



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of
Environmental Conservation

DIVISION OF SPILL PREVENTION & RESPONSE
Contaminated Sites Program

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November 12, 2014

CERTIFIED MAIL 7014 0510 0001 5871 2163 RETURN RECEIPT REQUESTED

File No: 330.38.074

Jan Shifflett
Response and Remediation SME
Alyeska Pipeline Service Company
PO Box 196660 Mail Stop 507
Anchorage, AK 99519

Subject: **Decision Document; Alyeska PS 06 Former Turbine Fuel Loading
Cleanup Complete – Institutional Controls Determination**

Dear Mr. Shifflett:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the Alyeska PS 06 Former Turbine Fuel Loading. 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:

Alyeska PS 06 Turbine Fuel Loading
Mile 55 Dalton Highway
Stevens Village, Alaska 99774

Name and Mailing Address of Contact Party:

Jan Shifflett, Response and Remediation SME
Alyeska Pipeline Service Company
PO Box 196660 Mail Stop 507
Anchorage, Alaska 99519

ADEC Site Identifiers:

File: 330.38.074
Hazard ID: 1731

Regulatory Authority for Determination:

18 AAC 75

Background

Soil contamination was discovered at Pump Station 06 during a September 1992 upgrade project involving the installation of a lined spill containment cell beneath the turbine fuel loading area. Historically, this area was used to load/offload turbine fuel to tanker trucks through two riser pipes located 25 east of the turbine off-loading building. Fuel loading activities were discontinued in 1995. The turbine offloading building is still onsite, however turbine fuel is no longer produced or stored.

This site is located within the Pump Station (PS) 06 industrial area at Alyeska pipeline milepost 354.9. It lies 6,000 feet south of the Yukon River along the Dalton Highway at milepost 55. There are no drinking water wells at PS 06, therefore drinking water is trucked in. In 1976, there was an attempt to install a drinking water well 800 feet below ground surface (bgs), but it did not produce sufficient groundwater and was abandoned.

Contaminants of Concern

During the investigations at the site, soil and groundwater samples were analyzed for diesel range organics (DRO) 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:

- DRO
- Benzene

ADEC Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B1 and B2, *Under 40 Inch Zone*.

Table 1- Soil Cleanup Levels: *Method Two*, Table B1 and B2, *Under 40 Inch Zone*

Contaminants of Concern	Soil- Direct Contact /Ingestion*	Soil-, Inhalation*	Soil- Migration to Groundwater*
DRO	10,250	12,500	250
Benzene	150	11	0.025

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

Site Characterization and Cleanup Actions

During the liner upgrade in 1992, 1,400 cubic yards of contaminated soil were excavated from the turbine fuel liner footprint and stored at a long-term stockpile to be thermally remediated at a later date. The excavation extent was limited by frozen ground at a depth of 8 feet bgs and the turbine offloading building with associated electric and turbine fuel lines. Groundwater seeped into the excavation and fuel floated on its surface in some areas. A total of 45 confirmation soil samples were collected from the beneath piping and utilities, the sidewalls, and the bottom of the excavation. The soil samples contained benzene up to 1.05 mg/kg and DRO up to 21,000 mg/kg. The 21,000 DRO result, which was collected 8 feet bgs, was the only soil sample above ADEC ingestion and inhalation cleanup levels.

The highest concentrations of contamination left in place were within the frozen ground at the bottom of the excavation and adjacent to the turbine offloading building with associated electric and turbine fuel lines. The excavation was then backfilled 1.5 feet bgs with clean fill, lined with the new containment liner, and capped with additional clean fill up to grade.

In 1993, to determine the horizontal extent of contamination, eight bore holes were advanced with five completed as temporary monitoring wells. Soil samples were collected from depths of 3 to 21.5 feet bgs in the borings. Only three of the borings, located within the area of remaining

contamination, contained DRO up to 3,000 mg/kg and benzene up to 0.06 mg/kg from samples collected 7 to 15 feet bgs.

Groundwater samples collected from five temporary monitoring wells did not contain contaminant concentrations above ADEC Table C Groundwater Cleanup Levels. Prior to sampling, sheen was noted on two of the temporary monitoring wells located within the area of remaining contamination. Groundwater, which is frozen part of the year, was encountered 6.68 to 10.44 feet bgs.

Investigation of the vertical extent of contamination was limited by the recently installed containment liner. Frozen soil was encountered at 8 feet bgs.

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	No confirmation surface soil samples were collected. It is assumed surface soil was removed, however surface soil underneath the building was not evaluated. Sub-surface soil samples collected adjacent to the loading building were below direct contact cleanup levels. Exposure through this pathway is considered insignificant.
Sub-Surface Soil Contact	De Minimis Exposure	Only one soil sample, collected 8 feet bgs, contained DRO above ingestion 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 8 feet bgs, contained DRO 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)	De Minimis Exposure	Benzene was detected in soil samples located 40 feet southeast of the building at a depth of 10 feet bgs. The excavation has been capped with 8 feet of clean fill further reducing the risk. Therefore exposure risk via this pathway is considered de minimis.
Ground-water Ingestion	Pathway Incomplete	There are no drinking water wells at PS 06. Groundwater is not expected to be impacted in the future by remaining contamination. 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 Alyeska PS 06 Former Turbine Fuel Loading, 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, Alyeska will report to ADEC every five years to document land use, or as soon as the Alyeska 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. The soil contamination located under the offloading building with associated electric and turbine fuel lines is currently inaccessible (See attachment B). When the offloading building with associated electric and turbine fuel lines are decommissioned and/or the soil becomes accessible, the soil must be evaluated to the satisfaction of ADEC.
3. Installation of groundwater wells at this site will require approval from ADEC
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 of Alyeska 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 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, 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

Electronic cc:

Scott Rose, SLR

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

Alyeska agrees to the terms of this Cleanup Complete with Institutional Controls determination as stated in this closure decision document dated **November 12, 2014** for the *Alyeska PS 06 Former Turbine Fuel Loading* 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).

Signature of Jan Shifflett or Authorized Representative, Title
Alyeska Pipeline Service Company

Printed name of Jan Shifflett or Authorized Representative, Title
Alyeska Pipeline Service Company

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.: 330.38.074
Hazard ID: 1731
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

