



**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 2000

(October 1, 1999 to September 30, 2000)

December 7, 2000

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I. Introduction

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior. SMCRA provides authority to OSM to oversee the implementation of and provide Federal funding for State regulatory programs that have been approved by OSM as meeting the minimum standards specified by SMCRA. This report contains summary information regarding the 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, 1999 to September 30, 2000. 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:

ACHP	Advisory Council on Historic Preservation
AQD	Air Quality Division
BLM	Bureau of Land Management
CFO	Casper Field Office
CHIA	Cumulative Hydrologic Impact Assessment
DEQ	Department of Environmental Quality
EPA	Environmental Protection Agency
EQC	Environmental Quality Council
EY	Evaluation Year
LQD	Land Quality Division
NOV	Notice of Violation
NOx	Nitrogen oxides
NTTP	National Technical Training Program
OSM	Office of Surface Mining Reclamation and Enforcement
OTT	Office of Technical Transfer
PRBRC	Powder River Basin Resource Council
R2P2	Resource Recovery and Protection Plan
RSI	Random Sample Inspection
SHPO	State Historic Preservation Office
SMCRA	Surface Mining Control and Reclamation Act of 1977
TDN	Ten-Day Notice
TIPS	Technical Information Processing Systems
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
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 4,303 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 4 percent during 2000.

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, over 7 billion tons of coal are leased and 377,445 acres are permitted (Table 2).

Thirty-nine active mining operations are permitted in Wyoming; 33 are surface operations, three (3) are underground operations, one permit for a dragline move from one mine site to another and two in-situ operations. The dragline move and in-situ operations are listed as "other facilities" in Table 2 of this report. Currently, nineteen mines of the thirty-nine permitted operations are producing coal. The remaining mines are either in temporary cessation, or conducting final reclamation.

In 1998 conflict developed between 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. Civil action was taken by the coal bed Methane developers to stop the R2P2 process. Due to this conflict, a moratorium was placed on the approval of the R2P2 for the Thundercloud Lease. Tension between the coal bed methane and coal industry has eased some what. Agreements have been reached by the parties and the leasing conflict has been resolved for the coalbed methane and coal mines. The moratorium on R2P2s has been lifted for the Thundercloud lease. The Thundercloud lease was split into three smaller leases. Kennecott's Jacobs Ranch mine has the eastern edge of the Thunder Cloud lease and Arch's Black Thunder mine has the remainder of the lease. R2P2s have been approved for the Kennecott's southern and Arch's lease.

BLM indicates that it will be taken a more assertive action regarding the production of coalbed

methane in advance of coal mining to avoid future conflicts. BLM plans to require time schedules and commitments for developing methane. If developers are not producing within the schedules, they will be directed by BLM to produce or possibly lose the methane to mining operations.

Several mines are being combined into one permit. The Powder River Coal Company's North Antelope and Rochelle mines have been consolidated under one permit. Kennecott's Caballo Rojo and Cordero mines, and P&M's Kemmerer and Skull Point mines are proposing to consolidate permits. Wyodak Resources Corporation is consolidating the East Gillette and Clovis Point permits into the Wyodak mine permit.

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 very limited public participation.

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 in recent years, 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 current issues.

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) has installed 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. The employees received training and manuals for using the intranet system in October 2000.

The intranet system moves Wyoming one step closer to implementation of electronic permitting. This allows staff in all offices (three districts and technical support) to review simultaneously all electronic documents received from mine operators using one simple interface.

The Office of Technical Transfer (OTT) provided assistance to Wyoming’s electronic permitting efforts which included the purchase of a 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. Exceedance of five (5) parts per million (ppm) exposure for more than the short term standard period (15 minutes) can be harmful, 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.)

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 study were made available to the public in July 2000.

EPA became involved in a reviewing the one of the complaints 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 NO_x 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.

EPA met with Wyoming LQD & AQD and OSM (CFO & WRCC) on 10/9/99 to provide options for the solution of the NO_x issue. The preferred option was to allow industry to resolve the issue. EPA and LQD held another meeting on 11/30/99 to further discuss the issue with the Wyoming Mining Association (WMA). On January 12 & 13, 2000, WMA held a seminar in Gillette, WY to share blasting information with all interested parties. The seminar was attended by the public, coal operators, explosives suppliers, and Federal and State.

In addition, WMA has provided Campbell County with \$40,000 for an automated emergency warning system. The warning system is in place and warning signs along Wyoming Highway 450 have been installed. The Powder River Basin Resource Council have stated that they have observed progress on the part of the coal industry. WMA provides updates at the LQD Advisory

Board meetings.

