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EPA Project Update for Neihart, Montana

Neihart Operable Unit, Carpenter Snow Creek Mining Area Site

U.S. EPA Region 8 – Montana Office, 10 West 15th Street, Suite 3200, Helena, Montana 59226

March 2005

EPA's Remedial Investigation Report is Now Available

EPA is releasing the *Draft Remedial Investigation Report for the Neihart Operable Unit of the Carpenter-Snow Creek Mining District NPL Site* to characterize the extent of contamination caused by hard rock mining and ore-processing activities in and near Neihart, Montana. It presents all published environmental data for the area and discusses the data in the context of human health risks.

The report marks the end of primary investigations for Neihart. The next step in the process is the human health risk assessment, which will define the health risks for people who live or recreate in Neihart. That document is expected to be completed and released for comment in spring 2005 (see timeline below). The risk assessment will be followed by the feasibility study, which is an analysis of possible cleanup options, using information from the remedial investigation and the risk assessment. The feasibility study uses specific criteria to weigh the merits of each option (such as soil removal) and includes a no action option. The draft feasibility study report is expected to be completed and released for comment later in 2005.

Residential yard reclamation and Star Mill slope stabilization

After the feasibility study report is issued, EPA, in consultation with the Montana Department of Environmental Quality, will prepare a proposed plan for cleanup of any contamination that poses a significant threat to human health. This plan is expected to be made public in late 2005 or early 2006. There will be a public comment period to allow interested citizens to provide input and comment on the proposed plan. EPA will weigh that input, and seek input from Cascade County, before making a final cleanup decision. Throughout the process, there will be ample opportunity for public meetings, discussion, and other communication. This fact sheet provides a brief summary of the key highlights of the remedial investigation report.

Timeline of Site Activities

2001/2002
- Site added to EPA's National Priorities List
- Initial sampling

2003
- Public meetings
- Sample results provided
- Remedial Investigation begins

2004
- Community interviews
- Community Involvement Plan
- Remedial Investigation ends
- Selected areas of Neihart cleaned up

2005
- Remedial Investigation Report
- Human Health Risk Assessment
- Feasibility Study

2006
- Proposed Plan for cleanup
- EPA Record of Decision (ROD) issued

2007
- Cleanup in accordance with Record of Decision

The full report is available for the public to review in the Neihart and Great Falls document repositories. A CD copy can be obtained from Scott Brown, EPA Project Manager (see back page).

Do You Want to Learn More?

The Carpenter-Snow Creek Site is a joint effort between EPA and Montana Department of Environmental Quality (DEQ), with EPA being the lead agency. EPA and Montana DEQ Project Managers welcome questions about the site. If you need more information on the work being conducted, please contact the following EPA or DEQ managers:

- **Scott Brown,** *EPA Remedial Project Manager,* (866) 457-2690 (toll free), brown.scott@epa.gov
- **Catherine LeCours**, *DEQ Project Manager*, 841-5040, clecours@mt.gov

Document Repositories

EPA maintains two site document repositories where the public can read site documents. These repositories are located at:

- **Belt Ranger Station,** Neihart, Montana (236-5511)
- **Great Falls Public Library,** 301 2nd Ave N., Great Falls, Montana (453-0349)

The most recent document added to the repositories is EPA's ***Draft Remedial Investigation Report, Neihart Operable Unit, Carpenter-Snow Creek Mining District NPL***. Additional documents will be added as they become available.

Watch for a fact sheet on the human health risk assessment report in spring of this year!

EPA Draft Remedial Investigation Report Highlights

The full report is a technical document that is several hundred pages long. It includes a description of the areas in and near Neihart that were evaluated and the nature and extent of the contamination. There is also a 17-page, comprehensive summary that distills the investigation results down to the key findings.

This fact sheet provides a very brief summary of the report findings. ***The primary finding is that Neihart is a safe place to live, especially since the 2004 cleanup work.*** However, there are a limited number of relatively-small areas that will be addressed in the risk assessment and feasibility study. Less-contaminated residential areas may or may not require cleanup, depending on the results of those two documents.

Initial Assessment of Risk

Initial risk assessment work indicates that several soil contaminants may present health risks. The primary contaminant of concern, especially for children, is lead.

- For soils, stream sediments, and mine waste, EPA used numeric values for the metals of concern to gain a perspective about possible risks. Final cleanup standards will be determined following completion of the risk assessment.
- For surface water and groundwater, EPA used state and federal water quality standards.

Residential Yards

- Soil samples were collected from 91 residential-type yard locations.
- ***Lead concentrations exceed the preliminary remediation goal of 1,000 mg/kg lead in 7% of the surface and 15% of the subsurface samples***

Collecting a subsurface sample

- The yards exceeding 1,000 mg/kg lead are found predominantly in the northern portion of town and in the block between Jefferson and Montana Streets.
- Yards with buried wastes currently have a rich topsoil layer and support a good cover of vegetation, which reduces the likelihood of exposure to children.

