



EPA Issues A Revised Proposed Plan for Clean Up of Soils in Neihart, MT



Site Timeline

- **2001.** The Carpenter-Snow Creek Superfund site (includes the Neihart OU) was added to EPA's National Priorities List of Superfund sites.
- **2002 and 2003.** EPA sampled soils, surface water, sediments, and tailings in Neihart.
- **2004.** Soil removals in residential areas conducted to eliminate very high lead levels.
- **2005.** Remedial Investigation completed.
- **2006.** Human Health Risk Assessment completed.
- **2006.** Cleanup Feasibility Study completed.
- **October 2006.** Original Proposed Plan describes EPA's Preferred Alternative for cleanup.
- **2007/08.** EPA reassesses proposed lead cleanup action level.
- **October 2008.** EPA conducts additional yard soil sampling.
- **December 2008.** Revised Proposed Plan issued.
- **Winter 2009.** Record of Decision issued that documents cleanup details.
- **Spring 2009.** Yard cleanup designs prepared with property owner involvement.
- **Summer/Fall 2009.** Yard cleanups initiated.

On December 22, 2008, the U.S. Environmental Protection Agency (EPA) issued the Revised Proposed Plan for Neihart Operable Unit (OU) 1. This fact sheet summarizes that plan and the opportunities for public review and comment.

Why A Revised Proposed Plan Is Needed

In October 2006, EPA issued the original Proposed Plan for the Neihart community soils area. Two public hearings were sponsored by EPA and Montana Department of Environmental Quality (MDEQ). At that time, EPA's Preferred Cleanup Alternative was Alternative 2B with a soil cleanup action level for lead of 1,200 parts per million (ppm). EPA is retaining Alternative 2B but has lowered the soil lead cleanup action level to 400 ppm. This change has increased the number of residential properties to be cleaned up and the associated cost. Since the cost increase is greater than 50 percent of the original cost and could not have been reasonably anticipated by Neihart property owners, town officials, Cascade County, or any other stakeholder, EPA is required to issue a revised Proposed Plan.

EPA is seeking additional public comment on the revised Proposed Plan, which was released December 22, 2008, before a final decision will be made and before the Record of Decision is issued.

As described in more detail in the Proposed Plan and the Feasibility Study (available at the document repositories—see box on page 3), **Alternative 2B** involves the excavation of contaminated residential soil and non-paved road base material from the town of Neihart and the disposal of that material in an engineered, safe repository outside of any flood plain. Alternative 2B includes the excavation and disposal of the Belt Creek Tailings pile, located north of Neihart, and reclamation of the stream channel at that location. Institutional controls are also a key component of this alternative and are summarized on page 3.

The original Proposed Plan estimated that 14 properties (includes residential, commercial, and vacant lots) and 10 sections of earthen roadway in Neihart would require cleanup at an estimated cost of \$3.8 million. Based on the revised soil lead cleanup action level, 66 properties and 24 earthen roadway sections would be addressed at an estimated present value cost of \$11.8 million. This change does not affect the Belt Creek Tailings pile, which will be removed regardless of the final selected cleanup strategy for Neihart.

Questions and Answers About EPA's Revised

What Type of Sampling was Done?

Samples have been collected from mine waste, surface water, sediment, groundwater, and soils to characterize the nature and extent of mining contamination in and near Neihart. Soil at 153 properties (residential, commercial, public-owned, and vacant lots) have been sampled in Neihart since work was initiated in 2002. This represents 85% of the properties in the Neihart community soils area (original townsite) and 95% of properties north of the Community Center.

Any property owner desiring information or sampling should contact Scott Brown at 406-457-5035.

Soil lead levels are generally higher north of the community center compared to the residential area south of the center. This observation is consistent with the town's former mills and the main ore transportation corridor previously located north of the Community Center. Soil lead concentrations range from about 22 to 2,700 ppm, with an average of approximately 447 ppm. Elevated lead levels have also been found in unpaved roadway material.

Surface water is contaminated in Broadwater, Compromise, and Rock Creeks, but water quality in Belt Creek and O'Brien Creek (the local drinking supply) meets water quality standards. Four residential groundwater wells and three springs were also sampled. One well had a slightly elevated concentration of mercury, and two springs had elevated lead concentrations. None of these levels are of concern as long as these water sources are not used for drinking.

What Health Risks Were Identified?

