



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of
Environmental Conservation

DIVISION OF SPILL PREVENTION & RESPONSE
Contaminated Sites Program

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November 17, 2014

CERTIFIED MAIL 7014 0510 0001 5871 0497 RETURN RECEIPT REQUESTED

File No: 2114.26.005

Russell Grandel
Alaska Railroad Corporation
P.O. Box 107500
Anchorage, AK 99510-7500

Subject: **Decision Document; ARRC Whittier Rail Yard
Cleanup Complete – Institutional Controls Determination**

Dear Mr. Grandel:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the ARRC Whittier Rail Yard. This decision letter memorializes the site history, cleanup actions, and specific conditions required to effectively manage remaining contamination. No further remedial action will be required as long as compliance with these conditions is maintained.

Site Name and Location:

ARRC Whittier Rail Yard
West Camp Road
Adjacent to Passage Canal
Whittier, Alaska 99693

Name and Mailing Address of Contact Party:

Russell Grandel
ARRC
P.O. Box 107500
Anchorage, Alaska 99510-7500

ADEC Site Identifiers:

ADEC Reckey: 1992211032503
File: 2114.26.005
Hazard ID: 23977

Regulatory Authority for Determination:

18 AAC 75 & 18 AAC 78

Background

Petroleum contaminated soil was encountered during the removal of a 2,500 gallon regulated gasoline underground storage tanks (UST) in 1992. This site is located in an industrial area 100 feet south of Passage Canal in Whittier, Alaska. A guard shack, pad-mounted transformer, sewage lift station, and a connex are located onsite.

Groundwater at the site is susceptible to tidal activity and saltwater intrusion. Drinking water in Whittier is obtained from three public drinking water wells located 1,000 feet up gradient of the site.

Contaminants of Concern

During the investigations at the site, soil and groundwater samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO) and the volatile organic compounds (VOCs) benzene, toluene, ethylbenzene, and xylenes. Based on these analyses and knowledge of the source area, the following contaminants of concern (COC) were identified in soil:

- GRO
- DRO
- Benzene
- Ethylbenzene
- Toluene
- Xylenes

ADEC Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B1 and B2, *over 40 Inch Zone*. The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels

Table 1- Soil and Groundwater Cleanup Levels

Contaminants of Concern	Soil- Method Two, Direct Contact /Ingestion*	Soil- Method Two, Inhalation*	Soil- Method Two, Migration to Groundwater*	Groundwater Table C#
GRO	1,400	1,400	260	2.2
DRO	8,250	12,500	230	1.5
Benzene	120	8.5	0.25	0.005
Ethylbenzene	8,300	81	6.9	0.7
Toluene	6,600	220	6.5	1.0
Xylenes	16,600	63	63	10

Notes to Table 1. *All soil contaminant concentrations are presented in mg/Kg.

#All groundwater contaminant concentrations are presented in mg/L.

Site Characterization and Cleanup Actions

In 1992, the 2,500 gallon gasoline UST was removed and 270 cubic yards of soil were excavated. The extent of the excavation was 28 feet by 22 feet by 15 feet below ground surface (bgs). Soils with a hydrocarbon odor were encountered along the bottom and western and southern sidewalls from a depth of 5 to 15 feet bgs; groundwater was not encountered. The excavation was limited due to the proximity of high voltage electrical lines, a transformer, and a roadway. Confirmation soil samples collected from the excavation bottom contained GRO up to 2,400 mg/kg, benzene up to 4.5 mg/kg, toluene up to 9.6 mg/kg, ethylbenzene up to 14 mg/kg, and xylene up to 110 mg/kg. A PVC gallery was placed in the excavation and it was brought back to grade with clean fill.

In 2010, three soil borings were advanced at the former UST location: one within the footprint of the former gas UST excavation; and two advanced, east and north, down gradient toward Passage Canal. Two soil samples were collected per borehole. A soil sample collected from the north bore hole at the 11 feet bgs at the groundwater interface, contained benzene at 0.0459 mg/kg, toluene at

7.22 mg/kg, ethylbenzene at 19.3 mg/kg, and GRO at 1,550 mg/kg. All other soil samples collected were either non-detect or below ADEC default soil cleanup levels.

