#### Office of Surface Mining Reclamation and Enforcement

#### **Annual Evaluation Summary Report**

for the

Regulatory

**Program** 

**Administered by the State** 

 $\mathbf{of}$ 

#### **COLORADO**

for

**Evaluation Year 1999** 

(October 1, 1998, through September 30, 1999)

January 2000

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#### 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 programs that have been approved by OSM as meeting the minimum standards specified by SMCRA. This report contains summary information regarding the Colorado program and the effectiveness of the Colorado program in meeting the applicable purposes of SMCRA as specified in section 102. The Colorado Department of Natural Resources, Division Of Minerals and Geology (DMG) is the regulatory authority for the State of Colorado. This year's report covers the period October 1, 1998 through September 30, 1999. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the OSM Denver Field Office.

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

DMG Division of Minerals and Geology

FTE Full-Time Equivalents

GPRA Government Performance Results Act

OSM Office of Surface Mining Reclamation and Enforcement SMCRA Surface Mining Control and Reclamation Act of 1977

WRCC Western Regional Coordinating Center

#### II. Overview of the Colorado Coal Mining Industry

Coal bearing regions within the State cover approximately 29,600 square miles, which is 28.4 percent of the total area of Colorado. Coal reserves vary from lignite to anthracite. More than 70 percent is bituminous, 23 percent is subbituminous, 5 percent is lignite, and less than 1 percent is anthracite. The demonstrated coal reserve base is about 17.08 billion tons, or 3.5 percent of the national reserve base. Of this reserve base, an unmineable fraction exists consisting of coal rendered not mineable because it is in or near alluvial valley floors, national parks, historic and archaeological sites, and under towns or properties where surface impacts are a concern. These restrictions are imposed by Section 522 of SMCRA. Some 8.8 million acres of coal rights in the State are owned by the Federal Government; on about 72 percent of this land, the Federal Government controls both the coal and surface rights. All Federal coal is leased by the U.S. Bureau of Land Management (BLM). BLM estimates that approximately 4.2 billion tons of reserve base are under Federal ownership. Recoverable coal reserves held under Federal lease are estimated to be approximately 1.9 billion tons (of which 540 million tons are surface mineable). On average, 96 percent of Colorado's coal production is obtained from mines on Federal lands. OSM supports the Colorado coal program through an annual grant that

provides for 79% of the programs costs.

Commercial coal production first began in 1861, while surface mining for coal began in the early 1950's. Underground production tonnage was first recorded in 1864. Generally, production climbed between 1875 and 1920. The 1 million tons per year milestone was reached in 1888, and the 5 million tons mark was attained by the end of the century. By 1910, production was at 10 million tons annually, and it remained steady until affected by the Depression. Production returned to 5 million tons per year through the mid-1930's. World War II increased production to 8 million tons per year. Following the war, the change to diesel fuel for locomotives and oil for electric production severely reduced the demand for coal, and production ranges remained at 2 to 4 million tons per year through 1963, increased to 8 million tons in 1976, then climbed rapidly to 19.3 million tons in 1981. Coal production declined somewhat through 1988, then climbed back to 19.3 million tons in 1992. During 1999, Colorado produced 22.3 million tons of coal.

Colorado continues to lead the world in record longwall production. The Twentymile Mine continues to hold the record with over one million tons mined in a month.

Surface and underground mines employ less than 2000 people. Employment peaked in the early 1980's with 4700 people producing coal. Currently 23 surface mines, 33 underground mines, 1 surface/underground mine, and 2 facilities are regulated under the approved State program by the Colorado Division of Minerals and Geology (DMG). Eight underground mines and six surface mines were producing coal at the end of the evaluation period. Permitted mine acreage per minesite ranged from 20 to 22,580 acres.

Differences in elevation create many climatic zones. Local annual precipitation can average less than 8 inches in some areas in extreme western Colorado and can average in excess of 30 inches in certain mountainous areas. Generally, precipitation rates are low at most minesites, making revegetation difficult. This problem can be overcome with careful species selection. The growing season can be up to 169 days in length at some sites, but is usually much less, especially in the mountainous regions of the western half of the State.

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

#### MINED LAND RECLAMATION BOARD MEETINGS

The Mined Land Reclamation Board held two of its monthly meetings away from its regular Denver meeting site. Meetings were held in Victor and Colorado Springs. By holding the meetings in the vicinity of the mining operations, public participation is encouraged by making the DMG and the Board more available to the public, and helps DMG and the Board to establish a presence outside of Denver.

