OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

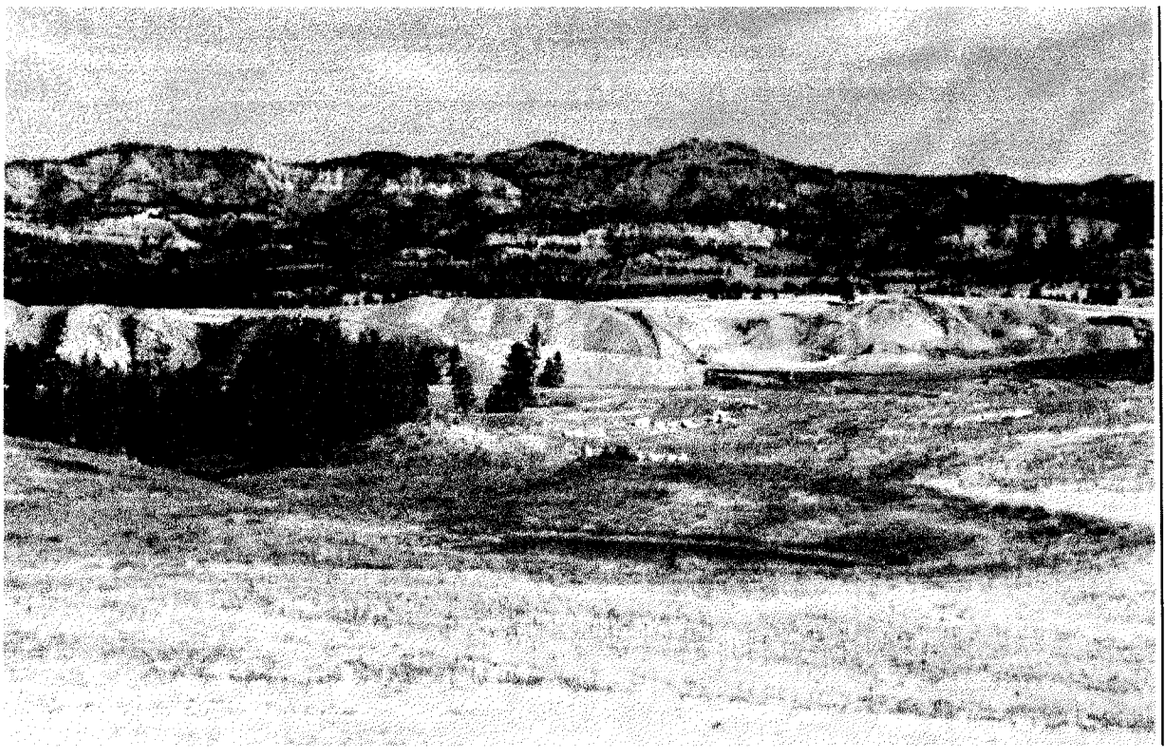
Annual Evaluation Summary Report

for the

Regulatory and Abandoned Mine Land Programs

Administered by the State
of

MONTANA



Evaluation Year 1997
(October 1, 1996 to September 30 , 1997)
(October 1997)

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Cover Photo: Reclamation, active mining and the Wolf Mountains in the background at the Westmoreland Resources Absaloka Mine.

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Regulatory Program

I. Introduction

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior. SMCRA provides authority to OSM to oversee the implementation of and provide Federal funding for State regulatory and abandoned mine land programs that have been approved by OSM as meeting the minimum standards specified by SMCRA. This report contains summary information regarding the Montana programs and the effectiveness of the Montana programs in meeting the applicable purposes of SMCRA as specified in section 102. This report covers the period of October 1, 1996 to September 30, 1997. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the Casper, Wyoming, OSM Office.

(Photo: Aerial view of reclamation at the Absaloka Mine showing another view of the same pond as the cover photo.)

The following list of acronyms are used in this report:

AMD . . . . . Acid Mine Drainage
AML . . . . . Abandoned Mine Lands
AMLR . . . . . Abandoned Mine Land Reclamation
AOC . . . . . Approximate Original Contour
BTTI . . . . . Branch of Technical Training and Information
CFO . . . . . Casper Field Office
CHIA . . . . . Cumulative Hydrologic Impact Assessment
EISMA . . . . . Excellence in Surface Mining Awards
EY . . . . . Evaluation Year
GIS . . . . . Geographic Information System
MT-DEQ . . . . . Montana Department of Environmental Quality
MWCB . . . . . Mine Waste Cleanup Bureau
NOV . . . . . Notice of Violation
NPRC . . . . . Northern Plains Resource Council
OSM . . . . . Office of Surface Mining Reclamation and Enforcement
PHC . . . . . Probable Hydrologic Consequences
RSI . . . . . Random Sample Inspection
SMCRA . . . . . Surface Mining Control and Reclamation Act of 1977
WRCC . . . . . Western Regional Coordination Center

II. Overview of the Montana Coal Mining Industry

Montana's demonstrated coal reserve base is approximately 120 billion tons, or about 24.6 percent or the total U.S. reserve base. Coal fields are found throughout the State, but most are located east of the Continental Divide. Of the 17 coal fields in the State, three (Fort Union, Powder River, and Bull Mountains) currently have producing mines. Montana coal ranges in rank from lignite to high volatile A bituminous, with most of the coal currently mined being sub-bituminous.

