

STATE OF ALASKA

SEAN PARNELL, GOVERNOR

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

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File No: 2258.38.010
Return Receipt Requested
Article No: 7009 2820 0001 7169 7115

May 10, 2012

Russell Grandel
Alaska Railroad Corporation (ARRC)
P.O. Box 107500
Anchorage, Alaska 99510-7500

Re: Decision Document; ARRC Former Sunshine Section House HOT
Cleanup Complete – Institutional Controls

Dear Mr. Grandel:

The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program, has completed a review of the environmental records associated with the ARRC Former Sunshine Section House Heating Oil Tank (HOT). Based on the information provided to date and the administrative record, the ADEC has 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 as long as the site is in compliance with established institutional controls.

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 – Institutional Controls Determination.

Introduction

Site Name and Location:

ARRC Former Sunshine Section House
ARRC Milepost 215.3; end of Sunshine Drive
1 mile east of milepost 102 Parks Highway
Talkeetna, Alaska 99676

Name and Mailing Address of Contact Party:

Russell Grandel
Alaska Railroad Corporation (ARRC)
P.O. Box 107500
Anchorage, Alaska 99510-7500

ADEC Site Identifiers:

ADEC Reckey: 2004220130701
File: # 2258.38.010
Hazard ID: 4339

Regulatory authority under which the site is being cleaned up:

18 AAC 75

Background

Petroleum impacted soil was encountered during the removal of a 1,000 gallon underground heating oil tank (HOT) in 2004. The HOT was used to heat the former Sunshine section house, which has been decommissioned and dismantled.

The site is located one mile east of Parks Highway milepost 102. It is situated between railroad tracks located to the west, and the end of Sunshine Drive to the east. Residential buildings are located 100 feet away and a potable well is located 300 feet away (see attachment B).

Contaminants of Concern

During the investigations at this site, soil samples were analyzed for the following: gasoline range organics (GRO); diesel range organics (DRO); residual range organics (RRO); and benzene, toluene, ethylbenzene, and xylenes (BTEX). Based on these analyses and knowledge of the source area, benzene was identified as the only Contaminant of Concern (COC).

Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B1, Migration to Groundwater (MTG) *Under 40 Inch Zone*.

<u>Contaminant</u>	<u>MTG Soil Cleanup Level (mg/kg)</u>
Benzene	0.025

The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels.

<u>Contaminant</u>	<u>Groundwater Cleanup Level (mg/L)</u>
Benzene	0.005

Site Characterization and Cleanup Actions

Five cubic yards of contaminated soil were removed during the excavation of the 1,000 gallon underground HOT and transported to Alaska Soil Recycling for thermal remediation in 2004. Two confirmation soil samples, collected at the bottom of the tank excavation at approximately 5.5 feet below ground surface (bgs) contained benzene up to 9.29 mg/kg. Groundwater was not encountered, and the excavation was brought back to grade with clean fill.

To evaluate the extent of contamination, three soil borings were advanced in 2009 as follows: one at the former heating oil tank (HOT); one 30 feet north of the HOT; and one 42 feet northeast of the HOT. Soil samples were collected from each of the three borings just above the water table at 5 feet bgs. Only one soil sample, collected from the former HOT excavation area, contained detectable levels of contaminants with benzene at 10.8 mg/kg. Groundwater samples were collected from three temporary monitoring wells advanced adjacent to the soil borings. Only one water sample, collected from the former HOT excavation area, contained detectable levels of contaminants with benzene at 0.364 mg/L.

To further evaluate the extent of petroleum impacts, eight soil borings were advanced in 2010 around the former HOT excavation. Benzene was detected in two of the of eight borings up to 2.01 mg/kg

Additional evaluation of groundwater occurred in 2011. Groundwater samples were collected from four temporary monitoring wells advanced to the north, east, west, and south of the former HOT excavation. Only MW RSE-S4 located west of the former HOT excavation adjacent to the railroad tracks, contained benzene above cleanup levels at 0.00585 mg/L.

A drinking water well (DWW) is located 300 feet east of the site (see attachment B). Groundwater sampling events from monitoring wells located just east of the contaminated former HOT area, upgradient of the DWW, did not contain detectable levels of contaminants. The data suggest remaining benzene contamination from a historic source is localized, and transport to the DWW is considered incomplete.

