



**OFFICE OF SURFACE MINING RECLAMATION AND
ENFORCEMENT**

Annual Evaluation Summary Report

for the

Regulatory Program

Administered by the Land Quality Division

of the

Wyoming Department of Environmental Quality

for

Evaluation Year 1999

(October 1, 1998 to September 30, 1999)

December, 1999





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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 Wyoming Program and the effectiveness of the Wyoming program in meeting the applicable purposes of SMCRA as specified in section 102. The report covers the period of October 1, 1998 to 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 Casper Field Office.

The following list of acronyms is used in this report:

AVF	Alluvial Valley Floor
AVS	Applicant Violator System
CFO	Casper Field Office
CHIA	Cumulative Hydrologic Impact Assessment
DEQ	Department of Environmental Quality
EQC	Environmental Quality Council
EY	Evaluation Year
FOD	Field Office Director
LQD	Land Quality Division
OSM	Office of Surface Mining Reclamation and Enforcement
PHC	Probable Hydrologic Consequence
PRBRC	Powder River Basin Resource Council
RSI	Random Sample Inspection
SMCRA	Surface Mining Control and Reclamation Act of 1977
TDN	Ten-Day Notice
WQD	Water Quality Division
WRCC	Western Regional Coordinating Center
WOC	Wyoming Outdoor Council
WWF	Wyoming Wildlife Federation

II. Overview of the Wyoming Coal Mining Industry

Over ninety-nine percent of the current coal production in Wyoming is from surface coal mines with 92 percent of the coal currently mined in the Powder River Coal Basin near Gillette, Wyoming. Until 1954, underground mines out-produced surface mines, but in that year surface mines began to dominate production. By the late 1960's, surface coal mining production in the Powder River Basin became a major contributor to the Nation's total coal production. Coal-bearing formations underlie more than 40,000 square miles, or approximately 41 percent of

Wyoming's total land area. The coal mining industry directly employs approximately 4,521 people providing substantial income and secondary employment in the State. Approximately 97 percent of coal produced in Wyoming is used for electrical generation in 29 states, Canada and overseas. Coal production increased 15 percent during 1999.

The Wyoming Geological Survey estimates the quantity of Wyoming open pit coal reserves is in excess of 26.3 billion tons; an additional 38.3 billion tons of coal reserves can be recovered by underground mining methods. Coal seams in the Wasatch Formation and the underlying Fort Union Formations can exceed 100 feet in thickness with 30 to 80 foot seams being common; 220 foot thick seams have been uncovered. Wyoming coals range from lignite to high volatile A bituminous in rank with the majority of the coal produced being sub-bituminous. Wyoming has the largest reserves of "compliance coal" in the lower 48 States; that is coal of such high quality that utility companies can burn the coal in power plants without expensive scrubbers to remove sulphur dioxide emissions. Currently, 6.9 billion tons of coal are leased and 300,000 tons are permitted.

Approximately \$98.1 million was paid in to the Abandoned Mine Lands fund , with about 25% returning to Wyoming. Total taxes and royalties paid by Wyoming s coal industry is approximately \$498 million.

Forty active mining operations are permitted in Wyoming; 35 are surface operations, three (3) are underground operations, one permit for a dragline move from one mine site to another and two research and development (R&D) licenses. The R&D licenses are for in-situ operations. The dragline move and in-situ operations are listed as other facilities in Table 2 of this report. There are no exploration permits within the State. Currently, twenty-four mines of the forty are producing coal.. The remaining mines are either in temporary cessation, or conducting final reclamation.

During the previous evaluation year (1998), the Bureau of Land Management was considering issuing several coal leases in the Powder River Basin. However, a conflict of resources has occurred which has delayed the issuance of coal leases. The conflict is between the coalbed methane developers and the coal mining industry. BLM issued coal leases and oil and gas leases that are dependent on the same coal resources. BLM s EIS process included both coal mining and coal bed methane development. Combining the two likely increased the time to complete the EIS. Due to this conflict, a moratorium was placed on the approval of the R2P2 for the Thundercloud Lease.

The ownership and control of the Wyoming mines has been changing and consolidating for the past few years. In 1998, the Zeigler Coal Holding Company announced a merger with AEI Resources in an \$855 million stock deal. In August 1999, Zeigler sold their Triton holdings to Vulcan Coal. Vulcan Coal s holdings include the Buckskin and North Rochelle mines in Wyoming. North Rochelle mine began overburden removal and coal production. Currently, Arch owns the Black Thunder mine (the largest producing mine) and Coal Creek mine.

Kennecott Energy Corp. controls Antelope, Cordero, Jacob s Ranch, Caballo Rojo, and Ft. Union mines, Wyodak Resources owns the Wyodak, Clovis Point and East Gillette mines. RAG Coal West own Eagle Butte, and Belle Ary mines and Renco Coal of NY owns the Kemmerer and Skull Point mines. Several mines are being combine into one mine, such as North Antelope and Rochelle mines, Caballo Rojo and Cordero mines, and Kemmerer and Skull Point mines.

BLM has completed the final environmental impact statement for leasing 5,235 acres of Federal coal lands in Carbon County in southern Wyoming. Arch of Wyoming would open two new mines if they are successful in obtaining these Federal leases. The coal reserves (150 million tons) would replace dwindling reserves at Arch s Medicine Bow and Seminoe II mines. Arch proposes to develop a surface mine (Elk Mountain mine) and an underground mine (Saddleback Hills mine). The Wyoming Outdoor Council opposes BLM offering these leases for sale.