Coal mining began in Montana over 100 years ago. Early coal production was almost entirely from underground mines and was used by smelters, railroads, and for domestic purposes by early settlers of the State. Early underground production ranged from a few hundred thousand tons to peaks of as high as five million tons during World Wars I and II. Larger surface mining techniques after WWII boosted production to a high of nearly 42 million tons in 1994. Annual production for 1996 was approximately 37.2 million tons, a majority of which came from surface mines. Nearly all of Montana's coal production is used in coal-fired electrical generation facilities to produce electrical power; however, small amounts are also used for heating and other domestic uses.

There are currently 12 active surface mines and one underground mine, with total industry employment at 1,300 to 1,400 people in the State. This total includes one Indian Lands surface mine located on the Crow Ceded Strip adjacent to the northern boundary of the Crow Reservation. Mine size within the State ranges from 10 acres to nearly 22,000 acres. A total of approximately 61,000 acres are currently permitted in the State. Approximately 25,500 acres of the 61,000 acres permitted have been disturbed and 9,100 of these disturbed acres have been backfilled, graded, topsoiled, and permanently seeded.

III. Overview of the Public Participation Opportunities in the Oversight Process and the State Program

To encourage public participation in Montana's oversight process, OSM and the Montana Department of Environmental Quality (MT-DEQ) jointly hold public meetings periodically to discuss the development and implementation of Montana's oversight performance agreement.

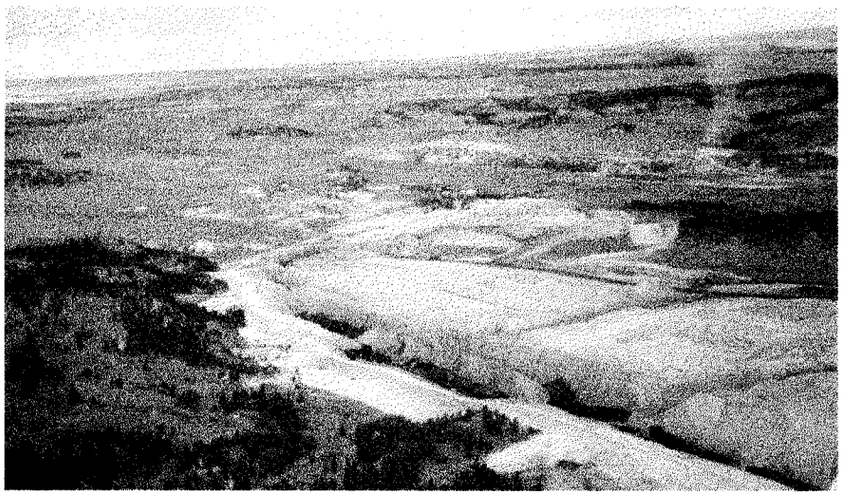
The MT-DEQ also has an open door policy and encourages contact with the coalfield citizenry at any time. The Montana program has, and the MT-DEQ uses the necessary public participation requirements in their program for permitting and program changes.

IV. Major Accomplishments/Issues/Innovations in the Montana Program

Overall, Montana's performance in implementing its regulatory program and meeting the purposes of SMCRA has been excellent. The Montana Department of Environmental Quality, the State agency responsible for implementing the provisions of SMCRA, manages its program in such a manner that there have been no serious threats to Montana's environment or the health and safety of the citizens of Montana's coalfields.

As with most of the semi-arid western states, water issues will always be areas of concern in Montana. The CFO and MT-DEQ are currently working together to address concerns raised by coalfield citizens in the Colstrip, Montana area regarding the quality and quantity of the groundwater recharge for the region (see section VII-F).

During the this evaluation period, the Western Energy Company's Rosebud Mine received the OSM's Excellence in Surface Mining Award for their reclamation efforts in the Hall of Fame category. Western Energy was recognized for its reclamation efforts that have satisfactorily withstood the tests of time. One of Western Energy's permits was the first permit approved under SMCRA.



V. Success in Achieving the Purposes of SMCRA as Measured by the Number of Observed Off-Site Impacts and the Number of Acres Meeting the Performance Standards at the Time of Bond Release

To further the concept of reporting end results, the findings from performance standard evaluations are being collected for a national perspective in terms of the number and extent of observed off-site impacts and the number of acres that have been mined and reclaimed and which meet the bond release requirements for the various phases of reclamation, as well as, the year in which those acres were disturbed and reclaimed. Individual topic reports are available in the Casper, Wyoming, Office which provide additional details on how the following evaluations and measurements were conducted:

A. Off-Site Impacts:

Sediment ponds were selected by the CFO to evaluate the off-site impacts of mining in Montana.

Sediment ponds when not adequately designed, constructed and maintained have the potential to result in discharges which fail to meet the effluent limits with the off-site impacts of sedimentation of downstream areas and degradation of downstream water quality.

(Photo: Undisturbed, active mining, and reclamation at the Big Sky Lee Coulee Mine.)

A sample of the pond certification approvals were reviewed to determine if:

1) All ponds are being designed and approved prior to construction. This item was selected to assure that:
   a) sediment ponds are correctly sized for the intended use and
   b) have been reviewed by the R.A. and comply with all applicable rules and regulations.
2) Ponds are being constructed prior to disturbance within the watershed. This item was selected to assure that controls are in place prior to mining disturbance.
3) Ponds are certified after construction. This assures that the sediment ponds are being constructed as designed /approved.