#### JOINT DMG/OSM PUBLIC MEETINGS

DMG and OSM conducted two public meetings for the purposes of receiving comments and suggestions for oversight of the Colorado program. The meetings were held in coal mining regions in Trinidad and Craig. Notice of the meetings was published in a statewide distributed newspaper and local newspapers. The public was encouraged to submit written comments if unable to attend the meetings. In addition, approximately 130 letters were sent to environmental groups, the coal industry, and consultants with notification of the meetings.

#### EDUCATION AND COMMUNITY OUTREACH

DMG Coal program staff and OSM participated in the Northwest Colorado Coal Conference held in Craig in June. The conference was sponsored by the Associated Governments of Northwest Colorado. AGNC also hosted a reception for OSM Director Kathy Karpan. Ms. Karpan toured surface coal mines in northwest Colorado to observe quality reclamation and to discuss issues common to Colorado mines. DMG staff members assisted with the planning and helped guide the tours. The Division of Wildlife also provided the Director with a briefing on the successful reestablishment of Sharp-Tailed Grouse on reclaimed mine lands. While this species of grouse has been declining in other parts of the country, the population in northwest Colorado has increased in part because of the reclaimed surface mines.

Permitting activity in the North Fork Valley increased substantially during this evaluation year. In response to citizens' requests, the DMG held several public meetings to explain the permitting process and how citizens could be involved. DMG and OSM also participated in public meetings held by the Bureau of Land Management during the Environmental Impact Statement process and meetings of the Public Lands Partnership (a group consisting of local government officials, the BLM, citizen groups, and mine industry representatives). DMG also responded to citizen requests to make permitting materials more available in the North Fork Valley area by copying and sending proposed revisions to the Paonia Public Library. Mine operators were instructed to make copies of

future permitting actions available at the library. This is a more convenient location for citizens of the area than the county court house 30 miles away.

As part of OSM's Revegetation Success Outreach Initiative, the DMG hosted a public meeting to allow interested parties an opportunity to express their comments.

At OSM's Bond Release Forum in September, several coal staff members gave presentations highlighting Colorado bond release activities. Representatives of OSM, western state agencies, industry, private citizens and contractors participated in the forum.

DMG works closely with local citizen groups and schools at the Coal Basin Mines. DMG participated in a public meeting with the Redstone Community Association and the Crystal Valley Environmental Protection Association to inform citizens of the reclamation success, recent progress and future reclamation plans for the Coal Basin Mines. A tour of the mine was also given to these groups and all local citizens in September. Many school and volunteer groups have assisted with reclamation projects at the site including Aspen Middle School, Aspen Elementary School and the Colorado Rocky Mountain School in Carbondale. Yampah Mountain High School in Glenwood and Carbondale High School have used the site for environmental studies and as part of their river watch program.

DMG staff also made presentations to local university classes. These occurred at both the University of Denver and at Colorado State University. Presentations focused on the coal regulatory program and associated reclamation issues.

DMG has developed a public information display which includes photographs, charts, handouts, and other information on Division activities and coal mining in Colorado. The DMG display was used in other outreach efforts throughout the State including "A Taste of Colorado-Education Exhibit". The display was also used by the Education Foundation of the Colorado Mining Association for a program titled "Total Concept of the Mining Industry" which is presented to school teachers.

#### YOUTH IN NATURAL RESOURCES

The Colorado Department of Natural Resources manages a program known as Youth in Natural Resources. The mission of this program is to foster an interest in stewardship toward the state's natural resources by providing environmental education and opportunities for summer employment to Colorado's youth.

The Division of Minerals and Geology participated in this program in 1999 by hiring three high school students and one college student. In addition to their work at the Division, these students were given tours of active coal mining operations in Colorado and a power station where they learned how coal is used to generate electricity.

#### IV. Major Accomplishments/Issues/Innovations

#### **BOND RELEASE**

After reviewing and approving all requirements for Phase III bond release, the DMG terminated jurisdiction for two surface mines, an underground mine and a large part of a surface mine in northwest Colorado. These mines were reclaimed to the beneficial post mining land uses of rangeland/wildlife habitat and pastureland.