EPA's human health risk assessment showed that **lead** and **arsenic** are the mining-related contaminants of concern. The primary concern driving the cleanup is children's exposure to elevated concentrations of lead.

In Neihart, **residential soils** are the primary pathway by which people may be exposed to mining-related contaminants. Exposure occurs when soil is **inhaled** (dust) or **ingested** (on unwashed vegetables, hands, toys, etc.). Other pathways (surface water, groundwater, or stream sediment) were shown to not be a health concern.

Based on EPA's lead exposure model, exposure is a concern mainly for **full-time resident children at properties having lead concentrations greater than 400 ppm**. In addition, EPA has set a cleanup action level for arsenic of 100 ppm. Visitors or recreationists do not contact soils frequently enough to have elevated exposures. Approximately **66** properties are either known or expected to exceed the 400 ppm lead concentration. By removing the elevated concentrations of lead and arsenic in residential soils in Neihart, human health risks associated with mining-related contamination will be reduced to acceptable levels.



Lead and Arsenic

EPA's Cleanup Objectives in Neihart

- Prevent resident exposure to elevated lead levels in residential soil, dust, and road base.
 - Control the spread of contaminated material by wind and water erosion.
- Prevent contamination of cleaned areas by preventing the use of mine wastes as construction fill.
 - Remove the Neihart Tailings from the Belt Creek flood plain.

What Cleanup Alternatives Were Evaluated in the Feasibility Study?

1	No Action. Superfund requires this alternative to be considered. Cost estimated at \$240,000.
2a	Removal/Replacement/Disposal of all Contaminated Soil, Plus Institutional Controls (ICs). Excavation of contaminated residential soil and non-paved road base material from Neihart and disposal of the excavated material in an engineered repository. ICs will protect the remedy. Original cost estimated was \$1.8 million. <i>Using the new 400 ppm lead level this cost is now ~\$9.1 million.</i>
2b	Removal/Replacement/Disposal of all Contaminated Soil and Removal of Neihart Tailings, plus ICs . Same as Alternative 2a, but includes excavation and removal of the Neihart Tailings. Original cost estimated was \$3.8 million. <i>Using the new 400 ppm lead level this cost is now ~ \$11.8 million.</i>
3	Selective Removal/Replacement/Disposal of Contaminated Based on Home Occupancy, plus ICs. Same as Alternative 2a, but only at properties that are occupied by children under seven years of age. Requires annual consultation with Cascade County and town of Neihart to determine changes in demographics and to collect soil samples. Original cost was estimated at \$0.7 million. <i>Using the new 400 ppm lead level this cost is now ~\$1.1 million.</i>

The primary difference between the alternatives is the amount of contaminated soil removed and whether the Belt Creek Tailings are removed.

Proposed Plan for Cleanup in Neihart, Montana

How Would A Cleanup Be Done Under Preferred Alternative 2B?

EPA will prepare a detailed cleanup plan for yards having greater than 400 ppm lead or 100 ppm arsenic in soil. Homeowners will be consulted in advance to discuss details of the cleanup, schedule, and any specific homeowner needs. All details will be agreed upon in writing prior to the start of construction.

EPA will use proven yard cleanup protocols in Neihart. Soil will be removed with conventional equipment, supplemented by hand shovels close to buildings, septic systems, trees, etc. Excavated areas will be backfilled with clean soil and graded. Vegetation that is removed will be replaced, along with any structures, such as fences. EPA's on-site representative will be happy to assist property owners with any questions or concerns during the construction.

What Are Institutional Controls?

Institutional controls (ICs) are non-engineering actions, such as legal controls, that help minimize the potential for exposure to residual contamination once the construction has been completed. ICs are meant to supplement the engineering (construction) controls.

Before the soil cleanups are completed, the Cascade County Health Department, county commissioners, and Neihart town council will help determine what ICs are needed. **An especially important IC will be to prevent the importation of contaminated material into or out of Neihart.** Much of the contamination being cleaned up in Neihart resulted from the practice of using mine waste from the dozens of nearby active and inactive mines (see Figure 1) as fill material.

Other important ICs will help prevent residents from being exposed to residual contaminated material during home construction and other projects, medical monitoring of children's blood lead, and developing educational programs.

How Many Yards Will be Cleaned Up?

Based on the sampling conducted to date, it is estimated that 66 residential type properties and 24 earthen roadway sections will have lead or arsenic concentrations exceeding the cleanup level and will therefore require soil replacement.

