



OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

ANNUAL EVALUATION SUMMARY REPORT

FOR THE

ABANDONED MINE LANDS PROGRAM

FOR

MONTANA

EVALUATION YEAR 2003

(October 1, 2002 to June 30, 2003)



COVER PAGE CAPTION

A pond collecting highly polluted mine drainage just below the toxic tailings piles of the Emery Mine in Montana

MONTANA ABANDONED MINE LANDS PROGRAM ANNUAL REPORT

Part I. Introduction

The Montana Abandoned Mine Land Reclamation (AMLR) program continues to operate under the guidelines of the Surface Mining Control and Reclamation Act (SMCRA), the Federal Assistance Manual and associated regulations. The Casper Field Office (CFO) of the Office of Surface Mining (OSM) conducts oversight activities in regard to the Montana program, and the topics of the oversight report were selected in concert with the Montana Department of Environmental Quality (DEQ), Mine Waste Cleanup Bureau (MWCB). The Montana AMLR program was initiated in 1980 and for the next 10 years the State concentrated on abating the hazards left by past coal mining practices. In 1990 the State certified that all known coal problems had been addressed and they were then authorized by OSM to begin reclaiming the multitude of high priority non-coal hazards in their inventory. However, any abandoned coal hazards that are discovered must still be given priority funding over non-coal projects, and this requirement has been followed by the State. The evaluation methods used to produce this report are based on OSM Directive AML-22 and associated regulations. This report covers the period of October 1, 2002 to June 30, 2003.

Both the design and construction portions of each AML project are completed by private contractors. The State has established a bid process to obtain the most qualified design and construction firms at the most cost effective price. The design and specification work is accomplished during the winter months when most outside work is impractical, and the actual reclamation work starts as soon as weather and ground conditions will allow equipment to be moved to the site. Many of the sites presently being reclaimed are in mountainous terrain and at high altitudes. This may drastically shorten the amount of time available for reclamation work because of the difficulty of moving the heavy equipment needed for reclamation in the snow, ice and mud. A part of the responsibility of the design contractor is to provide an inspector for the reclamation work, who will be on site during working hours to ensure that the work is being completed according to the plans and specifications that have been approved.

The MWCB staff is very knowledgeable and dedicated to the completion of the program goals. An excellent working relationship exists between the staff of the MWCB, the CFO staff, and the State and Federal agencies that must be contacted during the course of preparing projects for reclamation. The MWCB personnel spend most of the construction season in the field coordinating and supervising the reclamation work, and preparing future projects for reclamation. Some construction work may continue into the winter months but the staff primarily spends this time of the year working with the design contractors to get projects ready for the upcoming construction season.

No AMLR grant was awarded during this reporting period. The grant for the 2003 year becomes effective on July 1, 2003. The State continues to submit timely grant applications and the approval process is completed well within the 60 day government timeframe.

The following is a list of acronyms used in this report:

SMCRA Surface Mining Control and Reclamation Act

AMLIS	Abandoned Mine Land Inventory System
AMLR	Abandoned Mine Land Reclamation
MWCB	Mine Waste Cleanup Bureau
OSM	Office of Surface Mining
SHPO	State Historic Preservation Office
AML	Abandoned Mine Lands
CFO	Casper Field Office
DEQ	Department of Environmental Quality
BLM	Bureau of Land Management
MOA	Memorandum of Agreement
AMD	Acid Mine Drainage

Part II. Noteworthy Accomplishments

The Abandoned Mine Reclamation program in Montana continues its inspection of existing, and identification of previously un-documented, abandoned coal and hard rock mines throughout the State. In the 1980's and 90's, much of the location data originally collected for the 7000+ Problem Area Description Sheets (PADS) was in township/range/section (TNS) format. When the AML database was developed, these TNS locations were recalculated to the more computer compatible format of latitude and longitude. Because of this, ground-truthing these locations became one of the necessary goals for the Mine Waste Cleanup Bureau. Inspecting the present conditions at these sites, and assessment of the conditions at previously reclaimed sites, are two other important goals of the Bureau.

