

STATE OF ALASKA

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

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File: 2268.26.001

April 20, 2010

Mr. Troy Jones / Ms. Sandy Apple
7504 Chapman Drive
North Richland Hills, TX 76180-4652

Subject: Record of Decision; Big Su Lodge USTs; Corrective Action Complete Determination

Dear Mr. Jones and Ms. Apple:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with Big Su Lodge USTs located at 36535 (Milepost 104) South Parks Highway, Willow. Based on the information provided to date, the ADEC has 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 decision is based on the administrative record for the Big Su Lodge USTs, which is located in the offices of the Alaska Department of Environmental Conservation (ADEC) in Anchorage, Alaska. This letter summarizes the decision process used to determine the environmental status of this site and provides a summary of the regulatory issues considered in the Corrective Action Complete Determination. Please note that this document refers only to the site associated with the removal of the three underground storage tanks (UST). The other site on this same property, named Big Su Lodge HOT (ADEC Contaminated Sites File #2268.38.005), remains open.

Introduction

Site Name and Location:

Big Su Lodge USTs
36535 (Milepost 104) South Parks Highway
Willow, Alaska 99688
Lot 1, Holsonbake Subdivision

Name and Mailing Address of Contact Party:

Mr. Troy Jones / Ms. Sandy Apple
7504 Chapman Drive
North Richland Hills, TX 76180-4652

Database Record Key and File Number:

ADEC Reckey: 1997220015501

File: 2268.26.001

Hazard ID: 24730

Regulatory authority under which the site is being cleaned up:

18 AAC 75 and 18 AAC 78

Background

Petroleum impacted soil and groundwater was encountered during the removal of three regulated USTs, and associated piping and dispenser. Soil samples collected at this site have been tested for: gasoline-range organics (GRO); diesel-range organics (DRO); residual-range organics (RRO); benzene, toluene, ethylbenzene, and total xylenes (BTEX); polycyclic aromatic hydrocarbons (PAH), and total lead. Groundwater samples were collected for testing for the same contaminants as soils except not for total lead.

Cleanup Activities

A 3,000 gallon unleaded gasoline UST, a 3,000 gallon diesel UST formerly holding leaded gasoline, and a 2,000 gallon diesel UST were removed on June 2 to 3, 1997. During the tank removal, approximately 332.5 cubic yards of contaminated soil were excavated. Eight confirmation soil samples were collected from the excavation. Five of these samples were sidewall samples collected at varying depths between 15 feet and 19 feet below the ground surface (bgs). Three excavation bottom samples were taken at 19 feet bgs. Laboratory analysis of soil samples submitted for laboratory analysis resulted in exceedances of the applicable cleanup levels for GRO, DRO, benzene, and total BTEX set for the site in 1997. These cleanup levels were based on the Matrix Score Category A soil cleanup levels of 50 mg/kg for GRO, 100 mg/kg for DRO, 2,000 mg/kg for RRO, 0.1 mg/kg for benzene, and 10 mg/kg for total BTEX. In mg/kg, the maximum sample results in 1997 were: 851 for GRO, 380 for DRO, 1.97 for benzene, 13.1 for toluene, 8.12 for ethylbenzene, and 63.7 for total xylenes. In addition, the contaminant concentrations exceeded the current 18 AAC 75.341 Method Two Migration to Groundwater (MTG) soil cleanup levels for GRO, DRO, and BTEX. However, none of these values exceeded their respective current 18 AAC 75.341 Ingestion/Dermal Contact cleanup levels.

Groundwater was encountered at the very bottom of the excavation at 19 feet bgs. One groundwater sample was taken from the excavation bottom and determined unacceptable by the ADEC because it was taken from open pit water.

The excavation was backfilled with excavated soil that was determined clean via screening results along with additional clean fill from off site. On April 24, 1998, the ADEC approved a corrective action plan for long-term stockpiling of 333 cubic yards of contaminated soil stockpiled at the site. The stockpile is no longer on site and its fate is unknown.

On June 9 and 10, 2009, soil borings B2 through B4 were advanced to evaluate the nature and extent of soil and groundwater contamination at the site. Boring B2 was positioned from the ground surface to 15 feet bgs within the clean fill of the former USTs excavation in the vicinity of the most impacted area as documented during the 1997 UST closure assessment. Then the

drill rig was moved four feet east and a screening sample taken from 15 to 17 feet bgs in native soil. Groundwater was known to flow southward at the site. The other two borings were advanced south and down gradient of the source area with respect to the groundwater flow direction. Screening soil samples were collected from each borehole, generally at 2.5-foot intervals. One sample from each of these three boreholes was submitted for laboratory analysis for GRO, DRO, RRO, and BTEX. All three samples were taken from 10 to 12 feet bgs which was bridging or slightly above the water table at the time of drilling. The sampling results detected DRO, RRO, and benzene at maximum levels of 8.1 mg/kg, 25.7 mg/kg, and 0.00469 mg/kg, respectively. All sampling results and practical quantitation limits (PQL) were substantially below the 18 AAC 75.341 Method Two MTG soil cleanup levels.

