DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM**

SEAN PARNELL, GOVERNOR

610 University Avenue
Fairbanks, AK 99709-3643
PHONE: (907) 451-2192
FAX: (907) 451-5105
www.dec.state.ak.us

File: 100.38.226

October 12, 2011

Brett and Katherine Schlieve
3573 Rosie Creek Rd.
Fairbanks, AK 99709

Re: Decision Document; Residence-3573 Rosie Creek Road, Fairbanks, Alaska
Cleanup Complete Determination

Dear Mr. and Mrs. Schlieve

The Alaska Department of Environmental Conservation (DEC), Contaminated Sites Program has completed a review of the environmental records associated with the Residence-3573 Rosie Creek Road located in Fairbanks, 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.

This decision is based on the administrative record for the Residence-3573 Rosie Creek Road which is located in the offices of the ADEC in Fairbanks, Alaska. This letter summarizes the decision process used to determine the environmental status of this site and provides a summary of the regulatory issues considered in the Cleanup Complete determination.

Introduction

Site Name and Location:

Residence-3573 Rosie Creek Road
3573 Rosie Creek Road
Fairbanks, Alaska 99709

Physical Description

Tax Lot 3259 Section 32
Township 1S Region 2W

Name and Mailing Address of Contact Party:

Brett and Katherine Schlieve
3573 Rosie Creek Road
Fairbanks, Alaska 99709

ADEC Site Identifiers

File: 100.38.226
Hazard ID: 25504

Regulatory authority under which the site is being cleaned up:
18 AAC 75

Background

In October 2008 two monitor stoves were stolen from a main residence and a detached guest house at 3573 Rosie Creek Road (refer to attached figure). The fuel lines were separated from the stoves and heating fuel from the aboveground storage tanks drained into the structures, saturating the floors and seeping into the crawlspace and underlying soil. Because of the larger magnitude of the spill in the guest house building, the structure was demolished and disposed of. Soil remediation performed by the owner, with guidance from DEC's emergency responders, included removal of contaminated soil from the footprint of the former guest house structure. Because the release occurred during the winter, snow removal from the edge of the main residence was enough to remove the majority of the product in that area.

A drinking water well is on site at a distance of less than 25 feet from the guest house. A sample collected from the well in October 2009 indicated non-detectable levels for benzene, toluene, ethylbenzene, and xylenes (BTEX). The well was re-sampled again in 2010 with the same results. Drinking water well depth is estimated at 60 feet below ground surface. Soil samples were collected during a limited site characterization from the two source areas in the fall of 2010. Samples were analyzed for diesel range organics (DRO), BTEX, and polycyclic aromatic hydrocarbons (PAH's). No groundwater was encountered.

Site Characterization and Cleanup Actions

In 2010 DEC conducted a limited site characterization at the site. The work involved the installation of soil borings in both source areas to determine the approximate vertical and horizontal extent of the soil contamination. Hand-auger borings were also used for additional surface sample collection. Borings were planned to be finished as monitoring wells to determine if contamination had reached groundwater.

Results from the investigation revealed that contamination in the former guest house footprint only extends to a depth of approximately two feet. A layer of frozen soil was found at a depth of 10 feet on the former guest house location and at a depth of 9 feet adjacent to the main residence. Screened samples indicated that most of the contamination in the former guest house area is located within the top two feet over an area of 15 by 8 feet. The highest DRO concentrations were found at a depth of 1-2 feet at 10,000 milligrams per kilogram (mg/kg). Xylenes were the only other constituent above the applicable cleanup level at 169.7 mg/kg also at 2 feet depth. Samples collected from the release adjacent to the main residence did not result in any contaminants above cleanup levels. No groundwater was found above the frozen soil in any of the borings.

