

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

**DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM**

FRANK MURKOWSKI, GOVERNOR

610 University Avenue
Fairbanks, AK 99709-3643
PHONE: (907) 451-2166
FAX: (907) 451-2155
<http://www.state.ak.us/dec/>

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102.26.016

April 8, 2003

Robert Shoaf
Alyeska Pipeline Service Company
1835 South Bragaw Street, MS 502
Anchorage, AK 99512

Re: No Further Remedial Action Planned
Alyeska Van Horn Facility
Database ID No. 1990310127601

Dear Mr. Shoaf:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the Alyeska Van Horn Facility Groundwater Monitoring Report dated December 2002 provided by SLR Alaska, requesting an issuance of No Further Action for this property. This site is located at 1420 Van Horn Road in Fairbanks, Alaska at the southeast corner of the northwest corner of Section 22, Township 1 South, Range 1 West.

Site Background

This site involves the contamination from two 5,000 gallon heating oil underground storage tanks (USTs). Since the West Heating Oil UST was used for both on-site heating and dispensing of diesel, it is registered as a regulated UST under 18 AAC 78. The East Heating Oil UST was only used as a heating oil tank and is therefore exempt from 18 AAC 78.

The West Heating Oil tank, located adjacent to the warm storage building at the Van Horn Facility, released approximately 4,000 to 5,000 gallons of heating oil shortly after installation in 1984. The release was attributed to improper installation of the UST fittings.

In 1990, both USTs were tightness tested by Associated Environmental Systems of Alaska (AES). The AES tests indicated that neither tank was tight, likely having leaks in the vent lines of each tank.

Assessment and Remedial Activities

Removal of Contaminants

The West Heating Oil UST was excavated and removed on July 22 and 23, 1991. The excavation was extended to a depth of approximately 11 to 12 feet below ground surface (bgs). Approximately 240 cubic yards of impacted soil were excavated. The excavated impacted soil was taken to Environmental Services, Inc. for thermal remediation. With the exception of the west sidewall, excavation of soil continued until no odors were detected within in-place soils and PID measurements were at background concentrations (<1 parts per million (ppm)). Further excavation to the west was limited to a distance approximately four feet from the existing building due to concerns over building stability. Groundwater was encountered in the excavation at a depth of approximately nine feet bgs.

Soil samples were obtained from the excavation sidewalls at the limits of excavation on July 23, 1991. The four excavation walls were sampled at a depth of approximately eight feet bgs. Those soil samples that exceeded ADEC cleanup levels for total recoverable petroleum hydrocarbons (TRPH) are presented in Table 1.

Table 1. Results of soil samples collected after excavation of contaminated soil at the West Heating Oil UST at the Alyeska Van Horn Facility.

Sample Number	Sample Location	Date Sampled	Sample Depth (feet)	TPH-Diesel EPA Method 550/8100M (ppm)	TRPH EPA Method 418.1 (ppm)
ES-N-1	North sidewall West Heating Oil UST excavation.	7/23/91	8	43	134
ES-W-2	West sidewall of West Heating Oil UST excavation	7/23/91	5.5	19	205

The East Heating Oil Tank removal was conducted on July 22, 1991. The excavation extended to a depth of approximately 9.5 feet bgs. Approximately 60 cubic yards of impacted soil were excavated. The excavated impacted soil was taken to Environmental Services, Inc. for thermal remediation. Excavation of soil continued until no odors were detected within in-place soils and PID measurements were at background concentrations (< 1 ppm). Groundwater was encountered at approximately nine feet bgs.

Soil samples were obtained from the excavation sidewalls at the limits of the excavation on July 22, 1991. The four excavation walls were sampled at a depth of approximately seven feet bgs. All the soil samples were below ADEC cleanup levels.

Groundwater monitoring

Following excavation of the impacted soil in the East Heating Oil UST area, several monitoring wells were installed to determine groundwater impacts. Down gradient of the East Heating Oil UST, MW-8 was the only well that showed contamination above ADEC cleanup levels. This well was monitored from 1991 through 1999. The last two sample events in 1998 and 1999, indicated

sample results below ADEC cleanup levels for benzene, toluene, ethylbenzene, and xylene (BTEX), polynuclear aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), gasoline range organics (GRO) and diesel range organics (DRO).

In the vicinity of the West Heating Oil UST, free product was found in the excavation. After removal of the UST and excavation of the impacted soil, a 6-inch diameter recovery well (PW-1) was installed to recover free product. A Keck Instruments passive recovery canister, installed in PW-1 in 1992, collected free product in the summer months. Between 1992 and 2002, approximately 34 liters of free product were recovered via the passive recovery canister.

Monitoring wells were installed to delineate the extent of the groundwater contamination in the West Heating Oil UST excavation area. Groundwater contamination was monitored from 1991 until 2002. The results of the highest and final sampling of the monitoring wells at the West Heating Oil UST excavation that exceed ADEC cleanup levels are presented in Table 2. The downgradient monitoring wells at the site boundary, MW-10 and MW-14, have not exceeded ADEC groundwater cleanup levels for BTEX, DRO or PAHs.

