



THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

Department of Environmental  
Conservation

DIVISION OF SPILL PREVENTION AND RESPONSE  
Contaminated Sites Program

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File No: 1513.38.066

July 1, 2015

Via Electronic and Regular Mail

Roger Porto  
GMK Trust  
P.O. Box 032124  
Juneau, AK 99801

Re: Decision Document: Residence - Knickerbocker Spill  
Cleanup Complete Determination -- Institutional Controls

Dear Mr. Porto:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the referenced site. This decision letter memorializes the site history, cleanup actions, and specific conditions required to effectively manage remaining contamination. No further remedial action will be required as long as compliance with these conditions is maintained.

**Site Name and Location:**

Residence - Knickerbocker Spill  
10665 Glacier Highway  
Juneau, AK 99801

**Name and Mailing Address of Contact Party:**

Roger Porto  
GMK Trust  
P.O. Box 032124  
Juneau, AK 99801

**ADEC Site Identifiers:**

File No: 1513.38.066  
Hazard ID: 4061

**Regulatory Authority for Determination:**

18 AAC 75

**Site Description and Background**

The site is located at 10665 Glacier Highway in Juneau, Alaska. On or before April 30th 2004, approximately 100-200 gallons of diesel oil was spilled on the ground at the site. The oil traveled into ditches and muskeg bordering neighboring properties and was reported by an anonymous person to the ADEC Division of Spill Prevention and Response. The ADEC responders spoke with the homeowner at the time and were told that the pressure return line had become separated from the fuel tank allowing fuel to be discharged onto the ground. At that time, there was pooled oil near the heating oil tank and the muskeg in the yard was also saturated with oil. The ADEC responders supplied sorbents to aid in

cleaning up the oil and an environmental consultant was contacted by the homeowner, although no formal cleanup was accomplished nor documented. In 2005, the site was transferred to the Contaminated Sites program for long-term management. Numerous attempts were made by the ADEC to contact the homeowner and initiate characterization and cleanup activities with no success. In 2014, the ADEC became aware that the property was in the process of changing hands and/or probate court. In February of 2014, staff Duncan visited the site and spoke with the people living there and hand-delivered a notice of potential liability for the contamination. This notice of potential liability was also sent to GMK Trust in lieu of the site's legal status. In April of 2014 a Notice of Environmental Contamination was recorded at the Juneau Recorder's Office as a deed notice.

### Contaminants of Concern

The following petroleum contaminants of concern, those above approved cleanup levels, were identified during the course of the site investigations summarized in the Characterization and Cleanup Activities section of this decision letter.

- Diesel Range Organics (DRO)

### Cleanup Levels

The default soil cleanup levels that apply to the site are those established under Method Two, 18 AAC 75.340 and specifically listed at 18 AAC 75.341(d) Table B2. These are listed below.

Contaminant	Soil (mg/kg)	Pathway
DRO	230	Migration to Groundwater

Table 1 – Approved Soil Cleanup Levels

### Characterization and Cleanup Activities

In December of 2014, the ADEC received a work plan submitted by Carson Dorn Inc. (CDI) to conduct site characterization activities. The goal of these activities was to locate any heating oil contamination still on site using past documents and photos. CDI dug multiple test pits in January of 2014 and used a portable photoionization detector (PID) to field screen soils. None of the test pits exhibited evidence of petroleum contamination. In February of 2014, after the ground had thawed a bit, both the ADEC and CDI visited the site again and field screened soils in the suspected source area. At this time, there was evidence of petroleum contamination both on the east and west sides of the old heating oil tank still on site (Figure 1). Two analytical samples from the test pits having the highest PID readings were submitted to TestAmerica for the analysis of DRO and residual range organics (RRO) according to AK Methods 102 and 103. These samples tested below detection limits for RRO and positive for DRO having DRO soil concentrations of 190 (sample BH-1) and 290 (sample BH-2) mg/kg, just above the migration to groundwater cleanup level. A drinking water well on site was decommissioned in place with bentonite by CDI at the request of the ADEC because city water is available and no groundwater testing had occurred.

### Cumulative Risk Evaluation

Pursuant to 18 AAC 75.325(g), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be made that the risk from hazardous substances does not exceed a cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and does not exceed a cumulative noncarcinogenic risk standard at a hazard index of one across all exposure pathways.

Based on a review of the environmental record, ADEC has determined that residual contaminant concentrations do not pose a cumulative human health risk.

### Exposure Pathway Evaluation

Following investigation and cleanup at the site, exposure to the remaining contaminant 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 2.

Pathway	Result	Explanation
Surface Soil Contact	De-Minimis	DRO contamination may be present in surface soil (0 to 2 feet below ground surface) at concentrations above migration to groundwater cleanup levels but below inhalation and direct contact cleanup levels.
Sub-Surface Soil Contact	De-Minimis	DRO contamination may be present in the sub-surface soil at concentrations above migration to groundwater cleanup levels but below inhalation and direct contact cleanup levels.
Inhalation – Outdoor Air	De-Minimis	DRO contamination may be present in soil at concentrations below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	DRO contamination may be present in soil at concentrations below inhalation cleanup levels.
Groundwater Ingestion	Pathway Incomplete	The groundwater well was decommissioned and city water services are available at the site.
Surface Water Ingestion	Pathway Incomplete	Surface water is not used as a drinking water source in the vicinity of the site and no complete pathways to surface water exist.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.
Exposure to Ecological Receptors	Pathway Incomplete	Contamination is not likely to reach ecological receptors.

Table 2 – Exposure Pathway Evaluation

**Notes to Table 2:** “De-Minimis Exposure” means that in ADEC’s judgment receptors are unlikely to be affected by the minimal volume or concentration of remaining contamination. “Pathway Incomplete” means that in ADEC’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.

