STATE OF ALASKA

SARAH PALIN, GOVERNOR

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

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File: 1513.26.065

January 29, 2009

Via Electronic and Regular Mail
Mr. Rory Watt, Director
CBJ Engineering Department
155 South Seward St.
Juneau, AK 99801

Re: Record of Decision (ROD); Glacier Valley Fire Station
Corrective Action Complete Determination

Dear Mr. Watt,

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) reviewed site assessment data on the Glacier Valley Fire Station facility located at 1700 Crest Drive in Juneau. 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.

This decision is based on the administrative record for the CBJ Glacier Valley Fire Station which is located in the offices of the ADEC in Juneau, 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 Cleanup Complete determination.

Introduction

Site Name and Location:
Glacier Valley Fire Station
1700 Crest Drive
Juneau, Alaska 99801

Name and Mailing Address of Contact Party:
CBJ Engineering Department
155 Seward Street
Juneau, Alaska 99801

Database Record Key and File Number:
ADEC Reckey: 1999110029501
File: 1513.26.065
Hazard ID: 25160
Former LUST ID# 2735 and former Facility ID# 2167

Regulatory authority under which the site is being cleaned up:
18 AAC 78

Site Background History
The City and Borough of Juneau (CBJ) Glacier Valley Fire Station is adjacent to the east gate of the Juneau International Airport (JIA). The former fuel dispenser station was located several hundred feet southwest of the fire station building, just inside the gate to the airport chain-link fenced high-security perimeter. Adjacent to the station were two 1,000-gallon underground storage tanks (USTs), one used to store diesel fuel, the other gasoline.

The area is former intertidal land uplifted by the recession of glaciers. As a result of marine water intrusion the groundwater unsuitable for human consumption and assessment of ground water has not been requested by the ADEC. The Jordan Creek anadromous estuary flows within several hundred feet of the gated entrance to the JIA.

Site Assessment
In 1999, the CBJ arranged for closure by removal of two 1,000 gallon USTs, the dispenser island and all related piping. Although the tanks, dispenser and piping were found in good condition, petroleum contamination was identified and reported to the ADEC. Environmental Site Assessment found petroleum contaminated material beginning six feet below ground surface (BGS) in the footprint of the USTs spreading outward just above the water table in a soil layer between 12 to 18 inches thick at about 11 feet BGS. A water main utility corridor running north and south on the west side of the UST excavation limited access to remove all the soil contamination observed in the utility bedding material. Channel Construction transported 100 tons of contaminated soil to the United Soil Recycling facility in Juneau where it was thermally remediated, sampled and analyzed, and approved for unrestricted disposal by the ADEC.

Release Investigation and Corrective Action
In June 2004, the ADEC approved a Release Investigation and Corrective Action Plan to excavate, transport and remediate additional petroleum contaminated soil remaining after the closure of the USTs in 1999. The Release Investigation examined subsurface locations where the 1999 Site Assessment data indicated that residual petroleum contamination was not accessible for removal. *Site Assessment Report Contaminated Soil Removal at UST Facility ID#0-002167 City and Borough of Juneau Glacier Valley Fire Station*, dated September 2004, by Smith Bayliss LeResche Inc., states that in June 2004, excavation recovered 345 tons of material from the subsurface contaminated soil layer in directions east and south of the former UST dispenser station. The sandy material was transported off-site for remediation using a hot asphalt batch plant to incorporate the soil into asphalt pavement.

Access to contaminated soil was again limited by the water main along the western side and by the appearance of ground water in the bottom of the excavation. The smear zone lens of residual contaminated soil followed fluctuations in the water table as it spread outward from the UST footprint. Beyond the UST footprint the layer extended vertically on average from 11 feet BGS to a depth of 15 feet BGS near the center of the 2004 excavation where sample CL03 was collected.

The CL03 laboratory result for hydrocarbon fractions was concentrations in the diesel range (DRO) at 3,670 milligrams per kilogram (mg/kg) and in the gasoline range (GRO) at 112 mg/kg. The laboratory result for volatile compounds benzene, toluene, ethylbenzene and total xylene (BTEX) were concentrations below current soil cleanup criteria for the migration to groundwater exposure pathway for each compound.

Seven soil samples and one duplicate were collected from the north, south and east perimeter of the 2004 excavation at depths just above the water table to supply analytical confirmation data to verify the effectiveness of the Corrective Action Plan. The concentrations of hydrocarbon fractions (GRO & DRO) and volatile petroleum compounds (BTEX) were each below the applicable migration to groundwater soil cleanup levels with the exception of one sample from the north side of the excavation. CL08 with DRO at 5,580 mg/kg represents a small pocket of contamination under the paved area just inside the JIA gated entrance.

