THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION & RESPONSE
Contaminated Sites Program

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File: 300.38.295

December 9, 2013

Sarah Kenshalo
ConocoPhillips Alaska
700 G Street
Anchorage, AK 99519

Re: Decision Document; ConocoPhillips West Sak 16
Cleanup Complete Determination

Dear Ms. Kenshalo;

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with West Sak 16 site, located between Drill Sites 3I and 3M about 38.3 miles northwest (NW) of 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 ConocoPhillips West Sak 16 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 determination.

Introduction

Site Name and Location
ConocoPhillips West Sak 16
38.3 mile NW of Prudhoe Bay

ADEC Site Identifiers
File: 300.38.295
Hazard ID: 25646

Name and Mailing Address of Contact Party:
Sarah Kenshalo
ConocoPhillips Alaska
700 G Street
Anchorage, AK 99519

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

Background
West Sak 16 is an inactive exploration site accessible from the Kuparuk road system. The exploratory well, drilled in 1981, was plugged and abandoned in 1993. The site had included a reserve pit and flare pit, in addition to the now former gravel pad. The reserve pit and flare pit were addressed in the 2003 and 2004 Corrective Action when the gravel was removed and taken to the Drill Site 4 Grind and Inject (G&I) facility for disposal. Therefore, Method Two cleanup levels were used to evaluate the exposure pathways for closure.

Contaminants of Concern
During the investigations at this site, soil and surface water samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), benzene, toluene, ethylbenzene, and xylenes (BTEX), polynuclear aromatic hydrocarbons (PAHs), and salinity. Based on these analyses and knowledge of the source area, the following Contaminants of Concern were identified in soil:

- Gasoline Range Organics (GRO)
- Diesel Range Organics (DRO)

Cleanup Levels
Factors below are considered by ADEC when evaluating site specific cleanup levels and the need for institutional controls in the Arctic Zone.

- Arctic Zone cleanup levels **promulgated** in 18 AAC 75
- ecological impacts
- surface water quality
- presence of free phase product
- whether a cleanup action would cause more severe or long-lasting damage than the discharge or release for undisturbed tundra and native vegetation;
- other factors that might cause a deleterious impact to the environment.

The migration to groundwater pathway is not considered applicable in the Arctic Zone due to the presence of continuous permafrost. However, the migration to surface water pathway is evaluated for risk to human health (drinking water source), and for compliance with Alaska Water Quality standards (18 AAC 70) due to the tundra wetland ecosystem that exists throughout the Arctic region.

Arctic Zone cleanup levels **promulgated** in 18 AAC 75.341 include Method One Table A2 (for manmade gravel pads and roads), Method Two - Table B1 (for hazardous substances) and B2 (for petroleum hydrocarbons). If cleanup levels in Table A.2 - Method One are met, the site may be considered for unrestricted closure without institutional controls (ICs). If contaminant concentrations exceed Method One, then risk-based Method Two cleanup levels are utilized to evaluate the potential risk to human health via specific exposure pathways (such as inhalation and ingestion) and whether the site can be closed with ICs. Contaminants of concern and applicable cleanup levels for the subject site are listed in the table below. Method Two cleanup levels were used to evaluate the exposure pathways for closure because the gravel pad had been removed.

Method Two - Soil Cleanup Levels – Arctic Zone

Contaminants of Concern	Medium	Method Two, Direct Contact/Ingestion*	Method Two, Inhalation *	Migration to Groundwater*
DRO	Soil	12500	12500	N/A
GRO	Soil	1400	1400	N/A

Notes to Table. *All soil contaminant concentrations are presented as mg/Kg. Due to continuous permafrost in the Arctic Zone, the "Migration to Groundwater" pathway is considered incomplete or non-applicable (N/A). The department will determine the cleanup levels for undisturbed tundra and native vegetation on a site-specific basis, depending on whether a cleanup action would cause more severe or long-lasting damage than would the discharge or release alone

Site Characterization Activities

Soil samples collected in 2001 contained DRO up to 3,420 mg/kg. Corrective actions began in 2003. In 2011, surface water and surface soil samples were collected. Contaminants were not detected in surface water and shovel sheen testing was performed within the pad to help identify hot spot areas in the gravel pad area. Surface soil samples were also used to identify hot spots which were addressed in the final Corrective Action conducted in 2013.

The 2013 Corrective Action addressed the areas of contamination above cleanup levels identified earlier and removal efforts were conducted with confirmation samples showing concentrations remaining were below cleanup levels. Contaminated material from this removal effort was also taken to the G&I facility for disposal.

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	De minimis exposure	Contaminated surface soil is not present above Method Two cleanup levels at the site.
Sub-Surface Soil Contact	De minimis exposure	Contaminated subsurface soil is not present above Method Two cleanup levels at the site.
Inhalation – Outdoor Air	De minimis exposure	Contaminant concentrations are below inhalation cleanup levels and the site is covered with snow and ice for much of the year.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There are no structures present at the site
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	De minimis exposure	Contaminants are below Method Two cleanup levels and bioaccumulative compounds may be present but the amount of impacted-soil is insignificant compared with the range of the animal or the human consumption of that animal/plant is limited.
Exposure to Ecological Receptors	De minimis exposure	Contaminants are below Method Two cleanup levels and additional remediation at the site would do damage to the tundra environment which now exists at this former pad.

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

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 Keather McLoone at (907) 269-7546.

Approved By,

Keather McLoone
Environmental Program Specialist

cc: Melissa Head, ADNR