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

A. OSM Outreach Efforts.

The Casper Field Office (CFO) actively encourages public involvement in the Wyoming oversight and regulatory program. This includes CFO initiated contacts with citizen groups and participation in industry activities. Specifically, CFO has visited with citizens representing the Powder River Basin Resource Council (PRBRC), Wyoming Outdoor Council (WOC), Wyoming Wildlife Federation (WWF), and the Wyoming Mining Association (WMA). The purpose of these contacts is to notify these groups of OSM s activities and to provide the opportunity to interested parties to suggest how OSM s oversight role can assist in improving the State s regulatory program.

In the past, CFO held public meetings; however, there was little public participation. The current CFO practice is to approach citizen organizations and offer to meet and discuss the current issues throughout the evaluation year. CFO has a good working relationship with the PRBRC, WOC and WWF. These organizations are actively involved in OSM and State permitting and inspection oversight activities. Such involvement has resulted in helpful changes in the State program, thus improving the overall quality of the program. PRBRC has taken an active part in the oversight process and meets with the CFO several times a year. WOC and WWF have not been as active but CFO maintains communications with the groups, informing them of meetings and issues.

B. Wyoming Outreach Efforts

LQD has an advisory board (Land Quality Division Advisory Board) that provides recommendations to the Land Quality Division through a public forum. The Environmental Quality Council (EQC) rules on regulatory matters for all Divisions within the Department (including LQD), and also serves as the administrative hearings board for all Divisions (i.e.,

Land Quality, Air Quality and Water Quality Divisions) in DEQ. Wyoming's outreach efforts include, but are not limited to LQD Advisory Board meetings, and Environmental Quality Council hearings and board meetings. LQD has met on several occasions with the special interest groups (PRBRC, WOC, WWF, and WMA) to discuss their concerns. In addition, LQD has hosted several technical forums addressing issues such as topsoil, vegetation measurements, and blasting.

LQD also has public participation during the permitting, bond release, and enforcement processes. During the permitting and bond release processes, notices are published and comments are solicited. Citizen complaints are investigated as part of the enforcement process. Previous oversight reviews have found that LQD is highly receptive to the concerns of public, industry and citizen groups. DEQ also has an internet website at: <http://deq.state.wy.us/> with information for the public on permits, current rules, proposed rule changes and contact information.

CFO monitors DEQ's and LQD's meetings and outreach efforts and believes the State does a good job interacting with citizens.

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

A. Accomplishments

Although the State has not addressed all the outstanding regulatory program deficiencies, the State of Wyoming continues to administer an excellent Title V program (See **VII. General Oversight Topic Reviews**, B. Monitoring, Program Maintenance). Wyoming actively works to improve its program. Under the State's permitting functions, plans for an intranet system and modifying the format for reporting data in the permit Annual report are examples of these efforts and achievements.

The Wyoming Department of Environmental Quality, Land Quality Division (LQD) is installing a State intranet – electronic communications system -- to allow ease of simultaneous permit review and data sharing by three geographically separate LQD offices (Lander, Sheridan and Cheyenne). The intranet is comprised of an LQD file directory accessible only to staff, administered through a Windows NT server in Cheyenne.

This installation continues Wyoming's long term commitment to implementation of electronic permitting by allowing staff in all offices (three districts and technical support) to review simultaneously all electronic documents received from mine operators using one simple interface.

OTT's assistance to Wyoming's electronic permitting efforts in FY99 included the purchase of the following hardware/software: map/document scanner, digitizer and a digitizer stand, and Acrobat software.

B. Issues

Blasting / NO_x Gas Issue

Blasting is a common and necessary operation at the coal mines in the Powder River Basin Coal Field. As mines have moved from truck shovel to dragline operations with larger and larger equipment, cast blasting has been used as the most economical means of displacing overburden. These changes in mining methods have resulted in vast increases in the amount of explosives used in one blast to more than 7 million pounds. These amounts of explosives are unprecedented in the industry. On occasion, blasting generates NO_x gas which forms an orange cloud. NO_x gas is a result of incomplete combustion of ANFO (ammonium nitrate and fuel oil). NO_x gas is corrosive to the eyes, skin and mucous membranes, and if inhaled can be lethal. Five (5) parts per million (ppm) exposure for more than the short term standard period (15 minutes) can be fatal, while concentrations of 0.2 - 0.3 have ill affects on children, people with respiratory problems and the elderly. When an orange cloud is visible, the concentrations can exceed 30 ppm. (Per-Anders Perssen, Roger Holmberg. and Jaimin Lee; *Rock Blasting and Explosives Engineering*, CRC Press. 1993, Page 392.)

In 1995, OSM received a citizen complaint from Roger and Linda Pfeil, residents of Rawhide Village. Ms Pfeil was exposed to an orange cloud of NO_x gas. She suffered respiratory problems and received medical treatment. Wyoming Land Quality Division (LQD) issued a notice of violation and cession order (No. 300008) to AMAX Coal Company to cease blasting in the west pit at the Eagle Butte mine.

During EY 1998 and 1999, OSM received two citizen complaints concerning NO_x gases generated from blasting operations drifting off the mine permit areas. In both cases OSM issued TDNs to the State. The State response to the first one was determined and upheld by an appeal as inappropriate and OSM issued a Federal NOV in January 1999. The second was determined to be appropriately handled by the state (See **VII. General Oversight Topic Reviews, D. ON-GOING TOPICS** - Inspections). Aside from the regulatory protocols between OSM and the State, there still exists a potential health hazard to the public.

