

STATE OF ALASKA

SEAN PARNELL, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF SPILL PREVENTION AND RESPONSE CONTAMINATED SITES PROGRAM

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File: 1513.38.073

December 12, 2011

Sent by electronic and regular mail

Ms. Cheri Fluck
Mall PSA, LLC
P.O. Box 211308
Juneau, AK 99821

Mr. John Comick
Salmon Creek LLC
5415 California Avenue SW
Seattle, WA 98136

Re: Record of Decision
Cleanup Complete Determination

Dear Sirs:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with Mendenhall Mall HOTS located at 9105 Mendenhall Drive in Juneau, Alaska. Based on the information provided to date, the DEC 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 Mendenhall Mall HOTS Contaminated Site administrative record, which is located in the offices of the DEC 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:

Mendenhall Mall HOTS
9105 Mendenhall Drive
Juneau, Alaska 99501
United States Survey 381 FR

Name and Mailing Address of Contact Party:

John Comick
Salmon Creek LLC
5415 California Avenue SW
Seattle, WA 98136

Database Record Key and File Number:

DEC Reckey: 2006110127501
File: 1513.38.073
Hazard ID: 4448

Regulatory authority for cleanup:

18 AAC 75

December 12, 2011

Background

On October 2, 2006, site investigation soil samples were collected by R&M Engineering-Juneau at three un-regulated, underground heating oil tanks (USTs #1, #2, and #3) located near service entrance access points on the south side of the Mendenhall Mall (Mall) in Juneau. The samples were collected from stained surface soil observed at the UST fill pipes where it appeared that incidental spillage from an overfill had occurred during fuel transfer. Jon McElwain with R&M Engineering submitted the samples to Analytica Alaska Laboratory where they were analyzed for diesel (DRO) hydrocarbon fractions by Alaska Method 102. The greatest concentration of DRO at UST #1 was 1,500 mg/kg; at UST #2 was 24,000 mg/kg; at UST #3 was 190 mg/kg. The results for UST #1 and #2 exceeded the 18 AAC 75.341 Table B2 soil cleanup level for DRO of 230 mg/kg.

In October 2006 Carson Dom, Inc. (CDI) notified DEC of the pollution incident and prepared a cleanup plan for the overfill-related contaminated soil detected at USTs #1 and #2. The DEC/SPAR Southeast Area Response Team approved the site investigation plan in a letter dated October 25, 2006.

Due to winter conditions, the cleanup of contaminated surface soil impacted by the spill was delayed until May 14, 2007. Although the Mall had changed ownership in December 2006, the previous owners had agreed to perform this cleanup. CDI provided oversight with headspace photoionization detector field screening to ensure that all the petroleum contaminated soil around USTs #1 and #2 was excavated and transported for storage at the Bicknell Sand and Gravel (Bicknell) asphalt batch plant located on Montana Creek Road in Juneau. Bicknell added the contaminated soil to an asphaltic mixture used for private paving on June 15, 2007.

Site Characterization and Cleanup

Soil confirmation samples were collected at the limits of the tank excavations. The laboratory analytical results for DRO concentration in soil in two samples collected beneath UST #1 were 121 mg/kg and 80 mg/kg which are below the DRO cleanup level.

The excavation of contaminated material surrounding UST #2 was limited by the presence of a transformer and electric conduits overlying the tank. The removal of contaminated soil was advanced by machine and then by hand around UST #2. Soil confirmation samples were collected at the base of the building foundation at four feet below grade, and also at the far end of the excavation three feet below grade. The laboratory results for DRO concentration in the two soil samples were 143 mg/kg and 1,580 mg/kg. Sheen was observed on excavation water. PID screening results were low; as a result the soil samples were not analyzed for any volatile hydrocarbon compounds. Inspection of fuel tanks #1 and #2 gave no indication of them having leaked fuel, therefore suggesting that contamination migrated from the overfill at the surface.

In October 2007, DEC approved a work plan to investigate groundwater contamination at UST #2. In November 2007, CDI installed a monitoring well next to the Mall building foundation about 12 inches south of the UST #2 fill pipe. The fill pipe extended up the side of the building and the monitoring well was capped at ground level, locked with a padlock, and covered with an upside down bucket that was flush with the surrounding ground elevation.

December 12, 2011

On December 6, 2007, CDI purged the well to prepare for sample collection. The purge water appeared clear, but had small sheens and a slight gaseous odor was detected. Samples collected from the monitoring well were submitted to the laboratory for DRO and residual (RRO) hydrocarbon analysis by Alaska Methods 102 and 103. Sample MM-1 results were a DRO concentration of 0.668 mg/L and an RRO concentration of 0.763 mg/L; the duplicate sample MM-2 results were a DRO concentration of 0.551 mg/L and the RRO concentration was below instrument detection limit of 0.708 mg/L. Each of the results is below the 18 AAC 75.345, Table C groundwater cleanup levels. Based on the results, CDI requested that DEC accept the closure as complete. DEC approved the data but requested additional groundwater monitoring.