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 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	Pathway Incomplete	Contaminated surface soil was removed and thermally remediated. The excavation was brought back to grade with clean fill.
Sub-Surface Soil Contact	De Minimis Exposure	Remaining benzene concentrations are below inhalation and direct contact cleanup levels.
Inhalation – Outdoor Air	De Minimis Exposure	Remaining benzene concentrations are below inhalation and direct contact cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There are no buildings on the property, and no future development is planned adjacent to railroad tracks.
Groundwater Ingestion	De Minimis Exposure	Shallow groundwater contains benzene at the former HOT area. Groundwater flow is generally flat but appears to flow slightly to the east. Groundwater sampling events from monitoring wells located just east of the contaminated former HOT area did not contain detectable levels of contaminants. The data indicates the remaining benzene contamination is localized to the immediate area of the former HOT.
Surface Water Ingestion	Pathway Complete	The data indicates the remaining benzene contamination is localized to the immediate area of the former HOT; therefore transport via this pathway to surface water is considered incomplete.
Wild Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals. This area is not used for harvesting wild foods.
Exposure to Ecological Receptors	Pathway Incomplete	There are no complete exposure pathways to ecological receptors at this site.

Notes to Table 1: “De minimis exposure” means that in ADEC’s judgment receptors are unlikely to be affected by the minimal volume of remaining contamination. “Pathway incomplete” means that in ADEC’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

Contamination remains above the most stringent cleanup levels at the former ARRC Sunshine Section House. However, ADEC has determined there is no unacceptable risk to human health or the environment therefore this site will be granted a Cleanup Complete- Institutional Controls Determination subject to the following:

1. Any future change in land use may impact the exposure assumptions cited in this document. If land use and/or ownership changes, current institutional controls may not be protective and ADEC may require additional remediation and/or institutional controls. Therefore, ARRC will report to ADEC every five years to document land use, or as soon as ARRC becomes aware of any change in land ownership and/or use. **The report can be sent to the local ADEC office or electronically to DEC.ICUnit@alaska.gov**
2. Any proposal to transport soil or groundwater off site requires ADEC approval in accordance with 18 AAC 75.325(i). A “site” [as defined by 18 AAC 75.990 (115)] means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership (see Attachment B).
3. Movement or use of potentially contaminated soil in a manner that results in a violation of 18 AAC 70 water quality standards is unlawful.
4. Installation of groundwater or drinking water wells at this site will require approval from ADEC.

This determination is in accordance with 18 AAC 75.380(d) and does not preclude ADEC 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.

If you have questions about this closure decision, please contact the ADEC Project Manager, Grant Lidren at (907) 269-8685.

Approved By,



Linda Nuechterlein
Environmental Manager

Recommended By,



Grant Lidren
Environmental Program Specialist

Attachment A: Cleanup Complete-ICs Agreement and Signature Page*

ARRC agrees to the terms of this Cleanup Complete determination as stated in this Closure Decision Document dated **May 10, 2012** for the **ARRC Sunshine Section House** site. Failure to comply with the terms of this agreement may result in ADEC reopening this site and requiring further remedial action in accordance with 18 AAC 75.380(d).

Russell Grandel Environmental Engineer

Signature of Authorized Representative, Title
ARRC

Russell Grandel Environmental Engineer

Printed Name of Authorized Representative, Title
ARRC

Note to Responsible Person (RP):

After making a copy for your records, please return a signed copy of this form to the ADEC project manager at the address on this correspondence within 30 days of receipt of this letter.

ADEC File:# 2258.38.010
Hazard ID: 4339
ADEC Project Manager: Grant Lidren

For Internal Use Only

***Attention ADEC Administration Staff:** Please follow the procedure below after Attachment A is signed/returned to ADEC.

1. Log-in and Date Stamp *Attachment A*
2. Scan and Save to the appropriate electronic folder on the network Drive
3. File the hard copy in the appropriate project/site file Correspondence Folder (blue in Anchorage).
4. Provide the Correspondence folder (with the filed *Attachment A* hard copy) to the ADEC Project Manager so that the PM can update the CS database.

Attachment B: Site Figure