In 1995, 1998 and 1999, OSM received citizen complaints concerning NO_x gases generated from blasting operations drifting off the mine permit areas. In one case OSM issued a Federal NOV (January 1999). In the two other cases, the State handled the enforcement. The enforcement action taken by the State resulted in the issuance of a notice of violation to the mine operator. The complainant requested a hearing before the Wyoming Environment Quality Council (EQC). While the EQC hearing the case, the complainant and mine operator reached a settlement agreement that outlined the safety protocols for protecting the public. Since the EPA has been involved in the NO_x gas issue, the complainant requested EPA to meet with the State, mine operator and complainant to review and discuss the viability of the proposed protocols in the agreement. In addition to the steps taken by the WMA, the safety protocols outlined in the agreement will affect how other mine operators deal with the NO_x gas issue throughout the Powder River Basin region.

Cooperative Agreement

CFO hosted a forum to discuss Federal land coordination which included participants from four BLM and three LQD offices, the U.S. Forest Service, WRCC, and CFO and assembled a work group to pursue the possibility of a Working Agreement under the Wyoming Cooperative Agreement. On February 28, 2000 the group developed a rough draft working agreement for comment. The work group met on April 27, 2000. Comments and revisions were adopted. LQD and BLM requested time to coordinate procedures for R2P2 which will be completed by December, 2000. BLM and LQD plan to schedule joint meetings with both agencies' field staff in February 2001. The purpose is to present the coordination processes and establish a rapport and communications between the two agencies' field staff. The coordination for the OSM mining plan approval process has been initiated and will have a rough draft completed by December, 2000. A final written Working Agreement is scheduled to be completed in April 2001.

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.

LQD agreed to review the required schedules in all permits. The State further agreed to revise the annual reporting format to include information addressing contemporaneous reclamation progression. LQD has completed reviewing about 85 percent of the permits and has required some revisions. The remaining 15 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 was originally January 1999. However, some of the expected revisions will be "major" in scope and extend

beyond January 1999. Revisions to the annual reporting format has begun. Starting in 1999, annual reports are required to contain the new format. CFO reviewed the annual report to determine how many were using the new format during the evaluation period (EY 2000). Approximately half of the annual reports have been reviewed of which approximately 50% have been revised appropriately (See section **VII. General Oversight Topic Reviews**, A. Topics, Contemporaneous Reclamation).

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 two off-site impacts to groundwater outside the permit areas that occurred at two mine sites. In both cases, the mining operations adversely affected the water quantity of two domestic wells. The wells were the primary water supply to the occupied homes. In one case LQD took action to see that the well was replaced. In the second case, the state did not interpret its rules to cover this well replacement. OSM disagreed with LQD’s interpretation and issued a TDN. After LQD’s response to the TDN, LQD’s response was determined to be inappropriate. A Federal inspections was ordered and a Federal NOV was issued to the mine operator. The well was replaced by the operator. (See See section **VII. General Oversight Topic Reviews**, A. Topics, Inspection and Enforcement for more information.)

Both Occurrences where domestic wells were impacted, the impacts to people, hydrology and structures were considered to be major. These impacts significantly lowered the water table, rendering the wells non-functional. There were no impacts to land.

B. Bond Release

Wyoming LQD completed 5 bond release actions during this evaluation period. There was one phase I release of 143 acres, two phase II release of 2,692 acres, and one phase III release of 33.4 acres (Table 5).

C. Reclamation Success

Approximately 337,445 acres are currently bonded (Table 5) . By end of the evaluation period, approximately 4,839 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 2000, giving a long overview of the mining and reclamation activities in Wyoming.

