United States
Environmental Protection
Agency

Solid Waste And
Emergency Response
(5201 G)

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PB95-962929
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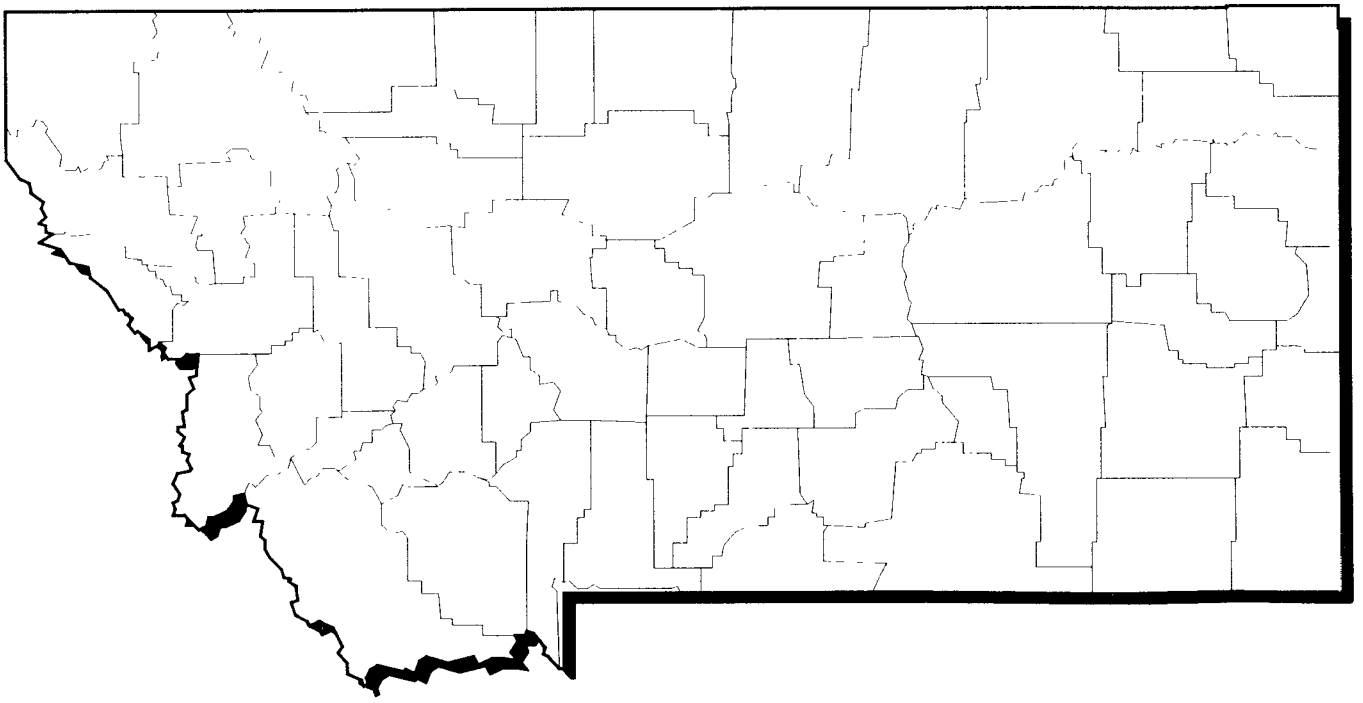
May 1995

SUPERFUND: Progress at National Priority List Sites



MONTANA 1995 UPDATE

Printed on Recycled Paper

How to Use the NPL Book

The site fact sheets presented in this book are comprehensive summaries that cover a broad range of information. The fact sheets describe hazardous waste sites on the NPL and their locations, as well as the conditions leading to their listing ("Site Description"). The summaries list the types of contaminants that have been discovered and related threats to public and ecological health ("Threats and Contaminants"). "Cleanup Approach" presents an overview of the cleanup activities completed, underway, or planned. The fact sheets conclude with a brief synopsis of how much progress has been made in protecting public health and the environment. The summaries also pinpoint other actions, such as legal efforts to involve polluters responsible for site contamination and community concerns.

The fact sheets are arranged in alphabetical order by site name. Because site cleanup is a dynamic and gradual process, all site information is accurate as of the date shown on the bottom of each page. Progress is always being made at NPL sites, and the EPA periodically will update the site fact sheets to reflect recent actions. The following two pages show a generic fact sheet and briefly describe the information under each section.

How Can You Use This State Book?

You can use this book to keep informed about the sites that concern you, particularly ones close to home. The EPA is committed to involving the public in the decision making process associated with hazardous waste cleanup. The Agency solicits input from area residents in communities affected by Superfund sites. Citizens are likely to be affected not only by hazardous site conditions, but also by the remedies that combat them. Site cleanups take many forms and can affect communities in different ways. Local traffic may be rerouted, residents may be relocated, temporary water supplies may be necessary.

Definitive information on a site can help citizens sift through alternatives and make decisions. To make good choices, you must know what the threats are and how the EPA intends to clean up the site. You must understand the cleanup alternatives being proposed for site cleanup and how residents may be affected by each one. You also need to have some idea of how your community intends to use the site in the future, and you need to know what the community can realistically expect once the cleanup is complete.

The EPA wants to develop cleanup methods that meet community needs, but the Agency only can take local concerns into account if it understands what they are. Information must travel both ways in order for cleanups to be effective and satisfactory. Please take this opportunity to learn more, become involved, and assure that hazardous waste cleanup at "your" site considers your community's concerns.

NPL LISTING HISTORY

Provides the dates when the site was Proposed, made Final, and Deleted from the NPL.

SITE RESPONSIBILITY

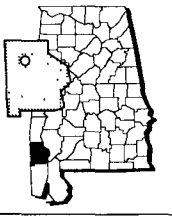
Identifies the Federal, State, and/or potentially responsible parties taking responsibility for cleanup actions at the site.

ENVIRONMENTAL PROGRESS

Summarizes the actions to reduce the threats to nearby residents and the surrounding environment and the progress towards cleaning up the site.

SITE NAME
STATE

EPA ID# ABC0000000



EPA REGION XX
COUNTY NAME
LOCATION

Other Names:

Site Description

A

Site Responsibility:

NPL Listing History
Proposed: XX/XX/XX
Final XX/XX/XX

Threats and Contaminants

B

Cleanup Approach

C

Response Action Status

D

Site Facts:

E

Environmental Progress

Site Repository

SITE REPOSITORY

Lists the location of the primary site repository. The site repository may include community relations plans, public meeting announcements and minutes, fact sheets, press releases, and other site-related documents.

A

SITE DESCRIPTION

This section describes the location and history of the site. It includes descriptions of the most recent activities and past actions at the site that have contributed to the contamination. Population estimates, land usages, and nearby resources give readers background on the local setting surrounding the site.

B

THREATS AND CONTAMINANTS

The major chemical categories of site contamination are noted, as well as which environmental resources are affected. Icons representing each of the affected resources (may include air, groundwater, surface water, soil, and contamination to environmentally sensitive areas) are included in the margins of this section. Potential threats to residents and the surrounding environments arising from the site contamination also are described.

C

CLEANUP APPROACH

This section contains a brief overview of how the site is being cleaned up.

