STATE OF ALASKA

SEAN PARNELL, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM

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Return Receipt Requested
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June 27, 2012

Mr. Gary Baldwin
Superintendent
Lower Kuskokwim School District (LKSD)
P.O. Box 305
Bethel, AK 99559

Re: Decision Document; Quinhagak Tank Farm-LKSD
Cleanup Complete Determination

Dear Mr. Baldwin:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Quinhagak Tank Farm-LKSD located at the Quinhagak School in Quinhagak, Alaska. Based on the information provided to date, it has been 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 Quinhagak Tank Farm-LKSD project file, 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 Cleanup Complete determination.

**Introduction**

Site Name and Location
Quinhagak Tank Farm-LKSD
Quinhagak, Alaska

Name and Mailing Address of Contact Party:
Mr. Gary Baldwin
Superintendent
Lower Kuskokwim School District
P.O. Box 305
Bethel, AK 99559

ADEC Site Identifiers:
Hazard ID #1561
CS file # 2441.38.001

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

**Background**
The Quinhagak School is located in the eastern portion of the Native Village of Quinhagak. A tank farm consisting of two 10,000 gallon tanks is located approximately 150 feet to the east of the school and supplies the facility with arctic heating oil. A 14,500 gallon heating oil spill occurred at the tank farm (site) in August 1992 of which approximately 10,800 gallons were reportedly recovered. In support of a planned school expansion project, an environmental investigation was conducted at the site in 2011 and 2012 to evaluate the remaining impacts of the 1992 spill.

**Contaminants of Concern**
During the various investigations at this site, soil and surface water samples were analyzed for one or more of the following: diesel range organics (DRO), residual range organics (RRO), gasoline range organics (GRO), and benzene, toluene, ethylbenzene, and xylenes (BTEX), and polynuclear aromatic hydrocarbons (PAHs). Based on the results of these investigations, the following contaminant of concern was identified:

- DRO

**Cleanup Levels**
The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B2, Under 40 Inch Zone, Migration to Groundwater (MTG).

| Contaminant | Site Cleanup Level (mg/kg) |
|---|---|
| • DRO | 250 |

**Site Characterization and Cleanup**
Site characterization activities conducted in 2011 and 2012 included the advancement of 48 shallow boreholes using hand tools. A direct push drill rig was used for 16 deeper boreholes. Soil samples collected from boreholes were screened in the field, and 19 samples were submitted for laboratory analysis from the locations with the highest field screening results. Diesel range organics were detected in two samples at concentrations above the cleanup level at 290 mg/kg and 628 mg/kg. A review of the chromatograms indicates biogenic sources likely contributed to elevated DRO results. One surface water sample was collected from a water body located in the area reportedly impacted by the spill. Contaminants were not detected.

**Pathway Evaluation**
Following investigation and cleanup at the site, exposure to the remaining contaminants 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, Exposure Controlled, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 1.

**Table 1 – Exposure Pathway Evaluation**

| Pathway | Result | Explanation |
|---|---|---|
| Direct Contact with Surface Soil | De Minimis Exposure | The contaminated surface soil is below direct contact cleanup levels and de minimis in volume. Therefore risk via this pathway is considered insignificant. |
| Direct Contact with Sub-Surface Soil | De Minimis Exposure | Contamination in the subsurface is below ingestion/direct contact cleanup levels. Therefore risk via this pathway is considered insignificant. |
| Inhalation-Outdoor Air | De Minimis Exposure | The remaining contamination is below inhalation cleanup levels. Therefore risk via this pathway is considered insignificant. |
| Inhalation-Indoor Air | Pathway Incomplete | The proposed school expansion will be constructed on pilings; therefore the indoor air pathway will not be complete. |
| Groundwater Ingestion | Pathway Incomplete | Groundwater is not utilized as a drinking water source in this area. |
| Surface Water Ingestion | Pathway Incomplete | Surface water is not utilized as a drinking water source in this area |
| Wild Foods Ingestion | Pathway Incomplete | Wild foods are not collected in this area. |
| Exposure to Ecological Receptors | De Minimis Exposure | Contamination is surface soil is de minimis in volume, and present at relatively low concentrations. Therefore risk via this pathway is considered insignificant. |

Notes to Table 1: "De minimis exposure" means that in ADEC's judgment receptors are unlikely to be affected by the minimal volume 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**

Based on the information available, ADEC 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 Cleanup Complete determination has been granted, ADEC approval is required for off-site soil disposal in accordance with 18 AAC 75.325(i). 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.

This determination is in accordance with 18 AAC 75.380(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.

**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.

Approved By,

Linda Nuechterlein
Environmental Manager

Recommended By,

William O'Connell
Environmental Program Specialist

CC: Blair Alden, Assistant Superintendent, LKSD