Residual soil under the utility line was characterized by analysis of three soil samples for GRO, DRO and BTEX compounds. Concentrations of each of the BTEX compounds was below Table B1 migration to ground water cleanup levels, indicating low potential for contamination to migrate to nearby surface water. A soil sample collected in 1999 at the buried water main had concentrations of DRO at 3,800 mg/kg and GRO at 540 mg/kg. Where additional removal occurred in 2004 further south along the buried water main, two more soil samples were collected for analysis. Soil sample CL01 had DRO at 241 mg/kg and GRO at 41 mg/kg; sample CL02 had DRO at 605 mg/kg and GRO at 39 mg/kg. The residual contamination smear zone lens in the utility corridor appears to be a meter wide and thick over a length of 20 meters.

Contaminants of Concern
Gasoline range hydrocarbons (GRO)
Diesel range hydrocarbons (DRO)

Cleanup Levels
The cleanup levels for petroleum hydrocarbon-contaminated soils are established in 18 AAC 75.341, Method Two, Tables B1 and B2 in the Over 40-inch Rainfall Zone. In the Over 40-Inch Zone, the migration to ground water pathway is evaluated as the primary migration pathway. Soil cleanup levels for this pathway are the most protective of human health and the environment.

In accordance with 18 AAC 75.350, ADEC may determine based on site specific data that groundwater underlying a property does not contribute to and is not currently used or reasonably expected to become a drinking water source. Using this determination, 18 AAC 75.340(e) selects soil cleanup levels from 18 AAC 75.341 Tables B1 and B2 to prioritize the most conservative value associated with the exposure pathways for inhalation, ingestion and migration to groundwater for each compound or petroleum fraction. The following table shows the migration to groundwater (most conservative) and the human health based soil cleanup levels for the contaminants of concern identified for this site cleanup remedy.

Contaminants (milligrams/ kilogram) Tables B1 and B2 – inhalation/ ingestion cleanup levels		
Gasoline range hydrocarbons	260	1,400
Diesel range hydrocarbons	230	8,250
Benzene	0.025	8.50 (inhalation)
Toluene	6.5	220 (inhalation)
Ethylbenzene	6.9	81 (inhalation)
Xylenes (total)	63	63 (inhalation)

Groundwater cleanup values are not established based on an ADEC determination that groundwater is not a current or reasonably potential future source of drinking water as defined by meeting all sections of 18 AAC 75.350. When this determination is made for a site, ADEC allows groundwater contamination to remain at a site by placing restrictions on the off-site transport of contaminated soil and groundwater.

Pathway Evaluation

The complete human exposure pathways to surface and subsurface petroleum contamination at this site include dermal contact and ingestion of soil particles, inhalation of ambient air. The outdoor inhalation and dermal contact/ingestion exposure risk is not unacceptable as the residual soil remains only below ground surface. The migration to ground and surface water exposure risk is not unacceptable because neither groundwater and nor surface water are potable near this marine estuary. Potable water at the facility and in the area is supplied by the City and Borough of Juneau.

The close hydrological connection between groundwater and Jordan Creek is a complete pathway to surface water and ecological receptors. The migration of residual petroleum contamination from the site does not pose an unacceptable risk of exceeding 18 AAC 70 Water Quality standards.

The exposure pathway analysis above was supported by the most recent ADEC Exposure Tracking Model (ETM) ranking. The ETM results showed all pathways to be De Minimis Exposure, Exposure Controlled, or Pathway Incomplete.

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 Contaminated Sites database.

Although a Corrective Action Complete determination has been granted, ADEC approval is required for off-site soil or groundwater disposal in accordance with 18 AAC 78.600(h). It should be noted that movement or use of potentially contaminated soil or groundwater in a manner that results in a violation of 18 AAC 70 water quality standards is unlawful.

The ADEC Contaminated Sites Database will include a description of the contamination remaining at the site. This determination is in accordance with 18 AAC 78.276 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 - .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, PO Box 111800, Juneau, Alaska 99801-1800, 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, PO Box 111800, Juneau, Alaska 99801-1800, 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 Bruce Wanstall at 907-465-5210 or email at bruce.wanstall@alaska.gov ,

Sincerely,

Bruce Wanstall

Bruce Wanstall
Project Manager
State & Private Sites Cleanup Program

cc: Pam Post, Dept of Law, via email
Veris Lunasin, SPAR Accounting, via email