STATE OF ALASKA

SARAH PALIN, GOVERNOR

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

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File No: 420.38.004

May 19, 2008

Brian Dellabona
North Slope Borough
3000 C St # N201
Anchorage, AK 99503

Re: NSB Point Hope Tikigaq School Diesel Tank
Record of Decision

Dear Mr. Dellabona:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed review of the environmental records associated with Tikigaq School Diesel Tank. 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 Tikigaq School Diesel Tank 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:
NSB Point Hope Tikigaq School Diesel Tank
Point Hope, AK 99766

Name and Mailing Address of Contact Party:
Brian Dellabona
North Slope Borough
3000 C St # N201
Anchorage, AK 9950

Database Record Key and File Number:
ADEC Reckey No. 199631019701
File #420.38.004

Regulatory authority under which the site is being cleaned up:
18 AAC 75 and 18 AAC 70

Background
Diesel contaminated soil was discovered during an above ground storage tank (AST) replacement. The release appears to be the result of overfilling of the AST.

Cleanup Actions
Excavation, stockpiling and sampling activities were performed in 1996. A total of 130 cubic yards of contaminated soil was excavated and stockpiled along the southern boundary of the village at the end of Milviksaagiaq Drive. Six confirmation soil samples were taken from the excavation pit. Diesel range organics (DRO) were detected up to 820 mg/kg and benzene was detected in one sample at 0.019 mg/kg.

A site assessment conducted in 2005 reported the 130 cubic yard contaminated soil stockpile stored at the end of Milviksaagiaq road was remediated and used for landfill cover.

Contaminant of Concern

- Diesel Range Organics (DRO)

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 (HH) exposure pathways that were evaluated for this decision document included: inhalation of vapors, ingestion of soil; dermal contact with soil; and ingestion of surface and groundwater. The inhalation and ingestion pathways may be complete but analytical data show that contaminant concentrations do not exceed 18 AAC 75.341 Table B2, Method Two risk based cleanup levels for either ingestion or inhalation. Therefore, the HH exposure risk is considered acceptable. The dermal contact may be complete, but contaminated soil is located below the surface and is not available to receptors.

In the Arctic Zone, the migration to surface water pathway is evaluated as a possible risk to human health (drinking water source) and/or for compliance with Alaska Water Quality standards (18 AAC 70). Surface water bodies were not identified in the area of the trench, so this pathway is considered incomplete. The migration to groundwater pathway is incomplete as supra-permafrost porewater in the Arctic Zone is not considered a potential drinking water source.

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 either De Minimus Exposure or Pathway Incomplete.

ADEC Decision

There is contamination remaining above established cleanup levels at the Tikigaq School Diesel Tank, 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 may be residual contamination remaining on site above the most stringent ADEC cleanup levels;

2. Any proposal to transport soil or groundwater off site requires ADEC approval in accordance with 18 AAC 75.370 (b)

This determination is in accordance with 18 AAC 75.38(d) 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 the ADEC Project Manager, William O'Connell at (907) 269-8685.

Sincerely,

Linda Nuechterlein

Linda Nuechterlein
Environmental Manager