### **ADEC Decision**

Remaining concentrations of known petroleum contamination in soil (190 and 290 mg/kg DRO) slightly exceed migration to groundwater cleanup levels (230 mg/kg DRO). In addition, there may be residual contamination below and around the old heating oil tank and other areas on the property that are currently inaccessible. At which time the property is free of debris and the soil can be accessed, an environmental assessment should be conducted. Despite these conditions, the ADEC has determined there is no unacceptable risk to human health or the environment as long as the contamination is properly managed per the conditions stated below.

A Notice of Environmental Contamination (deed notice) was recorded on December 2<sup>nd</sup> 2014 in the State Recorder's Office as an institutional control (IC) that identified the nature and extent of contamination at the property at that time and the conditions that the owners and operators are subject to in accordance with the deed notice and this decision document. The deed notice was put in place prior to any site sampling activities and since then more information has become available as this closure letter documents. This deed notice is attached at the end of this letter for reference. These conditions and institutional controls are as follows:

1. Notice Required for any Change in Land Ownership or Land Use

Any future change in land use may impact the exposure assumptions cited in this document. If land use and/or ownership changes, these management conditions may not be protective and the ADEC may require additional remediation and revised conditions. Therefore the property owner shall report to ADEC every 2 years to document land use, or report as soon as the property owner becomes aware of any change in land ownership and/or use, if earlier. The report can be sent to the local ADEC office or electronically to DEC.ICUnit@alaska.gov.

2. Excavation Restriction

No excavation shall occur on the property without DEC approval; characterization will have to be completed before excavation activities begin. Soil contaminated with DRO may be located near the old heating oil tank, underneath derelict debris, or elsewhere on site. When the soil becomes accessible, the soil must be evaluated and contamination addressed in accordance with an ADEC approved work plan.

3. Groundwater Use Restriction

The domestic groundwater well located on site shall not be used for drinking water purposes due to possible contamination from the heating oil spill that occurred on this property.

4. No Offsite Transport of Contaminated Material

Any proposal to transport soil or groundwater off-site requires DEC approval in accordance with 18 AAC 7.325(i). 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.

5. Contamination of Surface Water Prohibited

Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

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6. Groundwater in the state of Alaska is protected for aquaculture use. In the event that an aquaculture facility uses groundwater from this site in the future, additional treatment may be required to meet aquatic life criteria under 18 AAC 70.

The ADEC Contaminated Sites Database will be updated to reflect the change in site status as detailed above, and will include a description of the contamination remaining at the site. Institutional controls will be removed in the future if documentation can be provided that shows cleanup levels have been met. Management conditions 4-6 remain in effect after ICs are removed.

This determination is in accordance with 18 AAC 75.380 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 99811-1800, 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, Juneau, Alaska 99811-1800, 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 feel free to contact me at (907) 465-5207.



Danielle Duncan  
Project Manager

cc: SPAR Cost Recovery Unit via email [dec.spar.cr@alaska.gov](mailto:dec.spar.cr@alaska.gov)  
Sally Schlichting, Environmental Program Manager, via email  
Jolene Cox, Environmental Professional, CDI, via email

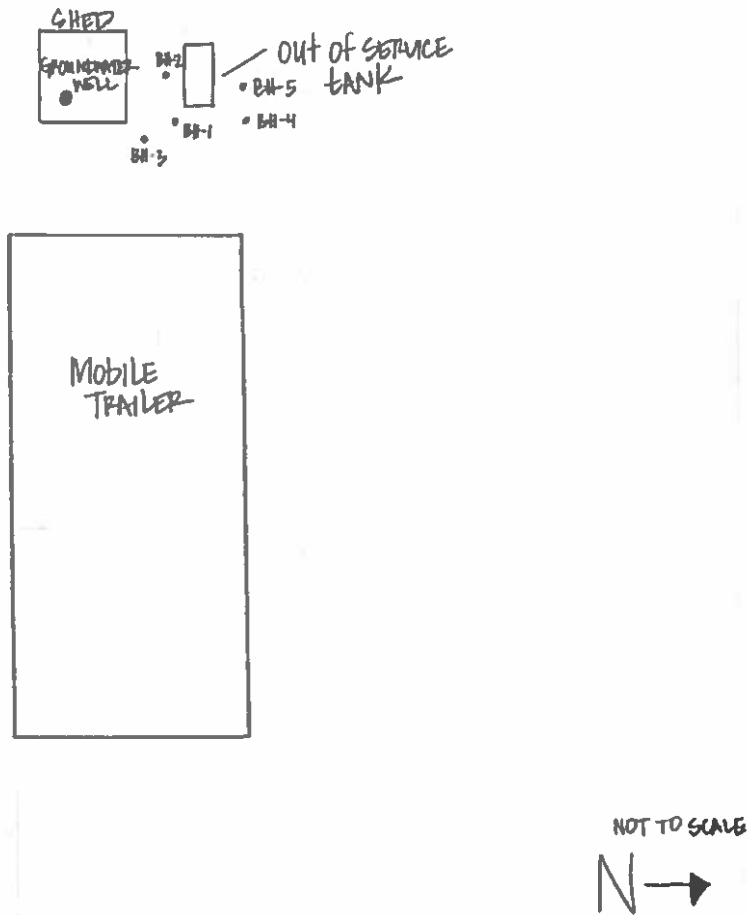


Figure 1: Site map showing the locations of test pits near the old heating oil tank from which analytical and field screening samples were taken. Figure copied from Re: Knickerbocker Spill – 10665 Glacier Highway – Soil Investigation dated March 11, 2015 and submitted to the ADEC by CDI.