

# STATE OF ALASKA

**SEAN PARNELL, GOVERNOR**

## DEPT. OF ENVIRONMENTAL CONSERVATION

### DIVISION OF SPILL PREVENTION AND RESPONSE CONTAMINATED SITES PROGRAM

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File: 1516.26.032

December 13, 2011

Mr. Ward Mace, Facility Manager  
Alaska Marine Highway System  
Dept. of Transportation & Public Facilities  
7559 North Tongass Highway  
Ketchikan, Alaska 99901

Re: Decision Document; ADOT&PF AMHS Ketchikan Terminal UST  
Corrective Action Complete Determination

Dear Ward,

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with ADOT&PF AMHS Ketchikan Terminal UST located at 3501 Tongass Street in Ketchikan. 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 ADOT&PF AMHS Ketchikan Terminal UST 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 Corrective Action Complete Determination.

#### **Introduction**

Site Name and Location:

ADOT&PF AMHS Ferry Terminal Ketchikan  
3501 Tongass Avenue  
Alaska Marine Highway System  
Ketchikan, Alaska 99901  
Lot 2 Block 17A Alaska Tideland Survey 1434

Name & Address of Contact Party:

Mr. Ward Mace  
Alaska Marine Highway System  
Dept. of Transportation & Public Facilities  
7559 North Tongass Highway  
Ketchikan, Alaska 99901

Database Record Key and File Number:

File: 1516.26.032  
Hazard ID: 25592

Regulatory authority for cleanup:

Chapter 18 Alaska Administrative Code 78

### Background

In mid-October 2010, petroleum soaked soil was encountered during the closure-by-removal site characterization of a 550-gallon heating oil underground storage tank (UST) and associated piping. The tank excavation was supervised by Gene Cheeseman Construction (GCC), certified tank worker #610, and the Release Investigation was conducted in accordance with 18 AAC 78.090 by Chris Bennet with Nortech Environmental Engineering (Nortech). The source of the release was determined to be a failure in the piping system; the volume of fuel released is not known.

### Corrective Action

During the tank removal by GCC, Nortech initiated a Release Investigation using DEC-approved field screening methods to segregate clean soil from apparent contaminated material. The result was an estimated volume of 24 cubic yards of petroleum contaminated soil stockpiled between liners on-site. GCC began Corrective Action by transferring the contaminated soil to super sacks and then loaded the sacks into shipping containers. The containers were then transported for storage at a secure off-site location in Ketchikan. In late-November 2011, GCC transferred the containers of contaminated soil to Waste Management for shipment to Columbia Ridge Landfill for remediation.

Soil samples at the site have been analyzed for benzene, ethylbenzene, toluene, total xylenes (BTEX) volatile organic compounds, polycyclic aromatic hydrocarbon (PAH) semi-volatile organic compounds and gasoline (GRO), diesel (DRO) and residual (RRO) range petroleum hydrocarbons. In accordance with 18 AAC 78.090(c)(2)(B), Nortech collected Release Investigation soil confirmation samples from the excavation in locations below and around the former tank and from the excavated contaminated soil. All four confirmation soil samples and the field duplicate collected from the excavation were below the laboratory reporting limit or below the Table B2 migration to groundwater soil cleanup levels for GRO, DRO and RRO hydrocarbons and Table B1 BTEX volatile compounds. The PAH hydrocarbon compound concentrations in the one confirmed sample analyzed were each below the Table B1 migration to groundwater soil cleanup levels. The maximum concentration of DRO in the excavated soil was 7,130 milligrams per kilogram (mg/kg). The excavated soil was not analyzed for PAH compounds. No groundwater was encountered in the excavation.

The maximum concentrations detected in soil confirmation samples collected in the excavation after Corrective Action removal of contaminated soil are listed in the following tables.

**Table 1**

Analyte	GRO	DRO	RRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes
Maximum mg/kg Concentration	<1.43	16.8	27.3	<0.0072	<0.032	<0.032	<0.032
MTG Cleanup Level	260	230	9700	0.025	6.5	6.9	63

**Table 2**

Polycyclic Aromatic Hydrocarbon	Mg/kg Concentration
1-Methylnaphthalene	0.00214
2-Methylnaphthalene	<5.33
Acenaphthene	<5.33
Acenaphthylene	0.00365

Anthracene	0.00388
Benzo(a)Anthracene	0.0109
Benzo[a]pyrene	0.012
Benzo[b]Fluoranthene	0.0158
Benzo[g,h,i]perylene	0.00831
Benzo[k]fluoranthene	0.0044
Chrysene	0.00824
Dibenzo[a,h]anthracene	0.00173
Fluoranthene	0.0207
Fluorene	<5.33
Indeno[1,2,3-c,d]pyrene	0.00628
Naphthalene	<5.33
Phenanthrene	0.00872
Pyrene	0.0227

### Contaminant of Concern

Based on these analyses and knowledge of the source area, the following Contaminant of Concern was identified:

- Diesel Range Organics (DRO)

### 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

### 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 Corrective Action Complete determination has been granted, DEC approval is required for off-site soil disposal in accordance with 18 AAC 78.600(h). 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. However, since this site has met the most conservative soil cleanup levels, this letter will serve as your approval for future off-site movement and disposal of soil associated with this release.

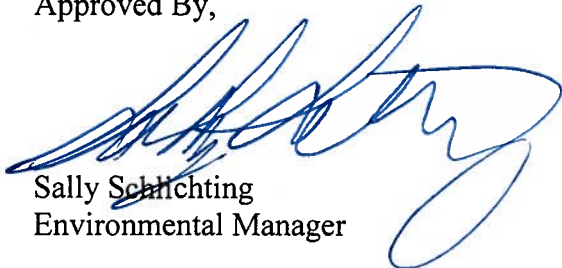
This determination is in accordance with 18 AAC 78.276(f) and does not preclude DEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

**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 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 Brinkerhoff, UST Program Manager, via email  
Jason Ginter, Nortech Environmental, via email

**Table 1 – Exposure Pathway Evaluation**

<b>Pathway</b>	<b>Result</b>	<b>Explanation</b>
Surface Soil Contact	Pathway Incomplete	All contaminated soil was transported off-site and remediated. There is no surface or subsurface contamination above MTG soil cleanup levels.
Sub-Surface Soil Contact	Pathway Controlled	No contamination remains in the subsurface above migration to groundwater soil cleanup levels.
Inhalation – Outdoor Air	Pathway Incomplete	No volatile BTEX compounds were detected in the four UST removal pit confirmation soil samples and remaining contamination is below migration to groundwater cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	A commercial building is located directly adjacent to the former UST location but no volatile compounds were detected above instrument detection in the confirmation soil samples.
Groundwater Ingestion	Pathway Incomplete	Groundwater was not encountered during the investigations. Any remaining contamination is below migration to groundwater soil cleanup levels.
Surface Water Ingestion	Pathway Incomplete	Surface water bodies nearby may be adequate to serve as drinking water sources but have no potential to be affected by the release at this site.
Wild Foods Ingestion	Pathway Incomplete	All contaminated soil was transported off-site and remediated. There is no surface or subsurface contamination above MTG soil cleanup levels.
Exposure to Ecological Receptors	Pathway Incomplete	Tongass Narrows is near the former UST location. All contaminated material above migration to groundwater soil cleanup levels was transported off-site and remediated.

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.