

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Annual Evaluation Summary Report

for the

Regulatory Program

Administered by the State

of

NEW MEXICO

for

Evaluation Year 2001

(October 1, 2000 to September 30, 2001)

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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 New Mexico Program and the effectiveness of the New Mexico Program in meeting the applicable purposes of SMCRA as specified in section 102. This report covers the period of October 1, 2000 to September 30, 2001. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the Albuquerque, New Mexico, OSM Office (AFO).

II. **Overview of the New Mexico Coal Mining Industry**

The coal bearing regions of New Mexico underlie about 25,000 square miles or 20.6 percent of the total area of the State. The majority of coal-bearing regions lie under Indian lands that are regulated by OSM. The New Mexico Mining and Minerals Division (MMD) regulates mines on the remaining coal bearing regions.

Most of the coal mined is located in the San Juan Basin in the northwestern part of the State and in the Raton area in the north-central part of the State. New Mexico's coal varies from Pennsylvanian to Paleocene Age. Coal resources in the San Juan Basin are of the late Cretaceous Age; those in the Raton area are of the Paleocene Age. The main coal-bearing strata are the Mesa Verde and Fruitland Formations in the San Juan Basin and the Raton and Vermejo Formations in the Raton area. San Juan Basin coal generally ranges from subbituminous A to high volatile bituminous C. Raton area coal ranges from high volatile A to bituminous B. The demonstrated coal reserve base is 4.65 billion tons, or about 1 percent of the national reserves.

The early Spanish settlers used small amounts of coal several centuries ago. Significant commercial coal mining began in 1861 when the U.S. Army opened a mine in the Carthage Field for Fort Craig, New Mexico. By 1889, annual production exceeded one million tons for use by the railroads and by the lead and copper smelters. Early coal production, stimulated by World War I, peaked in 1918, at more than four million tons for use by smelters, factories, and railroads. Conversion of the railroads to diesel and the smelters and factories to natural gas caused a decline in the use of coal until 1958. An increase in the production of coal was caused by inexpensive stripping methods and an increased demand for coal by electric utilities in the Southwest. The climate of the State is arid. The average annual precipitation at the San Juan Mine in the Four Corners area is 9.67 inches. Most of the precipitation is in the form of thundershowers from July to September. Re-vegetation in parts of the San Juan Basin is extremely difficult because of low rainfall amounts and because of highly erodible soil types.

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

The New Mexico Oversight Team (NMOT) sent the 2001 Workplan out for comment to eighteen (18) public and private agencies and interested parties. The team received responses from four (4) parties; Region six, United States Environmental Protection Agency (EPA) and the New Mexico State Office of the U.S. Bureau of Land Management (BLM), Southwestern Region, United States Department of Agriculture, Forest Service (USFS), State Historic Preservation Officer (SHPO). These comments as well as the response provided by OSM are summarized as follows:

Comments Received from EPA

EPA returned a letter stating that they had reviewed the Workplan and had no comments.

Comments Received from BLM

BLM sent an e-mail message offering recommendations for improvement of wildlife ponds. OSM acknowledged the comment and explained the design that was approved in the mining permit.

Comments Received from USFS

USFS returned a letter stating that they had reviewed the Workplan and had no comments

Comments Received from SHPO

SHPO requested an outline of the methodology used to determine if compliance with National Historic Preservation Act had been met. OSM replied by stating that an Archaeologist from the Denver, Colorado office would review each permitting action undertaken by MMD during the evaluation period. OSM invited representatives from the SHPO to attend the review.

IV. **Major Accomplishments/Issues/Innovations in the New Mexico Program.**

The purpose of oversight is to evaluate a State's or Tribe's ability to accomplish the goals and responsibilities of the SMCRA. The NMOT (consisting of OSM and MMD personnel) developed a workplan that governed the oversight of the New Mexico Program for the 2001 evaluation period. The workplan focused on site-specific topics concentrating on the major goals of SMCRA: elimination of off-site impacts, and achieving successful reclamation of the post-mining land use. Using the 2001 plan, the Team proactively investigated a number of variables that influence these two goals. Each element was designed to allow expansion in future years based on the information collected during previous oversight periods. The strategic plan adopted was to use oversight to generate ideas for improving regulatory efficiency, and on-the-ground reclamation.