D

RESPONSE ACTION STATUS

Specific actions that have been accomplished or will be undertaken to clean up the site are described here. Cleanup activities at NPL sites are divided into separate phases, depending on the complexity and required actions at the site. Two major types of cleanup activities often are described: initial, immediate, or emergency actions to quickly remove or reduce imminent threats to the community and surrounding areas; and long-term remedial phases directed at final cleanup at the site. Each stage of the cleanup strategy is presented in this section of the summary. Icons representing the stage of the cleanup process (initial actions, site investigations, EPA selection of the cleanup remedy, engineering design phase, cleanup activities underway, and completed cleanup) are located in the margin next to each activity description.

E

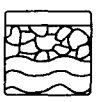
SITE FACTS

Additional information on activities and events at the site are included in this section. Often details on legal or administrative actions taken by the EPA to achieve site cleanup or other facts pertaining to community involvement with the site cleanup process are reported here.

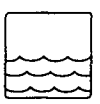
Guide to the NPL Book Icons

The "icons," or symbols, accompanying the text allow the reader to see at a glance which environmental resources are affected and the status of cleanup activities at the site.

Icons in the Threats and Contaminants Section



Contaminated *Groundwater* resources in the vicinity or underlying the site. (Groundwater is often used as a drinking water source.)



Contaminated *Surface Water and Sediments* on or near the site. (These include lakes, ponds, streams, and rivers.)

Contaminated *Air* in the vicinity of the site. (Air pollution usually is periodic and involves contaminated dust particles or hazardous gas emissions.)

Contaminated *Soil and Sludges* on or near the site. (This contamination category may include bulk or other surface hazardous wastes found on the site.)

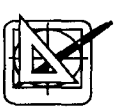
Threatened or contaminated *Environmentally Sensitive Areas* in the vicinity of the site. (Examples include wetlands and coastal areas or critical habitats.)

Icons in the Response Action Status Section

Initial, Immediate, or Emergency Actions have been taken or are underway to eliminate immediate threats at the site.

Site Studies at the site to determine the nature and extent of contamination are planned or underway.

Remedy Selected indicates that site investigations have been concluded, and the EPA has selected a final cleanup remedy for the site or part of the site.



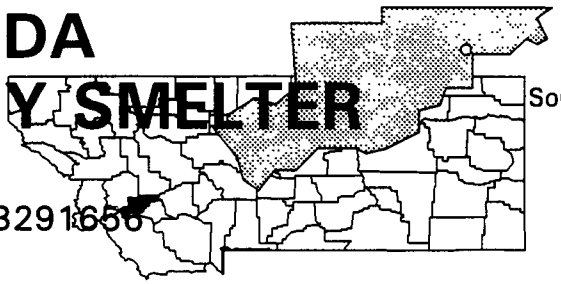
Remedy Design means that engineers are preparing specifications and drawings for the selected cleanup technologies.

Cleanup Ongoing indicates that the selected cleanup remedies for the contaminated site, or part of the site, currently are underway.

Cleanup Complete shows that all cleanup goals have been achieved for the contaminated site or part of the site.

EPA ID Number	Site Name
MTD093291656	ANACONDA CO. SMELTER
MTD980606602	BURLINGTON NORTHERN LIVINGSTON COMPLEX
MTD006230346	EAST HELENA SITE
MTD006232276	IDAHO POLE CO.
MTD980502736	LIBBY GROUND WATER CONTAMINATION
MTD980717565	MILLTOWN RESERVOIR SEDIMENTS
MTD006230635	MONTANA POLE AND TREATING
MTD021997689	MOUAT INDUSTRIES
MTD980502777	SILVER BOW CREEK/BUTTE AREA

ANACONDA COMPANY SMELTER
MONTANA
EPA ID# MTD093291656



EPA REGION 8
Deer Lodge County
Southern end of Deer Lodge Valley

Other Names:
Anaconda Reduction Works
Washoe Works
Old Works
New Works

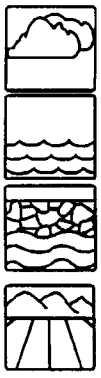
Site Description

The Anaconda Company Smelter site covers 6,000 acres at the southern end of Deer Lodge Valley. Wastes from nearly 100 years of smelting operations were distributed over a vast area by mechanical operations, slurry ditches, and the wind. The smelting processes produced wastes high in metals. The wastes include about 185 million cubic yards of concentrated ore wastes called mine tailings, about 27 million cubic yards of furnace slags, approximately 360,000 cubic yards of flue dust, and tens of square miles of contaminated soils. Investigations in 1984 found that Mill Creek, the closest community to the site, had the highest levels of contamination of any inhabited areas around the smelter. Mill Creek had a population of 100 people. They have been relocated and the houses have been demolished. Anaconda, with a population of 10,000 people, is located 1/2 mile west of the smelter.

Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 12/23/82
Final Date: 09/08/83

Threats and Contaminants



Airborne contaminants include arsenic, cadmium, and lead from wind-blown contaminated soil and beryllium from waste disposal areas. Surface water, groundwater, and soil contain heavy metals, including arsenic, cadmium, copper, zinc, and lead from the smelting operations. Environmental testing of the community and biological testing of pre-school children led the EPA to conclude that contamination in the Mill Creek area posed an imminent and substantial threat to the health of residents. The accidental ingestion of contaminated soil or groundwater could pose a health threat to people. Inhaling airborne contaminants also may increase health risks.

Cleanup Approach

The site is being addressed through a number of response actions. To date, an emergency action, four removals, and two long-term remedial actions have been completed. A number of ongoing studies are focusing on the cleanup of remaining areas of contamination at the site.

Response Action Status

Emergency Action: Between 1986 and 1987, the EPA and the Federal Emergency Management Agency (FEMA) temporarily relocated residents of Mill Creek.

Old Works Expedited Removal: In 1992 the EPA and ARCO completed a removal action that removed wastes from the stabilization of the banks of Warm Springs Creek near the Red Sands waste pile, restricted access to waste piles and ponds using fencing and signs, and repaired breaks in the levee along Warm Springs Creek.

Beryllium Disposal Areas: In 1992, beryllium wastes buried at the B2 cell in Opportunity Ponds and on Weather Hill were taken to a repository that was constructed on Smelter Hill. A temporary compacted soil cover was placed on the repository and a final cover was installed in 1995. Maintenance of the remedy is ongoing and will continue for the foreseeable future.

Arbiter Waste: In 1991 and 1992 about 275,000 cubic yards of material was taken from the Arbiter and placed in the Arbiter repository on Smelter Hill.

Teressa Ann Terrace/Cedar Park Homes Yard Removal: In 1991, 19 front or back yards, 32 yards around the Elkhorn Apartments, and 14 yards around Cedar Park Homes were replaced. All work was completed by September 1992.

Mill Creek: The EPA selected a remedy for Mill Creek in 1987 to permanently relocate all Mill Creek residents; stabilize the area temporarily; store the debris from relocation and demolition and dispose of it, along with the contaminated soils from Mill Creek, for final cleanup of Anaconda; regrade and replant areas disturbed by the relocation and demolition activities; monitor and maintain the vegetation and the fence installed around the area; and impose controls on access and land use. Mill Creek residents were permanently relocated by ARCO in 1988. All cleanup activities were completed in late 1988. The cleanup included county use of the land as storage for junk vehicles.

