



Anaconda Copper Mining Co. Smelter and Refinery

January 2010

Proposing Superfund Cleanup

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The U.S Environmental Protection Agency (EPA) and Montana Department of Environmental Quality (DEQ) are considering placing the ACM Smelter and Refinery and adjacent areas on the Superfund National Priorities List (NPL). Placement on this List ("Listing") would provide the resources to address site contamination and protect public health and the environment in and around Black Eagle, Montana.

Based on recent investigations, meetings with local officials and Black Eagle community members, EPA and DEQ determined that Superfund listing will be the best process to ensure a comprehensive risk assessment and cleanup. Cascade County, the Black Eagle community and the Governor of Montana have written letters of support for placement of the ACM Smelter and Refinery site on the NPL.

This fact sheet is intended to help interested parties understand the Superfund Listing Process. This information will help you provide input into the decision to move forward (or not) with listing the Site.

Background

The area being considered for Superfund cleanup has contamination from historic smelting and refining activities at Anaconda Copper Mining Company's Great Falls Reduction Department. Smelting and Refining of Copper from Butte mines and milling other specialty metals spanned more than 80 years. Primary products from activities at the site were copper, zinc, arsenic, and cadmium. The community of Black Eagle was founded in 1882 by workers at the nearby Great Falls Refinery.

The Site consists of 5 areas potentially needing cleanup:

- Residential soils
- The former smelter site
- Areas along the railroad bed
- Missouri River sediments and surface water
- Groundwater

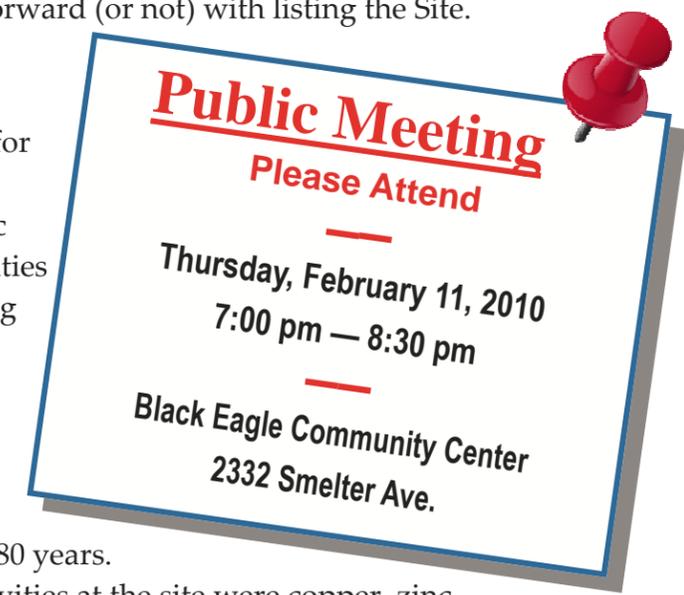
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 Or email: thomi.wendy@epa.gov

Toll Free Numbers
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Do You Have Questions?

Please contact any of these individuals for additional information.

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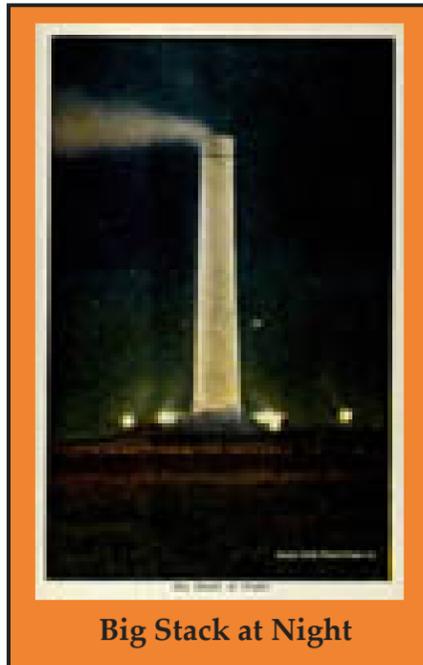
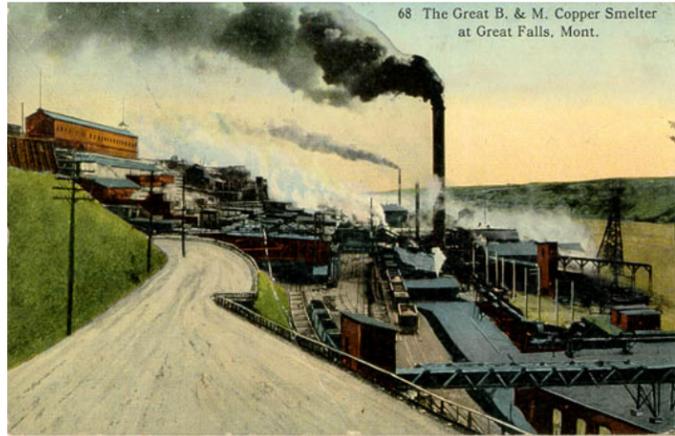
Metals Contamination

