**OFFICE OF SURFACE MINING**

**RECLAMATION AND ENFORCEMENT**

# Annual Evaluation Summary Report

# for the

# Regulatory Program

# Administered by the State

# of

# COLORADO

# for

**Evaluation Year 2005**

**(July 1, 2004 through June 30, 2005)**

**September 13, 2005**

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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 administration of and provide Federal funding for State regulatory programs that have been approved by OSM as meeting the minimum standards of SMCRA. This report contains summary information regarding the Colorado Division of Minerals and Geology (DMG) implementation of the approved Colorado program

## II. Overview of the Colorado Coal Mining Industry

Coal underlies 30,000 square miles or 28 percent of the State. Colorado is eighth in the United States in the demonstrated reserve base of coal (16.96 billion tons). The coal reserves are three-quarters bituminous and nearly one-quarter subbituminous. There are also small amounts of lignite and anthracite.

Since the commencement of mining in 1861, mines in Colorado have produced over 1 billion tons of coal. Currently (2004 annual coal production), Colorado ranks sixth among the coal-producing States. Coal production in Colorado has risen dramatically in the last decade. Mines are currently producing more coal than at any time in the State's history. Production in calendar year 2004 was 39.5 million tons (table 1).

Electric power plants burn most of the coal produced in Colorado. The mined coal is low in sulfur, ash, mercury, and trace elements. Colorado coal mining companies ship most of this "clean air compliance coal" by railroad to power plants in the Midwest and South, where it is blended and burned with lower quality coal.

As of June 30, 2005, there were 50 inspectable units (table 2). For these operations, permitted acreage totaled 163,300 (table 2) and disturbed acreage (which includes long-term mine facilities and active mine areas) totaled 25,740 (table 6). Of the 12 operations that were actively mining coal as of June 30, 2005, 7 were underground mines, and 5 were surface mines. Five of the 7 underground mines use the longwall mining method, and two used the room-and-pillar mining method.

The Federal government owns approximately 8.8 million acres of coal in the State. Slightly more than half of the inspectable units have Federal lands within their permit areas (table 2). Colorado's coal mining industry has a significant impact on the local and State economies. The mines employ about 2,000 persons. In 2004, they paid $9.9 million in severance taxes, which was used to support local and State governments and projects; and $41.8 million in Federal and State coal royalties (Colorado Geological Survey & Colorado Mining Association, 2004 annual statistics).

Differences in elevation throughout the State create many climatic zones in Colorado coal country. Local annual precipitation averages less than 8 inches in some areas in extreme western Colorado, to 30 inches in certain mountainous areas. The growing season can be up to 169 days in length at some sites, but is usually much less, especially in the mountainous regions.

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

### A. Oversight Process

Each year OSM and DMG jointly evaluate DMG's program for regulating coal mining. They determine how effective DMG is in ensuring that coal mine reclamation is successful, in preventing offsite impacts, and in providing service to its customers. Evaluation parameters of these three, key areas are further discussed in OSM Directive REG-8 "Oversight of State Regulatory Programs". During the year, the Team solicits input from potentially interested parties on the topics that OSM and DMG should evaluate. The Team has previously held advertised public meetings in all of Colorado's coal producing regions; and also annual mailings to coal mining stakeholders soliciting input for the oversight process.

During July 2004, the Team sent an annual outreach letter to 34 mining companies, 11 State agencies, 22 Federal agency offices, and 26 environmental organizations. The Team requested suggestions for topics concerning reclamation success, offsite impacts, and customer service that the Team should evaluate. OSM / DMG did not receive any suggestions in response to the Team letter.

### B. Colorado Program

#### 1. Mined Land Reclamation Board Meeting

The Mined Land Reclamation Board held one of its monthly meetings in Colorado Springs, away from its regular Denver meeting site. Holding meetings in the vicinity of the mining operations encourages public participation by making DMG and the Board more available to the public, and it helps DMG and the Board to establish a presence outside of Denver. Mine tours representing various types of mines and technologies help the Board better understand Colorado mining and reclamation issues.

