



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

**Department of Environmental
Conservation**

DIVISION OF SPILL PREVENTION & RESPONSE
Contaminated Sites Program

410 Willoughby Ave Suite 303
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File No: 1513.38.016

June 11, 2013

Steven Bowhay
Glacier Gardens Rainforest Adventures
7600 Glacier Highway
Juneau, Alaska 99801

RE: Notice of Cleanup Complete Determination
Glacier Gardens Rainforest Adventures AST Spill

Dear Steve,

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with Glacier Gardens Rainforest Adventures located in Juneau, Alaska. Based on the information provided to date, the DEC has determined that the contaminant levels 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 Glacier Gardens Rainforest Adventures AST Spill Contaminated Site administrative record, which is located in DEC Juneau office. 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.

Site Name and Location

Glacier Gardens Rainforest Adventures
7600 Glacier Highway
Juneau, Alaska 99801
USS 1568 Tract B Lot 3

Address of Contact Party

Steve and Cindy Bowhay
Glacier Gardens Rainforest Adventures LLC
7600 Glacier Highway
Juneau, AK

DEC Site Identifiers

Hazard ID 3709
File: 1513.38.016
Reckey: 2001110100401

Regulatory Authority for Determination

Title 18 Alaska Administrative Code 75

Background

A pedestrian walking past the property at 7600 Glacier Highway noticed a fuel odor and telephoned DEC on January 5, 2001 to report that an apparent oil spill was taking place. On January 9, 2001, DEC contacted you to request information concerning the reported pollution incident. You reported that you had discovered a cracked fuel service line to a heating oil tank located on the property. You stated that heating oil had escaped onto a gravel driveway and ran into a drainage ditch partially lined with geotextile. The oil had followed the surface water drainage down the hill where it left the property and ran into wetlands across Glacier Highway from the property. You contacted environmental consultant Carson Dorn Inc (CDI) to help control the spread of the oil and perform a cleanup investigation.

CDI reported to DEC that due to very wet conditions the oil spill covered an extensive surface area and sheen was observed on surface water both on the property, the neighbor's wetland, and the ditch along Glacier Highway. You and CDI constructed three lined reservoir ponds in the drainage to capture the water and oil mixture from the drainage. Sorbent pads were applied to the surface of the ponds to recover floating oil. CDI reported that the bulk of odor and visible contamination appeared to be present in the lower half of the driveway and that in the series of tile and drain pipe some were broken and may have left pockets of soil contamination.

Characterization and Cleanup Activities

During excavation CDI used a photoionization detector (PID) to separate clean soil from contaminated soil. An estimated volume of fifty cubic yards of contaminated soil was recovered from the driveway and from between stone tile lining the bottom of parts of the drainage. CDI submitted eight samples of remaining soil along the surface drainage for laboratory analysis for diesel range hydrocarbons (DRO). The levels of DRO in soil ranged from 9.9 milligrams per kilogram (mg/kg) in sample DD-10 to 2,300 mg/kg in sample DD-8, the latter is the highest level remaining in soil at the site. In late January 2001 DEC authorized transporting the contaminated soil to United Soil Recycling, formerly located in the Lemon Creek industrial area, where it was thermally remediated.

One area tested by CDI had results substantially above soil cleanup levels. Contaminated soil was excavated from this location but the samples were reportedly collected after the site was backfilled with clean material. This coupled with the extensive surface area that was exposed to oil by the release raised a possibility that contamination still exists at the site. As a result, in December 2001, the Preparedness and Emergency Response Program transferred the case to the Contaminated Sites Program.

In 2006 and in 2012 DEC requested by letter that you either perform additional investigation of the site or provide additional information on the site cleanup performed in 2001. In April 2012 you contacted DEC by telephone and explained that CDI had collected the soil samples at the limits of soil excavation. In addition, twelve years have passed since the site cleanup and any remaining contamination has likely attenuated by natural processes. The locations of breaks in the tile and piping in the storm water drainage where oil could have escaped into the soil have showed no effects from the spill and could only represent a de minimis extent of soil contamination. DEC concurs with your conclusions that additional site characterization to ensure that the protection of human health, safety and the environment from the historical effects of the oil spill is unnecessary.

Contaminants of Concern

Soil samples at the site have been analyzed for diesel (DRO) range petroleum hydrocarbons. Based on these analyses and knowledge of the site, the following Contaminant of Concern was identified:

- Diesel Range Hydrocarbons

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

Groundwater was not encountered and was not investigated in the cleanup process. As a result, groundwater cleanup levels are not applicable for this site.

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 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 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

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.

Steven Bowhay
Glacier Gardens Rainforest Adventure AST Spill

June 11, 2013

If you have questions about this closure decision, please contact the DEC project manager, Bruce Wanstall at (907) 465-5210.

Sincerely,

A handwritten signature in blue ink that reads "Bruce Wanstall". The signature is written in a cursive style and is positioned above a thin horizontal blue line.

Bruce Wanstall
Remedial Project Manager
State & Private Contaminated Sites Program

CC: Bill Janes, Section Manager, State & Private Contaminated Sites Program, via email

Attachment A: Exposure Pathway Evaluation

Table 1 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De-minimis exposure	There is no soil contamination remaining at the site in concentrations above the direct contact cleanup levels.
Sub-Surface Soil Contact	De-minimis exposure	Contamination remains in subsurface soil at depths greater than two feet below the surface at levels between Method Two Tables B1 and B2 migration to groundwater and ingestion cleanup levels for soil.
Inhalation – Outdoor Air	Pathway Incomplete	Contamination remains in the subsurface at levels below outdoor inhalation screening levels for soil.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Occupied buildings are not present within 30 linear feet of residual soil contamination and are not subject to preferential migration pathways.
Groundwater Ingestion	Pathway Incomplete	Groundwater was not encountered during the site investigation and, if present, is unlikely to be of sufficient quality or quantity to be considered a potable water source. The CBJ Public Works Department provides potable water to the site and the area.
Surface Water Ingestion	Pathway Incomplete	Surface water hydraulically connected to the site is not of sufficient quality or quantity to become a potable water source.
Wild Foods Ingestion	Pathway Incomplete	None of the contaminants have potential to bioaccumulate in flora or fauna.
Exposure to Ecological Receptors	Pathway Incomplete	DEC does not anticipate direct impacts or acute toxicity exposure to ecological receptors will occur due to the presence of residual soil contamination at the site.

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.