The Team documented problems identified during the course of the oversight period, and addressed them as they arose. The 2001 Topic-Specific Evaluation Report summarizes the methods used, problems identified, and solutions implemented by the Team during the oversight period. This report is on file at AFO. The report provides a summary of the State's program performance during the oversight period based on the performance measurements described in the workplan, and provides recommendations for future oversight.

OSM reviewed annual reports submitted to MMD by permittees. While these reviews indicate that reclamation efforts have been initially effective in restoring mined lands it would be premature to comment on the long-term effectiveness of such reclamation. The tests that would have to be made in order to secure a performance bond release for revegetation are also indicative of whether revegetation efforts have been successful. To date, none of the mines that have been inspected by OSM have requested a release of bond for re-vegetation.

Reviewing the annual reports also enabled MMD to collect data on the quality and timeliness of reclamation. The information tabulated by MMD shows that a total of 97,500 acres were under permit in New Mexico as of September 30, 2001.

Overall, New Mexico is implementing its approved program consistent with the provisions established in Section 102 of 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 the 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, at AFO, which provide details on how the following evaluations and measurements were conducted.

A. **Off-Site Impacts:**

MMD conducted 120 partial and 60 complete inspections during the Evaluation Year. These inspections resulted in four (4) Notices of Violation (NOV). All inspection reports filed for those inspections were reviewed by OSM. OSM also reviewed the Proposed Penalty Assessment report for each NOV. OSM concluded that there was one, documented off-site impact this Evaluation Year. OSM concurred with MMD that the off-site effect was minor.

B. **Reclamation Success:**

MMD approved 1,243 acres for phase II bond release and 237 acres for phase III bond release during this evaluation period. This information is recorded in Table 5 of the 2001 Oversight Evaluation Report.

C. Customer Service:

Two Citizen Complaints were received by MMD or OSM during the evaluation period. MMD investigated these complaints in a timely, accurate and professional manner. MMD determined that there were no violations of SMCRA or the State Program, and no enforcement actions were taken.

VI. **OSM Assistance**

Oversight for 2001 was conducted jointly by the NMOT, which consisted of State of New Mexico and OSM personnel. The mission adopted by the NMOT was to evaluate the State's ability to accomplish the goals and responsibilities associated with the Surface Mining Control and Reclamation Act, using OSM Directive REG-8, and the EY-2001 workplan as its guidance. The Team investigated variables that influence the major goals of SMCRA: elimination of off-site impacts and achieving successful reclamation that meets the intended post-mining land use. The strategic plan adopted by the NMOT was to use the results of the oversight effort to generate ideas for improving regulatory efficiency and on-the-ground reclamation.

MMD continues to implement its electronic permitting program. In support of MMD's efforts to share GIS-based information with staff and/or the public in an integrated and scalable manner, the OSM's Office of Technology Transfer (OTT) and OSM's Technical Information Processing System (TIPS) provided electronic permitting funds for Mapguide, bundled with ColdFusion software. This software cost \$9,620.00. The software has proven essential to New Mexico's electronic permitting efforts, because it allows MMD to make GIS information available over the World Wide Web. The introduction of ColdFusion provides software that interfaces databases with this web-available cartographic information.

OSM's Technical Librarian filled one reference request and provided two journal article reprints to New Mexico MMD staff members; in addition, the OTT provided four publications and two CD-ROMs to MMD's technical library.

OSM's Bonding Specialist provided technical assistance to the MMD hard-rock and non-coal mining staff by providing legal language for co-jurisdictional bonding instruments that cover bonding requirements of MMD's and the New Mexico Environment Department's (Water Quality Bureau) regulatory programs. MMD also received technical assistance on surety bond availability for a permittee whose cumulative bonding obligations exceeded the legal underwriting limits of all major surety companies.