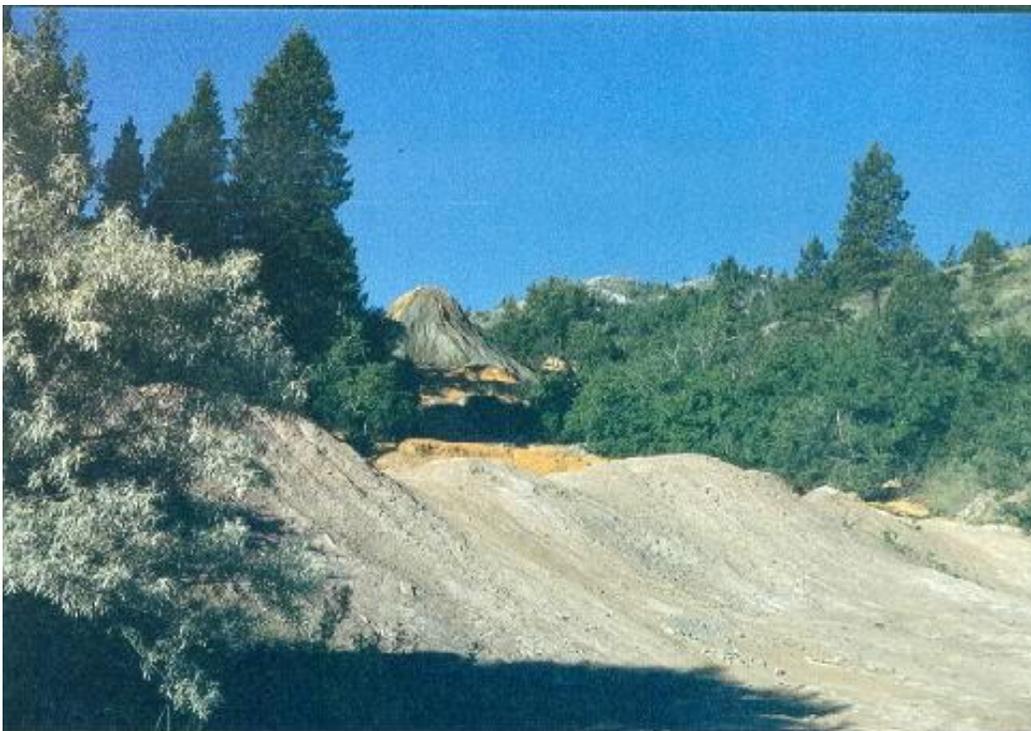
Each of the 56 counties in Montana has abandoned mine sites in them. This means that the AML PADS are widely distributed throughout the 147,000 square miles of the State. The MWCB has developed an aerial inspection program to deal with the widely dispersed distribution of AML sites, and they have eliminated the time consuming need to obtain landowner consent simply for inspection purposes. The approach taken for this inspection and aerial photography of the AML inventory is unique. The MWCB Bell Ranger III helicopter has been enlisted for the project. Mounted in the helicopter are a GPS receiver and a 5 mega-pixel Nikon digital still camera. These two units are connected to a laptop computer loaded with the PADS database. From this set-up the helicopter crew, AML personnel and pilot can collect accurate GPS location data, complete an inspection of conditions at the site and photograph the site in approximately 10 to 15 minutes. The computer/GPS link is being used not only for site latitude and longitude data, but also to establish routes to and between different sites. The route selection is important not only to make the flight time to each site as efficient as possible, but it will also allow the pilot to schedule refueling events to coincide with the planned route for the day. As a pre-flight planner, the GPS is an invaluable tool and the laptop computer is capable of displaying aerial photos of each site and the surrounding area, making site identification a certainty. Distance and heading from site to site is also provided, saving valuable flight time. The digital camera is mounted in a ball turret beneath the aircraft and can be operated to provide both overhead and oblique photos of the mine sites. The camera is controlled from inside the cockpit and the pictures taken are stored directly into the laptop's hard drive, eliminating the need to download stored photos at a later date. Good aerial photographs of each site will enable MWCB personnel to make assessments of site conditions without the time consuming ground site visits. The errors inherent with repeated after the fact data entry are also eliminated.

This ongoing project was started during the summer of 2003 in Broadwater and Lewis and Clark Counties and it will continue for several field seasons. Inclement weather and the summer fire seasons will limit the amount of ground visibility and the availability of helicopter pilots. During the course of

this project it is expected that new sites will be found and added to the database, making a continual assessment of priorities necessary as reclamation progresses.

Part III. On-Site Evaluation of Reclamation Projects

Because of the short time frame of this reporting period and the fact that the majority of the period was during the winter months when no construction was underway, there was no on site evaluation of reclamation projects. Projects will again be evaluated during the 2004 annual report period and the results of those evaluations will be included in this report. Historically, Montana has done an excellent job of reclaiming the hazards of past mining. One example of this is the recently completed Spring Hill Project, a portion of which is shown in the following photos. Once reclamation is completed the MWCBC monitors each project closely for a three year period. If conditions warrant this monitoring period may be extended, but sites are usually revegetated, erosion problems cured, fencing removed and other problems solved by the end of the three year period. After the initial three year period MWCBC personnel continue to visit each site at least once every three years to ensure continued success with the reclamation.



