

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF SPILL PREVENTION AND RESPONSE CONTAMINATED SITES PROGRAM

SEAN PARNELL, GOVERNOR

555 Cordova Street
Anchorage, AK 99501
PHONE: (907) 269-3057
FAX: (907) 269-7649
www.dec.state.ak.us

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February 7, 2011

Chuck Stilwell
BP Exploration (Alaska) Inc
P.O. Box 196193
Anchorage, AK 99519-6193

Re: Decision Document; BPX Kuparuk State #1
Cleanup Complete Determination

Dear Mr. Stilwell:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with BPX Kuparuk State #1 located in Prudhoe Bay, 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 administrative record for BPX Kuparuk State #1, 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

BPX Kuparuk State #1
Prudhoe Bay, Alaska

Name and Mailing Address of Contact Party:

Chuck Stilwell
BP Exploration (Alaska) Inc
P.O. Box 196193
Anchorage, AK 99519-6193

ADEC Site Identifiers:

Hazard ID #4055

CS file # 300.38.237

Regulatory authority under which the site is being cleaned up:

18 AAC 75

Background

One well was drilled at this exploration site in 1968 then plugged and abandoned in 1980. Contamination at the site is the result of releases and disposal practices associated with oil exploration and production activities.

Contaminants of Concern

During the various investigations at this site, soil 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). Based on the results of these investigations, the following contaminant of concern was identified:

- 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

Site assessment activities were conducted at this site in 2001, 2002, and 2003 to investigate and delineate the nature and extent of contamination at the Kuparuk State #1 former gravel pad. DRO was detected up to 16,200 mg/kg, with the majority of hydrocarbon contamination focused around the wellhead.

Corrective action at the site was conducted in 2010 and included backfilling the reserve pit and removal of the entire gravel pad. Gravel was segregated during removal for treatment or reuse based on the results of previous investigations. Where data was inadequate to characterize gravel prior to removal, the gravel was excavated, placed into 200 cubic yard (cy) stockpiles, and then sampled to determine contaminant concentrations. Approximately 5,700 cy of clean gravel and 1,400 cy of gravel with DRO less than 2,000 mg/kg were excavated and used to backfill the reserve pit. Approximately 5,300 cy of hydrocarbon impacted gravel was transported to East Dock Landfarm for treatment, and 800 cy of gravel was used to backfill the reserve pit at Milne Point D Pad.

Following removal of the gravel pad, confirmation samples were collected from the bottom and sidewalls of the excavated area. DRO was detected at a maximum concentration of 1,090 mg/kg. The excavated area was backfilled and topped with clean overburden and will be re-vegetated in accordance with a site specific rehabilitation plan

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	Pathway Incomplete	Hydrocarbon contaminated soil has been excavated from the site and backfilled with clean fill.

Direct Contact with Sub-Surface Soil	De Minimis Exposure	The remaining hydrocarbon contamination is in the subsurface; below direct contact cleanup levels; and the area will be capped with vegetation.
Inhalation-Outdoor Air	De Minimis Exposure	The remaining hydrocarbon contamination is in the subsurface, is below inhalation cleanup levels, and the site is not frequented by receptors
Inhalation-Indoor Air	Pathway Incomplete	Buildings are not located at the site; there are no plans for development in this area and DRO is non-volatile.
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	The remaining hydrocarbon contamination is in the subsurface and covered with clean fill, which will mitigate exposure to ecological receptors

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 cleanup actions to date have served to excavate and adequately remove contaminated soil from the site. 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.

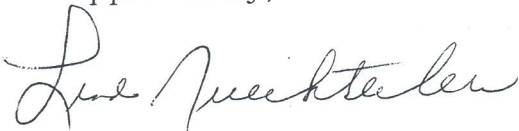
This determination is in accordance with 18 AAC 75.380(d) and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

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