

# Residential Properties and the ROD



The Selected Remedy will have a direct impact on the Butte citizens. It calls for **ALL residential properties** within the site boundary to be **sampled, assessed, and abated as required** for arsenic, lead, and mercury. Abatement may include cleaning up yard soils, indoor dust, and attic dust.

Butte/Silver Bow County currently has a very successful **Lead Intervention and Abatement Program** run by the health department. The County's abatement program removes both mining-related and non-mining related sources of lead (such as lead-based paint and piping) from residential properties where children live. Non-mining-related sources are NOT related to Superfund activities at the site.

EPA's vision for residential cleanups under the Selected Remedy calls for a new program called the **Residential Metals Abatement Program** to be created that will incorporate the elements of the existing county lead abatement program. Unlike the existing county program, the new program will include ALL residential properties, not just those where children are present. **Assessments** at each property will occur **within eight years** and abatement of properties that exceed action levels will occur within 15 years. The assessment process will also include attic dust.

Incorporation of the existing lead program into the new residential metals program must rely on **voluntary cooperation** from the potentially responsible parties, the County, and the Agencies for funding and implementation, because the cleanup of non-mining related metals is outside of Superfund's jurisdiction.\*

Under the Residential Metals Abatement Program, a sampling and remediation history for each property will be tracked in a site database. In addition to recording the progress of the abatement program, the database can be used to inform future property owners about the status of the property with regards to assessment and abatement. The new program would be run by the County with major funding from Atlantic Richfield.

*\*If the Residential Metals Abatement Program does not get implemented (voluntary program), the residential cleanup will still be required, though the implementation details will be different.*

## What's Next?

- Finalization and implementation of remedial designs for the Granite Mountain Memorial Area, Syndicate Pit, remaining source areas, storm water BMPs, and Lower Area One.
- Installation of additional groundwater monitoring wells in Metro Storm Drain and Lower Area One, and implementation of a major groundwater monitoring effort.
- Evaluation of the Metro Storm Drain and treatment lagoons at Lower Area One.
- Implementation of a Storm Water Monitoring Program.
- Full-scale implementation of the Butte Reclamation Evaluation System.
- Consent Decree negotiations or Administrative Order is served by EPA.

## Open House

EPA and DEQ will talk one-on-one with Butte residents who may have questions about the ROD.

**Thursday, November 9, 2006**  
**6:30 pm to 8:00 pm**

**at the Butte Silver Bow Courthouse**  
**(155 W. Granite St., 1<sup>st</sup> floor conference room #103)**

All interested parties are invited to attend.

**For more information on the ROD,**  
**please contact:**

- **Sara Sparks, EPA, Butte,**  
**(406) 782-7415**
- **Wendy Thomi, EPA, Helena,**  
**(406) 457-5037**
- **Joe Griffin, MDEQ, Butte/Helena,**  
**(406) 560-6060**



# Summary of EPA's Record of Decision for Cleanup of the Butte Priority Soils

September 2006

The U.S. Environmental Protection Agency (EPA), in consultation with the Montana Department of Environmental Quality (DEQ), issued the **Record of Decision (ROD)** for the Butte Priority Soils Operable Unit (BPSOU) of the Silver Bow Creek/Butte Area Superfund Site in Butte, Montana. The ROD documents the **Selected Remedy** describing how cleanup of the site will be completed.

Significant documents leading up to this decision include the Remedial Investigation, the Feasibility Study, the Focused Feasibility Study, several Human Health Risk Assessments, the Ecological Risk Assessment, the Proposed Plan, the transcript of public comments received on the Proposed Plan, and EPA's Responsiveness Summary.

