

# STATE OF ALASKA

**SARAH PALIN, GOVERNOR**

**DEPT. OF ENVIRONMENTAL CONSERVATION  
DIVISION OF SPILL PREVENTION AND RESPONSE  
CONTAMINATED SITES PROGRAM**

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File: # 330.38.005

May 5, 2008

Gary Schultz  
Alaska Department of Natural Resources  
3700 Airport Way  
Fairbanks, AK 99709-4699

Re: Arctic Wilderness Lodge  
Record of Decision

Dear Mr. Schultz:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) reviewed the environmental records associated with the Arctic Wilderness Lodge in Happy Valley, Alaska. This site had been contaminated by the release of a hazardous substance; however, based on the information provided to date, ADEC has determined that no further remedial action is required, and that the Arctic Wilderness Lodge site can be closed subject to the conditions outlined in this document. The hazardous substance contamination has been adequately addressed and does not pose an unacceptable risk to human health or the environment.

This decision is based on the administrative record for this site which is located in the offices of the ADEC in Anchorage, 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 ADEC determination.

## **Introduction**

### Site Name and Location

ADNR Arctic Wilderness Lodge  
Mile 334.4 Dalton Highway  
Happy Valley, AK

### Name and Mailing Address of Contact Party:

Gary Schultz  
Alaska Department of Natural Resources  
3700 Airport Way  
Fairbanks, AK 99709-4699

Database Record Key and CS file number:

ADEC Reckey # 1996360125401

CS file # 330.38.005

Regulatory authority under which the site is being cleaned up:

18 AAC 75 and 18 AAC 70

**Background**

The Arctic Wilderness Lodge is located at the former Happy Valley East construction camp that was used during construction of the Trans-Alaska Pipeline during the 1970's. The camp was used for housing workers and storing materials during pipeline construction. The Arctic Wilderness Lodge as a contaminated site was separated from the Happy Valley East site after investigations indicated fuel contamination was the result of more recent fuel storage activities associated with operation of the lodge.

**Site Characterization**

Initial site characterization activities were conducted from 1996 to 1998 as part of the greater Happy Valley East investigation undertaken by Alyeska Pipeline Services Company. Four above ground storage tanks (ASTs) were present at the site to provide fuel for the lodge. The area was assessed by collecting surface and subsurface soil samples and sampling surface water at several locations off of the pad and pore water at two monitoring wells located downgradient of the fuel storage area.

The subsurface soil sample collected from boring SB-10 contained DRO at 130 mg/kg. The surface soil sample collected next to the tank farm contained DRO at 89 mg/kg and GRO at 156 mg/kg. Pore water samples collected from monitoring well MW-4 in 1996 contained DRO at 16 mg/L and GRO at 15 mg/L. MW-4 was destroyed and replaced by MW-4A in 1997. Samples from MW-4A contained DRO at 3.77 mg/l, GRO at 0.15 mg/l, and benzene at 0.0044 mg/l during the last sampling event conducted in 2000.

Pore water samples collected from monitoring well MW-10 in 2000 contained DRO at 0.28 mg/l and benzene at 0.0018 mg/l. GRO was not detected. Surface water was most recently sampled in this area in 1997. Petroleum contaminants were not detected.

The lease for this portion of the pad and the Arctic Wilderness Lodge was assumed by Mr. Walt Audi in 2006. Mr. Audi removed the ASTs and the containment liner, and reported no indication of petroleum contamination at the location of the former tanks.

**Contaminants of Concern**

Diesel Range Organics

Benzene

## Cleanup Levels

The cleanup levels for petroleum hydrocarbon-contaminated soil on manmade gravel pads and roads in the Arctic Zone are established in 18 AAC 75.341 Method One, Table A2 and 18 AAC 75.341 Method Two Tables B1 and B2.

