



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

**Department of Environmental
Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

PO Box 111800
410 Willoughby Ave #303
Juneau, AK 99811-1800
Main: 907-465-5390
Fax: 907-465-5218
www.dec.alaska.gov

File No: 1513.26.044

January 5, 2015

Via regular and electronic mail

Mr. Skye Stekoll
City and Borough of Juneau, Engineering
155 South Seward Street
Juneau, AK 99801

RE: Decision Document: CBJ – West Juneau Lift Station Site
Corrective Action Complete

Dear Skye,

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the referenced site. This decision letter explains the site history, cleanup actions, and standard conditions for long-term site management. No further remedial action is required.

Site Name and Location

CBJ – West Juneau Lift Station
Douglas Hwy at Juneau Bridge
Juneau, Alaska 99801

Address of Contact Party

Skye Stekoll, CBJ Engineering
155 South Seward Street
Juneau, AK 99801

DEC Site Identifier

Hazard ID: 25078

Regulatory Authority for Determination

Title 18 Alaska Administrative Code 75 & 78

Site Description and Background

The City and Borough of Juneau (CBJ) Public Works Department manages the West Juneau Sewer Lift Station (Site) located on Douglas Highway at the west end of the bridge over Gastineau Channel. In 1999, soil contamination was discovered as part of the required site assessment conducted during the closure by removal of a 300-gallon diesel regulated underground storage tank (UST) at the Site.

Environmental consultant Smith Bayliss LeResche Inc. (SBL) stated in the subsequent Site Assessment Report that an estimated volume of 10 cubic yards of contaminated soil identified by field screening was stockpiled, with DEC approval, between liners on-site for three months. The disposition of the contaminated soil is not clearly documented but, similar to many other CBJ regulated UST closures during the period, contaminated soil was transferred to the DEC approved

storage cell in Lemon Creek and later was remediated by thermal treatment at Juneau United Soil Recycling.

In the 1999 Site Assessment Report, SBL reported observing a 300-gallon UST in good condition with no leaks and no signs of fuel overflow contamination at the surface fill and vent piping. Soil contamination was observed beginning at the edge of the lift station's subsurface drywell continuing to the bottom of the excavation in the UST footprint. SBL concluded that contamination was present in the western half of the excavation (Gastineau Channel is east of the Site) but did not estimate a depth or volume of the remaining soil contamination. Groundwater was not encountered during the UST closure by removal.

Contaminants of Concern

The following petroleum contaminant of concern was identified during the course of the site investigations summarized in the Characterization and Cleanup Activities section of this decision letter.

- Diesel Range Hydrocarbons (DRO)

Cleanup Levels

The more restrictive of the inhalation, direct contact, or ingestion Method Two soil cleanup levels apply to this site. Soil cleanup levels for the migration to groundwater pathway are not applicable for this site because site investigation determined that groundwater is consistently not present. The migration to groundwater soil cleanup levels are discussed in the release investigations to support the conclusion that the migration of contaminants from soil through groundwater to surface water has not occurred at the Site.

DRO was the only analyte detected in remaining soil at concentrations above the most conservative migration to groundwater pathway cleanup level protective of surface water. As a result, DRO is retained as the contaminant of concern even though release investigation has clearly shown that remaining soil contamination is below the ingestion cleanup level established in 18 AAC 75.341 (d), Table B2, as displayed in Table 1.

Table 1 -- Approved Cleanup Levels -- Ingestion and Outdoor Air Pathways

Chemical	Soil (mg/kg)
DRO	8,250

mg/kg = milligrams per kilogram

Release Investigation and Corrective Action

Release investigation and corrective action activities conducted under the regulatory authority of the Contaminated Sites Program began in 1999. These activities are described below.

The SBL Site Assessment Report suggests that the source of soil contamination may be other than the UST (see Attachment B: Site Figure). The DEC Spill Report dated April 20, 1999 for Event ID# 2307, however, documents the source of the fuel release as a leaking return line fitting at the tank.

Three SBL release investigation analytical confirmation samples collected from remaining soil in sidewalls and bottom of the UST excavation were analyzed by DEC approved laboratory methods for benzene, toluene, ethylbenzene, total xylenes (BTEX), and polyaromatic hydrocarbon (PAH) compounds and diesel (DRO) range petroleum hydrocarbons. Sample results for BTEX and PAH compounds were above laboratory reporting limits but below the most conservative migration to groundwater pathway soil cleanup levels. In two of three of the samples, DRO concentrations were between the most conservative migration to groundwater and the Table B2 ingestion pathway cleanup level applicable to this site. The highest level of contamination remaining was a DRO concentration of 2,200 milligrams per kilogram (mg/kg) detected in sample WJ-03 collected in the southwest corner of the excavation at a depth of 13 feet below ground surface (bgs). A DRO concentration of 67 mg/kg was detected in confirmation soil sample WJ-01 collected at six feet bgs in the east sidewall and a DRO concentration of 680 mg/kg was detected in sample WJ-02 collected from a depth of five feet bgs in the west wall of the excavation.

In fall of 2014, environmental consultant Carson Dorn Inc. (CDI) performed a second release investigation by advancing three soil borings at the historical limits of the 1999 UST closure by removal excavation. Installation of a monitoring well to sample groundwater was proposed but when no groundwater was encountered the effort was abandoned. CDI analyzed the samples for DRO, gasoline (GRO) and residual (RRO) range hydrocarbons and BTEX and PAH compounds. Concentrations of GRO, RRO, BTEX and PAH compounds in the samples were below method two migration to groundwater (M2 MTG) soil cleanup levels.

