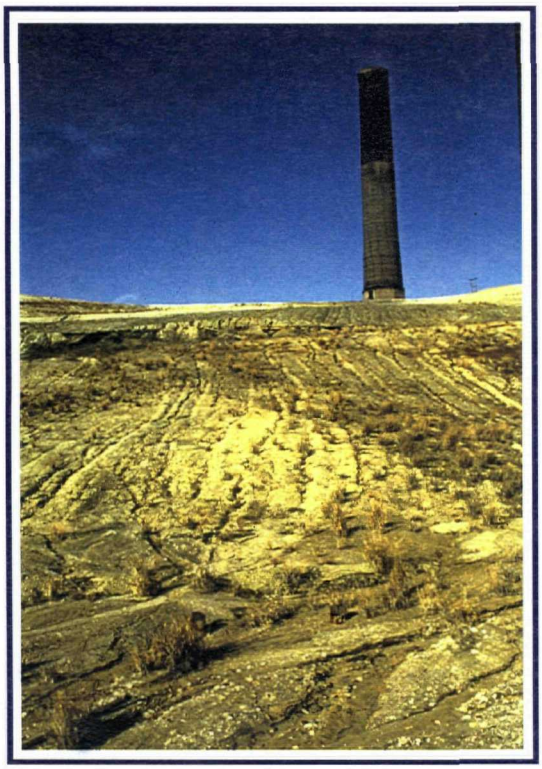
ADMINISTRATIVE RECORD

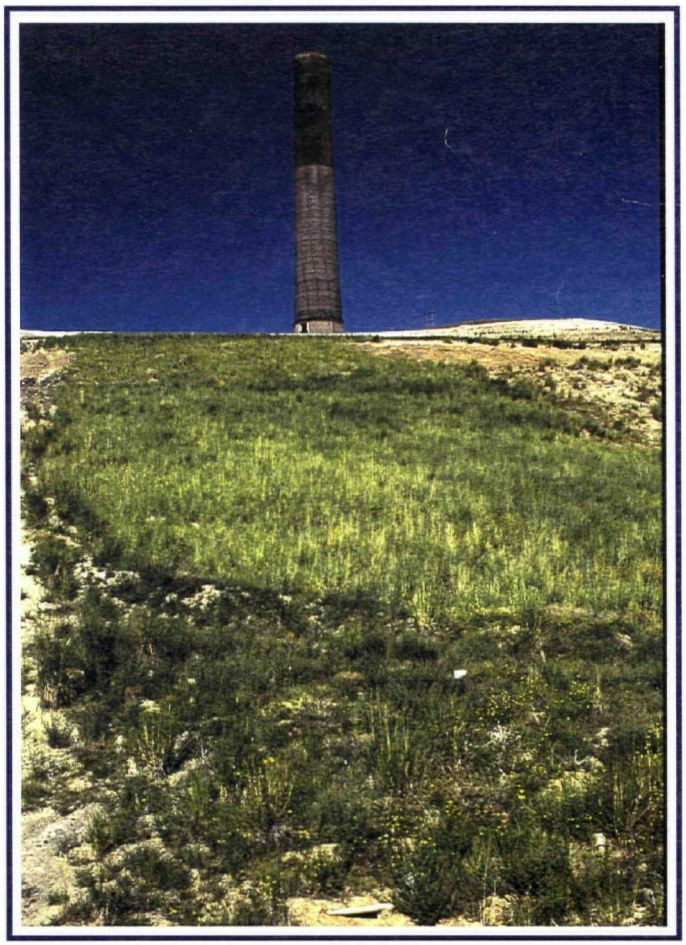
1097953 - R8 SDMS

RECORD OF DECISION

ANACONDA REGIONAL WATER, WASTE, AND SOILS OPERABLE UNIT

Anaconda Smelter National Priorities List Site
Anaconda, Montana





SEPTEMBER 1998

U.S. Environmental Protection Agency

and

Montana Department of Environmental Quality

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RECORD OF DECISION

ANACONDA REGIONAL WATER, WASTE, AND SOILS OPERABLE UNIT
ANACONDA SMELTER NPL SITE
ANACONDA, MONTANA

September 1998

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region VIII, Montana Office
Federal Building, Drawer 10096
301 South Park Avenue
Helena, Montana 59626
(406) 441-1150
(Lead Agency)

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
2209 Phoenix Avenue
Helena, MT 59620
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(Support Agency)

RECORD OF DECISION

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Max H. Dodson, Assistant Regional Administrator
Ecosystems Protection and Remediation
U.S. Environmental Protection Agency, Region VIII

9/29/98
Date

Mark A. Simonich, Director
Montana Department of Environmental Quality

9/29/98
Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 301 S. PARK, DRAWER 10096
HELENA, MONTANA 59626-0096

Ref: 8MO

September 28, 1998

MEMORANDUM

SUBJECT: Request for Signature on Anaconda Regional Water, Waste & Soils OU ROD

FROM: Julie A. DalSoglio Julie A. DalSoglio
Remedial Project Manager

THROUGH: Andrew J. Lensink, ENF-L

TO: John F. Wardell, Office Director
Robert L. Fox, Superfund Branch Chief

Attached is the Declaration for the Anaconda Regional Water, Waste & Soils OU ROD. Please sign your concurrence for this final site-wide remedy on page D-5, underneath the signature lines for Max Dodson and Mark Simonich.

