



OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Annual Evaluation Report

for the

Regulatory and Abandoned Mine Land Reclamation Programs

Administered by the State

of

Oklahoma

for

Evaluation Year 2001

(October 1, 2000, through September 30, 2001)

## TABLE OF CONTENTS

I.	Introduction.....	1
II.	Overview of Coal Mining Industry.....	2
III.	Overview of Public Participation in the Program.....	2
	A. Public Participation in OSM's Oversight.....	2
	B. Public Participation in the State Program.....	2
IV.	Major Accomplishments/Issues/Innovations.....	3
	A. Regulatory Program.....	3
	B. Abandoned Mine Land Reclamation Program.....	3
	C. Program Amendments.....	5
V.	Success in Achieving the Purposes of SMCRA as Measured by the Number of Observed Off-Site Impacts and the Number of Acres Meeting the Performance Standards at the Time of Bond Release.....	6
	A. Off-Site Impacts.....	6
	B. Reclamation Success.....	7
	C. Customer Service.....	8
VI.	OSM Assistance.....	9
VII.	General Oversight Topic Reviews.....	9
	A. Mine-Site Evaluation.....	10
	B. Bonding Instruments and Records.....	10
	C. Bonding for AMD Sites.....	10
	D. Contractor Reclamation with Forfeited Funds.....	11
	E. Alternative Enforcement Actions.....	11
	F. Surface Runoff Control Structures.....	11
	G. Postmining Land Use.....	12
	H. Fish and Wildlife Resources.....	12
	I. Acid and Toxic Materials Handling Plans.....	14
	Appendix A: Tabular Summaries of Data.....	15
	Tables 1.....	T-1
	Table 2.....	T-2
	Table 3.....	T-3
	Table 4.....	T-4
	Table 5.....	T-5
	Table 6.....	T-6
	Table 7.....	T-7

Table 8 .....	T-8
Table 9 .....	T-9
Table 10 .....	T-10
Table 11 .....	T-11
Appendix B: State Comments on Report.....	16

## 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 Oklahoma program and the effectiveness of the Oklahoma program in meeting the applicable purposes of SMCRA as specified in Section 102. The evaluation period covered by this report is October 1, 2000, to September 30, 2001.

OSM continues to implement the oversight policy initiated in the 1996 evaluation year. The primary focus of the policy is an on-the-ground results-oriented strategy that evaluates the end result of State program implementation, i.e., the success of the State programs in ensuring that areas off the minesite are protected from impacts during mining, and that areas on the minesite are contemporaneously and successfully reclaimed after mining activities are completed. The policy emphasizes a shared commitment between OSM and the States to ensure the success of SMCRA through the development and implementation of a performance agreement. Also, the policy continues to encourage public participation as part of the revised oversight strategy. Beside the primary focus of evaluating end results, the oversight guidance makes clear OSM's responsibility to conduct inspections to monitor the State's effectiveness in ensuring compliance with SMCRA's environmental protection standards.

Oversight is a continuous and ongoing process. To further the idea of continuous oversight, this annual report is structured to report on OSM's and Oklahoma's progress in conducting evaluations and completing oversight activities. It also reports accomplishments during the evaluation period. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the Office of Surface Mining, Tulsa Field Office, 5100 E. Skelly Drive, Suite 470, Tulsa, Oklahoma 74135-6547.

The following acronyms are used in this report:

AEA	Alternative Enforcement Action
AMD	Acid Mine Drainage
AML	Abandoned Mine Land
AOC	Approximate Original Contour
BTCA	Best Technology Currently Available
CFR	Code of Federal Regulations
EY	Evaluation Year
OAC	Oklahoma Administrative Code
OCC	Oklahoma Conservation Commission
ODM	Oklahoma Department of Mines
ODWC	Oklahoma Department of Wildlife Conservation

OSM	Office of Surface Mining Reclamation and Enforcement
SAR	Sodium Absorption Ratio
SHPO	State Historic Preservation Officer
SMCRA	Surface Mining Control and Reclamation Act of 1977
TIPS	Technical Information Processing System
TFO	Tulsa Field Office

## **II. Overview of Coal Mining Industry**

The coal-bearing strata in Oklahoma occur in the eastern portion of the State. The coal is bituminous and is Middle and Late Pennsylvanian in age. The demonstrated coal reserves are 1.6 billion tons, or 0.3 percent of the total U.S. coal reserves. About 8,000 square miles in Oklahoma have coal-bearing strata that are considered to be of commercial value with seams ranging from 10 inches to 8 feet thick.

Coal production in calendar year 2000 was 1.540 million tons, a slight decrease from the 1.6 million tons in 1999. Thirteen permits produced coal during 2000. One of the 13 producing permits was an underground mine, one was a contour mine, while the remaining eleven were area surface mines. Oklahoma had 100 permits that included 31,3840 acres at the end of the evaluation period. The Oklahoma Department of Mines (ODM) employed 27 people to administer the approved regulatory program. The Abandoned Mine Land (AML) program employed an additional six people.