## What is the Purpose of the ROD?

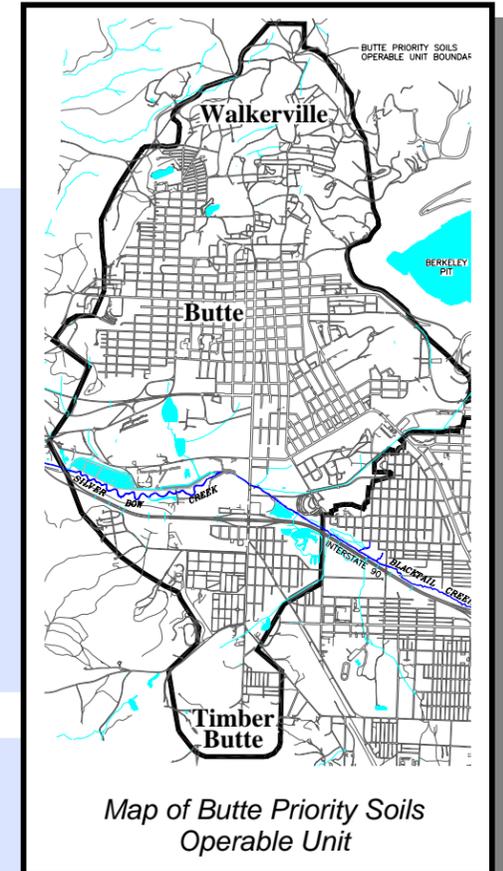
The ROD is a technical and legal document that does three things:

- Summarizes the science behind the cleanup decision. It includes cleanup goals, compliance with other laws, risks posed by site contaminants, evaluation of cleanup alternatives, and the rationale for the cleanup decision.
- Demonstrates how the remedy selection process was carried out in accordance with legal requirements.
- Provides a thorough site history and includes concerns and comments on the Proposed Plan submitted by the public and EPA's response to those comments.

## How is the ROD Organized?

The ROD is organized into three sections:

- **Declaration.** An abstract and data certification sheet for the key information in the ROD.
- **Decision Summary.** An overview of the site characteristics and analysis of cleanup options. Identifies the Selected Remedy and explains how it fulfills statutory and regulatory requirements.
- **Responsiveness Summary.** Addresses stakeholder and public comments received on the Proposed Plan and other information contained in EPA's Administrative Record.



Map of Butte Priority Soils Operable Unit

**Copies of the ROD are available.**

**Please contact Sara Sparks in EPA's Butte office at (406) 782-7415 or Wendy Thomi in EPA's Helena office at (406) 457-5037.**

# Summary of the Major Components of the ROD

## The Selected Remedy

The Selected Remedy describes EPA's cleanup plan for the site. It does the following:

- Addresses potential or actual threats to human health or welfare or the environment resulting from heavy metals and arsenic in soils, indoor dust, surface water, sediment, and groundwater.
- Incorporates many prior response actions done under removal or other authority.
- Achieves the remedial action objectives.
- Protects human health and the environment.
- Meets (or appropriately waives) applicable, relevant, and/or appropriate requirements established for the site.

## Changes Based on Public Comment

EPA received many comments on the Proposed Plan during the 90-day comment period in winter of 2005. EPA responded to the comments in the *Responsiveness Summary*. Based on the comments, EPA made several modifications to the Proposed Plan.

Those modifications include:

- Shortened time frame for residential metals sampling and abatement.
- Enhancement of the existing medical monitoring program to include the general population (not just sensitive populations). In addition to blood lead, the program now includes blood mercury and urinary arsenic.
- Continuation of groundwater treatment using the "treatment lagoons" on a probationary basis, instead of construction of a new conventional lime treatment plant.
- Shortened time frame for the storm water management program.

## Action Levels

Action levels are concentrations that trigger cleanup. The action levels for lead, arsenic, and mercury in soil, dust, and vapor are:

Contaminant	Exposure Scenario	Concentration (mg/kg)
Lead	Residential	1,200
	Non-Residential	2,300
Arsenic	Residential	250
	Commercial	500
	Recreational	1,000
Mercury	Residential	147
	Residential (vapor)	0.43*

mg/kg = milligrams/kilogram

\*µg/m<sup>3</sup> = micrograms/cubic meter of air

## Costs\*

Type	\$M
■ Soils/Waste/Etc.	44.3
■ Groundwater	15.5
■ Surface Water	49.0
■ Storm Water Treatment**	47.0
■ Institutional Controls	0.5
■ 5-year reviews	0.3
<b>Total</b>	<b>\$110 to \$157M</b>

\* Includes both capital and annual costs.