#### 2. Education and Community Outreach

DMG participated and made a speaking presentation at the Associated Governments of Northern Colorado's (AGNC) 2005 Coal Conference, which was held in Meeker in May 2005. DMG updated the attendees (coal mining companies, interested citizens, local governments, and State and Federal agencies) on various aspects of its program. OSM's Western Region Director also made a presentation at this coal conference highlighting OSM activities on national rulemaking, AML reauthorization, and OSM Western Region initiatives including technology transfer and technical assistance to Colorado, and other states in OSM's Western Region.

DMG representatives participated in the planning and execution of the 2005 American Society of Mining and Reclamation (ASMR) annual meeting in Breckenridge. DMG sponsored a booth at the meeting, presented a paper on Cumulative Hydrologic Impact Assessments, and led a coal mine field trip in northwest Colorado. Three OSM Western Region staff members also participated on the 2005 ASMR planning committee; and helped execute the annual meeting by providing OSM staff support for workshops, technical assistance, publications, and coal mine field trips.

DMG made presentations to local university and school classes, professional organizations, Scout troops, and adult education classes. Presentations focused on the regulatory program and associated reclamation issues.

All DMG staff had an opportunity to work in the DMG booth at the 2004 Colorado State Fair and help educate visitors about mining and reclamation. Over 549,000 people attended the fair and the DMG booth was a very popular attraction. DMG also sponsored a booth at the Taste of Colorado. This is another popular event that attracts thousands of visitors.

#### 3. Information and Technology Exchanges

DMG participates in the OSM steering committees for the National Technical Training Program, the Technical Innovation and Professional Services program, Western Regional Technology Transfer Team, and the National Technology Transfer Team.

DMG staff attended the Western Regional Technology Transfer team's New Technologies Implementation Information Workshop. DMG staff also attended, and presented opening remarks, to the TIPS Geospatial Conference in Atlanta during December 2004.

At the September 2004 Conference of Government Mining Attorneys (COGMA) meeting in Denver DMG presented a talk on fly ash disposal at a surface coal mine in Colorado.

Participation in the Interstate Mining Compact Commission (IMCC) fall annual meetings, Western States meeting, and the workshop on underground mine mapping, provided an opportunity for DMG to exchange information with several other states.

## IV. Accomplishments, Issues, and Innovations

### A. Accomplishments

#### 1. Final Bond Releases

DMG fully releases a reclamation performance bond (phase III bond releases) when a permittee meets or exceeds all DMG program requirements on the land that it disturbed.

During evaluation year 2005 (EY 2005), DMG granted a final bond release for all land disturbed by one surface mine, for 61 acres at an active surface coal mine, and 3.3 acres of industrial post mining land use at a reclaimed surface mine. The total number of permitted sites for which Colorado has approved full and final bond release under its permanent regulatory program is now 13.

For further discussion of successful reclamation on permitted mines, see following section V.B.1., page 7.

2. DMG and Colorado Mining Association Reclamation Awards

To encourage innovative reclamation techniques and to recognize those companies that have exceeded the regulatory requirements for environmental protection, DMG participated in the award process for DMG's and Colorado Mining Association's Annual Reclamation Awards.

In nominating awards for mines, DMG cited exemplary reclamation techniques, excellence in hydrologic protection, outstanding steep slope reclamation and outstanding contemporaneous reclamation and innovative mining techniques. The companies recognized at an awards luncheon during the Colorado Mining Association's annual conference were: Trapper Mining Inc., Twentymile Coal Company, Oxbow Mining LLC, Mountain Coal Company, and Colowyo Coal Company, L.P.

3. Evaluation of Permit Revocation Sites

DMG continued to evaluate the reclamation status on one permit revocation site, and 13 bond forfeiture sites, in an effort to terminate jurisdiction. Three of the sites have been reclaimed and seeded for ten years or longer which is the required liability period. DMG released Phase III liability for the above permit revocation site that was reclaimed by a bank holding the performance bond. Effective with the EY 2005 release of the permit revocation site, DMG continues to annually evaluate 13 bond forfeiture sites for reclamation success and off site impacts.