Borings B2 through B4 were completed, as Monitoring Wells MW2 through MW4, respectively, and developed on June 10 and 11, 2009. Groundwater was encountered approximately between 10 and 12 feet bgs during drilling. The 10-foot screened interval of the wells was approximately centered on the groundwater contact depths at the time of drilling. Groundwater samples were collected on June 11, 2009. A groundwater sample was collected from each well and was analyzed for GRO, DRO, RRO, and BTEX. All sampling results were non-detectable (ND) and PQLs were substantially below the groundwater cleanup levels.

The decontamination water from Borings B2, and B3 was discharged on the ground at the heating oil tank (HOT) release area on the property. The decontamination water from Boring B4 was added to a 55-gallon drum containing development water from related activities and was disposed of off-site at an approved facility. The soil and water associated with the borings and wells was land spread and discharged at the site in non-environmentally sensitive areas.

Contaminants of Concern

During the investigations at this site, soil samples were analyzed for GRO, DRO, RRO, and BTEX. Based on these analyses and knowledge of the source area, the following Contaminants of Concern were identified:

- Gasoline-Range Organics (GRO)
- Diesel-Range Organics (DRO)
- Benzene
- Toluene
- Ethylbenzene
- Total Xylenes

Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Tables B1 and B2, Migration to Groundwater.

<u>Contaminant</u>	<u>Site Cleanup Level (mg/kg)</u>
GRO	300
DRO	250
Benzene	0.025
Toluene	6.5

Ethylbenzene
Total Xylenes

6.9
63

The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels. No contaminants were detected in groundwater above cleanup levels.

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 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	Pathway Incomplete	The contaminated soil from the surface to two feet bgs has been removed and replaced with clean material and the soil stockpile is no longer on site so there is no surface soil contact.
Sub-Surface Soil Contact	De-minimis Exposure	Contamination remains in the subsurface at 15 feet bgs and is above MTG levels but below Ingestion/Dermal Contact Levels.
Inhalation – Outdoor Air	De-minimis Exposure	Contamination remains in the subsurface above MTG levels but is at a depth of 15 feet bgs or greater and below Outdoor Inhalation Soil Cleanup Levels except for total xylenes which were detected at a maximum concentration in 1997 at 63.7 mg/kg in a soil sample at 16 feet bgs. The CSP currently views the total xylenes levels as reduced below the Outdoor Inhalation Soil Cleanup Level due to natural attenuation since then.
Inhalation – Indoor Air (vapor intrusion)	De-minimis Exposure	A trailer and restaurant are located on site. The trailer is within 12 feet and the restaurant is approximately 70 feet away from the foot print of the closest former UST. The restaurant is currently unused because the roof is currently partially collapsed. Remaining contamination is approximately 15 feet bgs or greater and is highly unlikely to present any indoor air issues.
Groundwater Ingestion	Pathway Incomplete	An analytical sample of groundwater taken in 2009 for GRO, DRO, RRO, and BTEX resulted in ND levels for all analytes.

Surface Water Ingestion	Pathway Incomplete	The Susitna River is located approximately 0.17 mile north and west of the site. The groundwater flow direction at the site is southerly so there is no risk to the river. Groundwater contaminant levels for GRO, DRO, RRO, and BTEX in the monitoring well through the former tanks location are all ND.
Wild Foods Ingestion	Pathway Incomplete	Site contaminants are greater than six feet bgs and do not have the potential to bioaccumulate.
Exposure to Ecological Receptors	Pathway Incomplete	There are no terrestrial or aquatic exposure routes present, direct ecological impacts that may result from site contaminants are not evident, and acute toxicity from high contaminant concentrations is not suspected.

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.

ADEC Decision

The cleanup actions to date have served to excavate and adequately remove contaminated soil above risk-based levels from the site. Based on the information available, ADEC has determined that 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.

Four monitoring wells were installed at the site in June 2009 as part of a release investigation performed by Shannon & Wilson, Inc. for the two sites located on the property. These four monitoring wells are to be left in place. They are required for continuing monitoring of groundwater contamination associated with the other contaminated site on the same property named Big Su Lodge HOT which remains open. Their decommissioning will be completed later under the ADEC's oversight of corrective action at that site.

Although a Corrective Action Complete determination has been granted, ADEC approval is required for off-site soil disposal in accordance with 18 AAC 78.600(h). 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 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.

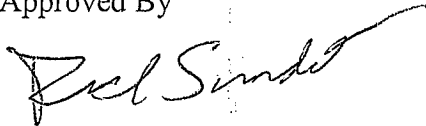
Appeal

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, 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 the ADEC project manager, Bill Petrik at (907) 269-7546.

Approved By



Rich Sundet
Environmental Manager

Recommended By



Bill Petrik
Environmental Program Specialist

CC: Stafford Glashan, Shannon & Wilson, Anchorage
Gregg Reiter, Willow
Brad Fisher; Fisher's Fuels, Inc.; Big Lake
Veris Lunasin, SPAR/RF, Juneau
Natalie Lawrence, AGO, Anchorage
Cheryl Paige, UST Program, Anchorage