In the 2014 Release Investigation Letter/Report, CDI states that the BH-2 boring sample, collected at a depth of five feet bgs at the western edge of the UST excavation, had results for nine PAH compounds detected above laboratory reporting limits, however, the PAH compound concentrations were all below the most conservative migration to groundwater soil cleanup levels. The DRO concentration in the BH-2 sample was 14.8 mg/kg. The BH-1 boring sample, collected at a depth of 13 feet bgs in the former UST midpoint, and the BH-3 boring sample, advanced at a depth of five feet bgs at the northeast limit of the historical UST excavation, had analytical results for all COCs below laboratory reporting limits and the most conservative migration to groundwater soil cleanup levels. CDI concluded the quality of the data was acceptable and recommended a closure determination for the Site. To clarify this description of the information, Figure 1 from the 2014 Report is included in this decision document, as Attachment B.

Soil

The following table displays the highest level of the contaminant of concern detected in soil remaining at the site following the release investigations in 1999 and 2014, the depth below the surface the sample was taken, the Method Two Table B2 direct contact/ingestion soil cleanup levels listed in 18 AAC 75.341 Table B2 that are applicable to this site.

Table 2 highest level of petroleum analytes detected in remaining soil

Hydrocarbon range	Greatest level in soil mg/kg	Sample name and depth below the surface	Method Two Ingestion Cleanup Levels mg/kg
DRO	2,200	Sample WJ-03 at 13 feet	8250

mg/kg = milligrams per kilogram

Groundwater and Surface Water

Groundwater was not encountered in the release investigations but may be present in the deep subsurface at the site and in the area during periods of steady rainfall, but is likely hydrologically connected to and tidally influenced by marine waters. Because it is not of sufficient quantity and quality to provide potable drinking water, the receptor of greatest concern is the receiving waters of Gastineau Channel. However, the hydrologic connection between the intermittent groundwater and fluctuating surface water is limited and disperse, due to the low permeability of the geology at the site. No discrete point discharge for sampling for water quality criteria in the waterfront area is present, and no sheens have been observed or reported.

Cumulative Health Risk Calculation

Pursuant to 18 AAC 78.600 (d), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be calculated. Cumulative risk from petroleum contamination of environmental media at the site is addressed using the BTEX and PAH analyte concentration data. Based on a review of the environmental record, DEC has determined that residual contaminant concentrations do not pose a cumulative human health risk.

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 Attachment A to this letter.

DEC Decision

The corrective cleanup actions to date have served to excavate and adequately remove contaminated soil from the site. Based on the information available, DEC has determined there is no longer a risk to human health or the environment and no further assessment or cleanup action is required. This site will be designated as closed on the Contaminated Sites Database subject to the following standard conditions:

Standard Conditions

1. If disturbance is planned in any of the areas of the property described in this letter as having residual contamination, a work plan must be submitted for DEC approval prior to any such site activity begins. Any proposal to transport soil or groundwater off-site requires DEC approval in accordance with 18 AAC 78.600(h). 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.
2. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

This determination is in accordance with 18 AAC 78.276(f) 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.

January 5, 2015

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 me at 410 Willoughby Suite 311 in Juneau by telephone at 907-465-5210 or by email at bruce.wanstall@alaska.gov.

Sincerely,



Bruce Wanstall
Remedial Project Manager
Contaminated Sites Program

Attachment A: Table 1 – Exposure Pathway Evaluation

Attachment B: Site Figure – Figure 1. Former UST - West Juneau Lift Station

cc: Jolene Cox, Project Manager, Carson Dorn Inc., via email
Sally Schlichting, DEC Unit Manager, Contaminated Sites Program, via email
DEC SPAR Cost Recovery, via email

Attachment A: Exposure Pathway Evaluation

Table 3 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	Pathway Incomplete	Surface soil contamination has been removed and remediated off-site. There is no soil contamination remaining at the surface on the site above the direct contact cleanup levels.
Sub-Surface Soil Contact	De-minimis exposure	Soil contamination remains not accessible in the subsurface at levels below Method Two Table B2 migration to groundwater and human health ingestion levels and future excavation is not planned.
Inhalation – Outdoor Air	Pathway Incomplete	Contamination remains in the subsurface, but no volatile compounds are present at levels above outdoor inhalation screening levels
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Building present is seldom occupied and only for brief periods of time. Any remaining volatile petroleum levels are either below laboratory reporting limits and/or the inhalation screening levels.
Groundwater Ingestion	Pathway Incomplete	Groundwater was not encountered in release investigations and was not investigated. CBJ Public Works supplies potable water to the site and the general area.
Surface Water Ingestion	Pathway Incomplete	Surface water hydraulically connected to the site is not of sufficient quality or quantity for a potable water source.
Wild Foods Ingestion	Pathway Incomplete	The site and the urban area are not a wild foods harvest area and none of the contaminants have potential to bioaccumulate in flora or fauna.
Exposure to Ecological Receptors	Pathway Incomplete	Ecological receptors are not present at the site. PAH & BTEX indicator compounds concentrations in soil are below Method Two Table B1 MTG levels.

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.

Attachment B: Site Figure

Figure 1. Former UST – West Juneau Lift Station