Flue Dust: The EPA selected a remedy for flue dust in 1991 that included stabilizing approximately 316,500 cubic yards of flue dust using cement and lime, and placing treated materials in an engineered repository. Treatment of flue dust was completed in late 1993. The final disposal and capping is scheduled to occur in 1995. All cleanup goals have been met.

Old Works/East Anaconda Development Area (EADA): The EPA began an investigation of the Old Works subsite in 1991. The investigation was completed in September 1993, and the final cleanup plan includes consolidation and capping of wastes, revegetation of the area, and institutional controls including future use of the land as a golf course. Construction of the remedy is in the second year of a five year planned schedule.

Smelter Hill: In 1988, the EPA and ARCO began an intensive study of soil and groundwater contamination around Smelter Hill. The investigation is scheduled to be completed in 1996.

Community Soils: In 1991, the EPA and ARCO began a screening study of community and regional soil pollution. ARCO also began an extensive community arsenic study to determine the level of exposure to arsenic by residents. The investigation began in 1994 and is scheduled to be completed in late 1995.

Regional Water and Waste: The EPA and ARCO began an investigation into the nature and extent of the problem through groundwater monitoring. The investigation is scheduled to be completed in 1996.

Site Facts: In 1984, ARCO entered into an Administrative Order on Consent with the EPA to conduct investigations of the site. A second Administrative Order on Consent was entered into in 1986 between ARCO and the EPA requiring the company to perform an expedited investigation of the Mill Creek area. In 1988, ARCO and the EPA negotiated a Consent Decree, under which ARCO permanently relocated the residents of Mill Creek. In the same year, ARCO and the EPA also entered into an Administrative Order on Consent to conduct studies on the Flue Dust and Smelter Hill areas and to conduct expedited cleanup actions for the Old Works high risk area. In 1990, ARCO and the EPA amended the 1988 Administrative Order to conduct an accelerated cleanup action on the Arbiter and beryllium disposal areas.

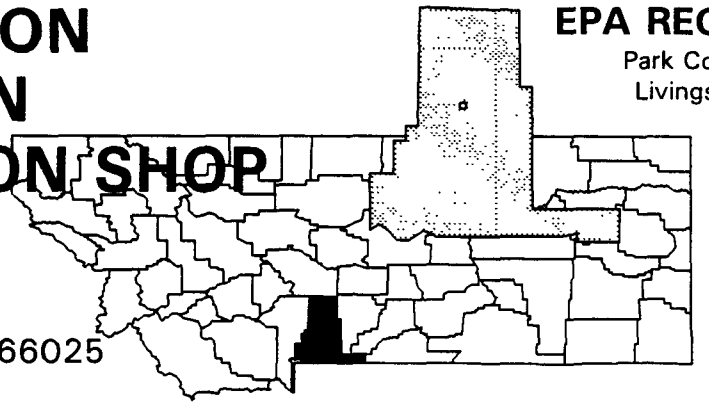
Environmental Progress

The permanent relocation of Mill Creek residents, removal of contaminated wastes from a number of areas, limiting access to the site, treating flue dust, and imposing land use controls have reduced threats to human health from the Anaconda Smelter site. However, the EPA has determined that high concentrations of heavy metals in waste piles, tailings and soils from the smelter operations continue to pose a threat. In response, the EPA has taken additional initial actions to consolidate and cap heavily contaminated soils to address these immediate threats while final cleanup activities are being planned.

BURLINGTON NORTHERN LIVINGSTON SHOP COMPLEX

MONTANA

EPA ID# MTD986066025



EPA REGION 8
Park County
Livingston

Site Description

The 90-acre Burlington Northern Livingston Shop Complex (BNLSC) is located in Livingston, Montana, about 100 miles west of Billings. The site is located within the city limits of Livingston, and borders the Yellowstone River on the east. BNLSC was constructed by the Northern Pacific Railroad (NPRR) in 1883 and, by the early 1900s, had expanded to include a passenger depot, machine shops, a turntable, a roundhouse, and a powerhouse. The NPRR operated BNLSC until early 1970, when Burlington Northern Railroad (BNRR) assumed ownership and operations. BNRR operated the complex until 1986, when the site closed. Both passenger and freight trains were fueled at BNLSC from 1947 until 1986. In 1987, portions of BNLSC were purchased and leased by Montana Rail Link, and the site was reopened. In 1988, a portion of the facility was purchased by the Livingston Rebuild Center. BNLSC is currently used for the switching and temporary holding of rail cars by Montana Rail Link, and for locomotive and heavy-equipment rebuilding and maintenance by Livingston Rebuild Center. BNLSC operations required the use of chlorinated cleaners, petroleum hydrocarbons, and lubricating oils. Historical waste treatment, storage, and disposal practices have contaminated soils and the Livingston Aquifer, which underlies the site. BNLSC waste sources include: Separator Ponds; the Waste Water Treatment Plant and Sump; the Oil Reclamation Sludge Disposal Area; the Cinder Pile Lagoon; and the Tetrachloroethene (PCE) Vapor Degreaser. Two contaminated groundwater plumes have been defined in the Livingston Aquifer. One plume, consisting of an estimated 300,000 to 600,000 gallons of petroleum hydrocarbons, resulted from mechanical failures and spills at fuel storage and fueling facilities. The second plume resulted from the release of volatile organic compounds (VOCs) during long-term locomotive maintenance operations and wastewater handling and treatment. The VOC plume extends northeast, for more than 1 mile, from the shop complex to the Yellowstone River. The Livingston Aquifer supplies municipal drinking water to the 6,701 residents of the city. Two municipal wells, as well as residential and business drinking water wells, have been closed due to VOC contamination.

Site Responsibility: The site is being through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 08/23/94

Threats and Contaminants

The soil and groundwater are contaminated with VOCs including PCE, trichloroethene (TCE), dichloroethene (DCE), and chlorobenzene. The groundwater also has a diesel plume floating on top of the aquifer. The Agency for Toxic Substances and Disease Registry (ATSDR) conducted a pancreatic cancer study of the Livingston area in 1990 and a follow-up study in 1994. The study revealed that the sample population had over twice the expected number of pancreatic cancers as seen nationwide; however, no link could be made between the site and the cancers.

Cleanup Approach

This site is being addressed in two stages: initial actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status

Initial Actions: From 1988 through 1994, the State of Montana directed the removal of the petroleum underground storage tanks, piping, and contaminated soils. Sludges from the wastewater treatment plant, which were deposited in unlined pits, were removed to off-site disposal facilities. Soil vapor extraction wells were installed at eight contaminated areas and the wells continue to remove VOCs from the soil.

Entire Site: The State of Montana is conducting an investigation into the extent of contamination at the site. Completion of the study is slated for late 1995, at which point final remedies will be selected to address remaining contamination at the site.

Environmental Progress

By removing petroleum tanks and contaminated soil and sludge, closing wells, and installing soil vapor extraction wells, the State of Montana has reduced potential health risks to people and the environment while further investigations are taking place.

