

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION Division of Spill Prevention and Response Contaminated Sites Program

SEAN PARNELL, GOVERNOR

Post Office Box 1542
Haines, Alaska 99827
Phone: 907-766-3184
Fax: 907-766-3185
www.dec.state.ak.us

October 12, 2009

File number: 1529.38.002

Mr. Tim Rooney
Borough Manager
City and Borough of Wrangell
Post Office Box 531
Wrangell, Alaska 99929

Re: Cleanup Complete Determination
Wrangell Institute; hazard identification number 3137

Dear Mr. Rooney:

The Alaska Department of Environmental Conservation (ADEC) has been working with the City and Borough of Wrangell (CBW) on the cleanup of the former Wrangell Institute, located at 4.5 mile Zimovia Highway, for several years. During this past summer, all of the excavated contaminated soil was transported off the site and the groundwater and surface water sampling results showed no exceedences of their respective cleanup levels. With the completion of these issues, ADEC can make a determination regarding closure for this site.

Site Background

In 1999, the CBW submitted an application to ADEC for inclusion of the site into the Contaminated Sites Program's Voluntary Cleanup Program (VCP) and the site was accepted. Under the VCP, the CBW excavated and stockpiled approximately 750 cubic yards (cy) of petroleum contaminated soil in a rock-pit near the airport. In July 2001, the CBW continued with removal of additional contaminated soil, in accordance with a *Cleanup Action Plan* prepared by Carson Dorn, Inc. and dated July 2001. Approximately 1500 cy of contaminated soil was removed from multiple former underground heating oil tank locations and along the underground fuel delivery pipeline. In 2002, ADEC requested that CBW provide a final report documenting the 2001 removal and the confirmation sample results collected delineating the remaining contamination. Given that the CBW had obtained ownership of the property when the contamination was already present and had invested a considerable amount of funds into the cleanup already, CBW requested that the ADEC assist with the funding for the report. ADEC funded the development of the *Interim Removal Action Report*, dated 2003, and began negotiations with all potentially responsible parties (PRPs) for future characterization and cleanup of the site.

In 2002, ADEC notified former owners and operators of the site as to their status as PRPs; these parties included the Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM), United States Forest Service (USFS), and Cook Inlet Regional, Inc (CIRI). In 2003, ADEC provided a copy of the report and requested that the PRPs conduct a complete characterization or, if they chose not to do so, ADEC would conduct the characterization and recover the cost from them.

Site Characterization

In Fall 2003, ADEC contracted with its term contractor SLR Corporation for the site characterization. Fieldwork occurred in October 2003 and the *Site Characterization Report* was released in February 2004. SLR delineated soil contamination at the site by advancing 52 test pits at the areas of potential contamination and hand augering at the southern-side fuel supply pipeline. Forty soil samples were collected for analysis of petroleum hydrocarbons. SLR installed eight (8) monitoring wells on the site in areas of suspected groundwater contamination and two (2) wells downgradient of the site; SLR sampled these and the two (2) existing water supply wells. SLR also conducted a seep and surface water survey downgradient from the site and collected 10 pairs of surface water and sediment samples.

Petroleum soil contamination was found at five (5) main locations extending both inside and outside the fence, with concentrations up to 150,000 milligrams per kilogram (mg/kg) of diesel-range organics. Groundwater contamination of diesel-range organics and polycyclic aromatic hydrocarbons was found in five (5) wells across the entire western (lower) portion of the site. Sediment samples showed high levels of petroleum and sheen mostly around the southern-side supply pipeline. There were two (2) surface water exceedences for polycyclic aromatic hydrocarbons. SLR estimated that 5800 cy of contaminated soil was left in place. SLR also sampled the soils stockpiled from the 1999 and 2001 removals and determined that elevated levels of diesel-range organics remained. SLR also provided a cost estimate to clean up the remaining contamination.

With the characterization report and a cost estimate for conducting the cleanup, ADEC negotiated a settlement agreement with the Department of Justice (DOJ), on behalf of all federal parties, CIRI, and CBW. In June 2007, DOJ signed an agreement for \$2.35 million to cover the federal portion of funding for the cleanup action, long-term monitoring, State of Alaska past and future oversight and contractual costs, and CBW past cleanup costs.

Site Cleanup

Cleanup levels for this site for soil were set as the 18 Alaska Administrative Code (AAC) 75.341, Table B2 most stringent default level of 230 mg/kg for diesel-range organics which is protective for direct contact, outdoor inhalation, and migration to groundwater residential use exposure pathways, and for groundwater the cleanup levels of 18 AAC 75, Table C which are appropriate for use in areas where groundwater is used for drinking water.