#### 1999 EXCELLENCE IN SURFACE COAL MINING RECLAMATION AWARD

The Basin Resources, Inc., Golden Eagle Mine, located in the Trinidad area, will receive a 1999 Office of Surface Mining Excellence in Reclamation Award. The Golden Eagle coal mine was recently reclaimed to a post mining land use of wildlife habitat and is now Bosque del Oso State Wildlife Area. The 30,000-acre Bosque del Oso wildlife area was purchased through joint efforts of the Rocky Mountain Elk Foundation, Great Outdoors Colorado and the Division of Wildlife. The DMG endorsed Golden Eagle Mine's nomination for this 1999 Excellence in Surface Coal Mining Reclamation Award.

#### BOND FORFEITURE SITE RECLAMATION

As a result of a DMG initiative, the state legislature allocated funds from the Colorado Severance Tax for reclamation and environmental remediation activities on selected coal mine sites where the permits were revoked and where the amount of forfeited bond money was insufficient to stabilize the site. Reclamation activities on these sites began during the 1999 construction season and will be completed no later than June 30, 2001.

#### RECLAMATION AWARDS

In an effort to encourage innovative reclamation techniques and to recognize those companies that have exceeded the regulatory requirements for environmental protection, DMG participated in the nomination process for the Colorado Mining Association's Annual Reclamation Awards. DMG recognized reclamation techniques, compliance history, and exemplary methods of ensuring public safety at four mine sites in the state. The companies were recognized at an awards luncheon during the Colorado Mining Association's annual conference.

#### **VEGETATION DATABASE**

DMG developed a vegetation database for all the monitoring data submitted by coal operators on their reclaimed lands. In addition to the monitoring data, the database has fields for the origin of topsoil, depth of topsoil replacement, year of seeding, and the seed mix. A comment field allows DMG to note any special reclamation techniques used and climatic conditions. The database will assist the DMG in monitoring trends during the ten year liability period and to monitor statewide vegetation trends for all reclaimed coal mines.

#### GOVERNMENT PERFORMANCE RESULTS ACT (GPRA)

DMG has started tracking and collecting data relative to active mining areas and coal mine reclamation to assist OSM in meeting the requirements of GPRA. This information, which includes acres backfilled and graded, topsoiled, and revegetated, acres in long term facilities use, etc. will also more accurately reflect the status of mine reclamation in Colorado.

#### **TRAINING**

DMG staff have participated in many of the training opportunities made available by the OSM. OSM/NTTP classes attended by the DMG were: Permitting Hydrology; Blasting and Inspection; Erosion and Sediment Control; Surface and Groundwater Hydrology; Soils and Revegetation; Spoils Handling and Disposal; Wetlands Awareness; Evidence Preparation and Testimony; and NEPA Compliance. TIPS classes attended by the DMG were: AutoCad Mapping; Introduction to GPS; and Intermediate Arc/View. The Office of Technology Transfer also offered classes the Coal Staff attended. They were: RUSLE; SEDCAD; Statistical Sampling; SurvCad for AutoCad; and a Statgraphics Refresher Course.

#### SPECIAL FOCUS REVIEWS

Four special focus reviews were conducted this evaluation year in Colorado. Specific review findings are found in Section VII. The reviews conducted to evaluate off-site impacts were for haul roads outside a sedimentation pond network and land disturbances. Phase I bond release and topsoil conservation were reviewed to determine reclamation success. Public availability of current permitting actions at the county courthouses was reviewed to assess customer service. Complete oversight inspections were also conducted this year.

The haul road review revealed one off-site impact that was occurring. DMG issued an appropriate Notice of Violation to correct the off-site impact and eliminate the conditions. The land disturbances review revealed conditions at two of the three mines evaluated that indicated a weakness in program implementation. To address this potential weakness, DMG inspectors will be researching their individual permits to determine if the weakness is pervasive among other permits. If it is found to be pervasive, DMG will explore options to address the issue.

The topsoil conservation and Phase I bond release evaluations conducted to address

successful reclamation did not identify any weaknesses or problem areas with DMG's implementation of its program. DMG is taking appropriate measures to ensure compliance with its program and is also requiring appropriate actions of the permittees in order to achieve successful reclamation.

During the course of the field part of these reviews, DMG was able to provide operators with guidance in these areas of review. For instance, during the site inspections, DMG would identify for operators conditions they were looking for as indicators of off-site impacts. Helpful discussions ensued that clarified for the operator's, the intent of the regulations and DMG's expectations.

