

# STATE OF ALASKA

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

SEAN PARNELL, GOVERNOR

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File: # 300.38.218  
Certified Return Receipt  
Article No:70081830000263494487

May 21, 2010

Chuck Stilwell  
BP Exploration (Alaska) Inc  
P.O. Box 196612  
900 East Benson Blvd  
Anchorage, AK 99519-6612

Re: Decision Document; BPX Building U-21  
Cleanup Complete Determination-Institutional Controls

Dear Mr. Stilwell:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with BPX Building U-21, 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 no further remedial action will be required as long as the site is in compliance with established institutional controls (ICs).

This decision is based on the administrative record for BPX Building U-21, 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

BPX Building U-21  
North of MCC  
Prudhoe Bay, Alaska

#### Name and Mailing Address of Contact Party:

Chuck Stilwell  
BP Exploration (Alaska) Inc  
P.O. Box 196612  
900 East Benson Blvd  
Anchorage, AK 99519-6612

ADEC Site Identifiers:

Hazard ID #3258

CS file # 300.38.218

Regulatory authority under which the site is being cleaned up:

18 AAC 75

**Background**

A 1,100-gallon diesel aboveground storage tank was formerly located near the northeastern corner of Building U-21 and reportedly provided fuel to an oil-fired heater inside the building. Leaks and spills at this tank are the suspected sources of hydrocarbon contamination found in gravel and pore water at the site.

**Contaminants of Concern**

During the investigation at this site, soil, pore water, and surface water samples were analyzed for diesel range organics (DRO), residual range organics (RRO), gasoline range organics, and benzene, ethylbenzene, toluene, and xylenes (BTEX). In addition surface water samples were also analyzed for polynuclear aromatic hydrocarbons (PAHs). Based on the results of these investigations, the following contaminant of concern was identified:

- GRO
- 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 characterization activities began at the site in 1998 with the installation and sampling of three pore water monitoring wells, the collection of surface and subsurface soil samples; and the collection of surface water samples from the adjacent tundra area. Soil samples collected near the corner of the building at two feet and four feet below ground surface (bgs) contained DRO up to 5,180 mg/kg. Pore water samples collected from the newly installed monitoring wells contained DRO up to 6.8 mg/l; and surface water samples contained DRO up to 0.29 mg/l, suggesting hydrocarbon contamination may have migrated from the pad into the surrounding tundra.

From 1998 to 2005, pore water and surface water monitoring continued, and additional soil borings were installed and sampled in an effort to delineate the extent of hydrocarbon contamination. In 2005, approximately 130 cubic yards of contaminated soil were excavated and treated at the East Dock Landfarm. A confirmation sample collected from the base of the excavation contained DRO at 176 mg/kg; however contaminated soil was left in place adjacent to and inside of the U-21 Building. Monitoring well MW01 was destroyed during the excavation, and surface water areas sampled prior to the excavation work were filled in following the excavation.

### 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
Surface Soil Contact	Pathway Incomplete	Contaminated soil is not located at the surface.
Sub-Surface Soil Contact	De Minimis exposure	Contamination remains in the subsurface, but is below direct contact cleanup levels.
Inhalation – Outdoor Air	De Minimis exposure	Contamination remains in the subsurface, but is below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De Minimis exposure	Contamination remains in the subsurface below inhalation cleanup levels. Clean soil at the surface will mitigate the exposure potential via this pathway
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	Following removal of the source area, contaminants remaining in the tundra adjacent the pad are de minimis in nature and extent
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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**

Contamination remains on site above established clean up levels, however ADEC has determined there is no unacceptable risk to human health or the environment. Therefore this site will be issued 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, BP Exploration (Alaska) shall report to ADEC every 5 years to document land use, or report as soon as BP Exploration (Alaska) becomes aware of any change in land use or ownership if earlier. **The report can be sent to the local ADEC office or electronically to DEC.ICUnit@alaska.gov.**
2. Contaminated soil remaining in the northeastern corner of the U-21 Building, must be removed when it becomes accessible.
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. (See attached site figure.)

Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited. The ADEC Contaminated Sites Database will be updated to reflect the change in site status as detailed above, and will include a description of the contamination remaining at the site. When the site meets the requirements for a Cleanup Complete determination, Institutional Controls will be terminated.

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.

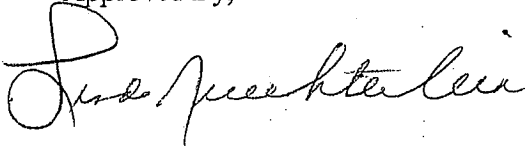
**Appeal**

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.

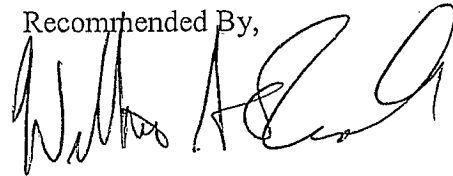
**Please sign and return *Attachment A* to ADEC within 30 days of receipt of this letter.** If you have questions about this closure decision, please contact the ADEC project manager, Bill O'Connell at (907) 269-3057

Approved By,



Linda Nuechterlein  
Environmental Manager

Recommended By,



William O'Connell  
Environmental Program Specialist

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

BP Exploration (Alaska) agrees to the terms of this Cleanup Complete with ICs determination as stated in this Closure Decision Document dated May 21, 2010 for BPX Building U-21. 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)

 Project Manager

Signature of Authorized Representative, Title  
BP Exploration (Alaska)

CHUCK STILWELL, Project Manager

Printed Name of Authorized Representative, Title  
BP Exploration (Alaska)

**Note to Responsible Person (RP):**

After making a copy for your records, please return a signed copy of this form to the ADEC project manager at the address on this correspondence within 30 days of receipt of this letter.

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JUL 09 2010  
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CONSERVATION

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ADEC File No.	300.38.218
Hazard ID:	3258
ADEC Project Manager:	Bill O'Connell

**For Internal Use Only**

\*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