During the 1999 second quarterly meeting, the Wyoming Land Quality Advisory Board asked Wyoming Mining Association (WMA) to develop a solution to the problem. WMA developed a study plan and monitored NO_x gas during the month of August. The results to the monitor should be available by November 1999.

EPA became involved in a reviewing the first complaint mentioned above. As part of EPA s continuous involvement, on September 9, 1999, the Powder River Basin Resource Council (PRBRC) and citizens held a meeting in Gillette, WY with EPA s toxicologist and air quality specialists. The NO_x gas problem was discussed and photographs of the orange clouds taken by citizens were provided to the EPA. EPA expressed their concern regarding the health affects of

the NOx gas. In a follow-up meeting conducted by EPA, which included OSM, Wyoming Land Quality Division, Wyoming Air Quality Division and EPA air quality section. Several EPA air quality specialists stated that the orange clouds were serious. An EPA air quality specialist stated that the orange clouds are far worse than those from industrial smoke stacks in large cities. He stated that these orange clouds are very dangerous and potentially lethal.

EPA indicated that it prefers the industry and the State (LQD or AQD) take care of the problem. EPA offered any assistance, resources or equipment to the State that they would need to resolve the issue. EPA also suggested that something needs to be done by the Wyoming Air Quality Division immediately to protect the public. If nothing is done, EPA indicated they may step in either under the emergency provisions or Section 114 of the Clean Air Act and issue cease and desist orders to the mine operators generating NOx gas.

Contemporaneous Reclamation

In 1997, CFO and LQD reviewed four mine sites for compliance with contemporaneous reclamation requirements and compared the on-the-ground reclamation with the approved reclamation plan in the permits. CFO and LQD found that the four mine permits did not clearly and concisely set time schedules and requirements for contemporaneous reclamation. Contemporaneous reclamation remains as an issue for the EY 2000 evaluation.

LQD has agreed to review the required schedules in all permits. Furthermore, the State has agreed to revise the annual reporting format to include information regarding contemporaneous reclamation progression. LQD has completed reviewing about 70 percent of the permits and has required some revisions. The remaining 30 percent have not been reviewed because revisions are anticipated that will affect the reclamation schedules for these permits. LQD will review these permits after the revisions are submitted. The target for completing the reviews is January 1999. Most of the reviews will be completed by this time. However, some of the expected revisions will be major in scope and will extend beyond January 1999. Revision to the annual reporting format has begun. Starting in 1999, annual reports will contain contemporaneous reclamation information. CFO will reevaluate contemporaneous reclamation during the next evaluation period (EY 2000).

C. Innovations

A pilot study indicated a significant decrease in review and issue resolution time as well as the overall time to issue a permit. (See A. Accomplishments) The Wyoming DEQ-LQD is a pioneer in the development of electronic permitting. Wyoming has developed standard formats for recording and submitting data to LQD for review of permit applications.

V. Success in Achieving the Purposes of SMCRA as Determined by Measuring and Reporting End Results

To further the concept of reporting end results, the findings from performance standards and public participation evaluations are being collected for a national perspective in terms of the number and extent of observed off-site impacts, the number of acres that have been mined and reclaimed and which meet the bond release requirements for the various phases of reclamation, and the effectiveness of customer service provided by the State. Individual topic reports are available in the Casper Field Office which provide additional details on how the following evaluations and measurements were conducted.

A. Off-Site Impacts:

There were three (3) off-site impacts observed. Two were related to blasting and one relating to sediment control.

One off-site impact relating to blasting occurred at a Wyoming mine, on January 7, 1999. This off-site impact involved blasting that generated orange clouds containing NO_x gas which drifted off the permit. The Second off-site impact (NO_x gas) was reported by citizens in September 1999 which was not included in last years annual report. The citizen complaint was being investigated at the time the report was being prepared. The orange clouds are generated due to less than ideal blasting conditions, or methods that result in an incomplete combustion of the explosives. The occurrence of these clouds are intermittent and usually dissipate in a short time. The nitrogen dioxide (NO₂) contained in the orange cloud is hazardous and potentially lethal. In the January 1999 incident, two children were exposed to the NO₂, but no medical care was obtained. The level of impact is considered major, because of the potential lethal /health hazards associated with NO₂. (For additional information, see the discussion under **IV. Major Accomplishments/Issues/Innovations in the Wyoming Program.**)

The third off site impact was observed at a (Belle Ayr) mine during an RSI inspection. A significant amount of sediment had left the permit area and deposited in an oxbow of Caballo Creek. The LQD did not cite this violation with an NOV. The violation no longer existed at the time of the RSI. This off site impact is considered to be minor.

