

# 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: 330.38.121

Return Receipt Requested

Article No: 7009 2820 0001 7169 6774

March 8, 2011

Jan Shifflett  
Alyeska Pipeline Service Company  
Mail Stop 507  
PO Box 196660  
Anchorage, AK 99519-6660

Re: Decision Document; Alyeska PS 03 Fire Training Area  
Cleanup Complete Determination

Dear Mr. Shifflett:

The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program (CSP) has completed a review of the project file and environmental records associated with the Alyeska Pump Station (PS) 03 Fire Training Area, located at mile 311.8 Dalton Highway in 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 this site will be closed.

This letter, which is based on the administrative record for the PS 03 Fire Training Area, 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:

Alyeska PS 03 Fire Training Area  
Mile 311.8 Dalton Highway

Name and Mailing Address of Contact Party:

Jan Shifflett  
Alyeska Pipeline Service Company  
Mail Stop 507  
PO Box 196660  
Anchorage, AK 99519-6660

**ADEC Site Identifiers**

File: 330.38.121  
Hazard ID: 25526

Regulatory authority under which the site is being cleaned up:

18 AAC 75

**Background**

In July of 2008, Alyeska discovered historic contamination and a liner puncture during excavation and removal of a fire training structure at Pump Station (PS) 03.

**Site Characterization and Cleanup Actions**

In August 2008, Alyeska attempted an excavation using the equipment on hand at this location but deemed it impractical at that time. Five samples and one duplicate were collected, but no samples were collected from beneath the liner.

Alyeska returned to this location to resume excavation during 2010. Approximately 90 cubic yards of contaminated soil were removed and thirteen soil samples and one duplicate were collected as confirmation. No results exceeded the most conservative Method Two, "Migration to Groundwater cleanup level.

**Contaminants of Concern**

During the investigations at the site, soil samples were analyzed for the following contaminants: benzene, toluene, ethylbenzene, and xylenes (BTEX); gasoline range organics (GRO); diesel range organics (DRO); residual range organics (RRO); volatile organic carbons (VOCs); and polynuclear aromatic hydrocarbons (PAHs). Based on knowledge of the source area, the following Contaminant of Concern was identified.

- Diesel Range Organics (DRO)

**Cleanup Levels**

The cleanup levels for petroleum hydrocarbon-contaminated soil on manmade gravel pads and roads in the Arctic Zone are established in 18 AAC 75.341 Method One, Table A2 and 18 AAC 75.341 Method Two Tables B1 and B2.



A number of factors are considered by ADEC when evaluating site specific cleanup levels in the Arctic Zone including:

- human health (ingestion/inhalation);
- ecological impacts (contamination impacting ecological species other than humans);
- groundwater and surface water quality;
- presence of free phase product; and
- any other factors that might cause a deleterious impact to the environment.

In the Arctic Zone, the migration to surface water pathway is evaluated as the primary migration pathway because the migration to groundwater pathway is not considered applicable due to the presence of continuous permafrost. Impacted surface water can adversely affect both human and ecological receptors, depending on the location of the contaminant source, its proximity to surface waters, and water usage in the impacted area. Therefore the migration to surface water pathway is evaluated as a possible risk to human health (drinking water source) and/or for compliance with Alaska Water Quality standards (18 AAC 70).

In addition, the migration to surface water is evaluated as a possible exposure pathway for ecological receptors because of the tundra wetland ecosystem that exists throughout the Arctic region. Potential future use of the property must also be taken into account when determining closure status. Differentiating between a “Cleanup Complete” and a “Cleanup Complete with Institutional Controls” determination will be based on site specific conditions and exposure pathways as determined by ADEC.

### **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**

<b>Pathway</b>	<b>Result</b>	<b>Explanation</b>
Surface Soil Contact	De-minimis exposure	Remaining contaminant concentrations are below ADEC’s direct contact cleanup levels.

Sub-Surface Soil Contact	De-minimis exposure	Remaining contaminant concentrations in the subsurface are below ADEC's direct contact cleanup levels.
Inhalation – Outdoor Air	De-minimis exposure	The remaining soil contaminant concentrations are well below the inhalation levels for all volatile compounds. Therefore, the contamination remaining is considered de minimis in extent, and risk is considered insignificant.
Inhalation – Indoor Air (vapor intrusion)	De-minimis exposure	The remaining soil contaminant concentrations are below the most conservative Method Two, migration to groundwater criteria for all volatile compounds; therefore, risk via this pathway is considered insignificant.
Groundwater Ingestion	Pathway Incomplete	This site is located in the Arctic Zone; therefore, this pathway is considered incomplete.
Surface Water Ingestion	De-minimis exposure	No significant surface water bodies are present within ¼ mile; and surface water bodies within ¼ mile are unlikely to be used for recreation; therefore, this risk via surface water ingestion is considered insignificant.
Wild Foods Ingestion	Pathway Incomplete	Site is an industrial facility and contaminants of concern do not have the potential to bioaccumulate in plants or animals; therefore, this pathway is considered incomplete.
Exposure to Ecological Receptors	Pathway Incomplete	Site is an industrial area covered with shot rock, and there is no evidence of off-site migration; therefore, this pathway is considered incomplete.

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 this site will be designated as closed 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 ADEC Project Manager Keather McLoone at (907) 269-7526.

Approved By,



Linda Nuechterlein  
Environmental Program Manager

Recommended By,



Keather McLoone  
Environmental Program Specialist

Cc: Scott Rose, SLR