STATE OF ALASKA

SEAN PARNELL, GOVERNOR

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

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Anchorage, AK 99501
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File No: 2540.38.008
Return Receipt Requested
Article No: 7010 2780 0000 2178 4933

November 10, 2011

Bob Fink
660 Sonstelie
Kalispell, MT 59901

Re: Decision Document: UAF Bristol Bay Campus Spill
Cleanup Complete Determination

Dear Mr. Fink:

The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program, has completed a review of the environmental records associated with the UAF Bristol Bay Campus Spill. Based on the information provided to date and the administrative record, the ADEC has determined that the contaminant concentrations remaining on site do not pose an unacceptable risk to human health or the environment; therefore 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 Determination.

Introduction

Site Name and Location:
UAF Bristol Bay Campus Spill
Seward Street; Northwest of the D Street Intersection
Dillingham, AK 99576

Name and Mailing Address of Contact Party:
Bob Fink
660 Sonstelie
Kalispell, MT 59901

ADEC Site Identifiers:
File #: 2540.38.008
Hazard ID: 2464
RecKey: 1995250134001

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

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Background
Approximately 375 gallons of diesel spilled from an above ground heating oil storage tank (AST) in December 1995. The spill covered a 20 by 20 foot area located 20 feet to the east of the University of Alaska Fairbanks (UAF) Rural Education Building. Currently, the spill area is under the foundation of a new UAF building completed in 2006.

Contaminants of Concern
During the investigations at this site, soil and groundwater samples were analyzed for the following: diesel range organics (DRO) and the volatile organic compounds (VOCs) benzene, toluene, ethylbenzene, and xylenes (BTEX). Based on these analyses and knowledge of the source area, the following Contaminant of Concern was identified in soil and groundwater:

- Diesel Range Organics (DRO)

Cleanup Levels
The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B2, under 40 inch Zone, *Migration to Groundwater (MGW).*

Contaminant	MGW Cleanup Level (mg/kg)
Diesel Range Organics	250

The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels.

Contaminant	MGW Cleanup Level (mg/L)
Diesel Range Organics	1.5

Cleanup and Site Characterization
Spill response activities were conducted one day after the spill in December 1995. A drum was placed under the AST to collect diesel fuel until the leakage could be stopped and absorbent pads were placed on the ground. The absorbent pads along with contaminated snow were placed in plastic bags and recovered free product was secured in drums and disposed of in 1996.

The AST was disconnected and relocated in May 1996. Contaminated soil was excavated and transported offsite to the Dillingham Construction and Equipment Company (Dillingham Construction) property located 1/3 mile to the north. Removal of soil was limited due to the proximity of underground utilities and frozen ground. Soil samples collected from the sidewalls and excavation bottom to a depth of 3.5 feet below ground surface (bgs) contained detectable concentration of contaminants, but below cleanup levels.

Further excavation work occurred in June 1996. Soil was excavated below the former AST area to the groundwater interface at 10 feet bgs. The soil was put into a separate stockpile at the Dillingham Construction property. Petroleum contamination was noted at the groundwater interface. The excavation was brought back to grade with clean fill.

To determine the extent of contamination, ten test pits were advanced to the groundwater water interface, which averaged 10 feet bgs. Field screening with a PID was conducted at each of the test pits however contamination was only noted at test pit TP-9 located down gradient 40 feet west of the excavation and adjacent to the former Naanguaq daycare center. Three soil samples were collected from TP-9 and the deepest soil sample collected at a depth of 6.7 feet bgs at the groundwater interface contained DRO at 7,900 mg/kg.

To evaluate the down gradient extent of groundwater contamination, four monitoring wells were advanced on the west side of the former Naanguaq Day Care Center. Groundwater was encountered from 4 to 9 feet bgs. Only Monitoring well MW-1, located adjacent to the Naanguaq Day Care building, contained DRO up to 2.4 mg/L.

In an effort to promote bioremediation, an infiltration gallery was installed in 1996 and microbes were introduced in 1997. The gallery was installed 4 feet bgs at the former AST area. The effectiveness of the system was never evaluated. Note: it is assumed the gallery is currently under the new UAF building, which was completed in 2006.

Further evaluation of the groundwater occurred in 1997. Monitoring Well MW-4 was decommissioned in place, and a new monitoring well (MW-5) was completed down gradient of the site in 1997. Groundwater was sampled from MW-1, MW-2, MW-3, MW-5, and the City drinking water (DW) well No. 4, which is located 600 feet to the west down gradient of the site. No contaminants were detected in MW-2 and MW-3 and the City drinking water well. However, MW-1 and MW-5 contained detectable levels of contaminants, but below ADEC cleanup levels. Monitoring wells MW-1, MW-5, and the City drinking water well No.4 were sampled again in 1998. The results were Non-Detect for the City DW well, and below ADEC cleanup levels for MW-1 and MW-5.

As indicated by a letter dated November 25, 1998, the ADEC required no further cleanup and or characterization of the source area. However, the site remained active due to the outstanding 125 cubic yard contaminated soil stockpiles located at the Dillingham Construction property.