#### DMG INTERNAL REVIEW - BOND FORFEITURE SITES

DMG conducted an internal review into the status of bond forfeiture sites in Colorado during EY99. The review consisted of determining the amount of reclamation bond funds unspent and available for reclamation of each site, development of a concise chronology of events on the individual sites, and updating descriptions of the physical characteristics of the individual sites.

# 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. Individual topic reports are available in the OSM Denver office which provide additional details on how the following evaluations and measurements were conducted.

#### A. Off-Site Impacts:

OSM conducted 15 inspections on active and inactive mines with at least a partial focus on off-site impacts. DMG conducted 292 inspections with at least a partial focus on off-site impacts. Off-site damages were observed seven times. Four of the observations were at permitted sites and three were at bond forfeiture sites. State Notices of Violation were issued for each occurrence at permitted sites. Five of the observations were deemed to have a minor impact on land resources, one was determined to have a minor impact on water resources, and one a moderate impact on structures. The nature of the violations do not present a discernable pattern. The Colorado program has been successful in deterring off-site impacts from coal mining operations.

#### **B.** Bond Release:

After reviewing and approving all requirements for Phase III bond release, the DMG terminated jurisdiction for an underground mine, two large surface mines, and a large part of another surface mine in northwest Colorado. These mines were reclaimed to the beneficial post mining land uses of rangeland/wildlife habitat and pastureland. A loadout facility also met the Phase III bond release criteria and will serve as an industrial rail site. In total, 5203.7 acres were granted a Phase III bond release.

Few permanent program mining operations in Colorado have acreage that has been granted a full Phase III bond liability release. Determining the success of the Colorado program based on this figure is deceptive because these Colorado coal operations tend to be large and long-lived. Some operators have been granted variances from contemporaneous reclamation as allowed by State and Federal regulations. More than half of the mines are underground operations where the surface disturbance will not be reclaimed until final closure of the mine. Also, all of the mines are subject to the 10-year minimum bond liability period. These combined factors result in acreage figures that do not represent the success of reclamation in Colorado. However, initial GPRA figures show that 49% of all acreage disturbed by coal mining has received a Phase I bond release. 67% of the disturbed acreage has been backfilled and graded and 23.2 square miles, or 14,848 acres, have been revegetated. Colorado leads the western States under WRCC in bond releases.

#### VI. OSM Assistance

The percentage of program costs for which OSM provides funding is relatively high in Colorado. The majority of mines operate on Federal lands and OSM funds the regulation of these mines through a Federal lands cooperative agreement. OSM provided \$1.63 million to DMG for the evaluation period. This figure represents 79 percent of the total program costs.

OSM continues to provide a wide variety of technical training opportunities for DMG personnel. DMG representatives have attended courses such as SB Slope, Earthvision, and Global Positioning Systems during the evaluation year.

OSM also provided assistance to DMG for the Coal Basin project. OSM personnel designed the Dutch Creek Diversion and assisted in monitoring construction of the channel to ensure that the design specifications were being met. OSM has awarded two grants to DMG, with the funds being derived from the OSM civil penalty fund. Approximately \$120,000 was awarded in September 1997 for the Dutch Creek Diversion construction project. An additional \$63,000 was awarded in September 1999. This money will be used to help remediate a portion of the old coal refuse pile.

OSM, as a partner with DMG, the Forest Service, and Pitkin County, participated in a noxious weed control program, provided personnel to assist DMG in a noxious weed

inventory of reference areas at the Coal Basin Mine. The inventory was intended to evaluate the effectiveness of the 1998 weed control effort, and to help delineate areas for continued treatment in 1999. This effort will be duplicated in 2000.

#### VII. General Oversight Topic Reviews

The OSM and DMG oversight team selected topics to be evaluated and defined the scope of the topic. For purposes of clarity and consistency, definitions and measurements were included in the agreement. Specific mines and a field evaluation schedule were agreed upon.

Oversight of the Colorado regulatory program focused on land disturbances and haul roads to assess off-site impacts. Phase I bond release and topsoil conservation were evaluated to assess reclamation success. Public availability of current permitting actions was evaluated to assess customer service. In addition to these topics, four complete inspections were conducted.

The joint OSM and DMG oversight team selected the topics to be evaluated and defined the scope of the topic. For purposes of clarity, definitions and measurements were included in the agreement so inspection staff and specialists would be consistent with each special focus evaluation. Specific mines and a field evaluation schedule were agreed upon.