Table 2. Results of the monitoring wells at the West Heating Oil UST excavation that exceed ADEC cleanup levels.

Monitoring Well	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Xylene (mg/l)	DRO (AK 102) (mg/l)
MW-1	10/11/1991	0.0968	0.131	0.011	1.17	NA
MW-1	1993, 1994, 1996, 1998, 1999	Product	Product	Product	Product	Product
MW-1	8/7/2000	0.0026	ND	ND	ND	5.37
MW-1	8/17/2001	0.0037	ND	ND	0.0013	3.33
PW-1	10/11/1991	0.33	<0.01	0.1	4	NA
PW-1	1992-2001	Product	Product	Product	Product	Product
PW-1	9/11/2002	ND	ND	0.0226	0.319	12.6

Evaluation of Exposure Pathways

SLR Alaska determined that the drinking water pathway is incomplete for this site. The Van Horn Facility uses city water as a drinking water source and no water wells exist on site. Migration of the hydrocarbon plume has been shown not to pose a risk to off-site water wells. Also, a prior assessment of the risks posed to off-site water wells was conducted in 1992. A water well search within a 1/2 mile radius of the Van Horn Facility was performed by America North. The contractor concluded that no active water wells were at risk of impact from migration of the petroleum hydrocarbon plume from the Van Horn Facility.

The indoor air pathway is considered potentially complete but insignificant. The two potential sources of petroleum hydrocarbon vapors migrating into the warm storage building resulting from the West Heating Oil UST release are from volatilization of hydrocarbons in soil vadose zone near the former UST location, and volatilization from hydrocarbons in groundwater underlying the warm storage building. SLR determined that although the indoor air pathway is potentially complete, it is

likely to be insignificant, as groundwater concentrations of petroleum hydrocarbons do not exceed the most stringent U.S. Environmental Protection Agency's (EPA) target groundwater concentrations for this exposure pathway.

Approved Cleanup Levels - Table 3

State of Alaska Method II Cleanup Levels (MCL) for soil in the under 40-inch precipitation zone.

Contaminant	Ingestion	Inhalation	Migration to groundwater
Benzene	290	9	0.02
Ethylbenzene	10,000	89	5.5
Toluene	20,300	180	5.4
Total xylenes	203,000	81	78
DRO	10,250	12,500	250

PCL = Practical Quantitation Limit

These cleanup levels represent the various pathways of exposure and can be found at 18 AAC 75.341, Tables B1 and B2. All results are in mg/kg.

Approved Groundwater Cleanup Levels - Table 4

Contaminant	Cleanup Level (mg/L)
Diesel Range Hydrocarbons	1.5
Benzene	0.005
Toluene	1.0
Ethylbenzene	0.7
Total Xylenes	10.0

The approved groundwater cleanup levels listed below can be found at 18 AAC 75.345, Table C.

Remaining Contamination

Soil samples collected from the excavations of both USTs indicate that all the contaminated soil has been removed with the exception of a small amount of soil on the north and west side walls of the West Heating Oil UST excavation.

Concentrations of petroleum hydrocarbons in groundwater samples at the East Heating Oil UST have decreased to levels below ADEC cleanup levels. Concentrations of petroleum hydrocarbons in the groundwater samples at the West Heating Oil UST, including the product recovery well PW-1 have decreased steadily since sampling commenced during the initial site investigation in 1991.

Determination

The Department has determined that an issuance of a No Further Remedial Action Planned (NFRAP) is appropriate for this site.

Institutional Controls

The following institutional controls have been established for this property until such time that contaminant concentrations meet the most stringent cleanup levels.

1. A record will be entered into the ADEC's Contaminated Sites Database regarding the contaminated groundwater and soil that remains.

- 2. If additional contaminated material becomes accessible through major structural modifications or demolition of current structures on the property, it shall be investigated and appropriately managed or removed in accordance with ADEC cleanup requirements.
- 3. Groundwater supply wells will not be installed on this property.

Closure

This decision is based on information presented to date but does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates the site might pose an unacceptable risk to human health or the environment.

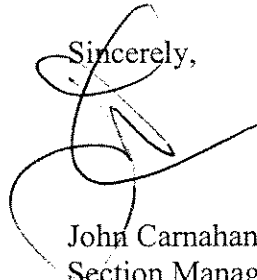
Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195- 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. **Informal review requests** must be delivered to the Division Director, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 15 days of the decision. **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 of the decision. If a hearing is not requested within 30 days, the right to appeal is waived. If you have any questions regarding this decision, please call me at 907-451-5174.

Sincerely,



Deborah Williams
Environmental Specialist

Sincerely,



John Carnahan
Section Manager
Fairbanks/Juneau Field Operations

cc: Jan A. Shifflett, Alyeska Pipeline Service Company