## **III. Overview of Public Participation in the Program**

### **A. Public Participation in OSM's Oversight**

OSM distributed "Citizen Information Cards," that were developed in Evaluation Year-1999, to citizens in an effort to educate them about their rights, and what to do if they have a concern about a mining operation or an AML site. OSM participated in bond release inspections throughout the year that resulted in significant interaction with landowners.

### **B. Public Participation in the State Program**

ODM allows public input into the State program through several avenues. Citizens may comment on permit applications, amendments to the State program, or file complaints on mining operations. Citizens may participate in the various conferences, hearings, and inspections that are part of the permitting and enforcement process. For example, ODM inspectors regularly interact with landowners during Phase I, II, and III bond releases. ODM inspectors and support staff conducted two Student Outreach Presentations during April and May 2001. The presentations entitled, "The Oklahoma

Mining Experience” is offered to schools. Seven ODM employees participated in the two events, where they used literature, activities, and visual aids to construct a portrayal of mining and reclamation in Oklahoma. On April 11, 2001, 180 students from nine fourth grade classes in Wagoner, Oklahoma, attended the program during their Science class period. The students received “hands-on” experience using a seismograph to measure ground motion and airblasts. They examined mineral samples, were given a short course in Oklahoma mining history, and viewed a mining video. On May 16, 2001, the State employees presented the same information to 320 sixth and seventh grade students in Broken Arrow, Oklahoma.

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

##### **A. Regulatory Program**

ODM issued one new 405 acre surface mine permit during EY 2001. The State renewed 2 existing permits, approved 21 revisions and 5 incidental boundary revisions to existing permits. Newly permitted acreage increased to 2,490 acres from the 2,094 acres approved in EY-2000 (Table 3).

ODM conducted Phase I bond releases on 2,642 acres, Phase II on 2,755 acres, and Phase III on 2,058 acres. Total bonded acres statewide was reduced from 34,377 to 32,327 acres.

It was not necessary for ODM to forfeit or collect any bond during the 2001 evaluation period.

ODM continued its review of 8 candidates for possible Alternative Enforcement Actions (AEA). The principle officer of one coal mine has been in litigation with ODM for 5 years on an abandoned 1,174 acre permit.

##### **B. Abandoned Mine Land Reclamation Program**

The Oklahoma Conservation Commission (OCC) is the State Regulatory Authority for the AML Reclamation program. It operated with an annual grant of \$1,858,135. OCC received \$45,000 in civil penalty money that it used for construction of a project, which will break ground in the first half of EY-2002. OCC AML has a full-time staff of six. Part-time field staff are utilized on an as needed basis for engineering surveys and as construction inspectors. Project selection is based on a system that considers protection of the health, safety, general welfare, and property from extreme danger of adverse effects of past coal mining practices. Selection of projects for construction complied with Section 403 of SMCRA and the approved AML reclamation program.

## 2001 ANNUAL EVALUATION REPORT

---

In EY-2001, OCC's projects were funded through its annual construction appropriation plus carry-over of construction projects started in previous years. Projects included reclaiming priority 2 water-filled coal mine strip pits and highwalls as well as closing openings and reclaiming subsidence areas associated with past underground coal mining activities. One underground mine opening was addressed under OCC's AML Emergency Program. Selected projects were located near roads, schools, concentrations of residential housing, and on or near land open for public recreation. OCC followed standard construction practices using State contracting procedures.

The last two annual evaluation reports addressed a citizen complaint on a joint Natural Resource Conservation Service /OCC project. The complaint went to mediation, which was finalized and issues resolved during this evaluation period.

During EY-2001, OCC completed one emergency project and 6 regular reclamation projects. Reclamation was completed on approximately 215 acres, including approximately 13,120 linear feet of highwall, 8 hazardous water bodies, 2 vertical openings, and one portal. Since program approval OCC has reclaimed approximately 3,472 acres.

The Council for Historic Preservation in Denver proposed the agreement include an OCC certified archeologist on staff or contract. Since OCC no longer has an archeologist and has developed a good working relationship with the SHPO, it decided not to pursue the agreement at this time.

Improvements were noted in sediment control on AML projects under construction. OCC continues to refine its sediment and erosion control practices with additional improvements anticipated on projects initiated in EY-2002.

OCC had several notable firsts for its AML program. OCC initiated construction of its first Appalachian Clean Streams Initiative project, which it completed in the first few weeks of EY-2002. The vertical flow wetlands will treat a low pH, high iron and high manganese artesian flow from an abandoned underground coal mine. When the project becomes fully operational in EY-2002 the treated effluent should provide marked improvements of instream habitat for several miles below the project. A significant increase in numbers and diversity of vertebrate and invertebrate life forms is expected, including the return of fish to stream segments that have been essentially devoid of vertebrate life for several years. The project will also decrease the iron loading of a downstream Corps of Engineers project.