Part 1 for this topic was a major effort initiated by the DEQ during EY93 and has been completed during EY97 (WECO was the last mine to complete its submission of pond designs for this phase). However, the DEQ has not completed its review of all the designs/as-builts submitted.

Parts 2 and 3 included a comparison of state-approved designs with the on-the-ground as constructed condition of the sediment ponds and review of the post-construction certification of those sediment ponds. The Casper Field Office (CFO) conducted three partial inspections to review these items in the field and found that sediment ponds are being constructed per the approved designs and are being certified. However, the CFO did find a number of sediment ponds where the company had proposed changes to the structures that were deemed necessary to conform with the regulations that have not been approved by the DEQ resulting in sediment ponds that <u>may</u> not be adequate. During these six partial inspections no off site impacts were observed by the CFO. However, Montana did report 1 incident of minor off-site impact related to blasting.

B. <u>Bond Release:</u>

The CFO reviewed the effectiveness of the Montana bond release program in ensuring reclamation on lands affected by surface mining. The evaluation was based on the number of acres that potentially meet bond release standards and acres that have received bond release. The review centered on five specific areas.

1) Approximate original contour - Measured by the number of acres that have been backfilled and graded to the approved post mining contour.

2) Land capability - Measured by the number of acres where topsoil or other approved suitable material has been properly redistribute, seeded and vegetation

has been established to stabilize the surface from erosion, and a demonstration (grazing) is currently being made that the approved post mining land use (grazing and wildlife habitat) can be achieved.

3) Hydrologic reclamation - Measured as a comparison of the premining surface and ground water quality and quantity as compared to the postmining / permitted standards.

4) Contemporaneous Reclamation - Measured by comparison of the acres disturbed to the acres reclaimed (backfilled, graded, topsoiled and seeded) on an annual basis and expressed as a ratio of lands reclaimed to lands disturbed and eligible for reclamation.

5) Acres of lands released under Phase I, II, III, and IV of the Montana program.

Although the number of acres released from bond may appear minimal, a substantial amount of reclamation has occurred in Montana. Roughly 58% (approx. 14,773 acres) of the cumulative disturbed acreage (approx. 25,545 acres) has been backfilled and rough graded and 36% (approx. 9,101 acres) have been resoiled and reseeded to program standards. Most of these acres could be available for OSM Phase I and II bond release (see Table 6),if the operators within the state chose to apply for such release. Currently only one mining operation (Westmoreland Resources, Absaloka Mine) is collecting the productivity data (ie. average daily weight gain) from its grazing activities to demonstrate that the approved post mining land use is being achieved. The discussion covering the hydrologic review was a specific oversight topic and is covered in section VII-F.

Ideally, under a steady state, which the we believe the Montana coal industry has reached (there are no new mines coming on line or large production changes anticipated) the number of acres disturbed by mining in a years time will be offset or exceeded by the number of acres reclaimed on a statewide average. As indicated in Table A, in 1991 and 1992, reclamation in Montana approximated this 1 to 1 ratio. However, since that time the contemporaneous ratio has slipped to about 1/3 to 1 by 1996. While the MT-DEQ and OSM are concerned, as there are many factors than can influence this information. OSM and MT-DEQ feel that this issue is mine specific and intend to investigate the issue further during EY98 by focusing on specific mining operations and not on an industry or statewide basis.

Table A

YEAR	ACRES DISTURBED	ACRES RECLAIMED	RATIO OF RECL. VS. DIST.
1990	531	119	0.22
1991	737	700	0.95
1992	783	695	0.89
1993	807	550	0.68
1994	816	536	0.66
1995	1213	579	0.48
1996	1507	541	0.36

VI. OSM Assistance

OSM has assisted Montana financially through its contribution of approximately 80 percent of the costs associated with Montana's reclamation program. OSM also assists the MT-DEQ technically by supplying access to OSM-BTTI training, and WRCC technical assistance whenever necessary.

VII. General Oversight Topic Reviews

A. State Program Amendments:

To evaluate the current status of Montana's approved program, the Casper Field Office (CFO) developed a list of all 30 CFR Part 732 (program deficiency) issues sent to Montana from the approval date of its permanent program in March 1980 through June 1996. There were new 732 letters submitted to Montana in 1996 that are currently being addressed also. The list of past 732 issues was reviewed jointly by OSM and MT-DEQ to determine if and when Montana had changed its program to address this list of required program changes.

Montana has addressed a majority of these issues through the state program amendment process; however, several of the required program changes are included in state program amendment packages currently being reviewed by OSM. Contingent on OSM's approval of the amendments in progress, Montana will be in full compliance with all required program changes requested of them through June 1996.

B. Inspection and Enforcement:

The CFO conducted two Random Sample Inspections (RSI's) in Montana during EY97 to evaluate Montana's inspection program. In addition to the two RSI's, the CFO conducted 3 partial inspections focused on off - site impacts, 6 Excellence in Surface Mining Awards (EISMA) site visits, 1 partial/bond release inspections and an aerial overflight of the mining operations. The CFO also conducted 4 complete and 7 partial inspections of the one Indian Lands mine. No enforcement actions were taken.

Montana inspectors conducted 95 complete and 86 partial inspections during the review period (10/01/96 to 9/30/97).

All inspection reports prepared by Montana were reviewed by the CFO and were found to be complete, documented site/mine conditions, tracked violation status and provided continuity with previous inspections.