B. Bond Release:

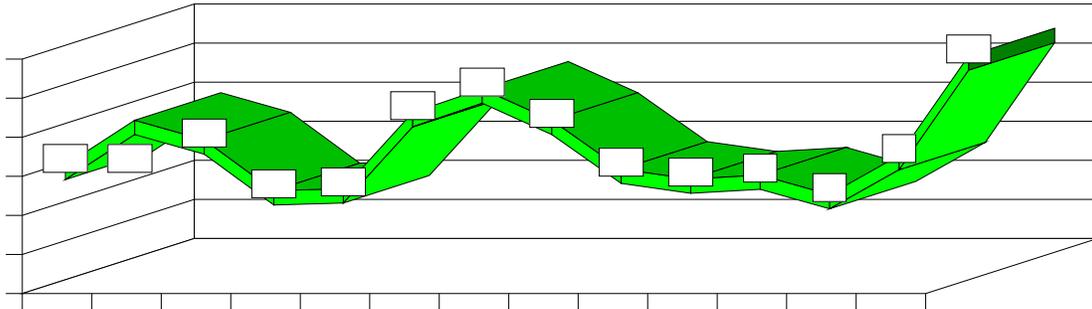
During the EY 1999, there were 197 acres of phase I bonds released, 374.6 acres of phase II bonds released and 106.4 acres of phase III released.

C. Reclamation Success:

Approximately 181,561 acres are currently bonded (Table 5). By end of the evaluation period, approximately 31,073 acres were permanently reclaimed with a permanent seed mixture and ready for application for phase I and II bond release. Table 6 contains data

collect from 1986 to 1999, giving a long overview of the mining and reclamation activities in Wyoming.

Figure 1. illustrates the ratio of the yearly permanent reclamation compared with the net disturbance found in Table 6. The net disturbance are all areas available for reclamation that are not being used for long-term approved disturbances such as: stockpiles, active pits, access roads, haul roads, railroad right-of-ways, coal preparation and loading sites, offices, shops, sediment ponds, and other approved uses. The 1999 ratio shows a marked



increase of reclamation and a constant level of newly disturbed land which reflects what has been observed in the field. A ratio of 1.0 indicates that the reclamation and net disturbance are equal. A ratio higher than 1.0 indicates that the reclamation is greater than the net disturbance, while a ratio less than 1.0 indicates the opposite.

VI. OSM Assistance

OSM offers training courses to State regulatory authority employees at no expense to the State (other than salary and benefits) or the attendee. OSM's technical training program provided a wide range of courses including engineering, hydrology, soils & revegetation, inspection & enforcement, and computer software. Thirteen Wyoming employees received training from OSM's technical training program at a cost of \$ 8,507.81 during EY1999. In addition, one Wyoming employee served as an instructor for one of these training classes.

Twelve LQD staff participated in the following National Technical Training Program (NTTP) sponsored training:

Acid-Forming Materials Principles & Process -	1 staff
Bonding Cost Estimation -	1 staff
Effective Writing -	2 staff
Erosion and Sediment Control	3 staff
Expert Witness -	1 staff
Principles of Inspection -	1 staff
Soils and Vegetation -	1 staff
Surface Mining in the 21 st Century -	1 staff
Wetland Awareness -	1 staff

Sixteen LQD staff participated in the following OTT sponsored workshops/training:

Revised Universal Soil Loss Equation -	3 staff
AutoCAD for Mining & Reclamation -	4 staff
SEDCAD+	1 staff
Regression Analysis	3 staff
Statistical Sampling for Baseline Studies, Bond Release & Monitoring Studies	5 staff

Two DEQ/LQD staff participated in OSM s Interactive Bond Release Forum on Revegetation. Also, the WY DEQ/LQD Administrator made a presentation on Wyoming s Approach to Species Diversity at the Forum.

VII. General Oversight Topic Reviews

This section contains a brief description of the topics reviewed during the evaluation year. Major accomplishments, issues and innovations are addressed in Section IV of this report. The detailed documentation of all reviews are available in the central files at the Casper Field Office.

A. NEW TOPICS

The evaluation was conducted to determine if problems exist in the field. When no problems are observed in the field, the evaluation is concluded. However, when problems such as failure to

comply with the State's statutes and rules were identified, the team investigates the problem, traced the source(s) and works with the State to resolve the problems.

Settlement Agreements

During an investigation of a citizen complaint concerning blasting at AMAX West Coal, INC. s Eagle Butte mine, the Casper Field Office (CFO) noted a revision to the permit was made using the settlement process under the Department of Environmental Quality Rules of Practice and Procedure (Chapter 1, Section 11). Wyoming and AMAX, using the settlement process, revised the permit, by-passing the requirements protocols for processing revisions per Chapter 13 of the Wyoming Coal Rules and Regulations.

The settlement was the informal disposition of an appeal to an earlier permit revision contested by citizens. The approval of the Permit revision contained a stipulation (or condition) that addressed the concerns of the citizens contesting the permit revision. AMAX was appealing the permit stipulation. The State through the settlement process approved AMAX s revision, which superseded the permit stipulation. The State approved this revision without an official revision application or review under the requirements in Chapter 13. The citizens were not afforded the opportunity to participate as they were under the processes outlined in Chapter 13.

The three permits were reviewed where objections were filed and settlement agreements resulted. In all three settlement agreements, the permitting requirements were appropriately utilized. The settlement agreements were not used in leu of permit requirements. Instead the agreements specified that the permitting procedures in Chapter 13 were required to fulfill the requirements of the agreements. The Eagle Butte settlement agreement that by-passed the permitting requirements appears to be a unique incident and not a standard or common practice.

Blasting Records and Federal Lands Provisions:

Blasting records was an oversight topic negotiated with the State Administrator. During 4 RSI inspections the blasting records were checked for completeness and accuracy. A checklist was derived from the Wyoming regulations. One record was found to be incomplete. The State issued a Minor NOV for this violation.

