



THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

**Department of Environmental  
Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE  
Contaminated sites Program

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File No. 2337.38.020

December 22, 2014

Ms. Sarah Kenshalo  
Environmental Coordinator – Remediation Contractor  
Conoco Phillips Alaska, Inc.  
700 G Street  
Anchorage Alaska 99519-6247

Re: Decision Document: Beluga River 212-35  
Cleanup Complete Determination

Dear Ms. Kenshalo,

The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program has reviewed the environmental records for the referenced site. This decision letter memorializes the site history, cleanup actions, and standard conditions for long-term site management. No further remedial action is required.

**Site Name and Location:**

Beluga River 212-35  
West Cook Inlet  
Alaska

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

Sarah Kenshalo  
ConocoPhillips  
PO Box 300360  
Anchorage, Alaska 99510-0360

**DEC Site Identifiers:**

File No: 2337.38.020  
Hazard ID: 995

**Regulatory Authority for Determination:**

18 AAC 75

**Site Description and Background**

The Beluga River 212-35 site is located in a forested area immediately east of the Beluga River Unit (BRU) camp, on the east side of the Beluga airstrip. The site is close to the bluff adjacent to Cook Inlet. The well drilling pad and access road were constructed in 1962. Surface facilities (well house,

heater building, contactor building and an electrical shed) were constructed in 1968 (OilRisk Consultants 2003). Between 1989 and 1990, the contactor sump was removed and replaced with an above ground storage tank. During the removal of the contactor sump, hydrocarbon impacted surface and subsurface soil was encountered. (ENSR 1991)

In 2000, one monitoring well (212-35-1) was installed at the former sump location. DRO was detected in a water sample collected from monitoring well 212-35-1 at 2.5 milligrams per liter (mg/L).

### Contaminants of Concern

'Contaminants of Concern' include any hazardous substances that exceed ADEC's most stringent soil or groundwater cleanup levels. These cleanup levels are designed to be protective of human health exposure pathways in residential settings, where groundwater may be used as a source of drinking water. The following contaminants of concern were identified during the course of the site investigations, which are summarized in the **Characterization and Cleanup Activities** section of this decision letter.

- Diesel Range Organics (DRO)

### Cleanup Levels

The more restrictive of either the inhalation or ingestion soil cleanup levels apply to this site. Diesel range organics were detected in soil above the migration to groundwater cleanup levels established in 18 AAC 75.341 (d), Table B2. Migration to groundwater soil cleanup levels are not applicable in this circumstance because groundwater was shown not to be a source of drinking water at this remote industrial site. There are no groundwater cleanup levels because the impacted groundwater is not a source of drinking water. Surface water was not impacted.

**Table 1 – Approved Cleanup Levels**

Contaminant	Soil (mg/kg)	Groundwater (mg/L)
DRO	10,250	N/A

mg/kg = milligrams per kilogram  
mg/L = milligrams per liter

### Characterization and Cleanup Activities

Characterization and cleanup activities conducted under the regulatory authority of the ADEC began in 1989-1990 with the removal of the contactor sump.

In 1991, three soil borings were installed to delineate impacted soil in the vicinity of the contactor sump. The borings were terminated above the water table due to the lack of apparent hydrocarbon impacted soils beneath the base of the contactor sump. Of the four soil samples collected and

analyzed for extractable petroleum hydrocarbons (EPH), two samples detected hydrocarbon contamination.

Four additional soil borings were drilled in 1991 to further delineate impacted soils at the area of the sump. Of the four soil samples collected, one sample contained detectable EPH concentrations. EPH impact was limited to the immediate vicinity of the contactor sump with a maximum concentration of 8,600 mg/kg at 6.5 to 8 feet below ground surface (bgs), decreasing to 3,600 mg/kg at 15 to 16.5 feet bgs. Groundwater was encountered between 15 and 16.5 feet bgs.

In 2000, one monitoring well (212-35-1) was installed at the former contactor sump location. One soil sample was collected during well installation. The soil sample was analyzed for diesel range organics (DRO); gasoline range organics (GRO); polycyclic aromatic hydrocarbons (PAH); and benzene, toluene, ethylbenzene and total xylenes (BTEX). The DRO concentration was 6,300 mg/kg. All other analytes were either not detected above the method detection limit, or were below ADEC Method Two 'migration to groundwater' soil cleanup level.

DRO was detected in a water sample collected from monitoring well 212-35-1 at 2.5 milligrams per liter (mg/L). The DRO concentration exceeded the ADEC 18 AAC 75.345 Table C groundwater cleanup level of 1.5 mg/L. This is the only time this monitoring well was sampled. A second attempt was made to sample the well in 2014, however the well could not be located and is considered lost or destroyed.

### **Cumulative Risk Evaluation**

Pursuant to 18 AAC 75.325(g), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be made that the risk from hazardous substances does not exceed a cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and does not exceed a cumulative non-carcinogenic risk standard at a hazard index of one across all exposure pathways.

Based on a review of the environmental record, ADEC has determined that residual contaminant concentrations do not pose a cumulative human health risk.

### **Exposure 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, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 2.

**Table 2 – Exposure Pathway Evaluation**

<b>Pathway</b>	<b>Result</b>	<b>Explanation</b>
Surface Soil Contact	De Minimis Exposure	Contamination may remain in surface soil (0 to 2 feet below ground surface), but does not exceed the approved soil cleanup level.
Sub-Surface Soil Contact	De-Minimis Exposure	Contamination may remain in the sub-surface, but does not exceed the approved soil cleanup level.
Inhalation – Outdoor Air	De-Minimis Exposure	Contamination may remain in the sub-surface, but is below outdoor inhalation soil cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Inhabited structures are not present, and not anticipated in the future.
Groundwater Ingestion	Pathway Incomplete	Groundwater at this site is not considered a current or future source of drinking water.
Surface Water Ingestion	Pathway Incomplete	Surface water at this site is not used as a drinking water source in the vicinity of the site.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.
Exposure to Ecological Receptors	Pathway Incomplete	Contamination from known sources has not impacted ecological receptors.

**Notes to Table 2:** “De-Minimis Exposure” means that in ADEC’s judgment receptors are unlikely to be affected by the minimal volume or concentration of remaining contamination. “Pathway Incomplete” means that in ADEC’s judgment contamination has no potential to contact receptors.

**ADEC Decision**

Remaining petroleum contamination in soil is below the ADEC approved soil cleanup level. This site will receive a “Closed” designation on the Contaminated Sites Database, subject to the following standard conditions.

**Standard Conditions**

1. Any proposal to transport soil or groundwater off-site requires ADEC approval in accordance with 18 AAC 75.325. 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.
2. 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 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 99811-1800, 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 99811-1800, 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 feel free to contact me at (907) 262-3412.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Campbell". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Peter Campbell  
Project Manager