In 2011, three soil borings were advanced and completed as monitoring wells RSE-1, RSE-2, and RSE-3. Boring RS-3 was advanced at the UST area and borings RSE-1 and RSE-2 were advanced down gradient toward Passage Canal. One soil sample was collected per boring at the groundwater interface 7 feet to 9 feet bgs. The soil samples did not contain petroleum constituents above ADEC default soil cleanup levels, however a hydrocarbon sheen and odor were noted. Groundwater samples collected from the three monitoring wells did not contain contamination above ADEC cleanup levels with the exception of RSE-1, which contained DRO at 1.79 mg/L.

The monitoring wells were sampled again in 2012, 2013, and 2014. None of the groundwater sampling events contained contaminant concentrations above ADEC Table C Groundwater Cleanup Levels.

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 of one across all exposure pathways. Based on a review of the environmental record, ADEC has determined that residual contaminant concentrations do not pose a cumulative human health risk.

Exposure Pathway Evaluation

Following investigation and cleanup at this site, exposure to remaining contaminants was evaluated using ADEC's Exposure Tracking Model (ETM). Exposure pathways are conduits by which contamination may reach human or ecological receptors. ETM results show all pathways to 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 Exposure	Contaminated surface soil at the source area has been excavated and brought to grade with clean fill. Remaining contamination on site is considered de minimis.
Sub-Surface Soil Contact	De Minimis Exposure	Only one soil sample collected 15 feet bgs in 1992 contained DRO and xylenes above ingestion/direct contact cleanup levels. The horizontal extent of remaining contamination was defined and, exposure risk via this pathway is considered de minimis.
Inhalation – Outdoor Air	De Minimis Exposure	Only one soil sample collected 15 feet bgs in 1992 contained DRO and xylenes above inhalation cleanup levels. The horizontal extent of remaining contamination was defined and exposure risk via this pathway is considered de minimis.

Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There are no buildings on site and contaminated soil at 15 feet bgs has been capped with clean fill. No future building construction is anticipated. Therefore exposure risk via this pathway is considered incomplete.
Ground-water Ingestion	Pathway Incomplete	Groundwater at the site is considered non-potable due to tidal activity and saltwater intrusion. Therefore, risk via the drinking water pathway is considered incomplete.
Surface Water Ingestion	Pathway Incomplete	Surface water is not utilized as a drinking water source in this area.
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 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 ground water use, or a physical barrier in place that deters contact with residual contamination.

ADEC Decision

There is contamination remaining above established cleanup levels at the ARRC Whittier Rail Yard, but ADEC has determined there is no unacceptable risk to human health or the environment, and 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 the 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. If the remaining contaminated soil becomes accessible, the soil must be evaluated to the satisfaction of ADEC.
3. The three remaining monitoring wells must be decommissioned in accordance with ADEC guidance in 2015.
4. Movement or use of potentially contaminated soil in a manner that results in a violation of 18 AAC 70 water quality standards is unlawful.
5. 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).

6. Attachment A must be signed by an authorized representative and returned to ADEC.

The ADEC Contaminated Sites Database will be updated to reflect the change in site status as detailed above, and will include a description of the contamination remaining at the site. Institutional controls will be removed in the future if documentation can be provided that shows cleanup levels have been met. Note: management conditions 4 and 5 will remain in effect after ICs are removed.

This determination is in accordance with 18 AAC 78.276(f) 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, 555 Cordova Street, Anchorage, AK 99501, 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.

Please sign and return *Attachment A* to ADEC within 30 days of receipt of this letter. If you have questions about this closure decision, please feel free to contact Grant Lidren at (907) 269-8685.

Sincerely,



Grant Lidren
Environmental Specialist

Attachment A: Cleanup Complete-ICs Agreement Signature Page
Attachment B: Site Figure

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

The Alaska Railroad Corporation (ARRC) agrees to the terms of this Cleanup Complete with Institutional Controls determination as stated in this closure decision document dated **November 17, 2014** for the *ARRC Whittier Rail Yard* 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 78.276(f).

Russell Grandel Environmental Engineer 11/18/2014
Signature of Russell Grandel or Authorized Representative, Title
Alaska Railroad Corporation (ARRC)

Russell Grandel Environmental Engineer
Printed name of Russell Grandel or Authorized Representative, Title
Alaska Railroad Corporation (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 No.: 2114.26.005
Hazard ID: 23977
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

Attachment B: Site Figure