In July 2007, ADEC contracted with Shannon & Wilson, Inc. (S&W) to conduct the cleanup activities. S&W arrived at the site in August and began to excavate the remaining contaminated soil and stockpile it on-site. Work continued into the fall until continuously rainy weather made excavating too difficult and field activities ceased. All stockpiles were secured with liners and storm water controls were in place and the site was monitored over the winter. In April 2008, excavation resumed for several days only to stop again due to rain. Excavation began again in May and was

completed in early July. Additional characterization activities occurred in July in the muskeg area along the southern-side fuel supply pipeline.

Contaminated soil was excavated from seven (7) separate areas on site. Confirmation samples were collected from the sidewalls and floors of all excavations, unless the excavation was advanced to groundwater. In the five (5) excavation areas covering the main facility area, confirmation sample results met the cleanup level of 230 mg/kg for diesel-range organics. In the two small excavation areas along the southern-side fuel pipeline, excavation occurred to the extent practicable without extensive damage to the surrounding wetlands. Analytical samples were collected by hand augering and showed contamination to be limited in extent along the former pipeline. S&W contracted with local surveyors, Greg Scheff & Associates, to set two monuments in the areas of the remaining contamination to provide a reference point. The survey and a figure of the extent of remaining contamination has been recorded with the Department of Natural Resources' Records Office and placed in CBW local files. The cleanup activities and confirmation sample results are documented in the *Corrective Action Report*, prepared by S&W, dated May 2009. A copy of this report was provided to the CBW in June 2009.

Soil Disposal

Almost 11,000 cy of contaminated soil was excavated and stockpiled on-site. Samples were collected of the stockpiled soils and compared to the criteria set by the ADEC's Solid Waste Program as acceptable for beneficial reuse as landfill cover at the Wrangell Landfill. Sample results showed that only 400 cy of soil was classified as highly-contaminated and required disposal off-site; the remaining soil was considered lightly-contaminated and could be beneficially reused.

The Consent Decree specified that CBW would be responsible for the transportation of the lightly-contaminated soil from the site to the Wrangell Landfill. Given the increase in volume of soil which was eligible to be beneficially reused as landfill cover, ADEC gained concurrence from all PRPs to amend the Consent Decree so that ADEC could fund the movement of the soil; the amendment was finalized in September 2008. ADEC contracted with Emerald Services, Inc. to transport the 400 cy of highly-contaminated soil to Waste Management's Columbia Ridge Landfill in Oregon and the 10,000 cy of lightly-contaminated soil to the Wrangell Landfill. The transportation and disposal of all of the contaminated soil was completed in July 2009.

Groundwater and Surface Water Long-Term Monitoring

On May 15, 2009, CBW consultant Carson Dorn, Inc collected samples from the remaining four (4) groundwater monitoring wells and four (4) surface water sample locations. All of the groundwater samples were analyzed for polycyclic aromatic hydrocarbons and one (1) for diesel-range organics. All of the surface water samples were analyzed for polycyclic aromatic hydrocarbons and benzene, toluene, ethylbenzene, and xylenes in order to calculate total aromatic and total aqueous hydrocarbons. Analytes were determined based upon past sampling events. None of the sample results showed exceedences of any of their respective cleanup levels. These results were documented in a brief report prepared by Carson Dorn Inc and dated June 2009.

Settlement Agreement

The \$2.35 million Settlement Agreement funds were broken down to cover the cleanup action, long-term monitoring, State of Alaska past and future oversight and contractual costs, and CBW past cleanup costs. The breakdown of the settlement funding was as follows:

Cleanup:	1,721,715
Long-Term Monitoring:	175,000
State of Alaska Cost Reimbursement:	185,323
CBW Past Cost Reimbursement:	267,962

The total settlement amount was provided to the State of Alaska by DOJ. The Consent Decree specified that the long-term monitoring of groundwater and surface water would be conducted by CBW with costs to be paid for from the settlement funds. Specific instructions regarding the long-term monitoring and CBW past cost reimbursement were included in a separate Remedial Action Agreement between the CBW and State of Alaska. These funds, totaling \$442,962 were held by the Department of Law until the cleanup was complete and the criteria specified in the Remedial Action Agreement had been met. On August 4, 2009, these funds were electronically transferred to CBW from the Department of Law.

Determination

Given the success of the cleanup action as documented in the 2009 S&W report and subsequent groundwater and surface water sample results as documented in the 2009 Carson Dorn report, ADEC determines that this site is now designated as "cleanup complete".

If, in the future, the remaining contaminated soil along the southern-side pipeline is removed or additional contaminated soil is discovered, CBW will need to contact ADEC so the soil can be managed in accordance with current regulations and policy.

If you have any questions, please do not hesitate to contact me at 766-3184.

Sincerely,



Anne Marie Palmieri
Environmental Program Specialist

cc: Jennifer Roberts, ADEC
Breck Tostevin, Dept. of Law, (w/2009 report CD)
Robert Foster, US Dept of Justice, (w/2009 report CD)
Eric Fjelstad, Perkins Coie, (w/2009 report CD)