Part of the Spring Hill Mine site near Helena, prior to reclamation in July of 1999.



The same area of Spring Hill Mine after reclamation in August of 2002.

Part IV. Emergency Program

No emergencies were reported during this evaluation period. The MWCB maintains a close liaison with the landowners in emergency prone areas, and they are prompt in getting to possible emergencies for a thorough investigation of the problem. Historically, emergency projects have been completed very quickly to ensure the health and safety of the general public.

Part V. Fiscal and Administrative Controls

No drawdown analysis was conducted during this abbreviated reporting period, but the CFO will complete a drawdown analysis during the 2004 evaluation year. Previously, the Montana AML program had a U.S. Treasury agreement and therefore an analysis of their drawdowns was not necessary. However, the yearly level of funding does not now meet the minimum standard for participating in the Treasury agreement and the annual analysis will be resumed.

In the past, the Montana DEQ has had considerable difficulty reporting AML program costs to OSM on a timely basis as required by the Federal Assistance Manual. The State now appears to have corrected this problem and are considered current in their reporting. A new property inventory that met the requirements of the Common Rule was taken by the State during the spring of 2003. Property continues to be reported and transferred correctly and in a timely manner. The Montana DEQ is timely with their A-133 audits and there are no audits outstanding. There are also no outstanding findings for any previous audits.

The reporting of income earned from the use of the MWCB helicopter has become an issue for OSM. The MWCB will report these revenues, however, the first accounting is not due until after the closing date for this annual report. This information will be evaluated and included in the next annual report.

When the helicopter is not being used by the MWCB it is utilized by other State agencies, but primarily for fighting forest fires. Outside users are required to pay for their use of the helicopter, and all hours of usage will be reported so a degree of overall use, and income derived from that use, can be obtained.

Part VI. Acid Mine Drainage

Acid Mine Drainage (AMD) is found throughout the State in both coal and non-coal abandoned mines, but the heaviest concentrations are found in the Belt Coal Field area. With normal reclamation procedures, the MWCB is able to control or eliminate most of the AMD from the non-coal mines. The Belt Coal Field continues to pose an unmanageable AMD problem with the funding level the State receives and the technology that is presently available regarding AMD. The only method currently available to treat the widespread AMD problem found in the Belt Coal Field is to construct a large water treatment plant, or several smaller plants at strategic locations. The polluted water could then be piped from throughout the area into the treatment facility or facilities. The cost of the treatment facilities and the pipelines necessary to handle the AMD could run as high as twenty times the annual AML allocation received by the State, and this does not include the cost of any maintenance or the routine operation of the system. The MWCB has completed a considerable amount of abandoned mine reclamation in the Belt area, and they continue to attempt to control the AMD situation through conventional methods of reclamation. The MWCB continues to monitor scientific advancement in the prevention and treatment of AMD in anticipation that a cost effective method will be found.

Part VII. PUBLIC PARTICIPATION

The MWCB considers the public an important component of the reclamation program, and conducts a public meeting prior to the start of each project at the community nearest the mine site. These meetings are well publicized and held in the evenings to allow maximum participation of the general public. The overall plan for the project area, construction design, maps, overlays and aerial photographs are available for viewing and comment. Individuals or groups may submit comments in writing or meet with the project manager at any time prior to the completion of the comment period. In addition, project managers meet with affected landowners to explain the project in detail, and keep them informed of the progress throughout the active life of the project. It is not unusual for work plans on a reclamation project to be altered as a result of comments by landowners, the general public or contractors who complete the work.

PART VIII. NATIONAL HISTORIC PRESERVATION ACT

The MWCB continues to administer their reclamation program in full compliance with the National Historic Preservation Act. The MWCB has done more than any other State or Federal agency in Montana to protect and enhance the legacy of mining in the State. An archaeological consultant is contracted to survey each project area for cultural resources prior to any ground disturbance on the site. The result of each survey is coordinated with OSM, the State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation. The MWCB has assisted in the repair of museums, moved artifacts from mine sites to museums, preserved historic mining sites, erected interpretative signs at mine sites and deposited an abundance of information in the State historic data bank. The archaeologist for the MECB has written narratives and mapped most of the individual project sites, historic mining districts and mining landscapes in the State. These have all been placed on the internet for public use, and the MWCB continues to coordinate with the Montana State Library to ensure that the information is maintained and up to date.