Over the years, wastes at the ACM site were placed in a landfill on-site or dumped directly into the Missouri River. Tailings and slag were dumped into the River from a tramway that ran along the riverbank below the Black Eagle dam raceway. An estimated 950,000 tons of slag and tailings were released to the river in 1907 alone. Smelter operation at the Refinery site employed a 502-foot-tall plant stack for several years before pollution control technology was common. Such a stack allowed contaminants to be aurally dispersed over a wide area in the vicinity of the facility.

Soil sampling in 2003 documented the presence of metals on the former smelter site, in Missouri River sediments and surface water, and along the railroad bed, including antimony, arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, silver, sodium, and zinc.

In 2007 and 2008, additional sampling was conducted to assess residential soils in the area. Elevated levels of arsenic, lead and cadmium were found. EPA is concerned with lead and arsenic in residential soils because of the effects they may have on human health.

Lead and arsenic levels found in residential yards were compared with screening levels of 400 mg/kg lead and 40 mg/kg arsenic. Any samples found with numbers above these screening levels indicates that further investigation needs to be done to determine the extent of contamination and the potential risk. This additional information will help determine if cleanup is warranted.



For more background on site operations, please take a look at the July 2009 Fact Sheet:

History of Operations, Contamination and Cleanup.

Call Wendy Thomi toll-free at 1-866-457-2690 to have a copy mailed to you.

Big Stack at Night

Common Questions



What are the benefits of being on the NPL?

- Listing a site on the NPL increases the Superfund money available for cleanup. Without this funding, some sites will not be cleaned up.
- Listing a site makes funding available for cleanup if the party responsible for contamination –the potentially responsible party (PRP) - is not able to pay. It also eliminates delays in cleanup if negotiations with PRPs break down.
- Listing helps bring PRPs to the table, and enables EPA to legally oversee the cleanup.
- When a site is proposed for the NPL, other resources also become available: staff, TAGs, ATSDR, etc.
- The NPL process provides closure and certainty to PRPs, the local community and property owners.
- Listing a site makes it easier for trustees to pursue Natural Resource Damage claims.
- The availability of funding for cleanups coupled with the ability to recover three times the clean-up cost from non-cooperative PRPs, increases EPA's ability to get PRPs to participate.
- EPA can provide a greater degree of legal finality to responsible parties at NPL sites than at non-NPL sites.

Won't proposing a site for the NPL stigmatize the area?

Proposing the site for the NPL provides a means for addressing the risks at the site. The good news is that the problems will be addressed and the contamination problem controlled so that the site can be returned to productive, safe use. It is the presence of contamination in the area that makes it less desirable, not the NPL listing. NPL listing provides a means for reducing contamination and the threats it may cause permanently.

What will proposing a site for the NPL do to property values?

We have not observed a consistent correlation between NPL listing and property values. Many factors are important in determining property values. At some sites, property continues to sell and be developed. At others, property values take a temporary dip until the cleanup is completed. In our experience, the presence of contamination on a property, whether listed on the NPL or not, may affect the value of the property.

Superfund listing ensures the clean-up process will proceed. Once the cleanup is completed, EPA has found that property values improve. EPA has learned that there are things it can do to mitigate the impacts on property. Sometimes uncertainty about the status of a property is a concern to lenders. EPA can help property owners clarify the status of their property by sharing information with lenders and realtors. EPA provides property owners with comfort letters when their property is free of contamination and also assists with prospective purchaser agreements, which spell out the clean-up responsibilities of present owners and prospective purchasers.



Opportunities to Be Involved

EPA and DEQ have met with local officials four times during the last year (August 26, 2008; May 6, 2009; July 14, 2009; and October 21, 2009) to provide information about possibilities for proceeding with investigation and cleanup, including listing the site on the Superfund List. EPA and DEQ have also met with the public (May 6, 2009 and July 14, 2009) and attended a number of meetings to hear from the community. Meetings are a good opportunity to meet face-to-face to talk about site-related issues.

When proposed to the NPL, a public notice will advertise the proposal, website, and comment period. The ad will include how people can comment, where to send the comments, etc.

On February 11, 2010, EPA and DEQ in conjunction with Cascade County are holding a public meeting to discuss plans to move forward with proposing the ACM Smelter and Refinery to the National Priorities List and answer any questions people have about the process or its effect on the community.