Figure 1. Reclamation Ratio

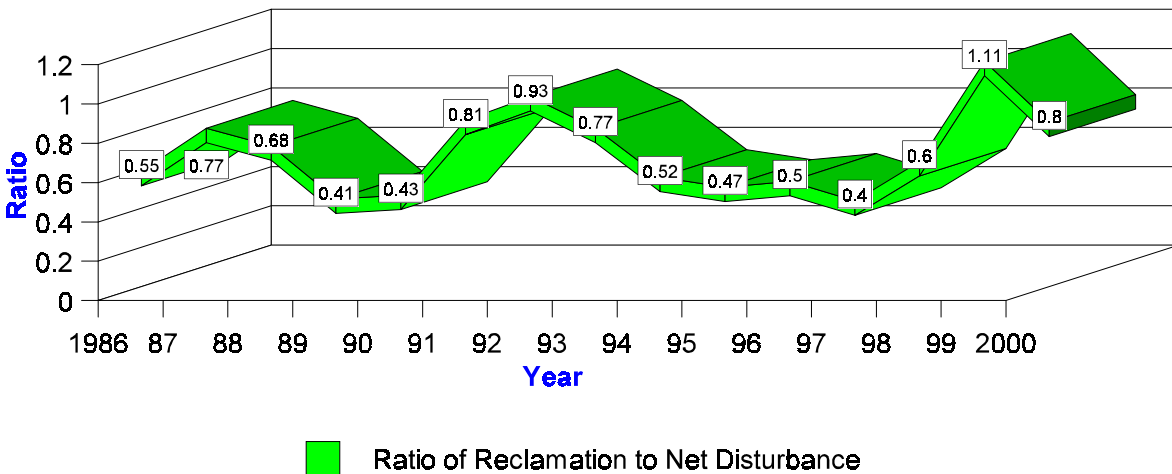


Figure 1. illustrates the ratio of the yearly permanent reclamation compared with the net disturbance found in Table 6. The net disturbance are all areas available for reclamation that are not being used for long-term approved disturbances such as: stockpiles, active pits, access roads, haul roads, railroad right-of-ways, coal preparation and loading sites, offices, shops, sediment ponds, and other approved uses. The 2000 ratio shows a 10 percent decrease of reclamation and a 24 percent increase of newly disturbed lands. The ratio of reclamation to net disturbance for EY 2000 is 0.8. 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. Part of this decrease in the ratio can be attributed to the new Annual Report format. The new data format in the Annual Reports specifically addresses

contemporaneous reclamation. After all the data is presented in this format, the data will become more accurate and reflect an accurate reclamation ratio.

VI. OSM Assistance

TRAINING

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. Ten Wyoming employees received training from OSM's technical training program at a cost of \$ 8,149.10 during EY2000.

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

Acid-Forming Materials Principles & Process -	1 staff
Effective Writing -	1 staff
Permitting Hydrology -	1 staff
Enforcement Procedures -	2 staff
Historical & Archeology Resources -	3 staff
Wetland Awareness -	2 staff

OSM provided electronic permitting funds to the WY Department of Environmental Quality (DEQ), Land Quality Division (LQD), to assist in its ongoing effort to install a State Intranet—electronic communications system—, the purpose of which is to facilitate simultaneous permit review and data sharing by three geographically separate LQD offices (Lander, Sheridan, and Cheyenne). The Intranet installation includes an LQD web page, accessible only to staff, administered through a Windows NT server in Cheyenne. OSM funds have been and will continue to be used to develop: (1) a framework to make the Intranet operational and assessable to staff, (2) training manuals for each LQD employee, (3) access to troubleshooting at each desktop, and (4) hands-on training at the three office locations. The installation is representative of WY's long-term commitment to implement electronic permitting so that staff in all the offices (three districts and technical support) can simultaneously review all electronic documents received from mine operators, by means of one simple interface.

OSM's Technical Librarian provided 11 journal article reprints to WY DEQ LQD staff members.

OSM's Bonding Specialist provided two instances of bonding technical assistance to WY LQD staff members regarding various aspects of reclamation bonding. In particular, the specialist helped resolve a variety of issues relating to reviewing bonds for approval,

interpreting regulatory requirements, correcting errors on bonding documents, and taking actions when a surety bond had exceeded the surety company's underwriting limitations.

OTT provided the opportunity for 22 WY DEQ LQD staff members to participate in an OTT-sponsored symposium, an interactive technical forum, as well as in several workshops, as follows:

Statistical Sampling for Baseline Studies, Bond Release and Monitoring Studies

April 26-27, 2000, Santa Fe, NM 4 DEQ LQD staff members

Electronic Permitting

May 10-11, 2000, Billings, MT 1 DEQ LQD staff member

Electronic Permitting

July 12-13, 2000, Steamboat Springs, CO 1 DEQ LQD staff member

Hydrology and Hydraulics Workshop

July 25-27, 2000, Denver, CO 1 DEQ LQD staff member

Soil Geochemistry for Arid and Semi-Arid Environments Workshop

August 7-11, 2000, Socorro, NM 2 DEQ LQD staff members

Billings Land Reclamation Symposium 2000, co-sponsored by OSM

March 24-28, 2000, Billings, MT 7 DEQ LQD staff members participated, co-authored papers, and made presentations:

Successful Reclamation Techniques and Bond Release for a Coal Mine in Wyoming, The Topsoil Dilemma, and Derivation and Interpretation of Wyoming's Postmining Shrub Density and Composition Standards for Coal Mine Lands.