Two mines were found to be mining Federal coal without threatened and endangered species surveys and cultural resource surveys or a mining plan approval from the Secretary of the Interior. It was found that the State Mining and Reclamation Permits do not always comply with the Cooperative Agreement [Article V.,10.(f)] with respect to requiring operators to acquire a Federal mine plan approval from the Secretary of the Interior. The State was asked to include a stipulation in the States s permits that informs the operator that the permit to mine on Federal leases is conditioned upon the operator obtaining

mining plan approval from the Secretary prior to mining Federal coal.

Probable Hydrologic Consequences (PHC) Verification: During mining operations, mine operators are required to collect hydrologic monitoring data. Wyoming coal operators have been preparing and revising PHC predictions based on available baseline data recorded at the time of the permit application. LQD and OSM developed a study plan to evaluate the accuracy of the PHC predictions at three active mine sites using the surface and ground-water monitoring data. OSM hydrologists have completed the study and prepared a draft report. The draft report was reviewed by LQD, with a few minor comments before the report was finalized.

A detailed review of the PHC s for three mines in Wyoming, including Caballo Rojo, Buckskin, and Black Thunder mines, was completed in 1998. The accuracy of the PHC projections were compared to available monitoring data. The review included both surface- and ground-water PHC predictions.

The review found that DEQ is doing an adequate job addressing hydrologic issues at midterm and renewals. Operators are required to update PHC sections of the permits and annual reports provide good summaries of hydrologic impacts and data. Coal bed methane (CBM) development is impacting the ground-water predictions in the coal aquifers as CBM impacts overlap with the coal-mining related drawdown. PHC predictions in the overburden aquifer are accurate.

The long-term nature of the mining/reclamation operations limits the on the ground analysis of impacts to spoils aquifers and sediment yield/surface water quality.

B. MONITORING TOPICS

Monitoring topics are issues identified in previous oversight evaluations. Due to the long term nature of these topics, the final evaluation cannot be resolved during a single evaluation period.

Permitting, CHIAs

In the 1992 Annual Evaluation year, CFO identified three deficiencies with some CHIA documents: 1) not all hydrologic impact projections were based on the most recent, readily available technical/baseline information; 2) assessments of hydrologic impacts were not adequate because the existing CHIA was general in scope and not specific to certain drainage basins; and, 3) the LQD did not have a formalized plan to develop comprehensive basin specific or regional CHIAs.

Two basin specific CHIA has been completed and two others have been started. The State has encountered a problem in that individuals assigned to prepare CHIAs have terminated

employment with the agency. This has slowed progress until another individual can be located and assigned to the project.

The final resolution of this problem will occur with the development of CHIA s where the most recent technical baseline information resources are used for specific cumulative impact areas (CIA's).

Program Maintenance (Amendments)

In the 1994 Annual Evaluation Year Report, the CFO reported that numerous outstanding program deficiencies existed, including less effective rules [30 CFR 732.17], disapproved rules [30 CFR 950.15], and required program amendments [30 CFR 950.16].

Wyoming LQD s and OSM s objective is to assure that these program deficiencies are resolved through approved amendments to the Wyoming Program. Schedules and priorities have been established for amendments that are crucial to the operation of the Wyoming regulatory program.

One amendment was submitted to OSM during this previous evaluation period. It was approved by OSM on August 1, 1999. The State has meet internal time frames for the Advisory Board meetings and Environmental Quality Council hearings for other amendments.

Thus far the State addressed 67 percent of the outstanding program deficiencies. As new changes to the program are required, these issues are grouped into related topic amendment packages and priorities are re-assessed jointly by LQD and OSM.

The next amendment is scheduled to be submitted during the next evaluation period, which will address rule changes for roads.

C. FOLLOW-UP TOPICS

Follow-up topics are issues identified in previous year's evaluation. Resolution of these topics are usually resolved within the next evaluation period.

Contemporaneous Reclamation

In response to 1997's evaluation of contemporaneous reclamation, the State agreed to contact the permittee and require changes to the format of data reported in the permit s annual report. The State has contacted the companies and required the change. In

addition, the State agreed to review all permits and assure that the permits contained clearly outlined standards for contemporaneous reclamation. The state is approximately 70 percent complete. See **IV. Major Accomplishments /Issues/ Innovations in the Wyoming Program**, B. Issues for additional discussion and progress.

D. ON-GOING TOPICS

On-going topics are functions of the State program that are reviewed every evaluation year.

INSPECTIONS

Four RSI inspections were conducted during EY-99. One TDN was issued for failure to certify an access road. The States response to this TDN was determined appropriate. One TDN was issued for blasting records errors and failure to maintain an out of pit spoil pile. The States response to this TDN was determined inappropriate. A Federal inspection was conducted to determine if the violations still existed. In response, the State issued a Minor NOV for the blasting records portion of the TDN. A Federal inspection resulted in a Federal NOV being issued for failure to maintain an out of pit spoil pile. The abatement for this NOV is pending.

One TDN was issued as a result of a citizen complaint. The TDN was issued for reason to believe a failure to prevent injury to people outside the permit area had occurred. The citizen complained of an orange cloud enveloping her home as a result of blasting operations. As part of the investigation discrepancies in the shot records were discovered. The operator sent 3 corrected blast records for the same event. The State added one more violation to a Minor NOV. The States response was considered appropriate.