4. Native Shrub Establishment on Reclaimed Lands

To address the challenge of establishing native shrubs on reclaimed lands, DMG received funding from the Colorado Severance Tax to research this topic. Initially, researchers from Colorado State University (CSU) conducted a comprehensive literature review to determine past research. Working with DMG, the Colorado Division of Wildlife, and several mining companies, CSU designed a field study to evaluate several shrub establishment techniques.
The operators of three coal mines installed the demonstration plots during the summer of 2000. CSU monitored the plots in 2001, 2002, 2003 and 2004. A final report for this study was presented by CSU in June 2005. Representatives from the Colowyo Coal Mine, Seneca II Mine, Trapper Mine, the DMG, Colorado Division of Wildlife, and the OSM toured the plots in June 2005 to evaluate the current plot status. Results show that shrub establishment is enhanced by topsoil replacement of approximately six inches, seed mixes designed to reduce grass competition, and fencing to prevent wildlife and domestic livestock grazing impacts. The reclamation techniques being evaluated will serve as templates for future reclamation planning to help establish diverse shrub communities.

5. Training

DMG continues to provide technical training and technology transfer opportunities to its staff. Staff members attended and assisted in the teaching of OSM classes covering Engineering Methods, AutoCAD, Blasting Log Evaluation, and Learning ARC GIS-9.

B. Issues

No unresolved issues

C. Innovations

1. Geographic Information Systems Development

As part of the underground mine mapping initiative funded by the Mine Safety Health Administration, the DMG digitized and geo-referenced all the active and historic mine maps for the Somerset coal field. Additionally, all coal mine permit boundaries were digitized and geo-referenced. This data was deployed to the DMG website and is available to the public online at: http://mining.state.co.us/maps.

## V. Success in Achieving the Purposes of SMCRA

The Team conducted evaluations and inspections to measure the number and extent of offsite impacts, the percentage of inspectable units free of offsite impacts, the number of acres that have been mined and reclaimed and meet the bond release requirements for the various phases of reclamation (reclamation success), and DMG's effectiveness in providing customer service. These evaluations and inspections are highlighted below in this section (section V), and in section VII, page 10.

Reports of the oversight evaluations and inspections conducted during EY 2005 are available for review in the OSM Denver Field Division office.

A. Offsite Impacts

An "offsite impact" results from a surface coal mining and reclamation activity or operation that causes a negative effect on resources (people, land, water, structures) outside the area authorized by the permit for conducting mining and reclamation activities. The applicable State program must regulate or control the mining or reclamation activity, or the result of the activity, causing an offsite impact. In addition, the impact on the resource must be substantiated as being related to a mining and reclamation activity, and must be outside the area authorized by the permit for conducting mining and reclamation activities.

Table 4 shows the number and type of offsite impacts that the Team documented as having occurred during EY 2005, for both permitted sites and bond forfeiture sites. For EY 2005, the Team documented three minor, hydrology, offsite impacts to a land resource on three bond forfeiture sites (table 4).

1. Permitted Sites

The Team assessed whether offsite impacts had occurred on each of the 37 permitted coal mining operations (as of June 30, 2005) in Colorado. The Team did so through the following on-the-ground observations: 182 DMG complete inspections; 318 DMG partial inspections (table 10), 4 OSM and DMG joint, complete oversight inspections; and 3 field evaluations of contemporaneous reclamation

practices.

The Team documented zero offsite impacts at the above 37 permitted coal mining operations for EY 2005. During routinely scheduled monthly meetings throughout the evaluation year, the Team reviewed, and documented discussions of six DMG Notices of Violation (NOV) that had a potential for offsite impact. After these monthly reviews, the Team decided the site specific circumstances of the violations resulting in these six NOV's did not result in offsite impacts at any of the mining operations.

2. Bond Forfeitures and Revoked Permit Sites

DMG has revoked the permits and forfeited reclamation performance bonds for 13 mines. In lieu of forfeiting a bond on another mine, it revoked the permit and allowed the bank securing the bond to reclaim the site. In previous evaluation years, DMG and the bank respectively, conducted reclamation on the 13 bond forfeiture sites and 1 permit revocation site (table 7).