Montana issued 10 enforcement actions (8 NON's an 2 FTA CO's) during the evaluation period. All enforcement actions were issued and terminated/vacated in a timely manner. Remedial measures and abatement periods were appropriate.

No ten-day-notices were issued by the CFO during this review period.

C. Drawdowns and Disbursements:

A drawdown analysis was conducted during the evaluation period by CFO for grant funds that apply to the Montana MT-DEQ inspection and enforcement program. The purpose of this analysis was to assure that OSM and Montana meet the US Treasury requirement of minimizing the time between the transfer of funds from US Treasury and the time expenditure is made for program purposes. CFO reviewed all drawdowns and found that they were expended timely and that the amounts drawn equaled the amount expended. No problems were found.

D. Grants Management - Audits and Audit Recommendations:

CFO depended on A-128 Audits for financial reviews this evaluation period. The last audit completed was for the 2 year period ending June 30, 1995. There were no findings pertaining to the administration and enforcement program. Another audit for the following one year has been completed but has not yet been received by O.M. The next audit will begin in early calendar year 1998. Montana is timely in conducting their A-128 audits.

CFO will conduct some specific internal control reviews during the next evaluation period.

Montana did not meet the required time frames for closeout of the Administration and Enforcement grant which applied to this evaluation period. This was primarily due to a State-wide reorganization effort which resulted in down time by staff. The CFO approved their request for extension for closeout.

E. Program Policy Guidelines:

Montana has proposed and initiated the development of subject matter guidelines to address policy interpretation for the following areas within their program:

1. Hydrology
2. Post-Mine Topography
3. Revegetation
4. Archeology

To date, the archeology guidelines have been completed to final draft form and have been submitted to OSM and other agencies for review and comment prior to finalizing the document. While not yet in any complete draft form, the other proposed guidelines are in various stages of development and are being addressed by the MT-DEQ staff as time and workload allow.

F. Hydrology:

During the evaluation year, the MT-DEQ held a public meeting in Colstrip, Montana to solicit specific comments and input from the area mines and citizens regarding surface and groundwater concerns. The meeting was well attended by both citizens and representatives of the mines and all parties commented and participated freely in the discussions.

At this meeting, it became apparent that while the mines are generally in compliance with their permit requirements for gathering and reporting hydrologic data, the citizens did not feel that the MT-DEQ was evaluating and utilizing the data to track or predict trends in post-mine water quality and quantity either on or off the current permits. Specific concerns regarding groundwater recovery rates and water quality standards for livestock (required postmining land use is primarily grazing for livestock and wildlife) were discussed at length.

In response to the concerns raised at the Colstrip meeting, the MT-DEQ staff proposed a hydrologic workplan to develop a GIS formatted database to house the current and historic hydrologic data and related information essential to understanding and monitoring changes to hydrologic systems in the mining districts. This workplan proposes to phase in the collected hydrologic data to develop the GIS layers with an end goal of incorporating a groundwater flow model to be used to monitor and evaluate regional hydrologic trends.

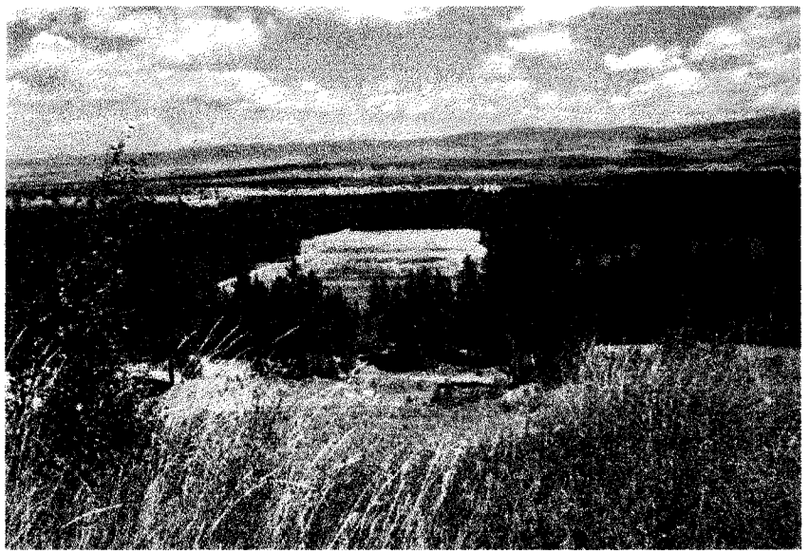
Data for the Decker area is already in an electronic format and as such will be easier to incorporate into the various GIS layers. The Decker area will be used as the pilot area to develop the propose model, primarily because of the type and condition of the available hydrologic data. This approach will then expedite use and evaluation of the model on the Colstrip area as the data from this area is properly converted to the GIS format and input into the GIS layers.

The Casper Field Office will continue to work with the MT-DEQ to develop and promote the use of the GIS technology for this proposed workplan by continued monitoring of the issue and providing assistance as necessary to help the MT-DEQ respond to citizen concerns.

VIII. Oversight Topics Proposed But Not Evaluated

A. AOC/Alternate Reclamation:

Those Montana permits containing provisions for bluff retention, steep slope reclamation, and thin breaks will be reviewed to determine if the proper demonstrations are available to document that these features meet program provisions. Permits containing provisions for alternate reclamation that were approved or revised by MT-DEQ after the OSM letter of July 15, 1994, will be evaluated for documentation of the conditions defined by that letter and all state provisions which apply (AOC, wildlife enhancements, stability, etc.). The CFO will be continuing this review in the EY98 oversight.