#### A. Off-Site Impacts - Land Disturbances

Two of the three sites evaluated had field and permit discrepancies that indicate a potential weakness in DMG's program implementation. Maps for one underground mine, Mine A, were structured such that only features actually shown were considered within the disturbed area boundary; in other words, a disturbed area boundary line was not indicated. Maps for another underground mine, Mine B, had a disturbed area boundary drawn to indicate the extent of disturbance allowed. While either method is acceptable, lack of consistency may have had an impact on the problems observed.

Mine A had a road leading to an explosives storage area that was not shown on the map. The extent of highwall disturbance was shown, as was the explosives storage area; however, the road between the disturbed areas was only partially shown. DMG is working to correct this permit deficiency by including the road on the permit maps.

Mine B had the disturbed area boundary reflected on maps, but some of the mining features also indicated on the maps extended outside of this boundary. The permit was revised and approximately 30 maps were changed to reflect an accurate disturbed area boundary. OSM regards this topic to be an indication of the success of an in-depth evaluation that is conducted during special focus reviews. Both of the mines have recently become inactive after many years of coal production. Both of the mines have been inspected many times over the years by both DMG and OSM, yet these conditions escaped discovery. This shows that narrowly focused evaluations have the potential to identify problems that would not

normally be identified during complete inspections.

#### **Off-Site Impacts - Haul Roads**

Two of the three sites evaluated were free of off-site impacts from haul roads outside of sedimentation pond systems. The third site had one location where erosion had gone beyond the permit boundary. This erosion also created a deposition zone off of the permit area. The impact to rangeland was localized and minimal. Erosion such as this in and of itself does not demonstrate a weakness in the Colorado program. It was located in an area not readily observable, and all parties, including the operator, immediately recognized the condition as one that is not allowed to exist. DMG issued an appropriate enforcement action and the operator not only repaired the damage, but improved the drainage system to prevent another occurrence. DMG is adequately implementing this part of its approved program.

#### **B.** Reclamation Success - Phase I Bond Release

DMG and OSM did not have an adequate sample during evaluation year 1998 to make a definitive finding on this topic. It was continued into evaluation year 1999 and finalized. It was found that DMG is successfully implementing its approved program with regard to Phase I bond releases.

OSM found that the mines evaluated for this review met the requirements for Phase I bond release. In two instances, DMG observed field conditions that delayed a bond release. DMG required the operator to take appropriate remedial action, and verified the success of those actions, prior to issuing its decision to approve the bond release. DMG is properly evaluating factors necessary to approve Phase I bond release, and is taking appropriate action to require additional work when necessary.

#### **Reclamation Success - Topsoil Conservation**

Three mine sites were evaluated to ensure that all topsoil was being recovered, stored, and redistributed as required to attain successful reclamation. No problems were observed on any of the three mine sites. One mine site was segregating, storing, and redistributing soils by horizon, much like prime farm land requirements. DMG is successfully implementing its approved program to ensure the recovery and viability of topsoil materials to reach its goal of successful reclamation.

#### C. Customer Service - Public Availability of Current Permitting Actions

Fifteen permitting actions on seven mining operations were evaluated to ensure all documentation was being made available for public review locally. Records required to be available for public review were available at the public offices specified in the mining operation's approved permit. All the mining operations evaluated for this special focus topic

were in compliance with the approved Colorado program. The Team determined that the public is being afforded its opportunity to access and copy the required records.

#### **D.** Complete Oversight Inspections

Four complete oversight inspections were conducted jointly with DMG in Colorado during the oversight year. The inspections were conducted on operations that were not subject to a review under one of the topics listed above and had not been subject to an oversight inspection during the preceding year. While the inspections were conducted as complete inspections, critical attention was paid to the conditions that were reviewed under the special focus topics.

Diversity in such categories as operational status, type of operation, geography, and size was considered in selecting the mine sites. No Ten-Day Notices or Federal enforcement actions were taken as a result of these inspections. The operations were found to be in compliance with the performance standards and permit requirements.