The Bonding Specialist identified a group of surety companies that, altogether, could provide the large amount of coverage this permittee required, and advised the State how

to structure a package of multiple surety bonds. Finally, the Bonding Specialist provided technical assistance to the New Mexico Environment Department on formulas and other considerations for trust funds for long-term treatment of polluted water and on what constitutes proper legal execution of surety-bond instruments.

OTT and MMD co-funded the collaborative research of an MMD staff member and a contractor, the results of which will be presented in a professional paper at the 19th National Meeting of the American Society for Mining and Reclamation, which will be held June 9-12, 2002, in Lexington, Kentucky. Doug Romig, New Mexico MMD, and John Kern, Spectrum Consulting Services, Inc., will give the results and conclusions of their joint research project. The study evaluates the potential for adverse effects from exposure of grazing cattle to selenium on seven New Mexico coal mine sites. Consumption of grasses, herbs, and shrubs is the primary pathway that may expose herbivores to potential risks associated with selenium at New Mexico surface coal mines. Risks were assessed separately for grasses, forbs, and shrubs on native-soil and regarded spoil areas. Relationships between plant and soil selenium concentrations were estimated using linear regression for soil samples grouped by depth intervals (top foot, top 2 feet, and top 4 feet). The conclusions are that risk of adverse effects due to selenium exposure at the seven mines studied in New Mexico is minimal, or nonexistent. OTT funded the statistical work by Spectrum Consulting Services, Inc., and MMD funded the soil science/biological work on the project.

OSM also provided the opportunity for an MMD staff member to participate in and present a paper at OSM's interactive forum on Approaching Bond Release: Wildlife Habitat Construction and Wildlife Use of Reclaimed Lands in the Arid and Semi-Arid West, which was held August 27-31, 2001, in Gillette, Wyoming. David Clark presented a paper entitled Habitat Enhancements in New Mexico Reclamation, which described five techniques that are being used and encouraged at New Mexico coal mines to enhance or preserve wildlife habitat. Techniques discussed were cliff reclamation, small-area depressions design, complex reclamation topography issues, wetland replacement, and minimization of drainage-bottom disturbance. The presentation gave specific examples

of reclamation at the Ancho mine in the northwestern part of the State, at the Gachupin-Brackett Unit of the same mine, and at the Lee Ranch mine.

OTT provided the opportunity for four MMD staff to participate in the OTT-sponsored workshops as follows:

The Desktop Database as a Data Management Tool, May 16-17, 2001, Farmington, NM

MMD staff in addition to 18 industry representatives, consultants, and other

State/Federal/Tribal agency staff attended.

Modeling Reconstructed Topography and Relief, and Associated Issues Relating to Approximate Original Contour (AOC), March 1-2, 2001, Denver, CO

3 MMD staff in addition to 10 industry representatives, consultants, and other State/Federal agency staff attended.

Financial assistance in the amount of \$689,035 was provided to the New Mexico Regulatory Program for Administration and Enforcement. This figure represents 72 percent of the total program budget of \$956,196.

II **General Oversight Topic Reviews**

A. Reclamation Success (backfilling and grading)

The analysis is not yet complete, because the permittee is in the process of submitting new post-mining contours for approval. The element will be carried over for review during the EY-2002 oversight period.

B. Reclamation Success (reclamation of exploration sites)

All twenty-one (21) sites inspected had been reclaimed in accordance with the permit and the New Mexico Regulatory Program requirements.

C. Customer Service (Compliance with NHPA)

MMD followed all requirements of the NHPA when processing permitting actions. Additionally, MMD's findings, and conclusions regarding identification, mitigation and protection of cultural resources were very well documented.

D. Hydrologic Reclamation (hydrologic balance)

The selected channels conform to the permit stipulations. OSM will develop an application for an "excellence in surface coal mining and reclamation award" for submittal in February, 2002.

APPENDIX A

These tables present data pertinent to mining operations and State and Federal regulatory activities within New Mexico. They also summarize funding provided by OSM and New Mexico staffing. Unless otherwise specified, the reporting period for the data contained in all tables is October 1, 1997 to September 30, 1998. Additional data used by OSM in its evaluation of New Mexico's performance is available for review in the evaluation files maintained by the Albuquerque OSM Office.