Abandoned Mine Land Program

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), a Programmatic Agreement between the State and the Casper Field Office (CFO) of the Office of Surface Mining (OSM), the Federal Assistance Manual and associated, regulations and policies. The CFO conducts oversight activities on the Montana program, and the topics of this report were selected in a shared commitment process with the State. The Montana AMLR program was initiated in 1980 and for the next ten years the State concentrated on eliminating the hazards from past coal mining. In 1990 they certified that all known coal problems had been addressed and were authorized to begin reclaiming the multitude of non-coal AML hazards in the State. However, any abandoned coal hazards must still be given priority funding for reclamation when they are discovered. The evaluation methods used to produce this report are based on OSM Directive AML-22 and the Programmatic Agreement. The report covers the period of October 1, 1996 to September 30, 1997.

During this evaluation period a State governmental reorganization was undertaken in Montana. As a part of this reorganization the Abandoned Mine Reclamation Bureau was moved from the Department of State Lands to the Department of Environmental Quality and renamed the Mine Waste Cleanup Bureau (MWCB). Personnel within the Bureau and the mission of the MWCB remained the same, but the reorganization and subsequent office move caused some deadlines for annual and closeout reports on AMLR and Outcrop Fire grants to be delayed.

(Photo: Completed reclamation on the Curlew tailings project near Stevensville, MT.)

The State continues to obligate a high percentage of the funding provided in each grant for the abatement of past mining hazards. Design and construction contracts are awarded to the lowest qualified bidder and reclamation work is completed in a cost effective manner. The MWCB staff spends most of the spring, summer and fall in the field coordinating and supervising active reclamation. Some reclamation may continue into the winter months but most of the staff time during this period is spent coordinating design work on projects for the next construction year.

One of the most persistent and difficult problems to solve in the Montana AMLR program has been Acid Mine Drainage (AMD). Water draining from abandoned coal and non-coal sites is causing the pollution of many drainage areas and no cost effective method of abating this problem has been found. The MWCB is working closely with the States' two main higher educational institutions, the University of Montana and Montana State University at Bozeman, to find a solution to this problem. One researcher at the University of Montana has developed a gel-like substance that does an excellent job of filtering contaminants from polluted water. The same gel column has been used over one thousand times in laboratory situations and still filters out contaminants. To clean the gel column it is simply backwashed and the metals can be retained in a clean, pure form for reuse. No applications of the gel material have been tried outside of laboratory conditions, but the MWCB is interested in field testing the material when University personnel feel it is ready. Hydrologists have also discovered that a reduction of up to 33 percent of AMD can be achieved by planting a high water uptake vegetation mixture over an underground mine. This reduces the amount of water seeping into the mine and thus reduces the AMD coming from the mine.

No major issues were noted during this evaluation period and no past unresolved issues are outstanding. The MWCB continues to complete projects in cooperation with other land managing agencies such as the United States Forest Service and the Bureau of Land Management to reduce costs to all agencies involved in abandoned mine reclamation. The relationship with the State Historic Preservation Office appears to be somewhat improved over the last evaluation period, and the State is still in full compliance with Section 106 of the National Historic Preservation Act on all reclamation projects.

II. Noteworthy Accomplishments

During this evaluation period the MWCB was approached by the Nature Conservancy and the Montana State Natural Heritage Program to reclaim an abandoned mine that contained a little brown bat nursery. In cooperation with these two organizations, a bat gate was installed at the mine opening to stop the vandalism that was occurring to the nursery and to provide safety to the general public. This cooperative project guarantees the continuation of an important breeding area for the bats.

At a project adjacent to the Blackfoot River to move toxic tailings out of the drainage area, an archeological site was discovered during the reclamation. Construction activities were immediately halted and the archeological specialist for the MWCB contacted the State Historic Preservation Office, the Advisory Council on Historic Preservation, and the U.S. Forest Service. A contractor was hired to complete a survey of the entire reclamation site to determine if additional artifacts were present. After the survey was completed the artifacts were catalogued and a report of the findings was written and distributed to all the parties, and the artifacts were turned over to the Forest Service to be placed in their archives. Everyone concerned was pleased with the immediate response and the professional way the archeological find was protected and investigated.

III. Project Construction

A. Construction Management

Staff personnel of the MWCB work very closely with both the design and construction contractors hired by the Bureau to ensure abatement of the AML hazards in the most cost effective and efficient manner. Project designs and specifications for completed projects are retained so they may be modified as necessary and used in the future on similar projects. Because of the variances in terrain, weather, soil conditions, precipitation, mining types and vegetation, a high degree of technical expertise and versatility is necessary on the MWCB staff. This staff expertise, along with that of the contractors, ensures that reclamation will be complete and cost effective.

B. Post Construction Monitoring and Evaluation

Because of the large number of completed reclamation sites, the MWCB has implemented a staggered three year cycle of monitoring to ensure that all sites will be evaluated until they are deemed ready for release. However, projects with AMD will be monitored until both the water on the project site and that which runs off-site, is clean. No specific time frame or frequency has been established for monitoring water problems. Continued monitoring and evaluation of water will depend totally on the results of the tests performed during the monitoring period.