## Appendix A: Tabular Summary of Core Data to Characterize the Colorado Program

TABLE 1

| COAL PRODUCTION<br>(Millions of short tons) |                   |                      |       |  |  |  |  |  |
|---|-------------------|----------------------|-------|--|--|--|--|--|
| Period                                      | Surface<br>mines  | Underground<br>mines | Total |  |  |  |  |  |
| Coal production <sup>f</sup> Annual Period  | for entire State: |                      |       |  |  |  |  |  |
| 1997  | 9.62              | 18                   | 27.42 |  |  |  |  |  |
| 1998 9.61                                   |                   | 16.5                 | 26.11 |  |  |  |  |  |
| 1999  | 6.88              | 15.42                | 22.3  |  |  |  |  |  |
|   | 26.11             | 49.72                | 75.83 |  |  |  |  |  |

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.

**TABLE 2** 

| INSPECTABLE UNITS As of September 30, 1999  |                              |            |            |                          |        |           |       |       |                         |       |          |                     |
|---|------------------------------|------------|------------|--------------------------|--------|-----------|-------|-------|-------------------------|-------|----------|---------------------|
|   | Number and status of permits |            |            |                          |        |           |       |       |                         |       |          |                     |
|   | Activ                        | e or       | Ina        | ctive                    |        |           |       |       |                         | Perm  | itted ac | creage <sup>A</sup> |
| Coal mines and related  | temporarily<br>inactive      |            |            | Phase II bond<br>release |        | Abandoned |       | als   | Insp. Unit <sup>D</sup> | (huno | dreds of | f acres)            |
| facilities  | IP                           | PP         | IP         | PP                       | IP     | PP        | IP    | PP    |                         | IP    | PP       | Total               |
| STATE and PRIVATE I   | LANDS                        |            | REGUI      | LATORY                   | Y AUTH | ORITY     | : STA | TE    |                         |       |          |                     |
| Surface mines   | 0                            | 8          | 0          | 2                        | 0      | 4         | 0     |       | 14                      | 0     | 75       | 75                  |
| Underground mines   | 0                            | 6          | 0          | 1                        | 0      | 7         | 0     | 14    | 14                      | 0     | 270      | 270                 |
| Other facilities  | 0                            | 2          | 0          | 0                        | 0      | 0         | 0     | 2     | 2                       | 0     | 2        | 2                   |
| Subtotals   | 0                            | 16         | 0          | 3                        | 0      | 11        | 0     | 30    | 30                      | 0     | 347      | 347                 |
| FEDERAL LANDS   |                              |            | REGU       | LATORY                   | Y AUTH | ORITY     | : STA | TE    |                         |       |          |                     |
| Surface mines   | 0                            | 6          | 0          | 3                        | 0      | 0         | 0     | 0     | 9                       | 0     | 403      | 403                 |
| Underground mines   | 0                            | 16         | 0          | 0                        | 0      | 3         | 0     | 19    | 19                      | 0     | 916      | 916                 |
| Other facilities  | 0                            | 0          | 0          | 0                        | 0      | 0         | 0     | 0     | 0                       | 0     | 0        | 0                   |
| Subtotals   | 0                            | 22         | 0          | 3                        | 0      | 3         | 0     | 19    | 28                      | 0     | 1,319    | 1,319               |
| ALL LANDS B   |                              |            |            |                          |        |           |       |       |                         |       |          |                     |
| Surface mines   | 0                            | 14         | 0          | 5                        | 0      | 4         | 0     | 14    | 23                      | 0     | 478      | 478                 |
| Underground mines   | 0                            | 22         | 0          | 1                        | 0      | 10        | 0     | 33    | 33                      | 0     | 1,186    | 1,186               |
| Other facilities  | 0                            | 2          | 0          | 0                        | 0      | 0         | 0     | 2     | 2                       | 0     | 2        | 2                   |
| Totals  | 0                            | 38         | 0          | 6                        | 0      | 14        | 0     | 49    | 58                      | 0     | 1,666    | 1,666               |
| Average number of permits per inspectable unit (excluding exploration sites)   Average number of acres per inspectable unit (excluding exploration sites) |                              |            |            |                          |        |           |       |       |                         |       |          |                     |
| 3103  |                              |            |            |                          |        |           |       |       |                         |       |          |                     |
| Number of exploration perm  | its on Sta                   | te and pri | ivate land | ls:                      |        |           |       | On Fe | deral lands:            |       |          | C                   |
| Number of exploration notic   | es on Stat                   | e and pri  | vate land  | s:                       |        | _4        |       | On Fe | deral lands:            |       | 2        | С                   |

IP: Initial regulatory program sites.

PP: Permanent regulatory program sites.

<sup>&</sup>lt;sup>A</sup> When a unit is located on more than one type of land, includes only the acreage located on the indicated type of land.

