

# STATE OF ALASKA

SEAN PARNELL, GOVERNOR

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

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Anchorage, AK 99501  
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www.dec.state.ak.us

File: 330.38.096

Return Receipt Requested

Article No: 7009 2820 0001 7169 6781

March 8, 2011

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

Re: Decision Document: Alyeska PLMP 734 Pipe Leak  
Cleanup Complete Determination-Institutional Controls

Dear Mr. Shifflett:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Alyeska Pipeline Milepost (PLMP) 734 Pipe Leak located near Mile 65 Richardson Highway. 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 no further remedial action will be required as long as the site is in compliance with established institutional controls (ICs).

This letter, which is based on the administrative record for the Alyeska PLMP 734 Pipe Leak, 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 with Institutional Controls (ICs) determination.

## **Introduction**

### Site Name and Location:

Alyeska PLMP 734 Pipe Leak  
Near Mile 65 Richardson Highway  
Near Copper Center, Alaska 99573

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: 330.38.096  
Hazard ID: 20

Regulatory authority under which the site is being cleaned up:

18 AAC 75

**Background**

A structural failure of the pipeline was discovered on June 15, 1979 at Alyeska Pipeline Milepost (PLMP) 734. The amount of the spill was estimated to be between 126,000 and 168,000 gallons.

**Site Characterization and Cleanup Actions**

The initial response was reported to have included re-injection of crude oil into the pipeline; sorbents which were later incinerated; and gravel excavated and placed on an access road in the vicinity.

In 2001, during a sleeve inspection and repair, test pits were advanced which indicated that soil contamination remained. The excavation was extended to 14.5 feet below ground surface (bgs) maximum depth. Approximately 400 cubic yards of material removed and stockpiled at Pump Station (PS) 12. Excavation confirmation samples contained benzene up to 0.98 mg/kg and DRO up to 1,910 mg/kg.

Three nearby surface water locations were sampled on August 23, 2002 in support of the development of a conceptual site model. Total Aromatic Hydrocarbon (TAH) and Total Aqueous Hydrocarbon (TAqH) results were below water quality criteria.

**Contaminants of Concern**

During the investigations at this site, soil samples were analyzed for diesel range organics (DRO), gasoline range organics (GRO); and benzene, toluene, ethylbenzene, and xylenes (BTEX).

The maximum excavation depth was reported to be 14.5 feet bgs. However, groundwater was not sampled as it was not encountered during excavation efforts. Based on these analyses and knowledge of the source area, the following Contaminants of Concern were identified:

- Diesel Range Organics (DRO)
- Benzene

### Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B2 Under 40 inch Zone, Migration to Groundwater (MTG).

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

### 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 Tracking Model Results**

Pathway	Result	Explanation
Surface Soil Contact	Pathway Incomplete	Release was below surface; therefore, this pathway is considered incomplete.
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, risk via this pathway is considered insignificant.
Inhalation - Indoor Air (vapor intrusion)	De minimis exposure	Remaining soil contamination is overlain with backfill; concentrations are below inhalation cleanup levels for DRO and benzene; and no other volatile compounds are present above the most conservative criteria. Therefore, exposure via this pathway is considered de minimis.

Groundwater Ingestion	De minimis exposure	Extent of contamination remaining is de minimis in volume. Nearest DW well is installed at 77 ft bgs; about ½ mile away(at PS 12); under artesian influence with a shallower clay layer protecting the formation. Therefore, exposure via this pathway is considered insignificant.
Surface Water Ingestion	Pathway Incomplete	Surface water bodies in immediate area were sampled for TAH and TAqH; and results did not exceed water quality criteria. Surface water within ¼ mile not used as a drinking source. Therefore, this pathway is considered incomplete.
Wild Foods Ingestion	Pathway Incomplete	Compounds do not have the potential to bioaccumulate in plants or animals; therefore, this pathway is considered incomplete.
Exposure to Ecological Receptors	Pathway Incomplete	Contamination remaining is at depths of more than 10 feet. No evidence of offsite migration.

