STATE OF ALASKA

SEAN PARNELL, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM

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

File: 300.38.293
Certified Return Receipt
Article No: 7009 2820 0001 7169 6347

November 17, 2010

Mr. Michael Nelson
ConocoPhillips Alaska, Inc.
Senior Environmental Coordinator
P.O. Box 100360
Anchorage, AK 99510-0360

Re: Decision Document; ConocoPhillips Oliktok Road Explosive Residue Cleanup Complete Determination

Dear Mr. Nelson:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the project file and environmental records associated with ConocoPhillips Oliktok Road Explosive Residue located approximately 1 mile south of Central Processing Facility (CPF-3) along the Oliktok Road near Kuparuk on the North Slope. 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 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
ConocoPhillips Oliktok Road Explosive Residue
Approximately 1 mile south of CPF-3
70.381722 North Latitude
149.809917 West Longitude

Name and Mailing Address of Contact Party:
Michael Nelson
ConocoPhillips Alaska, Inc.
Senior Environmental Coordinator
P.O. Box 100360
Anchorage, AK 99510-0360

ADEC Site Identifiers:
Hazard ID #25565
CS file # 300.38.293

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

Background
Nineteen degraded canisters of Nitro Carbo Nitrate explosive were found in a discrete area located along the Oliktok Road. The explosives were likely used for seismic exploration in the area, and based on the extent of degradation, appear have been at the location for at least ten years.

Contaminants of Concern
Based on the nature of the contaminant source, soil samples were analyzed for explosives. As a result of these investigations, the following contaminants of concern were identified:

- 2,4-dinitrotoluene
- 2,6-dinitrotoluene

Cleanup Levels
The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B2, Arctic Zone.

Contaminant	Arctic Zone Cleanup Levels (mg/kg)
• 2,4-dinitrotoluene	12
• 2,6-dinitrotoluene	12

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

- 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 discovery of the canisters in July 2010, an unexploded ordnance expert was dispatched to the site to confirm the explosives were no longer reactive and develop an appropriate disposal method. The canisters and their spilled contents were collected, examined, and disposed of as hazardous waste at an approved hazardous waste disposal facility in the Lower 48.

In August 2010 soil samples were collected from the impacted area which was estimated to be 6 square feet. Sample results exceeded Arctic Zone cleanup levels with 2,4-dinitrotoluene up to 35,000 mg/kg; and 2,6-dinitrotoluene up to 5,400 mg/kg. A corrective action was conducted in October 2010 which resulted in the removal of three 5-gallon buckets of contaminated soil from the impacted area. The excavation was then backfilled with tundra overburden to promote natural re-vegetation. Confirmation soil samples collected from the bottom of the excavation contained 2,4-dinitrotoluene up to 5.4 mg/kg and 2,6-dinitrotoluene up to 0.65 mg/kg. These results are below Table B2 Arctic Zone soil cleanup levels. The excavated soil was then transported out of state to an approved hazardous waste disposal facility.

Pathway Evaluation

Following investigation and cleanup at the site, exposure to the remaining contaminants were 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	Impacted soil at the surface has been removed, and replaced with tundra overburden.
Direct Contact with Sub-Surface Soil	De-minimis	Impacted soil has been removed and. remaining contamination is below Arctic Zone cleanup levels. The site is remote, with no likely future residents or visitors
Inhalation-Outdoor Air	Pathway Incomplete	Volatile contaminants capable of creating risk via this pathway are not present at the site
Inhalation-Indoor Air	Pathway Incomplete	Volatile contaminants capable of creating risk via this pathway are not present at the site
Groundwater Ingestion	Pathway Incomplete	Groundwater Ingestion is not considered a pathway 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	Pathway Incomplete	There are no complete exposure routes to ecological receptors at the site.

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
Specialist

Recommended By,

William O'Connell
Environmental Program

Cc: Gary Schultz, ADNR NRO