Stockpile soil sampling was conducted in 1999, 2004, and 2009. In 1999, six soil samples collected from the stockpiles contained DRO up to 7,100 mg/kg. In 2004, three soil samples collected from the stockpiles contained DRO up to 4,220 mg/kg. In 2009, eleven soil samples collected from the stockpiles contained DRO up to 2,270 mg/kg. The stockpiled soil was landspread on Dillingham Construction property in 2011 with ADEC approval.

The remaining onsite monitoring wells MW-1, MW-2, and MW-3 were decommissioned in 2010. However, monitoring well MW-5 was not located.

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 Tracking Model Results

Pathway	Result	Explanation
Surface Soil Contact	De Minimis Exposure	The contaminated surface soil has been removed and land spread offsite. Surface soil samples were below direct contact cleanup levels. Therefore risk via this pathway is insignificant.
Sub-Surface Soil Contact	De Minimis Exposure	Confirmation sub-surface soil samples were below direct contact cleanup levels and de minimis in volume. Therefore risk via this pathway is insignificant.
Inhalation – Outdoor Air	De Minimis Exposure	The remaining soil contaminant concentrations are below inhalation cleanup levels and de minimis in volume with clean soil above the impacted area which would mitigate exposure via this pathway. Therefore risk via this pathway is considered insignificant.
Inhalation – Indoor Air (vapor intrusion)	De Minimis Exposure	The remaining soil contaminant concentrations are below inhalation cleanup levels and de minimis in volume.Clean soil has been placed above the impacted area which would mitigate exposure via this pathway. Therefore risk via this pathway is insignificant.
Groundwater Ingestion	De Minimis Exposure	The source area and contaminated soil have been removed. Remaining soil contamination is considered de minimis. The latest two groundwater sampling events in 1997 and 1998 did not contain contaminants above ADEC cleanup levels and contaminants were not detected in samples collected from the City drinking water well #4. Therefore risk via this pathway is insignificant.
Surface Water Ingestion	Pathway Incomplete	Surface water is not utilized as a drinking water source in this area
Wild Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals. This area is not used for harvesting wild foods.
Exposure to Ecological Receptors	Pathway Incomplete	There are no complete exposure pathways to ecological receptors at this 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
Further investigation at the site indicates DRO is not present in groundwater above cleanup levels. Remaining DRO in soil is considered de minimis is volume, and was detected in soil below direct contact and inhalation cleanup levels. Based on the information available, ADEC has determined no further assessment and/or cleanup action is required. There is no unacceptable 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 the ADEC Project Manager, Grant Lidren at (907) 269-8685.

Approved By,

Linda Nuechterlein
Environmental Manager

Recommended By,

Grant Lidren
Environmental Specialist

Attachment A

cc: Bill Krause, UAF Risk Management Department

STATE OF ALASKA

TONY KNOWLES, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF SPILL PREVENTION & RESPONSE
CONTAMINATED SITES REMEDIATION PROGRAM
555 CORDOVA STREET, SECOND FLOOR
ANCHORAGE, AK 99501-2617

TELEPHONE: (907) 269-7530
FAX: (907) 269-7649

November 25, 1998

Robert Fink
Evergreen Landscaping, Inc.
205 E. Dimond Blvd # 150
Anchorage, AK 99515

RE: UAF Bristol Bay campus spill (Spill # 95269934001), Dillingham stockpiled soil remediation

Dear Mr. Fink:

The Alaska Department of Environmental Conservation (ADEC) has reviewed your August 26, 1998 letter and Coble Geophysical Services' report (dated August 20, 1998) related to the cleanup of this contaminated site. The additional information provided by the ground water sample results and clarification of the "contaminated soils left in place" was instrumental in allowing ADEC to make its determination regarding the environmental status of this site.

Analytical data indicate that ground water contaminant levels do not exceed the ground water cleanup standards proposed in the draft 18 AAC 75 regulations. In addition, the Coble report clarified that all contaminated soils (above the established cleanup level) were removed during the June 1996 excavation activities. Therefore, the only remaining issue at this time is the status (and contaminant concentrations) of the contaminated soil stockpile.

By this letter, you are requested to submit a corrective action workplan that will address contamination in the soil stockpile that exceeds the established cleanup level(s) for this site. It is recommended that current samples be collected from the stockpile to determine its status. Upon receipt of the analytical results, ADEC proposes a meeting between the interested parties in this project to discuss the alternative remedial methods that may be appropriate.

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Please contact me at (907) 269-7530 or by facsimile at (907) 269-7649 in order to discuss the issues raised above.

Sincerely,

Shah Alam

Shah Alam, Ph.D.
Environmental Specialist

SA:el

cc: Geoff Coble, Coble Geophysical Services
Jack Cushing, Cushing Engineering
Mike Oden/UAF Risk Management Department
Lona A. Schroeder, Dillingham Native Village Council
Jim Frechione, ADEC