The Team's initial evaluation of bond forfeiture and permit revocation sites occurred in EY 2000 and that evaluation documented three minor, hydrology offsite impacts to a land resource due to erosion and sedimentation caused by uncontrolled surface water runoff.
During EY 2005, DMG conducted 33 complete, and 39 partial inspections on these sites.

The Team initiated a two year topic evaluation beginning in EY 2004 to again determine offsite impacts from the bond forfeiture / permit revocation sites. Seven of the fourteen sites were evaluated in the field during EY 2004, and the remaining 7 sites were evaluated in the field during EY 2005.

The Team observed one minor, hydrology, offsite impact on one the seven sites evaluated during EY 2005. That site had essentially the same minor offsite impact (erosion resulting in sedimentation off the permit area) identified during the EY 2000 evaluation. The Team also determined that the same two bond forfeiture sites found to have a minor offsite impact during the EY 2000 and EY 2004 evaluations also had that same minor offsite impact during EY 2005 (table 4).

As a result, 78 percent of the bond forfeiture and permit revocation sites (11 of 14) were free of offsite impacts during EY 2005 (table 4).

The Team also found 78 percent of bond forfeiture and permit revocation sites free of offsite impacts during each of the following evaluation years: EY 2004, EY 2003 (9 month evaluation period), EY 2002, and EY 2001.

The results of this EY 2005 bond forfeiture sites evaluation can be found on page 11 of this report at section VII, B.

3. Joint, Complete, Oversight Inspections

Each year the Team evaluates offsite impacts and reclamation success on joint, complete, oversight inspections selected by the Team to reflect current Colorado coal mining conditions, and coal mining regions. Reports detailing the 4 oversight inspections conducted during EY 2005 are available for review in the OSM Denver Field Division. No offsite impacts were identified during the four oversight inspections. Reclamation success at these four mines was also evaluated and documented during each inspection. No problems with reclamation success were identified at the 4 mines

inspected.

## B. Reclamation Success

### 1. Permitted Sites

Each evaluation year the Team compiles reclamation information for all operations that DMG has permitted under the Colorado regulatory program. This reclamation information is derived from annual reclamation reports submitted to DMG by all permitted coal mine operations, and evaluation year bond release data contained in DMG's permitting database. The Team uses the reported information to make assessments of reclamation success. The annual reclamation reports show mining and reclamation data based on the calendar year, and is reflected on table 6. The DMG permitting database is queried for bond release acreages, and those acreages are presented as EY 2005 data on table 6.

For the permitted and bonded operations OSM measures reclamation success by tracking the bonded, disturbed acreage that has received bond release from DMG; by conducting complete, joint, oversight inspections; and selecting annual topics to evaluate for reclamation success.
Table 5 shows the acreage on active, temporarily inactive, or inactive permits where DMG partially released (phases I and II) or totally released (phase III) bonds during EY 2005.
For the 18,066 bonded acres that had not received phase III bond release at the beginning of EY 2005, DMG granted phase I bond releases on 187 acres, phase II bond releases on 65 acres, and phase III bond releases on 235 acres (table 5, and table 6).

The Team can accurately determine acreage in the following categories: disturbed acreage, acreage backfilled and graded, acreage topsoiled and seeded, reclaimed acreage with vegetation established for 10 years, and Phase I, II, and III bond release acreage. Much of the reclaimed acreage may be eligible for bond release under one or more of the three phases of bond release in the Colorado program. Several operations have not submitted bond release applications for eligible reclaimed lands.

Table 6 shows detailed reclamation status of the active, temporarily inactive, and inactive operations (37 mine sites); the operations for which DMG released all phase III bonds (14 mine sites); and the 13 mine sites for which DMG has forfeited the reclamation performance bonds. Review of data in table 6 indicates that over half (approximately 58%) of all the disturbed acreage on active, temporarily inactive, and inactive operations (all permitted operations but not including bond forfeitures) has been backfilled, graded, topsoiled, and seeded (11,866 of 20,528 acres).

The Team believes that most of this reclaimed acreage would meet the phase I and II bond release requirements, and that most of the acreage with vegetation established for ten years may meet the phase III bond release requirements.