Site Repository

Livingston Public Library, 228 Callendar,Livingston, MT 59047, (406) 222-0862

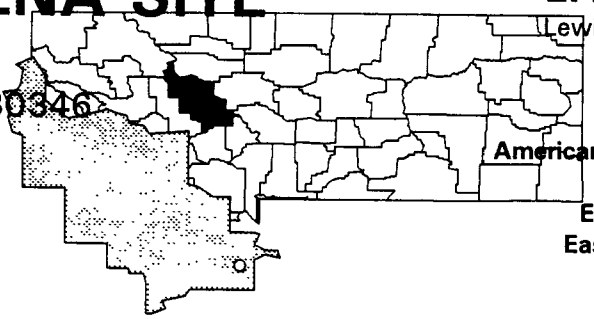
MSU Renne Library, Library Reference Desk, Bozeman, MT 59047, (406) 994-3119

MT State Library, Capital Complex, State Repository Program, Helena, MT 59626, (406)444-3004

EAST HELENA SITE

MONTANA

EPA ID# MTD006230346



EPA REGION 8

Lewis and Clark County
East Helena

Other Names:
American Smelting and Refining
ASARCO Inc.
East Helena Plant
East Helena Smelter

Site Description

The East Helena Site comprises an operating lead smelter, the town of East Helena, and the surrounding rural agricultural lands. For over 100 years, lead and zinc smelting operations have deposited contaminants into the Helena Valley. Public access to the smelter is restricted in the operating areas of the plant. Approximately 1,600 people live within 1 1/2 miles of the site. Most of the area residences are hooked up to the municipal water supply system; however, some residents still maintain private wells.

Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 09/08/83
Final Date: 09/21/84

Threats and Contaminants

Air in the vicinity of the site, the shallow groundwater, and the surface soils are contaminated with arsenic, and heavy metals, including cadmium and lead. Area residents are subject to exposure of site-related contaminants that have become airborne. Contaminated shallow groundwater does not pose a threat because it is not used for domestic water supply, and there is no potential for direct human contact. Health advisories were issued in 1988 to area residents warning them against consuming some locally grown produce. Advisories also have been issued concerning Wilson Ditch, a contaminated irrigation ditch that passes through a number of yards and play fields.

Cleanup Approach

The site is being addressed in four stages: initial actions and three long-term remedial phases focusing on source control, soils, and the remaining contaminated areas at the site.

Response Action Status

Initial Actions: An expedited cleanup action began in July 1991 to remove contaminated soils from residential areas, parks, playgrounds, streets, and alleys. The potentially responsible party at the site, ASARCO, is performing this work. Over 400 yards have been identified as needing replacement, and the EPA expects ASARCO to complete the work by 1996. Preliminary studies addressing soil and bioaccumulation of contaminants in locally-raised livestock and crops were conducted by ASARCO in 1987 and 1989. As a result of the studies, the EPA undertook a separate action to address the contamination in the Wilson Irrigation Ditch; this action was completed in 1993.

Source Control: Following completion of a site investigation in late 1989, the EPA selected the remedy to eliminate a source of contamination at the site. The process ponds act as a source of inorganic contamination of soils, groundwater, and surface waters. The remedy includes isolating the process waters from the groundwater by constructing steel storage tanks, other repairs, and replacing leaking equipment. The soils and pond sediments, contaminated by decades of seepage, will be excavated and smelted. Contaminated pond water will be treated by on-site coprecipitation. Approximately half of construction has been completed. A wastewater treatment plant has been constructed that recovers 50 percent of waste lead for reprocessing, as well as purifying the water for reuse. The cleanup is scheduled to be completed in 1999.

Soils: Based on the completed site studies, ASARCO will complete the expedited soils cleanup action described in the initial actions for this site. ASARCO is conducting further studies to evaluate other soil contamination and to define soils disposal options. The EPA has deferred a final remedy decision until 1998 while ASARCO funds a health professional from a county health department to run a lead abatement program.

Remaining Areas: A work plan for the remaining site areas that proposed a comprehensive site-wide study of all contamination and alternative cleanup methods was submitted in 1990. ASARCO has completed sampling of the soil, garden vegetable and grain, and fish. Confirmation of the contamination has led to the issuance of local health advisories. Regularly conducted groundwater sampling within the residential area has revealed arsenic contamination above drinking water standards in a few shallow wells. ASARCO has drilled additional groundwater wells to define the contamination. Alternatives for groundwater cleanup have been identified, but selection of the preferred remedy awaits completion of the cleanup of the process ponds remedy, one of the sources of site contamination.

Site Facts: In 1984, the EPA and ASARCO entered into an Administrative Order on Consent, under which the company performed a preliminary investigation of site contamination. A second Administrative Order on Consent was signed by the EPA, the State, and ASARCO in 1988 for the company to conduct additional investigations. In 1991, a third Administrative Order on Consent was signed by the EPA and ASARCO requiring the company to perform the initial actions to address the residential soil contamination.

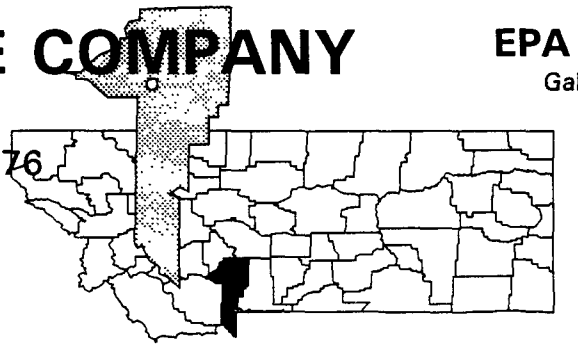
Environmental Progress

Preliminary evaluations by the EPA determined that removal of highly contaminated residential soils and Wilson Ditch sediments was necessary. These actions have addressed the immediate sources of soil contamination, while further investigations and cleanup actions that will address the groundwater and remaining areas of contamination are being completed.

IDAHO POLE COMPANY

MONTANA

EPA ID# MTD006232276



EPA REGION 8

Gallatin County
Bozeman

Site Description

The Idaho Pole Company began treating wood products with creosote in 1946 at this 50-acre site in Bozeman, Montana. In 1952, the company switched to a pentachlorophenol (PCP) treating process. The facility has a history of contamination problems with surface water discharge. While the current wood treating operation has no discharge, past spills and disposal practices have resulted in soil, groundwater, and surface water contamination with PCP and polycyclic aromatic hydrocarbons (PAHs). Groundwater in the area is shallow and flows north to northwest, discharging into Rocky Creek. The State found quantities of PCP in a tributary to Rocky Creek in 1978. Access to the site is restricted by a barbed-wire fence and warning signs. The facility is bordered on the north and west by residential and industrial areas. Agricultural and residential areas lie to the south and east. The nearest home is less than 1/2 mile from the site. About 1,250 people live within 3 miles of the site and use groundwater as a source of drinking water.

Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 10/15/84
Final Date: 06/10/86

Threats and Contaminants

Groundwater on site is contaminated with PCP, PAHs, and dioxins. Site soils contain volatile organic compounds (VOCs) such as benzene, toluene, and styrene. Ditches and trenches on the site contained various forms of dioxins and organic compounds. Surface water on the site contains PCP. Accidental ingestion or direct contact with contaminated groundwater, soil, and surface water are potential health risks. Surface water runoff from contaminated areas on the site threaten harm to Rocky Creek.