A number of factors are considered by ADEC when evaluating site specific cleanup levels in the Arctic Zone including:

- human health (ingestion/inhalation);
- ecological impacts (contamination impacting ecological species other than humans);
- water (ground and surface) quality;
- presence of free phase product; and
- any other factors that might cause a deleterious impact to the environment.

In the Arctic Zone, the migration to surface water pathway is evaluated as the primary migration pathway since the migration to groundwater pathway is not considered applicable due to the presence of continuous permafrost.

The 18 AAC 75.341 Method Two Table B2 regulations also limit soil hydrocarbon concentrations to a “maximum allowable concentration”. This concentration was established based on a specific soil type in which hydrocarbon product may become mobile as a separate phase and migrate in the soil. If a petroleum hydrocarbon exceeds a soil saturation limit, there may be an increased risk of migration off the gravel pad to surface water or tundra that has to be evaluated when making environmental decisions. Therefore, the soil type must be evaluated when establishing cleanup levels in the Arctic Zone to ensure the petroleum hydrocarbon does not exceed the residual saturation levels and pose a risk by migrating.

ADEC has evaluated the current site specific information regarding North Slope soil types and considers a coarse gravel soil type to be representative of those gravel pads rather than a fine sandy silt soil that was considered when establishing the Table B2 Arctic Zone levels. The diesel range saturation point in a coarse gravel material is 2200 mg/kg; the gasoline range saturation point is 950 mg/kg with residual range being 4800 mg/kg.

NOTE: Even though the migration to groundwater pathway is not complete in the Arctic Zone, the soil cleanup levels established for the migration to groundwater pathway in the Over 40 inch Zone are considered to be the most stringent cleanup levels, and protective of human health and the environment. If these cleanup levels are achieved at an Arctic Zone site, it will allow for unrestricted closure. In addition, the 18 AAC 75.341 Method One Table A2 cleanup levels may also be considered when making a final closure determination. Either Method One or Method Two migration to groundwater cleanup levels are considered protective to allow full site closure. The guidance document, “Policy for Establishing Cleanup Levels for Sites in the Arctic Zone in Accordance With 18 AAC 75, Article 3,” provides additional information for management of residual contamination in the Arctic Zone.

**Pathway Evaluation**

The pathways evaluated at this site include the human health exposure pathways of soil ingestion and dermal contact, inhalation of vapors, migration to groundwater and migration to surface water.

The ingestion and dermal contact pathways are considered incomplete as the remaining contamination is sub surface and not available to receptors. The inhalation pathway may be complete, but contaminant concentrations were not found above inhalation cleanup levels.

The migration to groundwater pathway is incomplete as pad porewater in the Arctic Zone is not considered a potential drinking water source. The migration to surface water pathway may be complete, but sampling of nearby surface water has not detected petroleum contaminants.

The exposure pathway analysis above was supported by the most recent ADEC Exposure Tracking Model (ETM) ranking. The ETM results showed all pathways to be one of the following: De Minimis Exposure, Exposure Controlled, or Pathway Incomplete.

**ADEC Decision**

There is contamination remaining above established cleanup levels at Arctic Wilderness Lodge but ADEC has determined there is no unacceptable risk to human health or the environment, and this site will be conditionally closed.

This decision is subject to the following conditions:

1. A Notice of Environmental Contamination will be recorded on the ADEC database to document that there is residual contamination remaining on site above the most stringent ADEC cleanup levels;
2. Any proposal to transport soil off site requires ADEC approval in accordance with 18 AAC 78.274(b)

This determination is in accordance with 18 AAC 75.380(d) (2) 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.

Site closure (without conditions) can be achieved when soil sampling confirms that all soil meets the most stringent ADEC cleanup levels.

**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 ADEC Project Manager William O'Connell at (907) 269-3057.

Sincerely,

A handwritten signature in black ink, reading "Linda Nuechterlein". The signature is written in a cursive, flowing style.

Linda Nuechterlein  
Environmental Manager

cc. Frank Maxwell, ADNR  
Walt Audi