OSM's Interactive Forum on Surface Mining Reclamation Approaches to Bond Release: Cumulative Hydrologic Impacts Assessment and Hydrology Topics for the Arid and Semi-Arid West

August 27 - September 1, 2000, Billings, MT 6 DEQ LQD staff members attended; in addition, staff members made two

presentations:

Alluvial Valley Floors Reclamation Bond Release Criteria and Wyoming Cumulative Hydrologic Impact Assessment and Coalbed Methane.

COMPUTER SUPPORT

TIPS personnel gave a brief presentation regarding TIPS' intent to provide scientific and engineering software directly to desktop workstations in TIPS customer locations. ArcInfo and AutoCAD software were delivered to these sites in early July with instructions for desktop and server installations.

The KeyServer licensing software was successfully tested in both Montana and North Dakota. KeyServer will be used to distribute software licensing to most TIPS software applications. TIPS advised each of these customer States that the remaining TIPS software will be delivered by the end of the calendar year.

CULTURAL RESOURCES

CFO continues to coordinate the National Historic Preservation Act, Section 106 cultural resource compliance for the State of Wyoming. CFO personnel work closely with the OSM Archaeologist in WRCC, Wyoming Department of Environmental Quality (DEQ), Bureau of Land Management (BLM), Wyoming State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (ACHP) and the U.S. Forest Service (USFS) to process cultural resource clearances on new mining lands and previously permitted areas that have not been surveyed for cultural resources. This detailed involvement is necessary because the State does not have a qualified archaeologist on staff and the SHPO will not accept cultural resource work from the them. The State has taken the position that, by law, the 106 process is the responsibility of the lead Federal agency and therefore OSM is responsible for this work on any mines under permit. Prior to OSM involvement with a parcel of land, the land managing agency (BLM or USFS) would be the lead federal agency, so the State has no plans to place an archaeologist on staff since all 106 clearances are covered by Federal agencies. During this reporting period action was taken on 18 projects, which included four Memorandum of Agreements with the above mentioned agencies.

THREATENED AND ENDANGERED SPECIES

During the evaluation period, OSM Wildlife Biologist has been assisting the LQD with its responsibilities for threatened and endangered species under the Wyoming State coal program and the Endangered Species Act of 1973, as amended. The State is responsible for ensuring that no surface mining activity is conducted which is likely to jeopardize the continued existence of Federally listed or proposed endangered or threatened species, or which is likely to result in the destruction or adverse modification of designated critical

habitats of such species. The State accomplishes this by completing informal Section 7 consultations, as needed, with the U.S. Fish and Wildlife Service (USFWS). The State implements the September 24, 1996 Formal Section 7 Biological Opinion and Conference Report on Surface Coal Mining and Reclamation Operations under SMCRA (1996 Biological Opinion). The 1996 Biological Opinion covers the continuation and approval of surface coal mining and reclamation operations throughout the United States. The USFWS made this non-jeopardy determination because provisions within SMCRA preclude the State from permitting coal mining related activities that would result in jeopardizing endangered or threatened species or their critical habitat.

The OSM has coordinated and facilitated several discussions between LQD and the USFWS to work out local procedures for implementing the 1996 Biological Opinion for listed or proposed threatened and endangered species in Wyoming. With OSM's assistance, the LQD has discussed threatened and endangered species issues for various proposed mining activities with the USFWS - Cheyenne Office. The discussions focused on what, if any, species may be affected and whether protective measures are needed to minimize any adverse effects to those species. If determined to be necessary, the LQD and the USFWS developed species-specific protective measures for an operator to implement. Over the past year, the LQD and the USFWS have successfully accomplished this process and assured the protection of threatened and endangered species at several mines including Black Thunder, Jacob's Ranch, North Antelope/Rochelle Mine Complex, Antelope, and the Eagle Butte mines.

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. TOPICS

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.

The LQD is conducting watershed basin specific CHIAs. As permits are revised or amended to incorporate new leases, CHIAs are being conducted as part of the permitting process. Thus far, 3 basin specific CHIAs have been completed. The CHIA for the Eagle

Butte mine was the most recent CHIA completed. Work has started on Black Thunder's CHIA for the Thunder Cloud Amendment. This CHIA is expected to be completed in January 2001.

