

STATE OF ALASKA

SARAH PALIN, GOVERNOR

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

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File: #310.38.021

December 17, 2007

Alan Snow
Eskimo's Inc
PO Box 536
Barrow AK, 99723

Re: Barrow Gas Station Tank Farm
Record of Decision

Dear Mr. Snow:

The Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed review of the environmental records associated with the Barrow Gas Station Tank Farm. Based on this information, ADEC has determined that the site shall be conditionally closed. The soil contamination on site has been adequately addressed and does not pose a risk to human health or the environment.

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

Barrow Gas Station Tank Farm
3417 Stevenson St.
Barrow Alaska, 99723

Name and Mailing Address of Contact Party:

Alan Snow
Eskimo's Inc
PO Box 536
Barrow AK, 99723

Database Record Key and CS file number:

ADEC Reckey # 1999310126701
LUST file # 310.38.021

Regulatory authority under which the site is being cleaned up:

18 AAC 75 and 18 AAC 70

Background

Three above ground fuel storage tanks (ASTs) were removed from the site in 1999 including one 20,000-gallon diesel tank, one 20,000-gallon gasoline tank, and one 15,000-gallon gasoline tank.

Cleanup Actions

The three tanks were on a liner when they were removed. Following removal of the tanks, 12 inches of gravel above the liner, the liner itself, and two feet of underlying soil were removed to permafrost. Excavated soil was transported to the PetroStar Refinery for treatment. Confirmation soil samples indicated diesel range organics and benzene remained in soil up to 387 mg/kg and 1.58 mg/kg, respectively. The area was backfilled, a new liner was installed, and the new ASTs were placed in the same location as the former ASTs,

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 human health exposure pathways evaluated at this site include ingestion, inhalation, and migration to groundwater.

The ingestion and inhalation pathways may be complete, but contaminant concentrations do not exceed ingestion or inhalation cleanup levels and do not pose an unacceptable risk. The migration to groundwater pathway is incomplete as groundwater is not used as a drinking water source at the site.

In the Arctic Zone, the migration to surface water pathway is evaluated both for possible risk to human health (ie drinking water source) and ecological receptors. There is no surface water adjacent to this pad, and no evidence of contaminant migration off the pad to surface water. Therefore, the surface water pathway is not considered complete.

ADEC Decision

There is contamination remaining above established cleanup levels at the Barrow Gas Station Tank Farm 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.

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 William O'Connell at (907) 269-3057.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jim Frechione".

Jim Frechione
Environmental Manager