IV. Emergency Investigations and Abatement

In 1983 Montana received approval to administer its own emergency reclamation program. The State follows the procedures of its approved AML reclamation plan and the appropriate Federal guidelines and policies in handling emergency projects. Possible emergency situations are promptly investigated and the CFO is notified immediately of

the situation. Necessary coordination with other State, Federal and local agencies is accomplished properly and only the abatement of the health and safety hazard is completed with emergency funding. No emergencies were reported from Montana during this evaluation period.

V. Drawdowns and Disbursements

A U.S. Treasury agreement is in effect for the AML program and therefore no drawdown analysis is required. The CFO did verify that the agreement is in place and applies to the dates of the evaluation year.

VI. Grants Management

The CFO depended on the A-128 Audits for financial reviews this evaluation period. The latest completed A-128 audit for the two years which ended on June 30, 1995 disclosed no finding pertinent to OSM's grants program. Another A-128 audit is being conducted for the two year time frame ending on June 30, 1997, however, OSM has not yet received this audit report. Montana is timely in conducting A-128 audits.

Montana is usually timely in submitting grant reports, although the restructuring of the State government and the subsequent moves of the MWCB office did cause some delays in these reports during this evaluation period.

The CFO will conduct some specific internal control reviews during the upcoming evaluation period.

VII. Overall Reclamation Success

Montana continues to achieve a high degree of success in its AMLR program. The experienced and knowledgeable staff is dedicated to providing the best reclamation possible with the funding provided. During this evaluation period CFO staff visited two projects that were in the process of reclamation. Construction inspectors were present on both sites and the work was progressing smoothly. One of these projects was on a steep, rocky mountain slope and was posing a challenge to the contractor to complete the work safely and with a minimum of damage to his heavy equipment. The project has since been successfully completed with no injuries to construction personnel. The other active construction site was the second phase of a project. The first phase of this project reclaimed a tailings area, and the revegetation of this area is excellent. Four additional sites proposed for reclamation and three that have been reclaimed were also visited. All are hardrock sites and the completed reclamation is at or above State reclamation standards. Most of the sites visited are in the geological formation known as the Boulder Batholith. This is a 60 to 70 million year old formation that runs generally from Butte to the Helena area. It is very rich in gold, silver, copper, iron and lead, as well as several

other trace metals in recoverable amounts. It appears that every drainage in this Batholith has from one to several mines in it, and all the spoil was dumped into the streams. Water draining through this spoil produces AMD and causes pollution of the water downstream. This area is 80 to 100 miles long and 40 to 50 miles wide and the State has records of over 20,000 mining claims here. An average of about 20 abandoned mines are discovered and investigated each year and the most dangerous of these are added to the AML inventory.

With the exception of the AMD problem, the State has had tremendous success with its AMLR program. They continue to search for efficient and cost effective methods of abating the AMD hazards of past coal and non-coal mining.

(Photo: Curlew tailings project showing revegetation after the second growing season.)

APPENDIX A:

The following tables represent data pertinent to the State and Federal regulatory and abandoned mine land program activities within Montana. They also summarize funding provided by OSM and Montana staffing. Unless otherwise specified, the reporting period for the data contained in all tables is October 1, 1996 to September 30, 1997. Additional data used by OSM in its evaluation of Montana's performance is available for review in the evaluation files maintained by the Casper, Wyoming, OSM Office.

TABLE 1

COAL PRODUCTION (Millions of short tons)			
Period	**Surface mines**	**Underground mines**	**Total**
Coal production[A] for entire State:			
1994	42.15	0.003	42.153
1995	39.67	0.010	39.680
1996	37.033	0.138	37.171
1997	38.733	0.011	38.744

[A] Coal production as reported in this table is the gross tonnage which includes coal that is sold, used or transferred as reported to OSM by each mining company on form OSM-1 line 8(a). Gross tonnage does not provide for a moisture reduction. OSM verifies tonnage reported through routine auditing of mining companies. This production may vary from that reported by States or other sources due to varying methods of determining and reporting coal production. Montana production also includes production from the Crow Absaloka Mine.

TABLE 2

INSPECTABLE UNITS
(As of September 30, 1997)

Coal mines and related facilities	Number and status of permits								Insp. Unit[D]	Permitted acreage[A] (hundreds of acres)		
	Active or temporarily inactive		Inactive		Abandoned		Totals					
			Phase II bond release									
	IP	PP	IP	PP	IP	PP	IP	PP		IP	PP	Total
STATE and PRIVATE LANDS REGULATORY AUTHORITY: STATE												
Surface mines	0	12	0	5	0	0	0	17	17	0	223	223
Underground mines	0	1	0	0	0	0	0	1	1	0	42	42
Other facilities	0	0	0	0	0	0	0	0	0	0	0	0
Subtotals	0	13	0	5	0	0	0	18	18	0	265	265
FEDERAL LANDS REGULATORY AUTHORITY: STATE												
Surface mines	0	12	0	2	0	0	0	14	14	0	338	338
Underground mines	0	0	0	0	0	0	0	0	0	0	0	0
Other facilities	0	0	0	0	0	0	0	0	0	0	0	0
Subtotals	0	12	0	2	0	0	0	14	14	0	338	338
ALL LANDS [B]												
Surface mines	0	12	0	5	0	0	0	17	17	0	561	561
Underground mines	0	1	0	0	0	0	0	1	1	0	42	42
Other facilities	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	13	0	5	0	0	0	18	18	0	603	603

Average number of permits per inspectable unit (excluding exploration sites) 1

Average number of acres per inspectable unit (excluding exploration sites) 3,377

Number of exploration permits on State and private lands: . 6 On Federal lands: 6 [C]

Number of exploration notices on State and private lands: . 4 On Federal lands: 3 [C]

IP: Initial regulatory program sites.
PP: Permanent regulatory program sites.