The following are anticipated permitting actions (revisions & amendments) where CHIAs need to be initiated:

- North Caballo Amendment
- Antelope-Horse Creek Amendment
- Buckskin Amendment
- North Rochelle Amendment
- Jim Bridger Amendment

Program Maintenance (Amendments)

The Wyoming State program has 72 outstanding program deficiencies, including less effective rules [30 CFR 732.17], disapproved rules [30 CFR 950.15], and required program amendments [30 CFR 950.16]. The oldest outstanding deficiencies dates back to 1986 with the most recent dating 1997. In 1994, OSM and Wyoming Land Quality Division (LQD) researched the outstanding deficiencies and developed a comprehensive list of outstanding program deficiencies. In addition, the two agencies developed amendment packages grouping the deficiencies by subject or topic. The deficiencies were divided into ten proposed amendment packages. OSM has received and approved three of these amendment packages. Seven amendment packages are pending submission to OSM. OSM and LQD established a schedule for submitting the remaining packages. The schedule has been revised several times due to delays in LQD's rule-making process.

The evaluation was divided into three (3) categories; 1) evaluation of the State's rule making process to determine why amendments are not meeting schedules, 2) evaluate whether Federal rule making changes the status of required program amendments, and 3) determine if any of the program deficiencies are non significant and can be removed. Evaluation of the first two categories has been completed.

State Rule Making Process

The Land Quality Division has developed program amendment packages. However, when the packages are reviewed by the Land Quality Advisory Board (Board) and Environmental Quality Council (Council), they are returned to LQD for a rewrite and inclusion of special interest items desired by the Board or Council. This has resulted in a "log-jam" in the Wyoming rule making process. On March 13, 2000, CFO staff met with the Administrator of LQD and discussed the lack of progress submitting program amendments on schedule. The Administrator decided to take a different approach with the Board and Council. LQD plans to para-phase

the Federal counterpart rules in its revised amendment package and place any supplemental rules that the Board and Council desire in a separate amendment package. LQD hopes to reduce controversy and expedite the rule making process.

Federal Rule Changes

Since 1986, OSM has revised, amended and removed Federal regulations. In 1994 and 1997 OSM revised several Federal rules including ownership and control requirements. The objective of this evaluation was to determine if all of the Wyoming program deficiencies are still valid based upon changes to the Federal rules in recent years.

Federal rule changes involved 26 of the 67 Wyoming program deficiencies. These changes occurred within the following parts of the Code of Federal Regulations:

- Ownership and Control [30 CFR 773.22-.25 and 778.13],
- Public Participation and Review of Permit Applications [30 CFR 773.13 & .15 and 779.25],
- Enforcement [30 CFR 843],
- Disposal of Non-coal Waste [30 CFR 816.89],
- General Environmental resource Information [30 CFR 779.12 - Cultural Resources],
- Spillways [30 CFR 816.49(a)(9)],
- Valid Existing Rights [30 CFR 761.5].

The Federal rule changes expanded and/or further defined the Federal requirements that were identified in the original deficiency letters [30 CFR 732], or Federal Register notices disapproving Wyoming rules [30 CFR 950.12] or requiring an additional program amendments [30 CFR 950.16]. None of the 26 deficiencies affected by the changes to the Federal rules were eliminated due to these changes. In instances where the Federal rules were expanded, OSM has not issued any new program deficiency letters [30 CFR 732].

The status of the Wyoming program deficiencies remains unchanged based on the results from CFO's review of each deficiency. However, the State will be made aware of those Federal rule changes that further define, or revise the Federal requirements.

Non-Significant Program Deficiencies

A review of each program deficiency is underway. The review will be completed during EY2001. Each proposed amendment package will be reviewed before the State begins its rule making process. The first amendment package to be reviewed is

Hydrology. No program deficiencies have been identified as non-significant. LQD asked that CFO not consider the Roads or Solid Waste amendments, because they are already in the rule making process. The remaining 4 amendment packages will be reviewed in the order in which they are scheduled to be submitted to OSM.

On April 4, 2000, WRCC Regional Director met with the Director of DEQ. The Directors discussed OSM's concerns regarding the lack of progress in submitting program amendments and the efforts LQD.