DMG has granted phase III bond releases on 6,898 acres (table 6), which is 27 percent of disturbed acreage under the Colorado permanent program (6,898 of 25,740 acres, table 6).
In addition, of the 25,740 total disturbed acres, 8,388 acres (table 6) consist of long-term facilities and active mining areas that are not subject to contemporaneous reclamation requirements, and thus not eligible for bond release, during any given evaluation year. The ratio of DMG's phase III bond release acreage to total disturbed acreage is higher than other comparable western States.

OSM concludes that completed reclamation of mined land in Colorado is successful based on the Team's review of the above annual reclamation reports, DMG's permitting database, DMG routine monthly inspections that include reclamation success evaluations of these reclaimed lands, and both complete, oversight inspections and annual topic evaluations completed by the Team that evaluate reclamation success.

2. Bond Forfeitures and Revoked Permit Sites

During EY 2005 DMG continued to evaluate two of the thirteen bond forfeiture sites, and one permit revocation site, for reclamation success that will lead to termination of jurisdiction. The permit revocation site (La Plata Mine) reclaimed by the bank holding the bond has achieved successful reclamation, and a Phase III bond release application from the bank was processed in accordance with Colorado Rule 3.03 " Release of Performance Bonds". The Division approved the bond release application, and released the bank from full Phase III liability in EY 2005. The permit revocation site is no longer an inspectable unit, and has been removed from the Colorado inspectable units in table 2.

3. Contemporaneous Reclamation

The Team evaluated reclamation success with the EY 2005 contemporaneous reclamation topic. The three surface mines evaluated met or exceeded the contemporaneous reclamation schedules approved in the DMG permit; and also were in compliance with the associated backfilling and grading performance standards of the Colorado Program. Results of the contemporaneous reclamation evaluations are found in section VII, A., on page 10.

4. Joint, Complete, Oversight Inspections

Each year the Team evaluates reclamation success on joint, complete, oversight inspections. Reports detailing the four joint, complete, oversight inspections conducted during EY 2005 are available in the OSM Denver Field Division. No problems with reclamation success were identified as a result of these four inspections.

C. Customer Service

During EY 2005, the Team conducted an evaluation of the Colorado Program bond release notification requirements, for coal mining operations submitting bond release applications. The Team found that the bond release applications reviewed provided notifications as required by Colorado Rule 3.03.2, Procedures for Seeking Release of Performance Bond. For a discussion of this evaluation, see following section VII, C., on page 12.

## VI. OSM Assistance

For the 1-year grant period starting January 1, 2005, OSM funded the Colorado program in the amount of $ 1.95 million (table 9). Through a Federal lands cooperative agreement, OSM reimburses DMG for permitting, inspection, and other activities that it performs for mines on Federal lands.

Because most of the mines in Colorado operate on Federal lands (table 2), the percentage of total program costs for which OSM provided funding was 79 percent (table 9).

Under its National Technical Training Program, and Technical Innovation and Professional Services Program, OSM offers free of charge technical training courses to State and Tribal employees. As described above in section IV (A) (5), eight DMG employees participated in these training opportunities during EY 2005.

This year the Colorado DMG staff continued to participate through the OSM WRCC-Office of Technology Transfer (OTT) workshops by sharing their technological advances, exchanging electronic information with their industry and other Western States, and beginning development of a global information system (GIS). Colorado staff made significant contributions to the new technologies workshops conducted by OTT this year by attending, participating, and sharing their expertise. Three DMG staff members attended two workshops – for a total of four attendees.

At the Anchorage OTT/WRTT sponsored New Technologies Innovations Implementation Workshop, a DMG Information Technology (IT) staff member shared his knowledge by presenting "Colorado's Use of Files Created by a DMG Document Imaging Project".

At the Helena New Technologies Innovations Implementation Workshop, a DMG IT staff member demonstrated and discussed the "Photo Archive System for Reclamation Sites/Bond Release Documentation".

As a result of the Colorado Permit System demonstration last year, the same DMG IT staff member noted in both examples above was requested to make presentations for senior managers in Alaska and Montana again in 2005. Alaska has requested Colorado's assistance with development of a "clone" system.