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 ADEC has determined there is no unacceptable risk to human health or the environment, and this site will be granted a Cleanup Complete- ICs 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 ICs may not be protective and ADEC may require additional remediation and/or ICs. Therefore, ~~Lower Kuskokwim School District~~ shall report to ADEC every five years to document land use; or report as soon as ~~Lower~~

Alyeska ←

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Kuskokwim School District becomes aware of any change in land ownership and/or use, if earlier. **The report can be sent to the local ADEC office or electronically to [DEC.ICUnit@alaska.gov](mailto: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 attached site figure.)
3. Installation of groundwater wells will require approval from ADEC.
4. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.
5. Soil contamination is located in the area of PLMP 734 (see attachment B). When the soil in this area becomes accessible, such as during pipeline decommissioning, the soil must be evaluated and contamination addressed in accordance with an ADEC approved work plan.

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. When the site meets the requirements for a Cleanup Complete determination, then the Institutional Controls will be terminated.

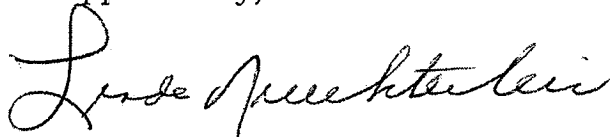
This determination is in accordance with 18 AAC 75.380(d) and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

### **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.

**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 contact the ADEC project manager, Keather McLoone at (907) 269-7526.

Approved By,



Linda Nuechterlein  
Environmental Manager

Recommended By,



Keather McLoone  
Environmental Specialist

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

Cc: Scott Rose, SLR  
Jerry Brossia, JPO  
Gary Reimer, BLM Anchorage District Manager

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

Alyeska Pipeline Service Company agrees to the terms of this Corrective Action Complete with Institutional Controls determination as stated in this Closure Decision Document for *Alyeska PLMP 734 Pipe Leak* dated **March 8, 2011**. 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 Authorized Representative, Title  
Jan Shifflett/ Alyeska Pipeline Service Company

\_\_\_\_\_  
Printed Name of Authorized Representative, Title  
Jan Shifflett/ 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, Keather McLoone at the address on this correspondence within 30 days of receipt of this letter.

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ADEC File No.:                   330.38.096  
Hazard ID:                        20  
ADEC Project Manager:       Keather McLoone