[A] When a unit is located on more than one type of land, includes only the acreage located on the indicated type of land.

[B] Numbers of units may not equal the sum of the three preceding categories because a single inspectable unit may include lands in more than one of the preceding categories.

[C] Includes only exploration activities regulated by the State pursuant to a cooperative agreement with OSM or by OSM pursuant to a Federal lands program. Excludes exploration regulated by the Bureau of Land Management.

[D] Inspectable Units includes multiple permits that have been grouped together as one unit for inspection frequency purposes by some State programs.

TABLE 3

STATE PERMITTING ACTIVITY

Type of application	Surface mines			Underground mines			Other facilities			Totals		
	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres[A]	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres
New permits	0	0	0	0	0	0	0	0	0	0	0	0
Renewals	4	2	10,727	0	0	0	0	0	0	4	2	10,727
Incidental boundary revisions	5	5	32	0	0	0	0	0	0	5	5	32
Revisions (exclusive of incidental boundary revisions)	0	1		0	0		0	0		0	1	
Transfers, sales and assignments of permit rights	1	1		0	0		0	0		1	1	
Small operator assistance	0	0		0	0		0	0		0	0	
Exploration permits	6	6		0	0		0	0		6	6	
Exploration notices[B]	4	4		0	0		0	0		4	4	
Totals	20	19	10,759	0	0	0	0	0	0	20	19	10,759

OPTIONAL - Number of midterm permit reviews completed that are not reported as revisions __0__

[A] Includes only the number of acres of proposed surface disturbance.

[B] State approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

TABLE 4

OFF-SITE IMPACTS

RESOURCES AFFECTED			People			Land			Water			Structures		
DEGREE OF IMPACT			minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major
TYPE OF IMPACT AND TOTAL NUMBER OF EACH TYPE	Blasting	1	1									1*		
	Land stability	0												
	Hydrology	0												
	Enroachment	0												
	Other	0												
	Total	1	1	0	0	0	0	0	0	0	0	1	0	0

Total number of permits or mine sites with observed off-site impacts:
Permits 1 or Mine Sites 0

Total number of permits or mine sites evaluated:
Permits 18 or Mine Sites 0

Total number of observations made to evaluate mine sites or permits for off-site impacts 0

Report the degree of impact under each resource that was affected by each type of impact. More than one resource may be affected by each type of impact. Therefore, the total number of impacts will likely be less than the total number of resources affected; i.e. the numbers under the resources columns will not necessarily add horizontally to equal the total number for each type of impact. To report the number of mine sites or permits use the same criteria used to determine an inspectable unit in the State. Number of observations is based upon the criteria developed between each State and OSM and may include observations by both the State and OSM.

* Impact to structure is questionable.

TABLE 5

ANNUAL STATE MINING AND RECLAMATION RESULTS		
Bond release phase	**Applicable performance standard**	**Acreage released during this evaluation period**
Phase I	●Approximate original contour restored ●Topsoil or approved alternative replaced	1,176
Phase II	●Surface stability ●Establishment of vegetation	0
Phase III	●Post-mining land use/productivity restored ●Successful permanent vegetation ●Groundwater recharge, quality and quantity restored ●Surface water quality and quantity restored	0
	Total number of disturbed acres at end of last review period (September 30,1996)[1]	25,545.88
	Total number of acres disturbed during this evaluation year	772.88
	Number of acres disturbed during this evaluation year that are considered remining	0

[1] Disturbed acres in this category are those that have not received a Phase III or other final bond release (State maintains jurisdiction).

TABLE 6

MONTANA RECLAMATION SUMMARY

	ANNUAL ACREAGE				CUMULATIVE ACREAGE				TOTAL ACRES PERMITTED
YEAR	DISTURBED	BACKFILLED & GRADED	RESOILED	SEEDED	DISTURBED	BACKFILLED & GRADED	RESOILED	SEEDED	
1993	806.57	892.13	482.02	549.53	21,103	11,860	6,729	6,695	60,730
1994	816.02	649.80	394.31	536.31	21,966	12,530	7,116	7,141	60,354
1995	1213.22	757.20	408.41	579.01	22,610	12,750	7,278	7,313	59,181
1996	1507.32	739.00	463.86	540.56	24,075	13,768	8,008	8,022	58,963
1997	772.88	504.14	606.83	527.12	25,545	14,773	9,179	9,101	60,786

TABLE 7

STATE BOND FORFEITURE ACTIVITY
(Permanent Program Permits)

	Sites	Dollars	Acres
Bonds forfeited as of January 1, 1996[A]	2	$0	249.38
Bonds forfeited during EY 1996	0	$0	0
Forfeited bonds collected as January 1, 1996[A]	0	$0	0
Forfeited bonds collected during EY 1996	0	$0	0
Forfeiture sites reclaimed during EY 1996	1*	[B]	0
Forfeiture sites repermitted during EY 1996	0		0
Forfeiture sites unreclaimed as of September 30, 1996	2		0
Excess reclamation costs recovered from permittee	0	$0	0
Excess forfeiture proceeds returned to permittee	0	$0	0

[A] Includes data only for those forfeiture sites not fully reclaimed as of this date.