The WRCC upheld the FOD s determination that the State responded inappropriately to a TDN issued as a result of a citizens complaint for blasting. A Federal inspection was ordered which resulted in a Federal NOV being issued for failure to blast to protect people outside the permit boundary. The final disposition of this NOV is pending a settlement agreement between the mining company and OSM.

FINANCIAL ADMINISTRATION (GRANTS)

CFO conducted financial oversight during the evaluation period. CFO visited DEQ offices in Cheyenne, Wyoming and reviewed financial information. Specifically, drawdowns, timeliness of grant applications and reports audits, accounting, payroll and travel were reviewed.

A drawdown analysis was conducted for the existing Administration and Enforcement grant. Four of twelve draws made were sampled. Each drawdown was done after the respective expense incurred and for the proper amount. No problems were found.

Wyoming is submitting required reports in a timely manner.

An A-133 audit has been completed for one year ending June 30, 1998. There were no findings or inappropriate costs relative to the Title V Program. A second A-133 audit will be completed in early FY2000 to cover one year ending June 30, 1999.

A review of payroll and benefits was made to ensure that charges for personnel and benefits were being made to OSM grants were legitimate and that OSM was not supporting non-coal activities. Another purpose was to verify that payroll was being approved by the proper authority (supervisors). No problems were found

Travel for the Title V program was reviewed relative to the State s policies and procedures. Charges were appropriate and approvals had been done and were appropriate.

Property management was reviewed and no problems were found.

CFO made one Administration and Enforcement grant award during EY99. The award was made in less than 60 days of the grant application, meeting the Government Performance Standards.

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

TABLE 1

COAL PRODUCTION (Millions of short tons)			
Period	Surface mines	Underground mines	Total
Coal production^A for entire State:			
Annual Period			
1997	274.5	2.3	276.8
1998	278.7	2.3	281.0
1999	322.3	1.8	324.1

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

TABLE 2

INSPECTABLE UNITS As of September 30, 1999												
Coal mines and related facilities	Number and status of permits								Insp. Unit ^D	Permitted acreage ^A (hundreds of acres)		
	Active or temporarily inactive		Inactive		Abandoned		Totals			IP	PP	Total
	IP	PP	Phase II bond release		IP	PP	IP	PP				
			IP	PP						IP	PP	
STATE and PRIVATE LANDS REGULATORY AUTHORITY: STATE												
Surface mines	5						0	0		5240	5240	
Underground mines	0						0	0			0	
Other facilities	2						0	0			0	
Subtotals	0	8	0	0	0	0	0	0	0	0	5240	5240
FEDERAL LANDS REGULATORY AUTHORITY: STATE												
Surface mines	30						0	0		303,045	303,045	
Underground mines	3						0	0		11,185	11,185	
Other facilities	0						0	0			0	
Subtotals	0	33	0	0	0	0	0	0	0	0	314,230	314,230
ALL LANDS ^B												
Surface mines	0	35	0	0	0	0	0	0	0	0	308,285	308,285
Underground mines	0	3	0	0	0	0	0	0	0	0	11,185	11,185
Other facilities	0	2	0	0	0	0	0	0	0	0	0	0
Totals	0	40	0	0	0	0	0	0	0	0	319,470	319,470
Average number of permits per inspectable unit (excluding exploration sites)											1	
Average number of acres per inspectable unit (excluding exploration sites)											7,792	
Number of exploration permits on State and private lands:											0	On Federal lands: 0 ^C
Number of exploration notices on State and private lands: 0											0	On Federal lands: 0 ^C
^I P: Initial regulatory program sites. ^{PP} : Permanent regulatory program sites. ^A When a unit is located on more than one type of land, includes only the acreage located on the indicated type of land. ^B Numbers of units may not equal the sum of the three preceding categories because a single inspectable unit may include lands in more than one of the preceding categories. ^C Includes only exploration activities regulated by the State pursuant to a cooperative agreement with OSM or by OSM pursuant to a Federal lands program. Excludes exploration regulated by the Bureau of Land Management. ^D Inspectable Units includes multiple permits that have been grouped together as one unit for inspection frequency purposes by some State programs.												

TABLE 3

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

Type of application	Surface mines			Underground mines			Other facilities			Totals		
	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres ^A	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres
New permits	1	1	0							1	1	0
Renewals	18	8	0							18	8	0
Transfers, sales and assignments of permit rights	5	5		1	1					6	6	
Small operator assistance	0	0										
Exploration permits	0	0										
Exploration notices ^B		0										
Revisions (exclusive of incidental boundary revisions)		96			5						101	
Incidental boundary revisions		7									7	0
Totals	24	117	0	1	6	0	0	0	0	25	123	0