To support Colorado's new technologies implementation, this year OTT provided a Gateway E-6300 Computer with 250 GB hard drive; an ATI Radon X600XT Pro 128MB; a Pecan jet 8200 printer with upgrade modification; and update and maintenance of the CIRCES program (the computerized Colorado Integrated Reclamation Cost Estimating System). In addition, OTT provided a Kern Statistical Services technical assistance contract to Colorado.

OSM's Technical Librarian filled two reference requests, and provided 155 journal article reprints to Colorado staff. In addition Colorado received Proceedings of State Regulation of Coal Combustion By-Product Placement at Mine Sites: A Technical Interactive Forum; Research report on Manganese Toxicity Thresholds for Restoration Grass Species; USGS Information Circular Coal – A Complex Natural Resource; A DVD on underground longwall operation; MSHA CD on Highwall Safety video; 3 CDs: Surface Mining Water Diversion Design Manual, Coal Mine Drainage Prediction and Pollution Prevention in Pennsylvania, and 1994 International Land Reclamation and Mine Drainage Conference Proceedings; in addition to two education outreach CDs, Facts About Coal and Minerals 2004-2005, and American Energy for America's Future brochure, that were distributed to WRTT.

## VII. Evaluation Topics

Each year the Team selects and evaluates topics to determine whether DMG is effective in preventing or minimizing offsite impacts, ensuring reclamation success, and providing customer service. Following are discussions of the evaluations conducted during EY 2005.

Reports for these evaluation topics are maintained at the OSM Denver Field Division.

A. Contemporaneous Reclamation

The Team completed an evaluation of contemporaneous reclamation during EY 2005 to determine whether offsite impacts are being prevented or minimized; and whether reclamation operations at the three surface mining operations selected for evaluation, met or exceeded contemporaneous reclamation requirements approved in the DMG mining permit, and required by the DMG approved regulatory program regulations. A similar contemporaneous reclamation evaluation was initially conducted by the Team during EY 1996.

Examples of offsite impacts that could occur from not meeting contemporaneous reclamation requirements include excessive erosion, land or spoil slides, and failure to meet the approved post mining land use resulting in erosion and sedimentation off the permit area, and water pollution.

During EY 2005 the Team conducted field evaluations at three surface mining operations. The Team did not observe any instances of offsite impacts that were caused by the operations failure to meet their approved contemporaneous reclamation requirements; and reclamation success is being accomplished in a timely manner with respect to backfilling and grading requirements.

All three surface mines evaluated met their approved contemporaneous reclamation requirements. In addition, all three mines exceeded both the approved number of acres, and required completion dates (time elapsed since coal removal) for rough backfilling and grading, including elimination of spoil ridges behind open pits on all areas affected by mining.

Based on the field evaluations at the three surface coal mine operations during EY 2005, OSM finds that DMG is helping to ensure the contemporaneous backfilling, grading, and reclamation of coal mining operations; and continues to prevent or minimize offsite impacts from surface coal mines in Colorado.

B. Bond Forfeiture and Permit Revocation Sites

During EY 2005, the Team concluded this two year topic to evaluate offsite impacts from bond forfeiture and permit revocation sites. The Team conducted field evaluations on seven (50 percent) of the thirteen bond forfeiture sites and one permit revocation site in Colorado (a bank holding the bond completed reclamation in lieu of bond forfeiture at one site) in EY 2004.
The remaining seven bond forfeiture sites were evaluated during EY 2005. This same topic was initially evaluated by the team in EY 2000. Three minor, hydrology offsite impacts (primarily due to erosion and sedimentation from uncontrolled surface water runoff) at three separate sites were documented during the EY 2000 evaluation.

The EY 2004 evaluation documented two minor, hydrology offsite impacts to a land resource (table 4). Of the seven sites evaluated during EY 2004, one minor offsite impact was identified at each of two separate sites. The EY 2000 evaluation also identified these same two, minor offsite hydrology impacts, at the same two sites. The erosion and resultant offsite sedimentation are primarily from the same erosion features, and surface water runoff patterns within each site, that were identified as

problematic during the EY 2000 evaluation. No additional reclamation work has been completed since EY 2000 on the identified problem areas at the two sites.

