STATE OF ALASKA

SEAN PARNELL, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM

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File: #425.38.003
Certified Return Receipt
Article No: 7009 2820 0001 7169 6767

March 1, 2011

Mr. Brian DellaBona
North Slope Borough
3000 C Street, Suite 104
Anchorage, AK 99503

Re: Decision Document; NSB Point Lay Former Tank Farm/Point Lay Power Plant; Cleanup Complete with Institutional Controls Determination

Dear Mr. DellaBona:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the NSB Point Lay Former Tank Farm/Point Lay Power Plant located in Point Lay, 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 no further remedial action will be required as long as the site is in compliance with established institutional controls.

This decision is based on the administrative record 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 with ICs determination.

Introduction

Site Name and Location
NSB Point Lay Former Tank Farm/Point Lay Power Plant
Point Lay, Alaska

Name and Mailing Address of Contact Party:
Mr. Brian DellaBona
North Slope Borough
3000 C Street, Suite 104
Anchorage, AK 99503

ADEC Site Identifiers:
Hazard ID #1624
CS file # 425.38.003

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

Background
A 20,000-gallon diesel fuel spill in 1991 impacted tundra and surface water adjacent to the former power plant tank farm.

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

- 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);
- groundwater and surface water 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 because the migration to groundwater pathway is not considered applicable due to the presence of continuous permafrost. Impacted surface water can adversely affect both human and ecological receptors, depending on the location of the contaminant source, its proximity to surface waters, and water usage in the impacted area. Therefore 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).

In addition, the migration to surface water is evaluated as a possible exposure pathway for ecological receptors because of the tundra wetland ecosystem that exists throughout the Arctic region. Potential future use of the property must also be taken into account when determining closure status. Differentiating between a "Cleanup Complete" and a "Cleanup Complete with Institutional Controls" determination will be based on site specific conditions and exposure pathways as determined by ADEC.

Site Characterization and Cleanup

Following spill cleanup activities, approximately 2,200 cubic yards of impacted gravel and tundra material were excavated, treated using a solvent extraction process, and disposed of at the Pt. Lay Landfill with approval from the ADEC Solid Waste program. Following excavation, confirmation samples reportedly contained DRO up to 22,000 mg/kg. Additional excavation was not feasible due to infrastructure and the concern that additional excavation into the tundra would disrupt the thermal stability at the site.

Additional site evaluation did not occur again until 2008, when two surface water samples were collected from the spill area and a shovel sheen test was conducted to determine if contamination had impacted surface water at the site. DRO and RRO were detected in surface water, but BTEX was not detected. No sheen was produced when sediments were disturbed with a shovel.

The tanks at this location were demolished after the spill. Fuel is provided to the power plant from an upgraded tank farm located west of the site.

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	Hydrocarbon contaminated soil may remain near the surface. Due to the age of the spill and the excavation of contaminated material, exposure via this pathway is considered de minimis.

Direct Contact with Sub-Surface Soil	De Minimis Exposure	The remaining hydrocarbon contamination is located in the subsurface in native tundra; and in gravel pad areas where future excavation is unlikely due to infrastructure.
Inhalation-Outdoor Air	De Minimis Exposure	The remaining subsurface hydrocarbon contamination is frozen throughout much of the year, making exposure via this pathway de minimis in nature.
Inhalation-Indoor Air	Pathway Incomplete	Buildings at the site are infrequently occupied. Due to the age of the spill and the climate, exposure via this pathway is not significant.
Groundwater Ingestion	Pathway Incomplete	Groundwater is not utilized as a drinking water source in the Arctic zone.
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	Surface water samples did not contain contaminants above Water Quality Standards; however, the pathway is complete because of detections. Due to the age of the spill and recent observations at the site, exposure to ecological receptors is not significant; and exposure is therefore de minimis.

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

The ADEC has determined there is no unacceptable risk to human health or the environment, and this site will be granted a Cleanup Complete- ICs determination subject to the following.

1. Any future change in land use may impact the exposure assumptions cited in this document. If land use and/or ownership changes, current ICs may not be protective and ADEC may require additional remediation and/or ICs. Therefore the North Slope Borough (NSB) shall report to ADEC once every five years, or as soon as NSB becomes aware of any change in land ownership or use, if earlier. **The report can be sent to the ADEC project manager or electronically to DEC.ICUnit@alaska.gov.**

2. When contaminated material becomes accessible, it must be evaluated in accordance with an ADEC-approved Work Plan.

3. Any proposal to transport soil or groundwater off site requires ADEC approval in accordance with 18 AAC 75.325 (i). A "site" [as defined by 18 AAC 75.990 (115)] means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership.

4. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

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.

Please sign and return *Attachment A* to ADEC <u>within 30 days of receipt of this letter</u>. If you have questions about this closure decision, please contact the ADEC project manager, Bill O'Connell at (907) 269-3057.

Approved By,

Linda Nuechterlein
Environmental Manager

Recommended By,

William O'Connell
Environmental Program Specialist

Attachment A: Cleanup Complete- ICs Agreement Signature Page
Attachment B: Site Figure

Attachment A: Cleanup Complete-ICs Agreement and Signature Page*

The North Slope Borough agrees to the terms of this Cleanup Complete with Institutional Controls determination as stated in this Decision Document dated **March 1, 2011** for NSB Point Lay Former Tank Farm/Point Lay Power Plant. Failure to comply with the terms of this agreement may result in ADEC reopening this site and requiring further remedial action in accordance with 18 AAC 75.380(d).

_____
Signature of Authorized Representative, Title

_____
Printed Name of Authorized Representative, Title

For Internal Use Only

Hazard ID #1624
CS file # 425.38.003

***Attention ADEC Administration Staff:** Please follow the procedure below after Attachment A is signed/returned to ADEC.

1. Log-in and Date Stamp *Attachment A*
2. Scan *and* Save to the appropriate electronic folder on the network Drive
3. File the hard copy in the appropriate project/site file Correspondence Folder (blue in Anchorage).
4. Provide the Correspondence folder (with the filed *Attachment A* hard copy) to the ADEC Project Manager so that the PM can update the CS database.

Attachment B: Site Figure