In July 2011, DEC visited the site during additional soil excavation in the former guesthouse area. Two additional feet were excavated off the surface. The limits of

the excavation were screened with a photoionization detector (PID) to ensure the contaminated soil was removed. Most of the encountered contaminated soil was excavated. However, a hot spot of contaminated soil was identified in the northeast corner of the excavation but additional soil could not be excavated due to lack of space in the dump truck. The hot spot was at a depth of approximately 1.5-2 feet and the amount is considered *De minimis*. Contaminated soil was thermally treated at OIT and property owners have since backfilled, fertilized, and landscaped the area.

Contaminants of Concern

During the investigations at this site, soil samples were analyzed for diesel range organics (DRO), benzene, toluene, ethylbenzene, and xylenes (BTEX); and polycyclic aromatic hydrocarbons (PAH's). Based on these analyses and knowledge of the source area, the following Contaminants of Concern were identified:

- Diesel Range Organics (DRO)
- Xylenes

Because groundwater was never encountered, contamination is limited to the top two feet of soil and a layer of permafrost was identified at a depth of 8 feet, the groundwater pathway is incomplete and the applicable soil cleanup levels are health based levels (ingestion and inhalation).

Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B2 Under 40 inch Zone, Ingestion and Inhalation (the most stringent for each contaminant).

Contaminant	Site Cleanup Level (mg/kg)
• Diesel Range Organics	10,250 (Ingestion)
• Xylenes	63 (Inhalation)

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 1.

Table 1 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De Minimis	Contaminated surface soil has been excavated. A <i>de minimis</i> amount remains at a depth of 1.5-2 feet. Area has been backfilled, tilled, fertilized, and landscaped.

Sub-Surface Soil Contact	Pathway Incomplete	No contamination was identified below a depth of 2 feet.
Inhalation – Outdoor Air	De Minimis	Contaminated surface soil has been excavated. A <i>de minimis</i> amount remains at a depth of 1.5-2 feet. Area has been backfilled, tilled, fertilized, and landscaped.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Buildings on site are built on piles, therefore the vapor intrusion path way is not complete.
Groundwater Ingestion	Pathway Incomplete	Contamination is limited to surface soils. A layer of frozen soil was found at a depth of 8 feet and no groundwater was encountered during site characterization.
Surface Water Ingestion	Pathway Incomplete	Contamination limited to the release area. No migration to surface water expected.
Wild Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.
Exposure to Ecological Receptors	Pathway Incomplete	Exposure to ecological receptors is not expected due to the limited extent of the contamination.

Notes to Table 1: “De-minimis exposure” means that in DEC’s judgment receptors are unlikely to be affected by the minimal volume of remaining contamination. “Pathway incomplete” means that in DEC’s judgment contamination has no potential to contact receptors. “Exposure controlled” means there is an administrative mechanism in place limiting land or groundwater use, or a physical barrier in place that deters contact with residual contamination.

ADEC Decision

The cleanup actions to date have served to excavate and adequately remove contaminated surface soil from the site. Based on the information available, DEC has determined no further assessment or cleanup action is required. There is no longer a risk to human health or the environment, and this site will be designated as closed on the Department's database.

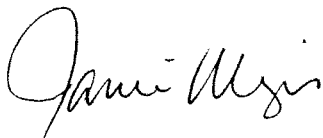
Although a Cleanup Complete Determination has been granted, DEC approval is required for off-site soil disposal in accordance with 18 AAC 75.32. It should be noted that movement or use of potentially contaminated soil in a manner that results in a violation of 18 AAC 70 water quality standards is unlawful.

This determination is in accordance with 18 AAC 75.380 and does not preclude DEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

Appeal

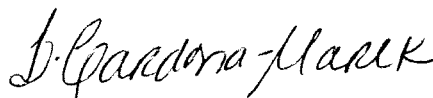
Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 -18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Division Director, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, 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, Juneau, Alaska 99801, 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.

Approved by,



RS Rich Sundet
Environmental Manager

Recommended by,



Tamara Cardona-Marek, PhD
Environmental Program Specialist

Attachment B: **Site Figure**

Attachment A: Site Figure

