STATE OF ALASKA

SEAN PARNELL, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM

555 Cordova Street
Anchorage, AK 99501
PHONE (907) 269-8685
FAX (907) 269-7649
www.dec.state.ak.us

File No: 2322.38.006
Return Receipt Requested
Article No: 7009 2820 0001 7169 6682

January 4, 2011

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

Re: Decision Document: ARRC Upper Trail Lake
Cleanup Complete Determination

Dear Mr. Grandel:

The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program, has completed review of the environmental records associated with the ARRC Upper Trail Lake. Based on the information provided to date, the ADEC has determined that the contaminant concentrations remaining on site do not pose an unacceptable risk to human health or the environment, and this site will be closed.

This decision is based on the administrative record which is located in the offices of the ADEC in Anchorage, 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:
ARRC Upper Trail Lake
ARRC Mile Post 29.5, Moose Pass Rail Yard - Near Upper Trail Lake
Moose Pass, AK 99631

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: 1991230130201
File #: 2322.38.006
Hazard ID: 1285

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

Background
In 1991, petroleum impacted soil was encountered during the removal of a 500 gallon underground heating oil tank (HOT) at the Moose Pass Section House. Currently the site, which is located between the railroad tracks at the ARRC Mile Post 29.5, is vacant with the exception of a concrete pad.

Contaminants of Concern
During the investigations at this site, soil samples were analyzed for polychlorinated biphenyls (PCBs), total metals, diesel range organics (DRO), extractable petroleum hydrocarbons (EPH) which is roughly equivalent to DRO, gasoline range organics (GRO), and volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, and xylenes (BTEX). Based on these analyses and knowledge of the source area, the following Contaminants of Concern (COC) were identified:

- Benzene
- Diesel Range Organics (DRO)

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

Contaminant	MTG Site Cleanup Level (mg/kg)
Benzene	0.025
DRO	250

Site Characterization and Cleanup Actions
In 1991, approximately 9 cubic yards of contaminated soil with a distinct petroleum odor were excavated during the removal of the 500 gallon HOT and stockpiled on site. Two confirmation samples collected from the depths of the excavation at 7.6 and 10.8 feet below ground surface (bgs) contained benzene up to 0.075 mg/kg and EPH up to 6,490 mg/kg. Groundwater was encountered at 5 feet bgs. Prior to backfilling the excavation with clean fill, a ventilation gallery was installed. The stockpile was sampled, and reportedly transported to the ARRC Milepost 388 Landfarm Area for treatment.

In 2010, three soil borings were advanced downgradient of the former HOT location to determine if contaminants were migrating toward Upper Trail Lake and to evaluate the extent of contamination. Two soil samples were collected from each boring; one from the vadose zone, and one from the groundwater interface at depths from 4 to 8 feet bgs. Soil samples did not contain detectable concentrations of contaminants.

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 soil was excavated. The excavation was brought back to grade with clean fill, therefore the surface soil pathway is incomplete.
Sub-Surface Soil Contact	De minimis exposure	Contamination may remain in the subsurface, but is below direct contact cleanup levels.
Inhalation – Outdoor Air	De minimis exposure	The remaining soil contaminant concentrations are below inhalation cleanup levels, and the presence of clean fill will mitigate exposure via this pathway.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There are no buildings at the site and any remaining contamination is below inhalation cleanup levels. The presence of clean fill will mitigate exposure via this pathway in the future.
Groundwater Ingestion	De minimis exposure	Contamination may remain in the subsurface soil above migration to groundwater cleanup levels. However, volatilization and biodegradation have likely reduced the contaminant concentrations detected in 1991 as indicated by the most recent soil sampling event in 2010. Groundwater may be used as a drinking water source, but the nearest well is located 500 feet upgradient. Therefore any potential impacts to groundwater from historical petroleum contamination is considered de minimis.

Surface Water Ingestion	Pathway Incomplete	Contaminants were not detected downgradient of the source area in 2010, and surface water is not used as a drinking water source in this area therefore this pathway is considered incomplete.
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	There are no complete exposure pathways to ecological receptors at the 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

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

Although a Cleanup Complete determination has been granted, ADEC approval is required for off-site soil disposal in accordance with 18 AAC 75.325(i). 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(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 Specialist