\*\* If storm water treatment is needed



**Residential Metals Abatement Program** - Sampling and clean up of yards and indoor living space will continue, at an accelerated pace. Attic dust will be cleaned up if homeowners plan to remodel and use their attic space as living space or if the ceiling deteriorates so contaminated dust can get into the living space. Requests are made to the Butte/Silver Bow County Health Department. See back page for more information.



**Sediment removal in Silver Bow Creek** - Contaminated sediment will be excavated from Silver Bow Creek. Excavation will occur between the confluence of the Metro Storm Drain and Blacktail Creek down to the reconstructed stream channel in Lower Area One. The sediments will be placed in the Butte Mine Waste Repository. Removal of sediments will minimize contamination entering nearby surface water.



**Surface water/storm water** - An aggressive storm water management program will be implemented to prevent contaminated storm water runoff from harming surface water quality in Silver Bow Creek, Blacktail Creek, and Grove Gulch Creek. Particular attention will be given to source area reclamation and to the very old underground storm sewer system. Additional actions may include: source controls (covers, caps, curb and gutter, some removal, etc.) on wastes; engineered sediment controls (sumps, berms, dikes, swales, etc.); detention/retention basins; and rerouting of storm water. If these controls are not effective in achieving good surface water quality in Silver Bow Creek, storm water runoff will be treated with lime to remove contaminants.



**Groundwater collection and treatment (Lower Area One and Metro Storm Drain)** - Contaminated groundwater associated with buried waste in Lower Area One and Metro Storm Drain will be captured and routed to the existing treatment lagoons at Lower Area One for treatment on a probationary basis. The five-year probationary period will allow time to address operation and maintenance issues. If these issues cannot be addressed, a conventional lime treatment facility will be built. Groundwater will be thoroughly and carefully monitored.



**Covers, partial removal, and limited treatment for solid media** - Previously reclaimed areas will continue to be monitored to ensure effectiveness of the reclamation. Areas reclaimed without EPA involvement may need to be upgraded to ensure protectiveness of the reclamation. Unreclaimed areas will be investigated to determine a course of action. This may include covers, partial removal, and limited treatment of mine wastes and contaminated soils. Reclamation at the historic Granite Mountain Memorial Area will include some waste removals, access restriction, installation of picnic areas and walking trails, enhancement of existing vegetation, and diversion of storm water runoff to the Berkeley Pit. The Syndicate Pit will be reclaimed for use as a mine training center. Accessible surface and near-surface soils in residential yards with metals concentrations that pose long-term risk will be removed and replaced with uncontaminated soil.



**Monitoring** - EPA will require comprehensive monitoring and operation and maintenance plans for all aspects of the cleanup to ensure that it is and remains protective. In addition to comprehensive groundwater and surface water monitoring, the **Butte Reclamation Evaluation System** will be used to monitor reclaimed and capped areas. This system is a tool developed specifically for the site to evaluate the stability, integrity, and degree of protectiveness of these areas. It uses routine inspections to assess: quality of vegetative cover, presence of erosion or exposed waste material, soil cap stability, and presence of barren areas or gullies. It is designed to indicate specific maintenance work that may be needed to maintain the integrity of the caps in perpetuity.



**Institutional Controls** - At a minimum, these administrative and legal controls will include: implementation of controlled groundwater areas to prevent residents from drinking contaminated water and prevent groundwater use that would spread contamination; deed restrictions for waste areas to notify landowners and ensure that the wastes are not mishandled; implementation of city/county zoning and permit requirements for construction activities to ensure control measures are maintained and wastes are not mishandled; and fencing or informational signs by private landowners (as needed).