Roadways

- Earthen road material samples were collected from 31 stations in Neihart. Lead concentrations exceed the preliminary goal at eight (26%) surface and four (13%) subsurface locations. These ***elevated concentrations were found in the alley that extends between the Ball Mill area (north of the Community Center) and the north end of town.***

Waste Rock, Mill Waste, and Tailings

- High levels of several metals are present at historic mine sites near Neihart.
- ***Sites likely to contribute mine waste material or dissolved contaminants to tributaries and Belt Creek during surface water runoff events are the Molton, Dacotah, Compromise, Hartley, and Broadwater mines***.
- Mine sites not likely to be sources of waste material to the tributaries or directly to Belt Creek are the Evening Star Mine and Mill site, Queen of the Hills, Fairplay, Silver Belt, Rochester, Atlantus, and Stallabrass.
- Mine sites on the north end of town, such as the Star Mill and Queen of the Hills present a greater risk to trespassers than those on the Neihart Slope, due to ease of access.

Groundwater

- ***No significant areas of groundwater contamination were identified in O'Brien, Johnston, or Belt Creek floodplains***.
- O'Brien and Johnston Creek floodplains had no potential sources of contamination, as these areas are not near historic mining activities.
- Belt Creek floodplain has source areas; however infiltration of clean water from the creek would be expected to dilute any mining-related groundwater contamination in much of this area.

Surface Water

- Tributaries to Belt Creek in the Neihart area include Carpenter, Rock, Compromise, Broadwater, O'Brien, and Johnston Creeks and Spring and Narrow Gauge Gulches. Other minor tributaries also exist near the residential area.
- Results show that water discharging from adits or shafts is a major source of contamination to Broadwater, Rock, and Compromise Creeks.
- ***Water quality down-gradient of mines in these drainages exceeds human health and aquatic life criteria***. However, these creeks make up a very small percentage of the water in Belt Creek.
- ***Overall water quality in Belt Creek in the Neihart area meets water quality criteria***, with only a few limited exceedances of human health and aquatic criteria. Stream discharge from Rock and Carpenter Creeks appears to be the most significant source of surface water contaminants to Belt Creek.
- Water quality in the pond and the three unnamed tributaries south of the community center sometimes exceeded human health and aquatic criteria, but the exceedences were relatively low.
- Discharges from the Neihart Tailings and Evening Star Mill and Mine Site appear to have ***minimal impact on Belt Creek water quality.***

Collecting surface water samples

Sediment

- The highest arsenic and metals concentrations were generally downgradient of mine sites in the Rock and Compromise Creek drainages.
- Not surprisingly, the greatest impact to sediments in Belt Creek is from Compromise and Rock Creeks. Belt Creek preliminary goals are also sometimes exceeded as a result of Carpenter Creek inflow.
- Prior to the 2004 cleanup, Belt Creek preliminary goals were exceeded at the Neihart Tailings discharge point because of runoff from the exposed tailings. Those tailings are now encapsulated.
- ***No exceedances of arsenic and lead sediment preliminary goals occurred in Belt Creek in the stream reach adjacent to Neihart***, and there were no impacts from O'Brien or Johnston Creeks.

Aquatic Conditions

- ***On Belt Creek, near the town of Neihart, aquatic habitat and insect populations are in good condition.*** This reach is considered unimpacted, or only slightly impacted, relative to the upstream stations that served as reference locations.

EPA Selective Removal Activities

An EPA removal action was conducted in 2004 to remove the most highly-contaminated soil from residential portions of Neihart and to stabilize and limit future contact with waste material at the Neihart Tailings and the Star Mill sites. EPA arranged for this removal to be completed before the major investigative work was done, in order to ensure that the most significant health threats were removed as quickly as possible.

At the Star Mill waste rock dump (steep slope at north end of town), much of the waste pile was effectively stabilized. The slope was reconfigured and hydroseeded to prevent further erosion of this material into the adjacent residential yards. In addition, contaminated soil was removed from the down-gradient residential yards. Contaminated soil was also removed from the historic mill north of the Community Center.

The surface of the Neihart Tailings pile, which is being used as a temporary repository for excavated soil and wastes, was re-engineered to limit the amount of surface water that could contact the tailings and to limit the volume of surface water that discharges to Belt Creek. Rip-rap added to the sides of the tailings pile will further stabilize the Neihart Tailings against flood-level flows in Belt Creek. The capped surface of the tailings pile will also reduce direct human contact should someone trespass on the site. EPA will hydroseed the area in spring 2005.

Excavating contaminated soil during removal activities