Schedules have been delayed due to industry comments on amendment packages, and required changes to amendments by the Land Quality Advisory Board and Environmental Quality Council to proposed amendment packages. For example, the Solid Waste amendment package has been before the Board four times (February 1994, October 1994, June 1998, and July 1999) and Council once (May 2000), where it was referred back to the Board for a fifth time. On August 1, 2000, the Board Passed the Solid Waste amendment and also passed the Roads amendment that has been in the State's rule making process since 1990. The Board inquired as to OSM's concerns regarding these amendments. OSM staff pointed out the regulations and the cooperative agreement require the State to maintain its coal regulatory program no less effective than the Federal program. Both Amendment packages will be processed and go before the Council for its approval. The earliest that the Council could review the amendments would be the fourth quarterly meeting in 2000.

In addition to the Roads and Solid Waste, there are five (5) more amendments that need to be prepared and submitted to OSM..

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 contacted all the coal operators in January 1998 and required changes to the Annual Report format. In addition, the State agreed to review all permits and assure that the permits contained clearly outlined standards for contemporaneous reclamation. During the EY 2000 evaluation, CFO reviewed all of the Annual reports to verify that the coal operators were adopting the new format. Approximately 40 percent (14 out of 34) of permits did not contain the information required by LQD. However, 11 of the 14 permit were not due until after the evaluation was completed. Those eleven permits will have to be checked in the next evaluation period.

Inspection and Enforcement

Five random sample inspections (RSI) were conducted during EY-2000. One Ten-Day-Notice (TDN) was issued as a result of an RSI. Two TDN's were issued as a result of citizens complaints for failure to replace domestic water wells. The States response to one citizen complaint TDN was determined appropriate. The permittee agreed to drill a well for the citizen who submitted the complaint. The States response to the other TDN stated that the age and condition of the well was at fault for failure and not the coal company permittee. This response was determined inappropriate. This determination was appealed to the OSM Western Regional Coordinating Center (WRCC). The WRCC upheld the Casper Field Office Director's inappropriate determination and ordered a Federal inspection. As a result of the inspection a Federal Notice of Violation (NOV) was issued. The NOV was issued for failure to replace a domestic water well which was determined to be adversely affected by mining. The corrective action ordered by the NOV was to replace the well. The permittee filed a motion for temporary relief from the corrective actions ordered in the NOV. The Administrative Law Judge granted the request for temporary relief. The Department of Interior Solicitors office and the WRCC in Denver has entered into a settlement agreement with the permittee, Arch Coal Company. The agreement states that the NOV will be vacated upon notification by the citizen that her well has been replaced. The well has been drilled but the quality of water needed for household use has not been produced. A motion has been filed by DOI Solicitors to vacate the ALJ hearing.

One TDN was issued for failure of the permittee to obtain Secretary of the Interior approval prior to mining federal coal. The States response stated that it lacked jurisdiction in this matter. The Casper Field Office Director determined the States response to be appropriate.

One TDN was issued as a result of a joint bond release inspection on Federal lands. The TDN was issued for failure to repair erosion. The States response was to issue a State NOV. The States response was determined appropriate requiring no further action by the Casper Field Office.

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, property and travel were reviewed.

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

Wyoming was timely regarding both reporting financial status of existing grants and filing of grant applications.

An A-133 Audit was completed for the year ended June 30, 1999. There were no findings regarding the Administration and Enforcement grant. For the previous year ended June 30, 1998 there was one finding regarding Wyoming's enforcement grant. There was one overdraw of funds from the U. S. Treasury and this had been found and reported by OSM. Wyoming DEQ has submitted a resolution to the Environmental Protection Agency - Wyoming's cognizant agency, and these will be forwarded to OSM. There are no other outstanding findings. Wyoming intends to complete another A-133 Audit on or before December 31, 2000 for the year ended June 30, 2000.

Personnel time sheets and specific travel were sampled for purposes of ensuring that when inspectors were conducting inspections (coal and non-coal) that they were charging to the coal grant; if the trip involved both coal and non-coal inspections that time was appropriately charged to coal and non-coal accounts. No problems were found.

Travel policies and procedures were reviewed. They were found to be adequate. Travel vouchers were sampled. Allowable per diem daily rates and mileage were reviewed. No problems were found. Several instances were found where the coal grant was charged for the entire trip when coal and non-coal functions had transpired. Also one voucher had been charged and approved where the charge should have been less. Wyoming has since made corrections to these findings. All vouchers had been approved by the appropriate supervisor. No other problems were found.

Wyoming DEQ was conducting a property review. This meets the requirement of the Common Rule. The current reported OSM-60 for the Administration and Enforcement grant has fewer than fifty items. Wyoming continues to update their OSM-60's.

