

Red Devil Mine

Environmental Investigation Update

August 2012

This newsletter provides updates on the environmental investigation at the Red Devil Mine, an abandoned cinnabar mine and mercury production facility on the Kuskokwim River. A complete record of documents for this investigation, including previous newsletters, is available at www.blm.gov/ak/red_devil_mine.

The BLM continues work on a **Remedial Investigation and Feasibility Study** for the Red Devil Mine site. The purpose of the investigation is to better understand the physical setting, the mine tailings, and analyze potential risks the mine may have on human health and the environment. During the Feasibility Study, BLM will examine what can be done to address those risks.

The investigation uses a process defined under the Comprehensive Environmental Response, Compensation and Liability Act, known as CERCLA.

Community Involvement

Tribal consultation and community involvement are important to this investigation. The following Kuskokwim River communities accepted the BLM's invitation to meet this spring: Akiak, Atnautluak, Bethel, Georgetown, Kalskag, Lower Kalskag, Kasigluk, Kwethluk, Nunapitchuk, Red Devil, Sleetmute and Tuluksak.



The purpose of the meetings was to update communities on the process, and discuss the Remedial Investigation (RI) and results of the fish and aquatic insects study in the area. Community participants shared their comments, questions and concerns about the project.

While the level of interest and concern about the Red Devil Mine investigation varied, some common themes emerged. Communities expressed concerns related to cancer risks, the importance of fish in local diets, mining contaminants, employment opportunities for local residents, and the length of time for completing the investigation.

Remedial Investigation Report

The BLM collected soil, groundwater, surface water and sediment samples at and near the Red Devil Mine site during 2010 and 2011. The results were analyzed to better understand the potential impacts to the environment from the tailings left on site by past mine operations. The investigation results were compiled in a draft RI report, which the BLM discussed with Kuskokwim River communities during the spring community meetings. Those results indicate the tailings contain high concentrations of mercury, arsenic and antimony.

The Alaska Department of Environmental Conservation and U.S. Environmental Protection Agency reviewed the draft RI report and the BLM is addressing their comments and suggestions.

The BLM will collect additional samples at the site in September to better understand how much of the area may be affected by the mine tailings. The new data will be included in a revised RI report which should be finalized in spring 2013.

Fish Contaminants Study

Since 2010, the BLM and the Alaska Department of Fish and Game have sampled nearly 1,000 fish in the middle Kuskokwim River and nearby tributaries, and in the George and Holitna rivers. The purpose was to better understand metals concentrations in the fish that make up a large portion of subsistence diets in the area. Some 300 of the pike and burbot sampled were also implanted with radio tags to track seasonal movements of the fish.

Much of the data are still being analyzed, but results show that smaller fish living in creeks within historically mined areas have elevated levels of mercury. Specifically, small tributary fish collected in Red Devil and Cinnabar creeks have much higher concentrations of mercury compared to fish in other tributaries.

The sampling results indicate that mercury levels vary significantly in larger predatory fish such as northern pike and burbot. Pike in the George and Holitna rivers have higher levels of mercury than pike in the Kuskokwim and Stony rivers. Telemetry data indicate that pike in the George and Holitna tend to stay in their watersheds. In contrast, burbot move large distances and have mercury levels that vary widely.

In general, this means fish that spend more time in rivers and streams where mercury naturally occurs—and especially where mining has occurred—have higher concentrations of mercury than fish in other areas.

Results of the 2010 data are available at www.blm.gov/ak/st/en/prog/fisheries/rdm_fish.html. The 2012 report with mercury, arsenic and antimony data from samples collected during 2010 and 2011 will be posted soon.

Fish are very nutritious and many species, including salmon, are low in mercury, so fish should be part of a healthy diet. However, some fish may not be safe for women of childbearing age and young children to eat in large amounts because they contain mercury. See fish consumption guidelines in the *Fact Sheet: Mercury in Burbot (Lush) and Pike from the Middle Kuskokwim River Area – June 2, 2011*, developed by the Alaska Department of Health and Social Services, available at www.epi.alaska.gov/eh/fish.



Lower Kalskag

Next Steps

The BLM will use the data from the Remedial Investigation to develop cleanup alternatives for the Feasibility Study. The BLM would then like to meet with Kuskokwim River communities to discuss the proposed cleanup action and hear comments, questions and concerns from tribes, local governments, village corporations and residents.

Please consider if you would like the BLM to meet with your community when the Proposed Plan is ready for tribal and community review and comment. The best cleanup plan is one that blends science, safety and traditional knowledge to address environmental issues.

Please be a part of this process. Your input matters.

Safety Reminder

Please do not enter the Red Devil Mine site for any purpose, including subsistence activities. The BLM has installed a second gate at the site and additional safety signage. **For your safety, please observe the posted safety notices at the site.**



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