<sup>&</sup>lt;sup>B</sup> Numbers of units may not equal the sum of the three preceding categories because a single inspectable unit may include lands in more that 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 Federa 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 I

#### **TABLE 3**

#### STATE PERMITTING ACTIVITY As of September 30, 1999

| Type of   | Surface<br>mines |        |       | Underground<br>mines |        |                    | Other<br>facilities |        |       | Totals       |        |       |
|---|------------------|--------|-------|----------------------|--------|--------------------|---------------------|--------|-------|--------------|--------|-------|
| application   | App.<br>Rec.     | Issued | Acres | App.<br>Rec.         | Issued | Acres <sup>A</sup> | App.<br>Rec.        | Issued | Acres | App.<br>Rec. | Issued | Acres |
| New permits   | 0                | 0      | 0     | 0                    | 0      | 0                  | 0                   | 0      | 0     | 0            | 0      | 0     |
| Permit Revisions                                      | 2                | 0      | 0     | 4                    | 1      | 2406               | 0                   | 0      | 0     |              |        |       |
| Renewals  | 2                | 1      | 428   | 4                    | 1      | 900                | 0                   | 0      | 0     | 6            | 2      | 1,328 |
| Transfers, sales and assignments of permit rights     | 0                | 0      |       | 3                    | 2      |                    | 0                   | 0      |       | 3            | 2      |       |
| Small operator assistance                             | 0                | 0      |       | 0                    | 0      |                    | 0                   | 0      |       | 0            | 0      |       |
| Exploration permits                                   | 0                | 0      |       | 0                    | 0      |                    | 0                   | 0      |       | 0            | 0      |       |
| Exploration notices <sup>B</sup>                      |                  | 6      |       |                      | 0      |                    |                     | 0      |       |              | 6      |       |
| Revisions (exclusive of incidental boundary revisions |                  | 50     |       |                      | 104    |                    |                     | 2      |       |              | 156    |       |
| Incidental boundary revisions                         |                  | 0      | 0     |                      | 4      | 88                 |                     | 0      | 0     |              | 4      | 88    |
| Totals  | 0                | 57     | 428   | 11                   | 112    | 3,394              | 0                   | 2      | 0     | 9            | 170    | 1,416 |

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

Permit revisions are listed separately from other revisions (technical and minor) because of the intense and time consuming review.

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

<sup>&</sup>lt;sup>B</sup> State approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

**TABLE 4** 

|              |                |   |        |           |       | IA    | DLC 4    |        |         |          |           |            |            |       |  |
|--------------|----------------|---|--------|-----------|-------|-------|----------|--------|---------|----------|-----------|------------|------------|-------|--|
|              |                |   |        |           | OF    | F-SIT | E IMPAC  | TS     |         |          |           |            |            |       |  |
| RESOU        | RCES AFFECTE   | D | People |           |       |       | Land     |        |         | Water    |           |            | Structures |       |  |
| DEGR         | EE OF IMPACT   |   | minor  | moderate  | major | minor | moderate | major  | minor   | moderate | majo<br>r | minor      | moderate   | major |  |
| TYPE OF      | Blasting       |   |        |           |       |       |          |        |         |          |           |            | 1          |       |  |
| IMPACT       | Land Stability |   |        |           |       |       |          |        |         |          |           |            |            |       |  |
| AND<br>TOTAL | Hydrology      |   |        |           |       | 2     |          |        | 1       |          |           |            |            |       |  |
| NUMBER       | Encroachment   |   |        |           |       |       |          |        |         |          |           |            |            |       |  |
| OF           | Other          |   |        |           |       |       |          |        |         |          |           |            |            |       |  |
| EACH TYPE    | Total          | 0 | 0      | 0         | 0     | 2     | 0        | 0      | 1       | 0        | 0         | 0          | 1          | 0     |  |
|              |                |   | C      | FF-SITE I | MPAC  | TS ON | BOND FO  | RFEITU | JRE SIT | ES       |           |            |            |       |  |
| RESOU        | RCES AFFECTE   | D |        | People    |       | Land  |          |        | Water   |          |           | Structures |            |       |  |
| DEGR         | EE OF IMPACT   |   | minor  | moderate  | major | minor | moderate | major  | minor   | moderate | majo<br>r | minor      | moderate   | major |  |
| TYPE OF      | Blasting       |   |        |           |       |       |          |        |         |          |           |            |            |       |  |
| IMPACT       | Land Stability |   |        |           |       |       |          |        |         |          |           |            |            |       |  |
| AND<br>TOTAL | Hydrology      |   |        |           |       | 3     |          |        |         |          |           |            |            |       |  |
| NUMBER       | Encroachment   |   |        |           |       |       |          |        |         |          |           |            |            |       |  |
| OF           | Other          |   |        |           |       |       |          |        |         |          |           |            |            |       |  |
| EACH TYPE    | Total          | 0 | 0      | 0         | 0     | 3     | 0        | 0      | 0       | 0        | 0         | 0          | 0          | 0     |  |