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

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

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

TABLE 4

OFF-SITE IMPACTS														
RESOURCES AFFECTED			People			Land			Water			Structures		
DEGREE OF IMPACT			minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major
TYPE OF IMPACT AND TOTAL NUMBER OF EACH TYPE	Blasting	2			2									
	Land Stability	0												
	Hydrology	0							1					
	Encroachment	0												
	Other	0												
	Total	2	0	0	2	0	0	0	1	0	0	0	0	0
OFF-SITE IMPACTS ON BOND FORFEITURE SITES														
RESOURCES AFFECTED			People			Land			Water			Structures		
DEGREE OF IMPACT			minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major
TYPE OF IMPACT AND TOTAL NUMBER OF EACH TYPE	Blasting	0												
	Land Stability	0												
	Hydrology	0												
	Encroachment	0												
	Other	0												
	Total	0	0	0	0	0	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 phase	Applicable performance standard	Acreage released during this evaluation period
Phase I	* <input type="checkbox"/> Approximate original contour restored * <input type="checkbox"/> Topsoil or approved alternative replaced	197
Phase II	* <input type="checkbox"/> Surface stability * <input type="checkbox"/> Establishment of vegetation	374.6
Phase III	* <input type="checkbox"/> Post-mining land use/productivity restored * <input type="checkbox"/> Successful permanent vegetation * <input type="checkbox"/> Groundwater recharge, quality and quantity restored * <input type="checkbox"/> Surface water quality and quantity restored	106.4
	Bonded Acreage Status^A	Acres
	Total number of bonded acres at end of last review period (September 30, 1998)^{B1}	181,561
	Total number of bonded acres during this evaluation year	31,073
	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
<p>^A Bonded acreage is considered to approximate and represent the number of acres disturbed by surface coal mining and reclamation operations.</p> <p>^B Bonded acres in this category are those that have not received a Phase III or other final bond release (State maintains jurisdiction).</p>		

TABLE 6

MINE RELATED DISTURBANCES AND RECLAMATION AT WYOMING MINE SITES (YEAR BY YEAR)					
R P E E P R O I R O T D	ACRES OF TOTAL MINE DISTURBANCE DURING REPORT PERIOD	ACRES OF CONSTRUCTED SUPPORT AREAS (FACILITIES, STOCKPILE, ROADS, ETC)	ACRES OF NET DISTURBANCE MINUS THE SUPPORT AREAS DURING REPORT PERIOD	ACRES OF PERMANENT RECLAMATION DURING REPORT PERIOD	RATIO OF RECL. VS. NET DIST.
1986	3152	492	2660	1456	0.55
1987	2521	439	2082	1630	0.78
1988	2610	606	2004	1355	0.68
1989	2967	580	2387	994	0.42
1990	2833	377	2456	1068	0.43
1991	2807	953	1854	1517	0.82
1992	2919	1167	1752	1641	0.94
1993	3173	754	2419	1888	0.78
1994	3327	1042	2285	1219	0.53
1995	3873	1278	2595	1234	0.48
1996	3954	1321	2633	1311	0.50
1997	3613	872	2741	1098	0.40
1998	4303	993	3210	1973	0.60
1999	3868	679	3189	3541	1.11

TABLE 7

STATE BOND FORFEITURE ACTIVITY			
(Permanent Program Permits)			
	Number of Sites	Dollars	Disturbed Acres
Bonds forfeited as of September 30, 1998 ^A	0	0	0
Bonds forfeited during EY 1999	0	0	0
Forfeited bonds collected as September 30, 1998 ^A	0	0	0
Forfeited bonds collected during EY 1999	0	0	0
Forfeiture sites reclaimed during EY 1999	0	0 ^B	0
Forfeiture sites repermited during EY 1999	0		0
Forfeiture sites unreclaimed as of September 30, 1999	0		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.			
^B 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	15.53
Inspection	9.53
Other (administrative, fiscal, personnel, etc.)	5.94
TOTAL	31

TABLE 9

FUNDS GRANTED TO WYOMING BY OSM (Millions of dollars) EY 1999		
Type of grant	Federal funds awarded	Federal funding as a percentage of total program costs
Administration and enforcement	\$1,511,005	85.80%
Small operator assistance	0	0
Totals	\$1,511,005	

TABLE 10

STATE OF WYOMING INSPECTION ACTIVITY		
PERIOD: October 1, 1998 - September 30, 1999		
Inspectable Unit Status	Number of Inspections Conducted	
	Partial	Complete
Active*	251	134
Inactive*	52	25
Abandoned*	0	0
Exploration	0	0
TOTAL	303	159

* Use terms as defined by the approved State program.

TABLE 11

STATE OF <u>WYOMING</u> ENFORCEMENT ACTIVITY		
PERIOD: October 1, 1998 - September 30, 1999		
Type of Enforcement Action	Number of Actions*	Number of Violations*
Notice of Violation	14	16
Failure-to-Abate Cessation Order	0	0
Imminent Harm Cessation Order	0	0

* Do not include those violations that were vacated.

TABLE 12

LANDS UNSUITABLE ACTIVITY STATE OF <u>WYOMING</u>			
PERIOD: October 1, 1998 - September 30, 1999			
Number of Petitions Received	0		
Number of Petitions Accepted	0		
Number of Petitions Rejected	0		
Number of Decisions Declaring Lands Unsuitable		Acreage Declared as Being Unsuitable	
Number of Decisions Denying Lands Unsuitable		Acreage Denied as Being Unsuitable	

Appendix B: State Comments on the Report

E-MAIL

From: "Rick Chancellor" <RCHANC@state.wy.us>
To: ISMCWY.CWY01(MHUMPHRE)
Date: 12/9/99 4:48pm
Subject: Annual report

Attached is a copy of our comments on the draft annual report. If you have any questions, please call. A hard copy will follow.