[B] Cost of reclamation, excluding general administrative expenses.

*MT-MWCB (AML) is working on the Bropy Mine, but not completely done. The bond was unsufficient to reclaim, especially as the Department will only receive $0.16 on the dollar for bond held.

TABLE 8

STATE PROGRAM STAFFING (Full-time equivalents at end of evaluation year)	
Function	**EY 1997**
AML Mine Land Program	10.0
Regulatory Program	18.9
Permit review	11.3
Inspection	3.8
Other (administrative, fiscal, personnel, etc.)	3.8

TABLE 9

FUNDS GRANTED TO STATE BY OSM (Millions of dollars)		
Type of grant	**Federal funds awarded**	**Federal funding as a percentage of total program costs**
Administration and enforcement	$0.86	82.8
Abandoned Mine Land	$3.78	100.0
Small operator assistance	$0	0.0
Totals	$4.64	

Appendix B
State's Comments on Report

DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMITTING AND COMPLIANCE DIVISION
INDUSTRIAL AND ENERGY MINERALS BUREAU

MARC RACICOT, GOVERNOR
1520 EAST SIXTH AVENUE

STATE OF MONTANA

(406) 444-4970
FAX (406) 444-1923
PO BOX 200901
HELENA, MONTANA 59620-0901

February 18, 1998

Harv Gloe
Office of Surface Mining
100 East B Street, Room 2128
Casper, WY 82601-1918

RE: Draft of Montana's Annual Report - Comments

Dear Mr. Gloe:

Thank you for providing our office with the opportunity for comments on OSM's Annual Report of Montana's Regulatory Program for EY 1997. We actually have very few substantive comments, that are outlined below, and will assume that your office has corrected the grammatical and spelling errors contained in the draft.

Page 3, line 5: change 22,000 acres, to 9,500.
Page 6, first paragraph: this paragraph does not make sense, but if a *the* were inserted after (EY-94), it might convey the meaning intended by OSM .
Page 6, **B** 2), line 4: grazing should be replaced by *grazing and wildlife habitat*, and further, *rangeland*, is not postmine land use.
Page 7, second paragraph, line 2: it is suggested the word *anticipated,* be inserted following *changes*.
Page 7, second paragraph, last sentence: Montana is probably not concerned on a statewide basis, but does share interest on a few specific operations where there appears to be a paucity of reclamation.
Page 9, fourth paragraph: The reason Montana did not meet the required time frames for closeout occurred because of the reorganization, loss of personnel in the Centralized Services Division, and the inability to replace those positions in a timely manner. The coal program had provided the necessary data well in advance of deadlines.
Page 9, last paragraph: While public opinion was solicited from area citizens, personnel from the mines attended the meeting and did provide comment.

Thanks again for the opportunity to comment. I believe the reason for the limited discussion relates to the completeness of draft, Montana's program, and the working relationship between our respective offices and personnel. We look forward to the next review period and continued interaction.

Sincerely,

Steve Welch

Steve Welch, Chief
Industrial and Energy Minerals Bureau
Permitting and Compliance Division

"AN EQUAL OPPORTUNITY EMPLOYER"

APPENDIX C

Casper Field Office Director's Response to Montana's Comments

On February 18, 1998, the Montana Department of Environmental Quality provided the Casper Field Office with their comments regarding the draft EY97 Annual Report. These comments and the Casper Field Office response follow:

1. MT Comment: Page 3, line 5: change 22,000 acres to 9500.

CFO Response: Upon closer review of the permitted mine acres, as reported by Montana in their Administration and Enforcement grant application, it was determined that the Western Energy Company Rosebud Mine complex (Areas A, B, C, D, and E) contains 24,425 acres instead of the erroneous 22,000 acres listed in the draft. The report has been corrected to incorporate the change.

2. MT Comment: Page 6, first paragraph: this paragraph does not make sense, but if *the* were inserted after (EY94), it might convey the meaning intended by OSM..

CFO Response: The report has been corrected to incorporate the suggested change.

3. MT Comment: Page 6, B2), line 4: grazing should be replaced by *grazing and wildlife habitat*, and further, *rangeland*, is not postmining land use.

CFO Response: The report has been corrected to incorporate the suggested change.

4. MT Comment: Page 7, second paragraph, line 2: it is suggested the word *anticipated*, be inserted following *changes*.

CFO Response: The report has been corrected to incorporate the suggested change.

5. MT Comment: Page 7, second paragraph, last sentence: Montana is probably not concerned on a statewide basis, but does share interest on a few specific operations where there appears to be a paucity of reclamation.

CFO Response: The report has been corrected to clarify our mutual intent to focus on this issue

further during the EY98 evaluation period.

6. MT Comment: Page 9, fourth paragraph: The reason Montana did not meet the required time frames for closeout occurred because of the reorganization, loss of personnel in the Centralized Services Division, and the inability to replace those positions in a timely manner. The coal program had provided the necessary data well in advance of deadlines.

CFO Response: The report was corrected to clarify circumstances as suggested.

7. MT Comment: Page 9, last paragraph: While public opinion was solicited from area citizens, personnel from the mines attended the meeting and did provide comment.

CFO Comment: The report was corrected to clarify the attendance and participation by all parties at the public meeting.