The objective of this table is to report all off-site impacts identified in a State regardless of the source of the information. Report the degree of impact under each resource that was affected by each type of impact. Refer to guidelines in Directive REG-8 for determining degree 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. As provided by the Table, report impacts identified on bond forfeiture sites separately from impacts identified on other sites. If bond forfeiture sites were not evaluated during the period, clearly note the table to indicate that fact. Impacts related to mine subsidence or to other areas where impacts are not prohibited are not included in this table. **Refer to report narrative for complete explanation and evaluation of the information provided by this table.** 

TABLE 5

#### ANNUAL STATE MINING AND RECLAMATION RESULTS

| Bond release<br>phase | Applicable performance standard  | Acreage released<br>during this<br>evaluation period |
|-----------------------|--|--|
| Phase I               | •Approximate original contour restored •Topsoil or approved alternative replaced   | 453.3  |
| Phase II              | •Surface stability •Establishment of vegetation  | 754.8  |
| Phase III             | Post-mining land use/productivity restored     Successful permanent vegetation     Groundwater recharge, quality and quantity restored     Surface water quality and quantity restored | 909.8  |
|                       | Bonded Acreage Status <sup>A</sup>   | Acres  |
|                       | Total number of bonded acres at end of last review period (September 30, 1998) <sup>B1</sup>   | N/A  |
|                       | Total number of bonded acres during this evaluation year   | 23,647   |
|                       | Number of acres bonded during this evaluation year that are considered remining, if available  | 0  |
|                       | Number of acres where bond was forfeited during this evaluation year (also report this acreage on Table 7)   | 0  |

A Bonded acreage is considered to approximate and represent the number of acres disturbed by surface coal mining and reclamation operations.

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

#### **TABLE 7**

#### STATE BOND FORFEITURE ACTIVITY

#### (Permanent Program Permits)

|  | Number<br>of Sites | Dollars     |   | Disturbed<br>Acres |
|--|--------------------|-------------|---|--------------------|
| Bonds forfeited as of September 30, 1998 <sup>A</sup>        | 13                 | \$4,677,813 |   | 1206               |
| Bonds forfeited during EY 1999                               | 0                  | \$0         |   | 0                  |
| Forfeited bonds collected as September 30, 1998 <sup>A</sup> | 13                 | \$4,677,813 |   |                    |
| Forfeited bonds collected during EY 1999                     | 0                  | \$0         |   |                    |
| Forfeiture sites reclaimed during EY 1999                    |                    |             | В |                    |
| Forfeiture sites repermitted during EY 1999                  | 0                  |             |   |                    |
| Forfeiture sites unreclaimed as of September 30, 1999        | 0                  |             |   |                    |
| Excess reclamation costs recovered from permittee            | 0                  | \$0         |   |                    |
| Excess forfeiture proceeds returned to permittee             | 0                  | \$0         |   |                    |

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

<sup>&</sup>lt;sup>B</sup> Cost of reclamation, excluding general administrative expenses.

TABLE 8

### STATE STAFFING (Full-time equivalents at end of evaluation year)

| Function  | EY 1999 |
|---|---------|
| Regulatory program                              |         |
| Permit review                                   | 19.6    |
| Other (administrative, fiscal, personnel, etc.) | 6.4     |
| TOTAL   | 26      |

**TABLE 9** 

#### FUNDS GRANTED TO [STATE] BY OSM

(Millions of dollars) EY 1999

| Type of grant                  | Federal<br>funds<br>awarded | Federal funding<br>as a percentage<br>of total<br>program costs |
|--------------------------------|-----------------------------|---|
| Administration and enforcement | \$1,609,340                 | 79%   |
| Small operator assistance      | 0                           | О   |
| Totals                         | \$1,609,340                 |   |