Cleanup Approach

The site is being addressed in two stages: immediate actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status

Immediate Actions: In 1978, the State ordered Idaho Pole to eliminate discharges to Rocky Creek and to stop disposing of waste in areas where it was likely to pollute State waters. The company built an intercepter trench along a portion of the property line to halt some of the PCP migration through the groundwater. In 1983, the EPA and the State sampled the trench and found that PCP was moving away from the plant. Under orders from the State Water Quality Bureau, Idaho Pole installed and is sampling 15 monitoring wells at the site. Sludges produced in wood-treating vats are drummed and transported to a licensed hazardous waste disposal site. The intercepter trench and absorbent pad system recover oily liquids from the groundwater prior to its leaving the site.

Entire Site: The State completed an investigation of soil and water contamination in late 1991. A site remedy was selected in 1992. The remedy includes groundwater treatment with oxygen and nutrients to stimulate biodegradation, then re-injection back into the aquifer. Residential water supplies will continue to be monitored. Soil will be excavated from the former round house area, the area north of the plant buildings and from the pasture area north of Interstate 90, and removed to a land treatment unit where contaminants will be biologically reduced by naturally occurring microorganisms. Soil under Interstate 90 and the plant buildings will be flushed with hot water and steam and then treated in place by biological degradation. The potentially responsible parties have begun designing the soil and groundwater remedies. The design for the soil remedy is scheduled to be completed in 1995. The groundwater remedy design is scheduled to be completed in 1996.

Site Facts: In 1978, the State issued a Compliance Order requiring Idaho Pole to take measures to eliminate discharges into Rocky Creek and to prevent the future disposal of waste in locations where it was likely to migrate into State waters.

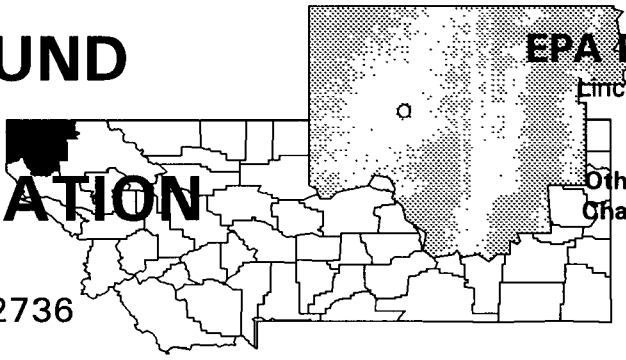
Environmental Progress

The installation of the intercepter trench and absorbent pad system have reduced the migration of wastes through the groundwater at the Idaho Pole Company site while the final cleanup remedies are being designed.

LIBBY GROUND WATER CONTAMINATION

MONTANA

EPA ID# MTD980502736



EPA REGION 8

Lincoln County
Libby

Other Names:
Champion Mill

Site Description

The Libby Ground Water Contamination site is located on the grounds of the former Champion International Corporation lumber and plywood mill in Libby. Between 1946 and 1969, wood treating fluids were disposed of and spilled at several different locations on the mill property. Wastewater and tank bottom sludges from the wood treating fluid tanks periodically were removed and hauled to waste pits. In 1979, shortly after private wells were installed, some area homeowners smelled a creosote odor in their water. The EPA sampled the groundwater and soil and found it to be contaminated. The contaminated soil is within the confines of the facility; however, groundwater contamination extends into the City of Libby. The Stimson Lumber Company purchased the Libby Mill from Champion in December 1993. Champion has maintained the responsibility for the site cleanup. The City of Libby and the surrounding areas have a population of approximately 11,000. The site is bordered by Flower Creek, Libby Creek, and the Kootenai River.

Site Responsibility: The site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 12/30/82
Final Date: 09/08/83

Threats and Contaminants

Groundwater is contaminated with pentachlorophenol (PCP) and polycyclic aromatic hydrocarbons (PAHs), in addition to heavy metals. Soils are contaminated with PCP, PAHs, and, to a lesser extent, dioxins. People who touch or accidentally ingest the soil or water from private wells may be exposed to contamination. If the contaminant plume reaches the Kootenai River or Flower and Libby Creeks, the wildlife in the area may be harmed by the pollutants.

Cleanup Approach

Response Action Status

Initial Action: In 1985, Champion began a water distribution plan under which residents with contaminated groundwater wells agreed to cease using their wells and to begin using water from the public water system operated by the City of Libby. The source of the public water supply is uncontaminated water from a reservoir upstream of Flower Creek. Champion continues to provide monetary compensation to the well owners to pay for the metered water. The company also sealed and locked the previously operating wells. The program will be terminated once the threat of contamination has been eliminated or other alternatives become available.

Groundwater: In 1986, the EPA selected a remedy to reduce human exposure to groundwater contamination by continuing and expanding the water distribution plan sponsored by Champion. The remedy also called for the enactment of an ordinance that prohibits the installation of new wells for drinking water or irrigation, but allows well installation for use in closed systems. Champion completed all actions selected in the remedy in late 1986.

Soil, Lower Aquifer, and Source Control: In 1988, the EPA selected a remedy to clean up the soil and to contain the source of the contamination by the following methods: excavating and consolidating 45,000 cubic yards of contaminated soil and debris in the waste pit area, treating it by an enhanced natural chemical breakdown process using microorganisms, and disposing of it in two lined treatment cells that will be capped; collecting highly contaminated groundwater in the upper aquifer system and treating it by bioremediation using microorganisms; treating the remaining contamination by adding oxygen and nutrients to the groundwater through injection wells; initiating pilot tests and studies to evaluate technologies that may be used to clean up the lower aquifer; and monitoring the site for five years to ensure the cleanup has been effective. Champion, under EPA supervision, has completed construction of the land treatment units and the bioreactor facilities. All contaminated soil has been excavated, additional monitoring and injection wells have been installed, and treatment of soils and upper aquifer groundwater has begun. A pilot test to determine the feasibility of bioremediation treatment of the lower aquifer is complete. Champion will complete additional hydrogeologic characterization of the lower aquifer and monitor the plume. EPA issued a lower aquifer determination on September 14, 1993, that selected long-term monitoring and continued use of institutional controls on the construction of new residential wells.

Site Facts: In 1983, St. Regis and the EPA signed an Administrative Order on Consent for the company to study contamination at the site. Champion International purchased the St. Regis Corporation in 1985 and has taken over its obligations to the Order. In 1989, the EPA and Champion signed a Consent Decree in which Champion agreed to pay the U.S. government for past and future oversight costs and to complete the cleanup action.

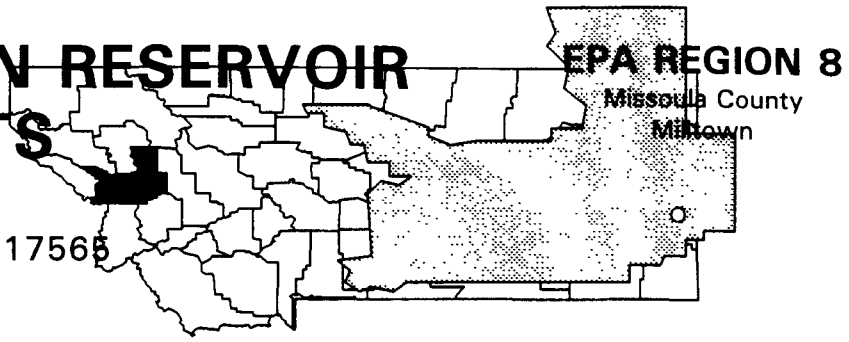
Environmental Progress

All construction at the site is complete. The provision of an alternate water supply and capping of the contaminated private wells have eliminated contaminated drinking water sources and the potential for exposure to hazardous substances at the Libby Ground Water Contamination site while treatment of the contaminated soils and groundwater continue.