Draft Annual Evaluation Summary Report LQD Comments

- RE: Page 1 Introduction FOD used on page 12 should be added to the list of acronyms.
- RE: Page 2, Paragraph 4 The report mentions that one R&D License is for a dragline route. The dragline route has now been converted to a full permit.
- RE: Page 2, Paragraph 5 The statement is made that conflicts with coal bed methane development has delayed issuance of coal leases. BLM s EIS process included both coal mining and coal bed methane development. Combining the two likely increased the time to complete the EIS. There was also a moratorium on the approval of the R2P2 for the Thundercloud Lease due to conflict with CBM. The statement in the report may be true it but it is hard to say if the delay was significant.
- RE: Page 2, Paragraph 6 Zeigler& AEI sold their Triton Coal holdings to Vulcan Coal and the transfer was approved August 1999.
- RE: Page 4, IV.A. It would be more accurate to say file directory than web page when discussing LQD intranet efforts.
- RE: Page 4, IV.B The statement is made that five ppm for any time period can be fatal, while concentrations of 0.2 - 0.3 have ill affects on humans. This statement may be misleading since there are national short term standards (15 minute average) that are five ppm and other short term standards that are higher than 0.2 - 0.3 ppm.

RE: Page 6, V.A.

A reference is made to a September 1999 Nox incident reported by citizens. Should this be 1998?

RE: Page7, V.C.

A statement is made that 31,073 acres are ready for application for bond release. Not all of that acreage may be *ready* since the ten year waiting period may not be completed. Suggested language may be ...and either under the ten year bond period or awaiting for application for bond release.

RE: Page 8, VI

The list only includes OTT sponsored workshops/training. Would it be beneficial to also include NTTTP courses?

RE Table 4

Two blasting events are reported to have major impacts to people. Is it assumed that if a citizen complaint is received that it is a major impact? What was the criteria used to make a determination of major impact. I would assume if a major impact was documented, that a imminent harm cessation order would have been issued. Only one IHCO was issued which is in the process of being vacated (perhaps for lack of foundation). The same two instances of blasting are reported to have off-site impacts to land, water, and structures. I question if NOx can have an impact to land, water, or a structure. Please clarify.

Appendix C: CFO Response to State Comments

LQD Comment: RE: Page 1 Introduction FOD used on page 12 should be added to the list of acronyms.

CFO Response: *CFO has been added to the acronym list.*

LQD Comment: RE: Page 2 , Paragraph 4 The report mentions that one R&D License is for a dragline route. The dragline route has now been converted to a full permit.

CFO Response: *The text has be changed to reflect LQD s comment.*

LQD Comment: RE: Page 2 , Paragraph 5 The statement is made that conflicts with coal bed methane development has delayed issuance of coal leases. BLM s EIS process included both coal mining and coal bed methane development. Combining the two likely increased the time to complete the EIS. There was also a moratorium on the approval of the R2P2 for the Thundercloud Lease due to conflict with CBM. The statement in the report may be true it but it is hard to say if the delay was significant.

CFO Response: *The text has be changed to reflect LQD s comment.*

LQD Comment: RE: Page 2 , Paragraph 6 Zeigler& AEI sold their Triton Coal holdings to Vulcan Coal and the transfer was approved August 1999.

CFO Response: *The text has be changed to reflect LQD s comment.*

LQD Comment: RE: Page 4 , IV.A. It would be more accurate to say file directory than web page when discussing LQD intranet efforts.

CFO Response: *The text has be changed to reflect LQD s comment.*

LQD Comment: RE: Page 4 , IV.B The statement is made that five ppm for any time period can be fatal, while concentrations of 0.2 - 0.3 have ill affects on humans. This statement may be misleading since there are national short term standards (15 minute average) that are five ppm and other short term standards that are higher than 0.2 - 0.3 ppm.

CFO Response: *The text has be changed to clarify the text based on LQD s comment.*

LQD Comment: RE: Page 6 , V.A. A reference is made to a September 1999 Nox incident reported by citizens. Should this be 1998?

CFO Response: *The text has be changed to reflect LQD s comment.*

LQD Comment: RE: Page 7 , V.C. A statement is made that 31,073 acres are ready for application for bond release. Not all of that acreage may be *ready* since the ten year waiting period may not be completed. Suggested language may be ...and either under the ten year bond period or awaiting for application for bond release.

CFO Response: *The text has be changed to clarify the text based on LQD s comment.*

LQD Comment: RE: Page 8 , VI The list only includes OTT sponsored workshops/training. Would it be beneficial to also include NTTTP courses?

CFO Response: *The NTTTP courses have been added in response to LQD s comment.*

LQD Comment: RE Table 4 Two blasting events are reported to have major impacts to people. Is it assumed that if a citizen complaint is received that it is a major impact? What was the criteria used to make a determination of major impact. I would assume if a major impact was documented, that a imminent harm cessation order would have been issued. Only one IHCO was issued which is in the process of being vacated (perhaps for lack of foundation). The same two instances of blasting are reported to have off-site impacts to land, water, and structures. I question if NOx can have an impact to land, water, or a structure. Please clarify.

CFO Response: *Citizen complaints do not constitute a major impact, nor does the absence of an imminent harm cessation order negate the incident as a major impact. CFO determined the two blast incidences as major impacts because the NOx cloud left the permit areas and impacted citizens. CFO issued TDNs to the State in both blasting incidents. In the first incident, the State s response to the TDN was determined and upheld as inappropriate and a Federal NOV was issued.*

The second incident involved a lingering NOx cloud that inundated a residential area and exposed children departing a school bus. CFO issued a TDN. The State appropriately responded to this TDN by requiring a permit revision containing protocols to address the issue.

CFO has deleted the minor impact designations for land, water, and structures in Table 4.