On the date of proposal, EPA will create a site specific website where we will post relevant information about the site and any current activities such as the listing process.

After the comment period, unless any comments have caused the EPA to reconsider the listing, the site will be published as final in the Federal Register. Along with responses to the comments received. A Remedial Project Manager with EPA and the DEQ will be assigned. To prepare for sampling, the Project Managers will reach out to community members to ensure everyone has the opportunity to have their yard sampled and questions answered.

Community interviews are important in making sure that that project staff know community concerns and how people want to be involved in the process and activities.



EPA wants to hear from the stakeholders throughout the various stages of investigation and cleanup. Hearing from the public is one of the things that ensures EPA is working with the very best information in its decision-making process. We welcome your ideas about how we can best keep each other informed. Contacts are on the last page!

Potential Health Risks

EPA conducted a Superfund Site Assessment of residential soils during the summer of 2007. The assessment focused on neighborhoods in Great Falls, Montana, on the south bank of the Missouri River across from the former refinery site and in the community of Black Eagle, west and northwest of the former refinery site.

The investigation found an approximate area of 78 acres encompassing 375 residences in Black Eagle to be contaminated with arsenic and lead above screening levels which means further study is necessary. Another Expanded Site Inspection was conducted during 2008 to further define areas of residential soil contamination. The investigation confirmed that Black Eagle residents may be exposed to levels of lead, arsenic, and cadmium in soil that are elevated from normal background levels of these metals. Arsenic, lead and cadmium are naturally-occurring elements, however, mining, milling, or other processing can concentrate these elements to a level where they pose a risk to public health.

Potential Risks

Arsenic — Breathing high levels of inorganic arsenic can give you a sore throat or irritated lungs. Ingesting very high levels of arsenic can result in death. Exposure to lower levels can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of “pins and needles” in hands and feet. Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small “corns” or “warts” on the palms, soles, and torso. Skin contact with inorganic arsenic may cause redness and swelling.

Lead — The effects of lead are the same whether it enters the body through breathing or swallowing. Lead can affect almost every organ and system in your body. The main target for lead toxicity is the nervous system and can reduce I.Q. in both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high levels of exposure to lead may cause miscarriage. High level exposure in men can damage the organs responsible for sperm production. There is no conclusive evidence that lead can cause cancer in humans.

Cadmium—Cadmium can cause a number of adverse health effects. Ingestion of high doses causes severe irritation to the stomach, leading to vomiting and diarrhea. Inhalation of high doses leads to severe irritation of the lungs and long term inhalation can increase the risk of lung cancer. Such exposures are rare. The effects which may occur following long-term low-level exposure are of greater concern. Kidney damage can be caused by excess cadmium either through air or diet. Other tissues reported to be injured by cadmium exposure include the liver, the testes, the immune and nervous systems and the blood.

The Superfund Process / Listing Timeline

A basic understanding of the Superfund investigation and clean-up process (and associated acronyms) can be helpful in reviewing the past, current and future clean-up actions at the ACM Smelter and Refinery Site. The steps are listed here in the order they *usually* occur. Public participation occurs during many of these processes. There will be opportunities for public input in upcoming decisions.

The **Preliminary Assessment and Site Investigation (PA/SI)** is the initial investigation of site conditions.

A **Removal Action** is an immediate or short-term cleanup. These actions are taken to address releases or threatened releases of hazardous substances that may pose an immediate threat to human health or the environment. They often require cleanup before the remedial studies and documents can be completed.

EPA's **National Priorities List (NPL)** is a list of sites with the most serious threats, most complicated issues or largest scope. EPA has identified them as national priorities for long-term cleanup.

A **Risk Assessment** provides an estimate of current and possible future risks to your health from contamination. Scientists collect samples and other information on chemicals of potential concern such as lead, arsenic or cadmium.

The **Remedial Investigation (RI)** documents the nature and extent of contamination.

The **Feasibility Study (FS)** assesses the treatability of site contamination and evaluates the potential performance and cost of treatment technologies.

The **Record Of Decision (ROD)** is a decision document that explains which clean-up alternatives will be used at NPL sites. Conclusions from the RI/FS and Risk Assessment are summarized in this document.

Remedial Designs (RD) are the preparation and implementation of plans and specifications for carrying out Remedial Actions.

A **Remedial Action (RA)** is a long-term cleanup. The bulk of cleanup on NPL sites occurs during this phase. A site may have several Remedial Actions to fully address the contamination.

Construction Completion marks the end of a phase of physical clean-up construction, although this does not necessarily indicate whether final clean-up levels have been achieved site-wide.

National Priority List Deletion—Removes a site - or a part of a site - from the NPL after cleanup.