MILLTOWN RESERVOIR SEDIMENTS

MONTANA

EPA ID# MTD980717565



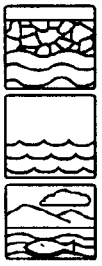
Site Description

The Milltown Reservoir Sediments site covers 820 acres in Milltown. In 1906, a hydroelectric dam was constructed, forming a reservoir that trapped sediments from mining, milling, and smelting operations in the Upper Clark Fork Valley. During the years since the construction, the reservoir storage has been almost filled with approximately 120 million cubic feet of sediments. In 1981, Milltown's four community water supply wells, serving 33 residences, were found to be contaminated with arsenic and other heavy metals. Residents were advised not to use this water for drinking or cooking and to use the alternate water supplies that were provided. Approximately 91 people live within ½ mile of the site. The nearest house is 100 meters away. The site is adjacent to the Milltown Dam, where the Big Blackfoot River joins the Clark Fork River. The rivers are used for recreational activities.

Site Responsibility: The site is being addressed Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 12/30/82
Final Date: 09/08/83

Threats and Contaminants



Groundwater and sediments are contaminated with arsenic and metals, including manganese. The Clark Fork River and Milltown Reservoir contain elevated levels of copper, arsenic, zinc, and cadmium. An alternate water supply has been provided, and contaminated wells have been taken out of service; therefore, residents have little chance of exposure to contaminants by drinking the water. People who swim or fish in the Clark Fork River arm of the reservoir may be exposed to pollutants. Fish kills have been reported downstream of the dam. Access to the site is unrestricted, and the potential exists for direct contact with contaminated areas. Montana Power Company, the dam operator, is required by the Federal Energy Regulating Commission to develop the reservoir as a recreational area as a condition of relicensing.

Cleanup Approach

The site is being addressed in four stages: an initial action and three long-term remedial phases focusing on the water supply, the sediment source control, the Clark Fork River, and the downstream surface water.

Response Action Status

Initial Action: In 1983, volunteers using National Guard equipment supplied residences with door-to-door water service on a biweekly basis for 3 months.

Water Supply: In 1984, the EPA selected a remedy to clean up the Milltown water supply. The remedy included: constructing a new well from a separate aquifer; constructing a new distribution system; flushing the plumbing system of each house to remove contaminants from the water system and plumbing; and testing the water quality to ensure that standards were met. In 1985, the EPA added a supplemental remedy, which included replacing household water supply equipment that remained a source of contamination and continuing sampling of individual residences to ensure the sources of contamination had been removed. The State completed construction of the new water supply system and the installation of household water equipment in 1985.

Reservoir Sediment Source Control: The potentially responsible party, under EPA oversight, is studying the nature and extent of the sediment contamination at the site. The study is expected to be completed in late 1996. The EPA will select the groundwater remedy following the completion of the investigation. The EPA also conducted a separate risk assessment in consultation with an advisory committee, which included representatives from the public and the potentially responsible parties. The EPA will select the groundwater remedy following the completion of the investigation.

Clark Fork River: An investigation into the nature and extent of contamination of the Clark Fork River with respect to the transport of sediment from the reservoir and other water quality problems is scheduled to begin in 1995.

Downstream Surface Water: In 1989, the EPA completed a study of the effects of the contamination downstream from the reservoir. Preliminary results show no environmental damage. However, the sediment investigation described above will continue to ensure that no threat exists to the human population or the environment.

Site Facts: The EPA and a potentially responsible party signed an Administrative Order on Consent, under which the party agreed to study the extent of site contamination.

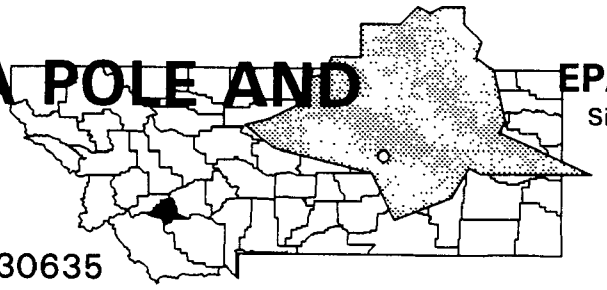
Environmental Progress

The construction of new water supply wells and the replacement of household water supply equipment have provided a safe drinking water supply to affected residents, reducing the potential health threats from contaminated groundwater while investigations leading to cleanup of remaining contamination continue at the Milltown Reservoir Sediments site.

MONTANA POLE AND TREATING

MONTANA

EPA ID# MTD006230635



EPA REGION 8
Silver Bow County
Butte

Site Description

The Montana Pole and Treating site is an abandoned 40-acre wood treatment facility located in Butte, Montana. From 1946 to 1983, the facility preserved utility poles, posts, and bridge timbers with pentachlorophenol (PCP). Hazardous substances from the pole-treating operations were discharged into a ditch adjacent to the plant that ran towards Silver Bow Creek. Five pole barns containing approximately 10,000 cubic yards of contaminated soil are on site. About 16,000 gallons of PCP-contaminated waste oil have been collected and are stored on site. Tanks, vats, pipes, and equipment were cut up and stored in the pole barns. There are forty 55-gallon drums of PCP-contaminated sludges on site. Montana Pole is located in a residential and industrial area. The nearest residence lies 100 yards from the site; the nearest private well is located 1/5 mile downgradient from the site.

Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 06/10/86
Final Date: 07/22/87

Threats and Contaminants

The groundwater and soils are contaminated with PCPs, dioxins, furans, volatile organic compounds (VOCs), and metals. The sludge also is contaminated with PCPs, dioxins and furans. PCP has been detected in Silver Bow Creek. Accidental ingestion and direct contact with groundwater, surface water, soil, and sludge pose hazards to human health. Contaminants may enter the air naturally or during cleanup operations, presenting another potential source of exposure to contaminants.

Cleanup Approach

The site is being addressed in two stages: an immediate action and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status

Immediate Action: In 1988, the EPA completed a cleanup action to halt the seepage of PCP and diesel oil into Silver Bow Creek. Contaminated soils were excavated and stored on site. The site was fenced, and monitoring wells and oil recovery trenches were installed. A temporary groundwater-soil separation treatment system was put into operation to separate PCP-contaminated oil from the groundwater. The treated water was pumped upgradient to infiltration galleries. Following the release of 3,000 gallons of contaminated oil from a holding tank, the EPA conducted a cleanup of oil-contaminated soil in 1991. Approximately 21,000 gallons of contaminated oil have been intercepted and are stored on site. In July of 1992, EPA re-initiated the removal action. During this action, a gundwall was installed to prevent penta/fuel from entering Silver Bow Creek. Groundwater recovery wells were installed to recover free phase penta/fuel from site groundwater. A water treatment plant was built to treat contaminated groundwater. After treatment, the water discharges to Silver Bow Creek.