**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.

Suspected Area of Contamination Remaining

Excavation Top of Slope

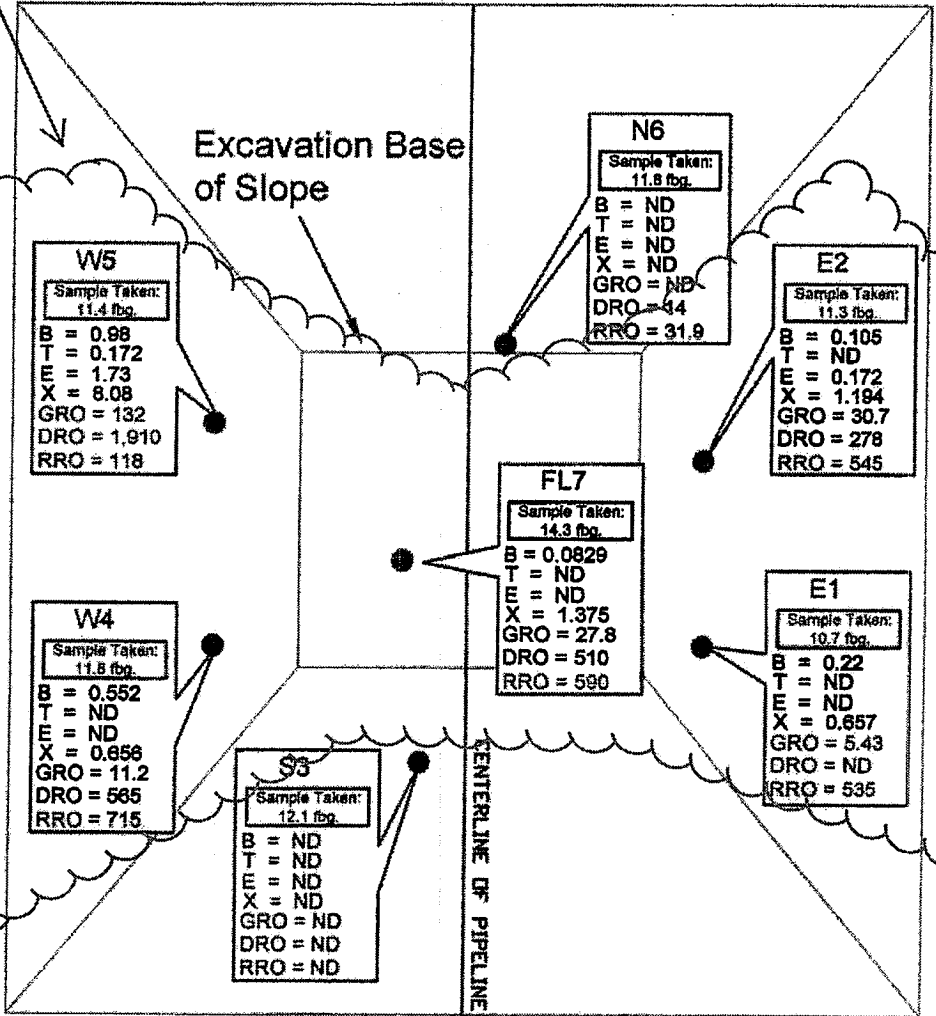
Station No. 38763+40.5

**NOTES**  
 SOURCE: Houston/Nana LLC  
 Survey Field Notes MP 734  
 Sleeve Repair Project.

**LEGEND**

- SAMPLE POINT
- LIMITS OF EXCAVATION
- fbg FEET BELOW GRADE
- BTEX BENZENE, TOLUENE  
ETHYLBENZENE, XYLENES
- DRO DIESEL RANGE ORGANICS
- GRO GASOLINE RANGE ORGANICS
- RRO RESIDUAL RANGE ORGANICS

ALL CONCENTRATIONS IN mg/Kg



**W5**  
 Sample Taken:  
 11.4 fbg.  
 B = 0.98  
 T = 0.172  
 E = 1.73  
 X = 8.08  
 GRO = 132  
 DRO = 1,910  
 RRO = 118

**W4**  
 Sample Taken:  
 11.8 fbg.  
 B = 0.552  
 T = ND  
 E = ND  
 X = 0.656  
 GRO = 11.2  
 DRO = 565  
 RRO = 715

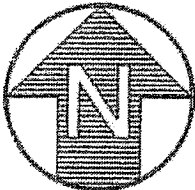
**S3**  
 Sample Taken:  
 12.1 fbg.  
 B = ND  
 T = ND  
 E = ND  
 X = ND  
 GRO = ND  
 DRO = ND  
 RRO = ND

**N6**  
 Sample Taken:  
 11.8 fbg.  
 B = ND  
 T = ND  
 E = ND  
 X = ND  
 GRO = ND  
 DRO = 44  
 RRO = 31.9

**FL7**  
 Sample Taken:  
 14.3 fbg.  
 B = 0.0829  
 T = ND  
 E = ND  
 X = 1.375  
 GRO = 27.8  
 DRO = 510  
 RRO = 590

**E2**  
 Sample Taken:  
 11.3 fbg.  
 B = 0.105  
 T = ND  
 E = 0.172  
 X = 1.194  
 GRO = 30.7  
 DRO = 278  
 RRO = 545

**E1**  
 Sample Taken:  
 10.7 fbg.  
 B = 0.22  
 T = ND  
 E = ND  
 X = 0.657  
 GRO = 5.43  
 DRO = ND  
 RRO = 535



APPROXIMATE SCALE: 1" = 10'