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			
1998	278.7	2.3	281.0
1999	322.3	1.8	324.1
2000	335.3	1.9	337.2

^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, 2000													
Coal mines and related facilities	Number and status of permits									Permitted acreage^A			
	Active or temporarily inactive		Inactive		Abandoned		Totals		Insp. Unit ^D				
	IP	PP	Phase II bond release										
			IP	PP	IP	PP	IP	PP	IP	PP	Total		
STATE and PRIVATE LANDS REGULATORY AUTHORITY: STATE													
Surface mines	0	33	0	0	0	0	0	0	33	33	0	122,695	122,695
Underground mines	0	3	0	0	0	0	0	0	3	3	0	4,260	4,260
Other facilities	0	2	0	0	0	0	0	0	2	2	0	430	430
Subtotals	0	38	0	0	0	0	0	0	38	38	0	127,385	127,385
FEDERAL LANDS REGULATORY AUTHORITY: STATE													
Surface mines	0	33	0	0	0	0	0	0	33	33	0	206,476	206,476
Underground mines	0	2	0	0	0	0	0	0	2	2	0	1,911	1,911
Other facilities	0	2	0	0	0	0	0	0	2	2	0	1,673	1,673
Subtotals	0	37	0	0	0	0	0	0	37	37	0	210,060	210,060
ALL LANDS^B													
Surface mines	0	34	0	0	0	0	0	0	34	34	0	329,176	329,176
Underground mines	0	3	0	0	0	0	0	0	3	3	0	6,171	6,171
Other facilities	0	2	0	0	0	0	0	0	2	2	0	2,103	2,103
Totals	0	39	0	0	0	0	0	0	39	39	0	337,445	337,445
Average number of permits per inspectable unit (excluding exploration sites)											<u>1</u>		
Average number of acres per inspectable unit (excluding exploration sites)											<u>8652</u>		
Number of exploration permits on State and private lands: . . .					<u>0</u>	On Federal lands:					<u>0</u>	C	
Number of exploration notices on State and private lands: . . .					<u>1</u>	On Federal lands:					<u>0</u>	C	
<p>IP: Initial regulatory program sites.</p> <p>PP: Permanent regulatory program sites.</p> <p>^A When a unit is located on more than one type of land, includes only the acreage located on the indicated type of land.</p> <p>^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.</p> <p>^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.</p> <p>^D Inspectable Units includes multiple permits that have been grouped together as one unit for inspection frequency purposes by some State programs.</p>													

TABLE 3

**STATE PERMITTING ACTIVITY
As of September 30, 2000**

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	0	0	0	0	0	0	0	0	1	0	0
Renewals	15	11	0	0	0	0	0	0	0	15	11	0
Transfers, sales and assignments of permit rights	6	4		1	1		0	0		7	5	
Small operator assistance	0	0		0	0		0	0		0	0	
Exploration permits	0	0		0	0		0	0		0	0	
Exploration notices ^B	1	1			0			0		1	1	
Revisions (exclusive of incidental boundary revisions ^C)	100	117	8255	10	7	0		0		110	124	8255
Incidental boundary revisions		4	172		0	0		0	0		4	172
Totals	123	137	8,427	11	8	0	0	0	0	134	145	8,427

OPTIONAL - Number of midterm permit reviews completed that are not reported as revisions 0

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

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

^C State revision process includes "amendments" where additional acreage is added to the permit as a permit revision.

TABLE 4

OFF-SITE IMPACTS														
DEGREE OF IMPACT		RESOURCES AFFECTED											Total	
		People			Land			Water			Structures			
		minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate		major
TYPE OF IMPACT	Blasting													
	Land Stability													
	Hydrology			2					2			2	2	
	Encroachment													
	Other (Dust & Smoke)													
	Total	0	0	2	0	0	0	0	0	2	0	0	2	2
Total number of inspectable units: <u>39</u>														
Inspectable units free of off-site impacts: <u>37</u>														
OFF-SITE IMPACTS ON BOND FORFEITURE SITES														
DEGREE OF IMPACT		RESOURCES AFFECTED											Total	
		People			Land			Water			Structures			
		minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate		major
TYPE OF IMPACT	Blasting													
	Land Stability													
	Hydrology													
	Encroachment													
	Other													
	Total	0	0	0	0	0	0	0	0	0	0	0	0	
Total number of inspectable units: <u>1</u>														
Inspectable units free of off-site impacts: <u>1</u>														