Entire Site: A potentially responsible party has completed an investigation into the nature and extent of site contamination. In 1993, a remedy was selected which includes: excavation and bioremediation of the contaminated soils; pumping and surface treatment, and in-situ bioremediation of contaminated groundwater. Design of the cleanup remedies is currently underway, and is expected complete in 1996.

Site Facts: In January 1990, Special Notice Letters were sent to three potentially responsible parties. A Consent Order to conduct an investigation of site contamination was negotiated with the Atlantic Richfield Company (ARCO). An additional Notice Letter was sent to Burlington Northern Rail in October 1991. EPA sued ARCO for recovery of past removal costs in September 1991. ARCO sued EPA contractors in October 1991. Litigation is on-going for the Montana Pole Site.

Environmental Progress

The EPA has taken measures to prevent further contamination of Silver Bow Creek, and additional actions were taken to remove the immediate sources of soil contamination, to treat groundwater, and to restrict access to the site. These actions have reduced the potential for exposure to hazardous substances while final cleanup remedies are being designed for the Montana Pole and Treating facility.

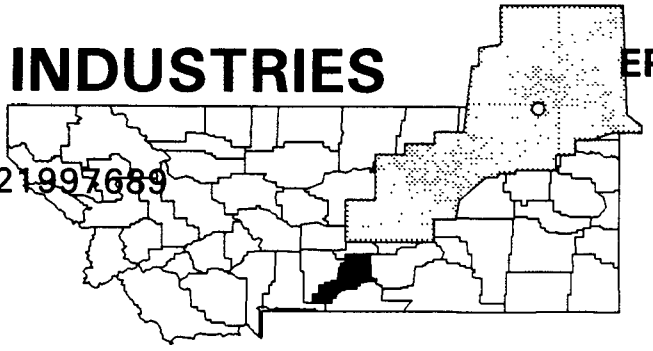
Site Repository

Montana School of Mines and Technology, Butte, Montana

MOUAT INDUSTRIES

MONTANA

EPA ID# MTD021997689



EPA REGION 8

Stillwater County
Columbus

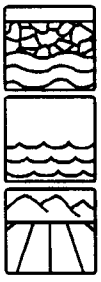
Site Description

The Mouat Industries site is located in Stillwater County, Montana, south of the City of Columbus on land leased from the City. Mouat Industries processed chromium ore into high-grade sodium dichromate at the site from 1957 to 1963. The process produced wastes containing hexavalent chromium and sodium dichromate. In early 1975, gravel was imported and placed on the site from a depth of 6 inches to 3 feet. By late 1976, yellow mineral deposits containing chromium were evident on top of the ground. In 1990, the site was fenced to restrict access. Soils and groundwater are contaminated with hexavalent chromium. The groundwater plume is moving slowly toward the Yellowstone River, which is located 1/2 mile south of the site. Approximately 300 people reside within the vicinity of the site. Private wells, which are not contaminated or threatened at this time, are found within 1/4 mile of the site.

Site Responsibility: The site is being addressed through Federal and Municipal actions.

NPL LISTING HISTORY
Proposed Date: 10/15/84
Final Date: 06/10/86

Threats and Contaminants



The groundwater, surface water, soil, and sediment are contaminated with chromium. Direct contact and accidental ingestion of contaminated soil, groundwater, and sediments are a potential health risk; however, private wells are not contaminated. Hay is grown and livestock is raised in the vicinity of the site. Bioaccumulation of contaminants in livestock and commercial agricultural products increases the potential of health threats from site contamination.

Cleanup Approach

The site is being addressed in two stages: immediate actions and a long-term action focusing on cleanup of the entire site.

Response Action Status

Immediate Actions: In 1990, the EPA erected a chain-link fence around the area of contaminated soils. At the request of the EPA, the city of Columbus redirected an existing drainage ditch that channeled runoff directly onto contaminated soils at the site. Monitoring wells that were drilled in the 1970s were capped. In 1991, the EPA directed the removal and treatment of on-site contaminated soils. Soil treatment was completed in 1994.

Entire Site: The EPA plans to begin an investigation in 1995 to determine the nature and extent of remaining contamination and identify alternatives for cleanup. Completion of the investigation is expected in 1996.

Site Facts: In November 1991, EPA issued an Administrative Order to all of the potentially responsible parties identified by the EPA. The Order directed the parties to perform soil treatment activities, which were completed in 1994.

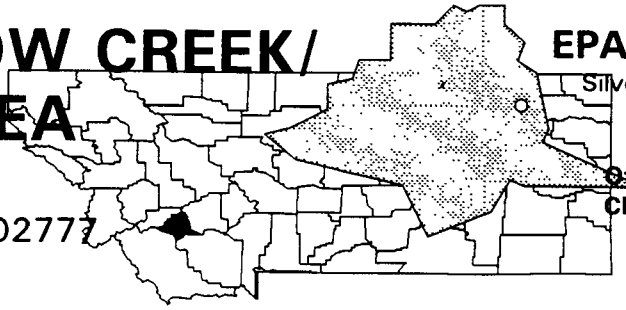
Environmental Progress

Early actions to restrict access to the site by erecting a fence, diverting runoff, and treating contaminated soils have reduced the potential for exposure to hazardous substances while the EPA is evaluating the site to determine if additional actions are warranted to protect public health and the environment.

SILVER BOW CREEK/ BUTTE AREA

MONTANA

EPA ID# MTD980502777



EPA REGION 8

Silver Bow County
Butte

Other Names:
Clark Fork Site
Butte Site

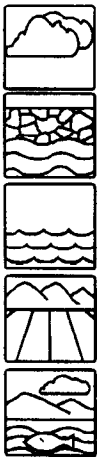
Site Description

The Silver Bow Creek/Butte Area site begins above Butte, near the Continental Divide, and extends westward along Silver Bow Creek and the Clark Fork River to the Milltown Reservoir. The site covers about 140 miles of stream and riparian habitat. Silver Bow Creek and the Clark Fork River were used as a conduit for mining, smelting, industrial, and municipal wastes for over 100 years. Vast mine tailings deposits are found along the creek and river. These deposits have been dispersed over the entire flood plain and contain elevated levels of metals. The Silver Bow Creek/Butte Area site is one of four contamination areas, known as the Clark Fork Sites, that also include the Milltown Reservoir, Anaconda Company Smelter, and Montana Pole & Treating as separate sites on the National Priorities List.

Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 12/30/82
Final Date: 09/08/83

Threats and Contaminants



Wind-blown particles, groundwater, surface water and soil are contaminated with arsenic and metals including zinc, copper, iron, cadmium, mercury, and lead. Silver Bow Creek and the Clark Fork River contain metals from Butte to Milltown. The tailings dispersed along the creek and river severely limit aquatic life forms and have caused fish kills in the river. Potential health threats include direct contact and accidental ingestion of contaminated soil, groundwater, and surface water and inhalation of contaminated air particles.

Cleanup Approach

The site is being addressed in several stages: immediate actions and seven long-term remedial phases focusing on the West Camp/Travona Shaft Area; Warm Springs Ponds; Butte Priority Soils; Berkeley Pit; Rocker Timber Framing and Treating; Streamside Tailings; and Lower Area I.