In addition to yards, Alternative 2B includes the removal of the Belt Creek Tailing pile and the reclamation of the stream channel in that location.

The preferred alternative will excavate approximately 61,679 cubic yards of material. This includes 29,742 cubic yards of residential soil, 4,087 cubic yards of roadway material, and 27,850 cubic yards of Belt Creek Tailings.

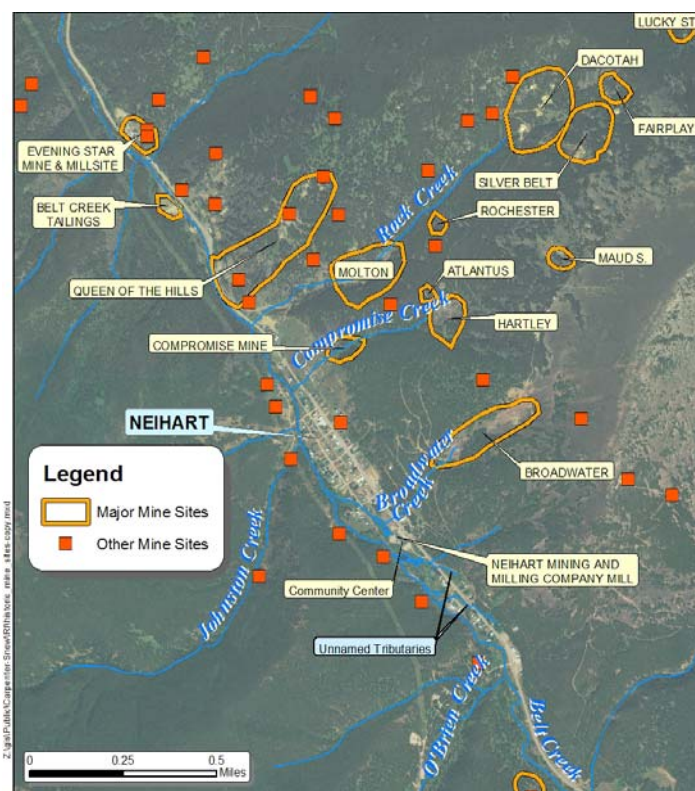


Figure 1: Historic Mine and Mill Sites

Site Contacts: For answers on questions about the cleanup, please call or write either of the following:

- **Scott Brown**
US EPA, 10 W. 15th St, Suite 3200 Helena, MT 59626
406-457-5035/brown.scott@epa.gov
- **Catherine LeCours**
MDEQ, 1100 N. Last Chance Gulch, Helena, MT 59620
406-841-5040/clecours@mt.gov
- **Sandy Johnson**
Cascade City County Health Department
115 4th Street South, Great Falls, MT 59401
405-454-6950

Document Repositories

Documents such as the Remedial Investigation, Risk Assessment, and Feasibility Study can be viewed at any of the locations listed below:

- **EPA**, 10 W. 15th St, Suite 3200 Helena, MT
- **Cascade County Health Department**, 115 4th Street South, Great Falls, MT
- **Belt Creek Ranger Station**, (north of Neihart)

US Environmental Protection Agency
10 West 15th Street, Suite 3200
Helena, Montana 59626



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Do You Want to Learn More or Provide Comments on the Proposed Plan?

A comment period for the revised Proposed Plan will run from December 22 to January 30, 2009. Interested individuals are encouraged to provide their thoughts, ideas, or comments to EPA during that time period. EPA will review and consider all comments before making its final cleanup decision in the Record of Decision. There are several ways to learn more about the Proposed Plan and to provide comments:

- **Read more about it.** This fact sheet summarizes the Proposed Plan. Copies of the plan are available for viewing at the Belt Creek Ranger station and the Cascade County Health Department.
- **Attend the public meeting.** EPA will hold a public meeting to discuss the plan (see below). Everyone is welcome!
- **Provide oral comments.** If you attend the public meeting, you can provide comments verbally. A stenographer will be present to record oral comments for the public record.
- **Provide written comment.** You may provide comments to EPA Project Manager Scott Brown in writing by letter or email (see page three).



Public Meetings

Neihart Community Center

(on US Hwy 89 in Neihart)

January 6, 2009 at 7:00 pm

(in conjunction with the Neihart town council meeting)

Cascade County Commissioner's Chambers

325 2nd Avenue North, Great Falls, MT

January 13, 2009 at 9:30 am

(in conjunction with the Commission's meeting)