Refer to the 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	! Approximate original contour restored ! Topsoil or approved alternative replaced	143
Phase II	! Surface stability ! Establishment of vegetation	2692
Phase III	! Post-mining land use/productivity restored ! Successful permanent vegetation ! Groundwater recharge, quality and quantity restored ! Surface water quality and quantity restored	33.4
	Bonded Acreage Status^A	Acres
	Total number of bonded acres at end of last review period (September 30, 1999) ^B	337,445
	Total number of bonded acres during this evaluation year	8,427
	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)	3
<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 E P O R T	P E R I O 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
2000		5185	1232	3953	3174	0.80

TABLE 7

STATE BOND FORFEITURE ACTIVITY			
(Permanent Program Permits)			
	Number of Sites	Dollars	Disturbed Acres
Bonds forfeited as of September 30, 1999 ^A	1	\$36,407	3
Bonds forfeited during EY 2000	1	\$36,407	3
Forfeited bonds collected as September 30, 1999 ^A	1	\$36,602	3
Forfeited bonds collected during EY 2000	1	\$36,602	3
Forfeiture sites reclaimed during EY 2000	0	0 ^B	0
Forfeiture sites repermited during EY 2000	0		0
Forfeiture sites unreclaimed as of September 30, 2000	1		1
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 2000
Regulatory Program	
Permit review	14.48
Inspection	8.35
Other (administrative, fiscal, personnel, etc.)	6.17
SUB-TOTAL	29.00
AML Program	13.10
TOTAL	42.10

TABLE 9

FUNDS GRANTED TO WYOMING BY OSM (Millions of dollars) EY 2000		
Type of Grant	Federal Funds Awarded	Federal Funding as a Percentage of Total Program Costs
Administration and enforcement	\$1,540,643	88.7 %
Small operator assistance	0	0
Totals	\$1,540,643	

TABLE 10

STATE OF WYOMING INSPECTION ACTIVITY		
PERIOD: October 1, 1999 - September 30, 2000		
Inspectable Unit Status	Number of Inspections Conducted	
	Partial	Complete
Active*	285	120
Inactive*	86	37
Abandoned*	0	0
Exploration	0	0
TOTAL	371	157

* Use terms as defined by the approved State program.

TABLE 11

STATE OF WYOMING ENFORCEMENT ACTIVITY		
PERIOD: October 1, 1999 - September 30, 2000		
Type of Enforcement Action	Number of Actions*	Number of Violations*
Notice of Violation	8	8
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, 1999 - September 30, 2000			
Number of Petitions Received	0		
Number of Petitions Accepted	0		
Number of Petitions Rejected	0		
Number of Decisions Declaring Lands Unsuitable	0	Acreage Declared as Being Unsuitable	0
Number of Decisions Denying Lands Unsuitable	0	Acreage Denied as Being Unsuitable	0

Appendix B:
State Comments on the Report

(E-mail from Richard Chancellor (LQD) to Mark Humphrey (OSM) received December 5, 2000)

MEMORANDUM

TO: Mark Humphrey
FROM: Richard A. Chancellor
DATE: 5 December 2000
SUBJECT: Annual Evaluation Summary Report EY2000

I have reviewed the draft report and only have two comments. Both refer to section II. Overview of the Wyoming Coal Mining Industry. The comments are:

1. On the top of page 3, the paragraph reads:

Kennecott's Jacobs Ranch mine has the northern and southern leases and Arch's Black Thunder mine has the third lease. R2P2 have been approved for the Kennecott's southern and Arch's lease. BLM is processing Kennecott's northern lease.

The eastern edge of the Thundercloud lease that is contained within the boundary of the Jacobs Ranch mine was split into a northern and southern lease. R2P2's for both leases have been approved. Likewise, the southern segment of the Thundercloud lease that is contained within the current Black Thunder permit boundary was split into a separate lease. The R2P2 for this lease was also approved.

2. Third paragraph on page 3. You may want to add: The Wyodak Mine is consolidating the East Gillette and Clovis Point permits into the Wyodak permit.

Wyoming, December 7, 2000

Appendix C:
CFO Response to State Comments

CFO Response to State Comments

LQD COMMENT:

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CFO RESPONSE:

CFO has made the correction and appreciates LQD's input.

LQD COMMENT:

2. Third paragraph on page 3. You may want to add: The Wyodak Mine is consolidating the East Gillette and Clovis Point permits into the Wyodak permit.

CFO RESPONSE:

CFO has made the correction and appreciates LQD's input.