Response Action Status

Immediate Actions: In Walkerville, Montana, the EPA and potentially responsible parties excavated and stabilized approximately 300,000 cubic yards of lead-contaminated soil from mine waste dumps. These actions were completed in 1988. Contaminated soil was removed from four earthen basements and 23 residential yards. Concrete basements were constructed, and 18 inches of clean fill and sod were placed in the residential yards. At Timber Butte, approximately 40,000 cubic yards of contaminated soil were moved to a temporary on-site repository in 1989. Contaminated soil was removed from two residential yards. Clean soil was placed on the excavated areas and revegetated. ARCO removed highly contaminated materials in the Rocker Timber Framing and Treating area, under State supervision. Arsenic wood treating wastes and contaminated soils and wood chips were hauled to a licensed hazardous waste disposal facility. Equipment and debris were consolidated on the site and buried. Major areas of the site were covered with topsoil and seeded. In 1990, approximately 100,000 cubic yards of contaminated soil were removed from 14 waste dumps, a railroad bed, and seven residential yards in Butte and Walkerville. In 1991, contamination from an additional 11 waste dump areas was either removed or partially removed and capped in place. In December of 1991, a removal action began at the Colorado Smelter site. Elevated levels of arsenic and lead were detected in on-site soils. Under a Unilateral Order, the potentially responsible parties conducted the removal activities. Approximately 40,000 cubic yards were moved to a temporary on-site disposal area. The disposal area was capped and fenced. In 1992, a removal was conducted at the Anselmo Mine Yard/Late Acquisition-Silver Hill areas of Butte. Elevated levels of arsenic and lead were detected in on-site soils. Under a Unilateral Order, the potentially responsible parties removed the contaminated soils.

West Camp/Travona Shaft Area: In 1989, under EPA oversight, the potentially responsible parties addressed rising mine waters in the West Camp/Travona Shaft area by constructing a pumping and piping system to the sewer line on Iron Street. Approximately 200 gallons per minute of mine water have been pumped to the Metro Plant since January 1990. Pumping continues on an intermittent basis, as necessary, to keep the water levels under control. The final remedy to address mine flooding was released in September 1994 and calls for continuation of the pump and piping system and construction of a treatment plant if the Metro Plant cannot handle the flow in the future.

Warm Springs Ponds: The three Warm Springs Ponds cover 2,500 acres at the confluence of Silver Bow, Mill, Willow, and Warm Springs creeks. The ponds were constructed by the Anaconda Company between 1908 and 1959 in an attempt to trap tailings before entering the Clark Fork River, which begins immediately below the ponds. An investigation of the ponds was completed in 1989. Public comments were extensive and led, in 1990, to a decision to expedite certain cleanup plans in a portion of the area, the Mill-Willow Bypass. The bypass contained approximately 400,000 cubic yards of tailings and contaminated soils that were a principal cause of fish kills. In 1990 and 1991, the tailings and contaminated soils were excavated, consolidated, and capped in the dry portion of Pond 3. The ponds contain 19 million cubic yards of tailings and contaminated soils. The selected remedy for the active area (Ponds 2 and 3) includes removing all of the Mill-Willow Bypass tailings; raising and reinforcing all pond berms; and upgrading treatment capabilities; wet-closing Pond 2; and enlarging Pond 3 to handle a 100-year flood. In June 1992, a remedy was chosen by the EPA that consists of a combination of wet-closure and chemical fixation of submerged tailings, extensive capping of mostly dry tailings, and groundwater interception. Construction of the cleanup remedies is nearly complete. By mid-1997, both the active and inactive area remedies are scheduled to be completed.

Butte Priority Soils: The Butte area has been divided into 36 high priority soil areas that will be dealt with in two phases. Phase I, an expedited response action (ERA), will address source areas (mine waste dumps, railroad beds, or other related mines wastes) in or adjacent to the 36 high priority soil areas and receptor areas (residential yards, gardens, parks, and playgrounds). The lead abatement program will address the removal or in-place stabilization of approximately 5 1/2 million cubic yards of contaminated mine waste, and an unknown number of residential yards throughout the cleanup. Phase II is an investigation that will assess the effectiveness of the actions already taken at all the other areas of contamination, as well as storm runoff and future land use problems in Butte and Walkerville, to determine if additional actions need to be taken.

Berkeley Pit: The EPA and the State are concerned about the rising water in the pit because contaminated mine water may eventually migrate into the shallow aquifer and Silver Bow Creek. The investigation for the Berkeley Pit area has been completed, and a remedy was selected in late 1994 that calls for permanent control of the 2 1/2 million gallons per day of inflow into the Pit; maintenance of the water level in the Pit system below the 5410-foot elevation; continued control of the West Camp System; implementation of a compliance monitoring program; and implementation of institutional controls to restrict access to contaminated bedrock aquifer waters, as well as increased monitoring and public education efforts.

Rocker Timber Framing and Treating: In 1991, the EPA and ARCO reached agreement for the company to perform an investigation, with EPA oversight, at the Rocker Timber Framing and Treating Plant area. The investigation activities began in August 1991. The remedy is scheduled to be chosen in 1995.

Streamside Tailings: In 1991, the State of Montana and ARCO reached agreement for the company to perform an investigation with State oversight, at the Streamside Tailings area. Two large-scale demonstration projects were conducted during the winter and spring of 1992 and 1993. The remedy is scheduled to be selected in 1995, with engineering designs to quickly follow.

Lower Area I: The EPA is conducting an ERA at Lower Area I. Removal of the manganese stock piles (approximately 245,000 tons) occurred in the summer and fall of 1992. The removal of the mine tailings (Colorado and Butte Reduction) began in the spring of 1993 and will continue for 3 to 5 years. An estimated 1 1/2 million cubic yards of tailings will eventually be removed to a repository. A groundwater collection and treatment system will be installed as the final step in this action. The tailings are being transported to the tailings ponds of the Anaconda Smelter site. These cleanup activities are scheduled for completion in early 1997.

Site Facts: Several potentially responsible parties signed an Administrative Order on Consent to conduct a portion of the work for the Berkeley Pit flooding; the remaining parties were issued a Unilateral Order to perform the remaining tasks. The State issued a Unilateral Order, requiring ARCO to remove highly contaminated materials in the Rocker Timber Framing and Treating area. In 1989, the EPA issued an Administrative Order on Consent to the potentially responsible parties to either discharge the West Camp water to the Butte Metro Plant, meeting all pre-treatment requirements, or to construct a treatment facility, meeting classification discharge requirements for toxic metals and drinking water standards for arsenic.

Environmental Progress

Numerous cleanup actions have been completed at the Silver Bow Creek/Butte Area site including: the excavation of contaminated soil in Walkerville, Timber Butte, 25 other waste rock dumps in residential neighborhoods; and smelter sites and mill sites in the Butte area; the construction and implementation of a pumping and piping system in the West Camp/Travona Shaft area; and the removal of contaminated soil in the Rocker Timber Framing and Treating area. These actions have reduced the potential health threats to the surrounding communities; however, the EPA has determined that high concentrations of metal in soils and drainage from the mine waste dumps still pose risks to human health and the environment that will be addressed in future cleanup actions.