Attachment

Printed on Recycled Paper

RECORD OF DECISION SUMMARY

ANACONDA REGIONAL WATER, WASTE, AND SOILS OPERABLE UNIT
ANACONDA SMELTER NATIONAL PRIORITIES LIST SITE

The U.S. Environmental Protection Agency (EPA), with the concurrence of the State of Montana Department of Environmental Quality (MDEQ), presents this Record of Decision (ROD) for the Anaconda Regional Water, Waste, and Soils (ARWW&S) Operable Unit (OU) of the Anaconda Smelter National Priorities List (NPL) Site. The ROD is based on the Administrative Record for the ARWW&S OU, including three Remedial Investigations (RIs) and five Feasibility Study (FS) Deliverables, human health and ecological risk assessments, the Proposed Plan, the public comments received, including those from the potentially responsible party (PRP), and EPA responses. The ROD presents a brief summary of the RIs and FS Deliverables, actual and potential risks to human health and the environment, and the Selected Remedy. EPA followed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, the National Contingency Plan (NCP), and appropriate guidance in preparation of the ROD. The three purposes of the ROD are to:

1. Certify that the remedy selection process was carried out in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601 *et seq.*, as amended (CERCLA), and, to the extent practicable, the NCP;

2. Outline the remedial action objectives, engineering components and remedial requirements of the Selected Remedy; and

3. Provide the public with a consolidated source of information about the history, characteristics, and risk posed by the conditions at the ARWW&S OU, as well as a summary of the cleanup alternatives considered, their evaluation, the rationale behind the Selected Remedy, and the agencies' consideration of, and responses to, the comments received.

The ROD is organized into three distinct sections:

1. The **Declaration** section functions as an abstract for the key information contained in the ROD and is the section of the ROD signed by the EPA Assistant Regional Administrator for Ecosystems Protection and Remediation and the MDEQ Director;

2. The **Decision Summary** section provides an overview of the OU characteristics, the alternatives evaluated, and the analysis of those options. The Decision Summary also identifies the Selected Remedy and explains how the remedy fulfills statutory requirements; and

3. The **Responsiveness Summary** section addresses public comments received on the Proposed Plan, the Remedial Investigation/Feasibility Study (RI/FS), and other information in the Administrative Record.

DECLARATION

DECLARATION

SITE NAME AND LOCATION

Anaconda Smelter NPL Site
Anaconda, Deer Lodge County, Montana
Anaconda Regional Water, Waste, and Soils (ARWW&S) Operable Unit (OU)
CERCLIS ID #MTD 093291656

STATEMENT OF BASIS AND PURPOSE

This decision document presents the Selected Remedy for the last OU, the ARWW&S OU, of the Anaconda Smelter NPL Site in Deer Lodge County, Montana. EPA, with the concurrence of MDEQ, selected the remedy in accordance with CERCLA and the NCP.

This decision is based on the Administrative Record for the ARWW&S OU of the Anaconda Smelter NPL Site. The Administrative Record (on microfilm) and copies of key documents are available for public review at the Hearst Free Library, located on the corner of Fourth and Main in Anaconda, Montana, and at the Montana Tech Library in Butte, Montana. The complete Administrative Record may also be reviewed at the EPA Records Center in the Federal Building, 301 South Park, in Helena, Montana.

The State of Montana concurs with the Selected Remedy, as indicated by its signature.

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances at and from the ARWW&S OU, if not addressed by implementing the response action selected in this ROD, may present an imminent and substantial endangerment to public health, welfare, or the environment.

DESCRIPTION OF THE SELECTED REMEDY

The ARWW&S OU is the fifth OU to receive remedial action at the Anaconda Smelter NPL Site. The first remedial action, taken at the Mill Creek OU, involved the relocation of residents from the community of Mill Creek after other initial stabilization and removal efforts. The second remedial action, taken at the Flue Dust OU, addressed flue dust at the site through removal, treatment, and containment. At approximately the same time, removal actions were undertaken, including permanent removal and disposal of Arbiter and beryllium wastes and the selective removal of contaminated residential yard materials from the community of Anaconda. The third remedial action addressed various waste sources found within the Old Works/East Anaconda Development Area (OW/EADA) OU, located adjacent to the community of Anaconda, and in areas of future development, and followed an initial removal action in the same area. Certain wastes within the OW/EADA OU received an engineered cover, including the Red Sands waste material and the Heap Roast slag piles, while others were consolidated and/or covered, including the floodplain wastes and miscellaneous waste piles. In addition, the third

action allowed economic development (i.e., construction of a golf course in the Old Works area) and provided the final response action at the Mill Creek OU.

The fourth remedial action, the Community Soils OU, addressed all remaining residential and commercial/industrial soils within the Anaconda Smelter NPL Site. The principal contaminant of concern (COC) at the Community Soils OU is arsenic in surficial soils from past aerial emissions and railroad beds constructed of waste material.