The EY 2005 evaluation identified one bond forfeiture site with a minor hydrology off site impact, affecting a water resource. The EY 2000 evaluation also identified the impacts from this site. Again, the erosion and resultant offsite sedimentation are primarily from the same erosion features and surface water runoff patterns within each site that were identified in EY 2000.

The site identified during EY 2005 with off site impacts is Colorado's highest elevation bond forfeiture. The determination that off site impacts were occurring was a jointly reached intuitive conclusion. Essentially, displaced soils and rock from the coal mining disturbed areas were leaving the extent of the disturbance boundary, in most cases without passing through a sedimentation structure. The Team agreed to identify the impacts as minor because the entire high elevation basin in which this mine sits is subjected to extreme mountain weather; high winter snow pack, avalanches, and intense duration summer thunder storms. At least one adjacent, undisturbed drainage in this same basin has even more severe erosion and stability problems than the coal mining disturbed areas because of these weather extremes.

OSM finds that DMG's program assists in minimizing the three minor offsite impacts that occur from the thirteen bond forfeiture sites and the one reclaimed-in-lieu-of-bond- forfeiture site evaluated during EY 2004 and EY 2005. No additional offsite impacts were identified beyond these three minor, hydrology impacts initially documented during the EY 2000 bond forfeiture site evaluations.

C. Bond Release Notification Requirements

During EY 2005 the Team evaluated DMG's bond release notification requirements as a customer service evaluation topic. We reviewed five bond release applications that had final decisions completed by DMG during EY 2005. The primary purpose of the evaluation was to ensure that bond release applicants are providing the notifications required when requesting bond release from DMG.

The Colorado program requires notification to the following parties: Adjoining property owners, surface owners, appropriate local government bodies, municipalities, regional planning commissions, boards of county commissioners, county planning agencies, sewage and water treatment authorities, water conservancy and water conservation districts, and DMG suggests notification to mineral owners within the permit area (Mineral owners are not specifically included within Colorado Rule 3.03.2 language.)

All five bond release applications provided documentation demonstrating that notifications to the above parties were provided as required by the Colorado program. The applications also documented that the notifications were provided during the time periods required.

After reviewing the five applications, the Team agreed that the categories which require notifications of bond release applications included in Colorado Rule 3.03.2 require interpretation from both the bond release applicant and DMG staff to determine which parties in those categories should receive notifications from the applicant. The parties requiring notification may differ on a case by case basis. Categorical inclusion of parties in Colorado Rule 3.03.2 include: "appropriate local government bodies, municipalities, regional planning commissions, county planning agencies, sewage and water treatment authorities, and water conservancy and water conservation districts".

The bond release applicants and DMG staff are working together to ensure that all parties with a jurisdictional interest(s), or other interests as identified in Colorado Rule 3.03.2, are identified and notified of the bond release application.

Examples of State and Federal agencies that fall into these categories, and may have a jurisdictional interest requiring notification of bond release applications include the Colorado Department of Natural Resources, Colorado Water Conservation Board, and the United States Department of Agriculture, National Resource Conservation Service. These agencies are parties in the "water conservancy and water conservation districts" category of Colorado Rule 3.03.2.

The National Resource Conservation Service was notified by at least one bond release applicant during EY 2005 (not included in the five applications reviewed for this topic), while other bond release applicants during EY 2005 did not notify them. DMG will continue to ensure that the interests and agencies identified in Colorado Rule 3.03.2 receive notice of bond release applications.

## Appendix Tabular Summary of Core Data Characterizing the Colorado Program

The following tables present data pertinent to coal mining operations and State and Federal regulatory activities within Colorado. The tables summarize Colorado funding provided by OSM, and Colorado staffing. Unless otherwise specified, the reporting period for the data contained in all tables is evaluation year July 1, 2004, through June 30, 2005, (EY 2005).

Optional table 6 contains data from both calendar year 2004, and EY 2005. The EY 2005 data in table 6 is bond release acreage and is labeled as evaluation year data.

Additional data used by OSM in its evaluation of Colorado's performance is available for review in the evaluation files maintained at the OSM Denver Field Division.