

# STATE OF ALASKA

SARAH PALIN, GOVERNOR

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

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January 23, 2009

**RECEIVED**  
**FEB 05 2009**  
**Anchorage Field Office**

Mr. Larry Beck  
Bureau of Land Management  
Anchorage Field Office  
4700 BLM Road  
Anchorage, AK 99507

Re: *Contaminated Soil Stockpiling and Debris Removal Report* Approval  
Cleanup Level Approval  
Cleanup Complete for Petroleum Contaminated Soil at Selected Tank Locations  
Red Devil Mine, Red Devil, Alaska

Dear Mr. Beck:

The Alaska Department of Environmental Conservation (department) has received and reviewed the *Contaminated Soil Stockpiling and Debris Removal Report*, prepared by Wilder Construction Company with URS Corporation and dated June 2007. This report is approved in accordance with the site cleanup rules of 18 Alaska Administrative Code (AAC) 75.325-.390.

### Cleanup Levels Approved

Soil cleanup levels for this site have not previously been approved. Cleanup levels used in this report were developed using the department's method three calculator with a modified site-specific hydraulic gradient of 0.074. The department had previously reviewed and concurred with the calculations and input parameters used to develop these cleanup levels. Thus, the cleanup levels used in the report, specifically gasoline range organics (GRO) – 1380 milligrams per kilogram (mg/kg), diesel range organics (DRO) – 1190 mg/kg, residual range organics (RRO) – 10,000, benzene – 0.087 mg/kg, ethylbenzene – 25.7 mg/kg, toluene – 25.2 mg/kg, xylenes – 362 mg/kg, naphthalene – 21 mg/kg, and penanthrene – 4300 mg/kg, are hereby approved.

### Excavations

As detailed in the above referenced report, the excavation of the petroleum contaminated soil along the fuel pipeline and bulk storage tank area was conducted in 2005 and 2006. A total of ~4470 cubic yards (cy) from five excavations (Excavations B-F) was removed with ~3410 cy of contaminated soil stockpiled in two separate stockpiles and 1060 cy of oversize material (2-inch

plus) used as cover material for Monofill 3.

Excavation A was located along the former fuel distribution pipeline. Six test pits were advanced, and field-screening and analytical samples collected. All sample results were below the respective cleanup levels approved in this letter. No additional action is needed at this area.

Excavation B was located at aboveground storage tank (AST) 3 and ~1500 cy of petroleum contaminated soil was removed. The excavation was advanced to bedrock at five feet below ground surface (bgs) on the southern side and eight to fifteen feet bgs on the northern side. All confirmation sample results were below the approved cleanup levels with the exception of sample 25RDB012SL at five feet bgs with DRO of 1360 mg/kg. Given that the sample was collected at bedrock and additional excavation vertically is not feasible as well as the facts that the sidewall sample results showed DRO concentrations of non-detect to 395 mg/kg demonstrating that all of the contamination had been removed laterally and the sample results from downgradient wells showed no petroleum contamination in the groundwater, the department determines that the remaining contamination is limited in extent and no additional cleanup action is needed in this area.

Excavation C was located at AST1 with a total of ~120 cy of petroleum contaminated soil excavated. All sample results were below the respective approved cleanup levels. No additional action is needed at this area.

Excavation D was located at the barge landing and pipeline near the Kuskokwim River. A total of ~230 cy of petroleum contaminated soil was excavated to a depth of eight feet bgs. All sample results were below the respective approved cleanup levels. No additional action is needed at this area.

Excavation E was located at AST 5. A total of ~2070 cy of petroleum contaminated soil was excavated with the excavation extending to depth of 35 feet. The excavation met bedrock along the southern, southwestern, and southeastern walls and petroleum contamination is still present at depth along the northern part of the excavation at a depth of 25 feet. All sample results were below the respective approved cleanup levels with the exception of sample 26RDE09SL collected at 29 feet bgs with benzene of 0.55 mg/kg, sample 26RDE10SL collected at 27 feet bgs with DRO of 2370 mg/kg, and sample 26RDE011SL collected at 26 feet bgs with DRO of 2350 m/kg. Additional characterization and/or cleanup is needed at this location. The department requests that BLM conduct these actions in conjunction with the Remedial Investigation scheduled for this field season.

Excavation F was located at AST 4 and ~550 cy of petroleum contaminated soil was removed. The excavation was advanced to four feet bgs on the southern side and sixteen feet bgs on the northern side. All confirmation sample results were below the approved cleanup levels with the exception of sample 25RDF05SL at four feet bgs with DRO of 1530 mg/kg. Given that the sample was collected at bedrock and additional excavation vertically is not feasible as well as the fact that the two sidewall sample results showed DRO concentrations of 207 mg/kg and 264 mg/kg demonstrating that all of the contamination had been removed laterally and the sample results from downgradient wells showed no petroleum contamination in the groundwater, the department determines that the remaining contamination is limited in extent and no additional cleanup action is needed in this area.

The department has determined that cleanup of the petroleum contaminated soil at the barge landing, pipeline, and ASTs 1, 2, 3, and 5 is complete. Please note that if, in the future, additional contamination is found to be present that may pose an unacceptable risk to human health, safety, welfare or the environment, it must be reported to the department and additional cleanup may be required.

#### Stockpiled Soils

All excavated and screened contaminated soils were placed in two separate stockpiles. Stockpile 1 was created in 2005 with ~1600 cy and an additional ~996 cy was added in 2006. Stockpile 2 was created in 2006 and contains ~711 cy. Alaska regulation 18 AAC 75.370 outlines requirements for the storage of petroleum contaminated soils in stockpiles. As stated in Table D, Long-Term Storage is defined as a stockpile lasting for a duration of 180 days to two years. The department's *Petroleum Cleanup Guidance* states that all stockpiled soil should be treated within two years. These stockpiles have been in existence for 2 ½ - 3 ½ years already. The department recognizes that BLM has budgeted funds this year for addressing the remaining in-situ petroleum contamination and stockpiled soils. The department requests that a treatment plan for the stockpiled soils be prepared and submitted for approval prior to June 1, and that an approved plan is implemented this field season.

In a site visit in September 2008, it was noted that the stockpiles are no longer covered with a liner. BLM is required to inspect and maintain the stockpile regularly so that it remains covered and any leachate is contained as stated in 18 AAC 75.370(a)(7). The department acknowledges that BLM staff attempted to place covers on the stockpiles this fall, however the stockpiles had already frozen and covering was not possible. The stockpiles should be covered as soon as field conditions allow and notify the department in writing that this action has been completed. If the BLM is unable to cover these stockpiles, the department will look to beginning enforcement actions.

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

Sincerely,



Anne Marie Palmieri  
Environmental Specialist

cc: Ken Marcy, EPA (via electronic mail)