This remedial action at the ARWW&S OU will address all remaining cleanup decisions for the Anaconda Smelter NPL Site. It will also address potential impacts to surface and ground water from soils and waste sources such as tailings and slag as well as human and environmental risks associated with arsenic contaminated soils that have not been addressed by other response actions.

The Selected Remedy for the ARWW&S OU is comprised of several remedies for the waste media types found throughout the OU. The major components of these remedies are described below.

Soils and Waste Materials

Major components of the remedy for contaminated soils and waste material include:

- Reduction of surficial arsenic concentrations to below the designated action levels of 250 parts per million (ppm), 500 ppm, and 1,000 ppm through a combination of soil cover or *in situ* treatment.

- Reclamation of the soils and waste area contamination by establishing vegetation capable of minimizing transport of COCs to ground water and windborne and surface water erosion of the contaminated soils and waste areas. This vegetation will also provide habitat consistent with surrounding and designated land uses.

- Partial removal of waste materials followed by soil cover and revegetation for areas adjacent to streams. Removed material will be placed within designated Waste Management Areas (WMAs).

Ground Water

Major components of the remedy for ground water include:

- For alluvial aquifers underlying portions of the Old Works and South Opportunity Subareas, clean up to applicable State of Montana water quality standards through use of soil covers and removal of sources (surface water) to ground water contamination and natural attenuation.

- For the bedrock aquifers and a portion of the alluvial aquifer in the Old Works/Stucky Ridge and Smelter Hill Subareas, waiver of the applicable ground

water standard. The aquifers underlying these subareas cannot be cost effectively cleaned up through reclamation, soil cover, or removal of the sources (wastes, soils, and tailings) of the ground water contamination. Reclamation of soils and waste source areas with revegetation is required, which will contribute to minimizing arsenic and cadmium movement into the aquifers.

- For portions of the valley alluvial aquifers underneath the Old Works/Stucky Ridge, Smelter Hill, and Opportunity Ponds Subareas where ground water is underlying waste-left-in-place, point-of-compliance (POC) monitoring to ensure contamination is contained at the perimeter boundary of the designated WMA. Should POC monitoring show a spread of contaminants beyond the boundary of a WMA, institute treatment options for the ground water where practicable.

Surface Water

Major components of the remedy for surface water include:

- Reclamation of contaminated soils and engineered storm water management options to control overland runoff into surface waters.

- Selective source removal and stream bank stabilization to minimize transport of COCs from fluvially deposited tailings into surface waters. Removed material will be place within a designated WMA.

Institutional Controls (ICs) and Operations and Maintenance (O&M)

- The remedy will employ ICs and long-term O&M for the OU to ensure monitoring and repair of implemented actions. These actions will be coordinated through development of an ICs Plan and O&M Plan and will allow for communication with local government and private citizens. The plans will function as a tracking system for the agencies and describe and plan for potential future land use changes.

- The remedy calls for a fully-funded ICs program at the local government level. The Anaconda-Deer Lodge County (ADLC) government will be responsible for on-going oversight of O&M in the OW/EADA OU, implementation of a county-wide Development Permit System (DPS), and provision of public information and outreach through a Community Protective Measures program.

- In addition, the remedy will bring closure to previous response actions within the site that are already implemented, such as the Flue Dust remedy or the Old Works remedy, primarily through long term O&M for some or all of those actions which are integrated into this remedy.

Remedial Design/Remedial Action Management

The ARWW&S OU encompasses a very large area. with Remedial Action slated for approximately 20.000 acres. The size of the OU and the focus on land reclamation as the key remedy will require management tools during Remedial Design/Remedial Action (RD/RA) activities to help direct. prioritize. and sequence response actions and allow for changing community interests. Management of the OU can be accomplished with the following elements:

- Site Management Plan (SMP) - The SMP will provide a framework for future RD/RA activities and will incorporate remedial unit designations and sequencing criteria for the RD/RA actions.

- Historic Preservation and Mitigation Plan - Final implementation of the Regional Historic Preservation Programmatic Agreement will be accomplished. Separate agreements to address tribal cultural resources will be included.

- Wetlands Mitigation - Assessment and mitigation of impacts to wetlands from implementation of the remedy and communications with U.S. Fish and Wildlife Service will be coordinated.

The Selected Remedy will achieve reduction of risk to human health and the environment through the following:

- Preventing human ingestion of, inhalation of dust from, or direct contact with, contaminated soil and/or waste media where such ingestion or contact would pose an unacceptable health risk for the designated land use.

- Stabilization of contaminated soil and waste material against wind and surface erosion.

- Minimizing transport of contaminants to ground water and surface water receptors.

STATUTORY DETERMINATIONS

The Selected Remedy is protective of human health and the environment, complies with federal and state requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost effective. This remedy uses permanent solutions (e.g., reclamation, soil removal and engineered covers) and alternative treatment technologies to the maximum extent practicable for this site.

Since hazardous substances above health-based risk levels will remain on site (in WMAs), periodic reviews will be conducted throughout the remedial action and upon its completion to ensure that the remedy continues to provide adequate protection of human health and the environment.