In May 2008, as CDI prepared to collect water samples from the monitor well at UST #2, fresh oil stains were observed on concrete surrounding the well casing. The sample collected from the monitoring well was submitted to the laboratory for DRO and RRO analysis. Sample results were a DRO concentration of 1.69 mg/L and an RRO concentration of 4.9 mg/L. Each of the results is above the 18 AAC 75.345, Table C groundwater cleanup levels for DRO (1.5 mg/L) and RRO (1.1 mg/L).

During the winter of 2008/2009, the boiler served by UST #2 experienced operational problems that were attributed to water in the fuel. Mall managers opted to remove UST #2 from service and install a temporary above ground tank (AST). As a result, UST#2 was not in service during the middle of the winter of 2008/2009. Once spring 2009 had arrived, the Mall managers contracted an investigation of UST#2 to determine how water had gotten into the fuel. The investigator discovered that, at some point between November 2007 and the end of 2008, the original fill pipe for UST #2 had been converted to a vent pipe because the monitoring well had been mistakenly identified as the fill pipe. As a result, an unknown number of attempts were apparently made to fill UST#2 by adding oil to the monitoring well. Fortunately the well casing would only hold a gallon of oil above the water level in the well. As a result of the discovery, DEC rejected the May 2008 groundwater data and considered the 2007 sample data sufficient to suspend further groundwater investigation.

In July 2009 the Mall managers decided to replace the temporary AST with a new permanent AST, and to close the old UST #2 in place because the highly congested site made removal not feasible. DEC approved a work plan to remove all free petroleum-product and all sludge from tank 2 then fill it with aerated slurry of concrete grout that can be pumped into the tank and, once in place, sets up to a firm consistency. The concrete grout was pumped into the tank through the vent pipe until it emerged from fill pipe. All free petroleum-product was pumped from the water well. All accessible contaminated soil was removed prior to backfilling and the water well was removed. Soil and water samples at the site have been analyzed for diesel (DRO) and residual (RRO) petroleum hydrocarbon fractions.

Contaminants of Concern

Soil and water samples at the site have been analyzed for diesel (DRO) and residual (RRO) petroleum hydrocarbon fractions. Based on these analyses and knowledge of the source area, the following Contaminant of Concern was identified:

Diesel Hydrocarbon Fractions (DRO)

December 12, 2011

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>
DRO	230

The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels.

<u>Contaminant</u>	<u>Site Cleanup Level (mg/L)</u>
DRO	1.5

Pathway Evaluation

Following investigation and cleanup at the site, exposure to the remaining contaminants was evaluated using DEC'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 as an attachment.

Cumulative Health Risk Calculation

Pursuant to 18 AAC 75.325 (g), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be calculated. A chemical that is detected at one-tenth or more of the Table B1 inhalation or ingestion values set out in 18 AAC 75.341(c) or the Table B2 values set out in 18 AAC 75.341(d) must be included when calculating cumulative risk under 18 AAC 75.325(g). Cumulative risk from petroleum contamination of environmental media at the site is addressed using the BTEX and PAH analyte concentration data. With data currently available, the DEC has determined that petroleum compounds remaining at the referenced site following cleanup are in concentrations that do not present a cumulative risk to human health.

DEC Decision

The cleanup actions to date have served to excavate and adequately remove contaminated soil from the site. Based on the information available, DEC 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, DEC 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 DEC 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

Ms Cheri Fluck and Mr. John Comick 5
RE: Mendenhall Mall HOT USTs ROD

December 12, 2011

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 DEC project manager, Bruce Wanstall at (907) 465-5210.

Approved By,



Sally Schlichting
Environmental Manager

Recommended By



Bruce Wanstall
Environmental Program Specialist

cc: Larry Bauer, building manager, Mendenhall Mall
Tom Carson, principle investigator, Carson Dorn Inc.

Table 1 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De-minimis exposure	The contaminated soil has been removed from the site and remediated off-site and there is no surface soil contact.
Sub-Surface Soil Contact	De-minimis exposure	The UST is encapsulated in concrete in-place due to overlying utilities. Subsurface soil contamination under the UST and adjacent power plant structures is de-minimis in volume, is not accessible and no new excavation is planned.
Inhalation – Outdoor Air	Pathway Incomplete	Contamination remains in the subsurface, but volatile compounds are not present.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Contamination remains in the subsurface, but volatile compounds are not present.
Groundwater Ingestion	De-minimis exposure	Groundwater investigation shows petroleum concentrations are below Table C cleanup levels. No known private wells are identified and a public utility provides drinking water to the site and surrounding area.
Surface Water Ingestion	Pathway Incomplete	There is surface water located within ¼ mile of the site but the urban stream Duck Creek is not considered a current or future drinking water source. CBJ supplies potable water to the area.
Wild Foods Ingestion	Pathway Incomplete	There is no surface soil contamination remaining above MTG levels and no wild food harvest opportunities are present at or near the site.
Exposure to Ecological Receptors	Pathway Incomplete	Minor groundwater contamination is not present in concentration or volume to reach the urban stream Duck Creek.

Notes to Table 1: “De-minimis exposure” means that in DEC’s judgment receptors are unlikely to be affected by the minimal volume of remaining contamination. “Pathway incomplete” means that in DEC’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.