

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

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September 8, 2006

Gambell IRA Council  
P.O. Box 99  
Gambell, Alaska 99742

Re: Gambell Village Tank Farm Pipeline

To Whom It May Concern:

The Alaska Department of Environmental Conservation, Contaminated Sites Program, (ADEC) reviewed the Shannon & Wilson *Final Report Soil and Groundwater Contamination Assessment Tank Farm and Pipeline Area; Gambell, Alaska* dated December 1993. Since that report was prepared, regulatory changes associated with hazardous substance contamination have been adopted that allow ADEC to evaluate the risk posed by hazardous substances and make decisions based on site specific information.

In the case of the Gambell Tank Farm, ADEC has determined that soil contamination remains at the site above the most stringent 18 AAC 75.341 soil cleanup levels but the nature and extent of the contamination does not pose an unacceptable risk to human health or the environment. This determination is subject to site specific conditions and, if complied with, will require no further remedial action at this time.

Please note the following information that was considered in making the determination on the environmental status of the site.

**Site Background**

The city of Gambell uses a series of pipelines between a marine header and holding tank system to transport and store petroleum products. The Alaska Village Electric Cooperative (AVEC) owned and/or operated the tank farms at the village store and the school. The tanks were reportedly upgraded in 2004 using the original tank farm sites.

In 1992, benzene contamination was detected in the water well at the Gambell Elementary School. The well was 18 feet deep and possibly impacted by the fuel pipelines that crossed the peninsula from the northern marine terminal south to the fuel tanks for the school and for the village. Both gasoline and diesel products were transported through these lines.

There were fuel stains observed at most of the joints in the pipeline and extensive soil contamination was documented in two locations during the installation of a new pipeline in 1992. The original line was abandoned in place in 1992 following installation of the new one.

In 1993, a site assessment report (by Shannon & Wilson) was performed that drilled fifteen soil borings and installed one groundwater monitoring well. There was also soil and water data that was referenced from a Village Safe Water Project during the same time. It was estimated that the contamination impacted about 4 acres of soil, with the highest concentrations of diesel range organics (DRO) detected north of the tank farm. The 4 acre area is between residential areas and the tank farms, but there are no occupied structures on this site.

The water well at the elementary school well was sampled and benzene contamination was detected up to 85.6 micrograms per liter (ug/L) in 1992. The ADEC cleanup level for benzene in groundwater is 5 ug/L. Final results from sampling in 1993 showed benzene still present in the water, but at concentrations below ADEC cleanup levels. The school well was abandoned in 1995 when the new school building was constructed and the school currently uses the municipal water system.

In 1997, a diesel fuel spill was reported during a transfer of fuel from a Delta Western barge to the village fuel tank farm. The administrative records indicate that a possible 10,000 gallons of fuel product might have been released but ADEC response staff were unable to locate it. There appeared to be some confusion about the actual quantity of fuel spilled versus what was actually stored in the tanks.

In 2004, the new buried pipeline and the abandoned above ground pipeline were removed by AVEC in an effort to upgrade the pipeline and tank farm system. There was no additional evidence of contamination reported at that time.

### **Pathways Evaluated**

Pathways evaluated at the site include both exposure and migration pathways. The exposure pathways include: ingestion of soil and water and inhalation of outdoor air. The migration to ground and /or surface water was also considered.

The soil contamination levels remaining on site do not exceed the 18 AAC 75.341 cleanup levels for ingestion/inhalation. Therefore, the soil does not pose an unacceptable risk to humans at the site. Groundwater in this area was impacted by contamination in the past, but the source (fuel pipelines) has been removed and the benzene contamination has degraded over time to now meet the drinking water standards. The ingestion of groundwater does not pose an unacceptable risk to the residents.

The groundwater in Gambell ranges from 3 feet below ground surface (bgs) to 15 feet bgs. Varied layers of permafrost and areas of sea water intrusion make for a complex groundwater system. The community of Gambell acquires its water upgradient from the site and there are no unacceptable risks to ground or surface water.

### **Cleanup Levels**

The soil cleanup levels established for this site are the 18 AAC 75.341 Tables B1 and B2 Method Two, “under 40 inch zone” migration to groundwater levels.

The groundwater cleanup levels established for this site are the 18 AAC 75.345 Table C levels.

**ADEC Decision**

Based on the information provided to date, ADEC has determined that any fuel contamination remaining along the former fuel pipeline does not pose an unacceptable risk to human health or the environment. There are data gaps and/or uncertainties associated with what was spilled and what remains in the environment, however, the information ADEC evaluated to make a decision regarding the Gambell Tank Farm site indicates there are no unacceptable risks to human health or the environment. Please note that this determination is subject to the following site specific conditions and/or controls:

1. An Institutional Control will be added to the ADEC Contaminated Sites Database identifying the nature and extent of contamination remaining on site.
2. In accordance with 18 AAC 75.325(i), ADEC approval must be obtained prior to removal and/or disposal of soil or groundwater from this site to an off-site location.
3. ADEC shall be notified prior to installation of groundwater wells at this site.

In accordance with 18 AAC 75.380(d)(2) ADEC may require additional site assessment, monitoring, remediation, and/or other necessary actions at this facility should new information become available that indicates contamination at this site may pose a threat to human health or the environment.

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, PO Box 111800, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99811-1800, within 15 days of the decision.

Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, PO Box 111800, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99811-1800, within 30 days of the decision. If a hearing is not requested within 30 days, the right to appeal is waived.

If you have any questions, please contact Shannon Oelkers at 907-451-2104 or via e-mail at [Shannon\\_Oelkers@dec.state.ak.us](mailto:Shannon_Oelkers@dec.state.ak.us).

Sincerely,

Shannon Oelkers  
Environmental Program Specialist

Jim Frechione  
Environmental Program Manager

Cc Steve Petz, Principal Gamble School, P.O. Box 169 Gambell, Alaska 99742