During a January inspection of a proposed project it was discovered western diamondback rattlesnakes were using an abandoned mine entrance to overwinter. The entrance was scheduled for a complete backfill. To address concerns over the falling numbers of the unlisted reptile, OCC altered its closure design abating the safety

hazard associated with the opening while attempting to protect the diamondback hibernating shelter.

OCC also started construction of its first “bat friendly” closures. Based on information gathered during surveys conducted with the United States Fish and Wildlife Service in the previous evaluation period, OCC planned bat gate closures to address abandoned underground mine openings known to be used by eastern pipistrelle and northern long-eared bats. OCC changed its design for a respiring opening from a solid backfill to a bat gate to maintain the airflow and atmospheric conditions in the area of the mine used by bats. When installation of the bat gates is completed in the fall of 2001, safety hazards associated with the abandoned mine openings will be abated while protecting an important natural resource. OCC is using the project to raise the public’s awareness of Oklahoma’s bat resources and the importance of protecting them.

### **C. Program Amendments**

During EY 2001, OSM approved one amendment to the Oklahoma regulatory program (OK-25). OSM worked with ODM on two other amendments that Oklahoma will submit in the near future (OK-28 and OK-29). The status and content of each of these is described below:

OK-25 On January 6, 1997, OSM sent a 30 CFR 732 letter to all States requiring changes in the States’ regulatory programs’ ownership and control regulations. The requirement was prompted by changes in OSM’s ownership and control regulations. Oklahoma submitted an amendment that partially satisfied the requirements on January 26, 2001. OSM approved that amendment on May 9, 2001. As a result of legal challenges to OSM’s regulations and changes in response to the judicial decision, Oklahoma plans to wait until OSM can provide additional guidance before it responds to the remaining requirements.

OK-28 On July 18, 2000, ODM submitted an informal amendment to change its rules relating to remining. OSM reviewed the informal amendment and responded with its concerns on July 31, 2000. ODM revised its rules, promulgated them, and on November 1, 2001, submitted a formal amendment to OSM.

OK-29 On August 23, 2000, OSM sent a 30 CFR 732 letter to all States requiring changes in the States’ valid existing rights regulations. The requirement was prompted by changes in OSM’s valid existing rights regulations. In response to the letter, on January 25, 2001, Oklahoma requested OSM to reevaluate its rules to determine whether the changes were really needed in the Oklahoma program. OSM responded on February 26, 2001, reaffirming that Oklahoma would need to change its valid existing rights rules. As of October 30, 2001, ODM had not submitted a formal amendment.



**V. Success in Achieving the Purposes of SMCRA as Measured by the Number of Observed Off-Site Impacts and the Number of Acres Meeting the Performance Standards at the Time of Bond Release**

To further the concept of reporting end results, the findings from performance standards and public participation evaluations are being collected for a national perspective in terms of the number and extent of observed off-site impacts and the number of acres that have been mined and reclaimed, 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 Tulsa Field Office (TFO) that provide additional details on how the following evaluations and measurements were conducted.

**A. Off-Site Impacts**

Thirteen off-site impacts were observed by State and Federal personnel during 948 opportunities for observations. An observation is defined as an inspection, either State or Federal, partial or complete. When a Federal observation led to a State observation, or the inspections were conducted jointly, the observation was only counted once. No types of mine sites were excluded from observations. An off-site impact is anything resulting from a surface coal mining and reclamation activity that causes a negative effect on resources (people, land, water, structures), outside areas permitted to be disturbed.

ODM and OSM agree that some cited violations may not result in an off-site impact. However, ODM and OSM personnel disagree on the definition of off-site impacts involving violations of effluent standards and violations for failure to pass surface drainage through a sedimentation structure. ODM maintains that violations for "failure to pass" and "effluent limits" will often be reported as having no off-site impact, because damage or a change to an affected stream, or to an undisturbed area cannot always be substantiated. OSM maintains that Oklahoma's position addresses the degree of environmental damage from the impact, rather than simply recording the occurrence of an impact. All effluent violations have some negative effect on the receiving stream or on the undisturbed area, although the impact may be minor. In EY-1998 ODM and OSM personnel agreed to use upstream and downstream sampling to substantiate the impact of discharges, in an attempt to provide a means to measure the effects of discharges, making the differences in the definition of off-site impacts a moot point. One downstream pH test was conducted in EY-1999, but no upstream testing or sampling was conducted. No upstream or downstream sampling was reported in either EY-2000 or EY-2001.

All 13 off-site impacts were reported as causing minor damage to people, land, water, or structures, in EY-2001. None of the 13 impacts were reported to cause moderate or major impacts (See Table 4).

OSM reviewed a sample of the violations that did not have an impact, and agreed with the State inspectors that the impacts were contained within the areas intended for disturbance. When no off-site impact occurs, State inspection reports are sufficiently descriptive to prove that all damage was contained inside the area intended for disturbance. ODM inspectors have increased their attention to what constitutes an off-site impact. The frequency of reported impacts outside of the areas intended for disturbance has increased, in part, because of State inspectors increased attention to impacts both on and off the permit. State inspectors have been commended by OSM for their increased attention to the number of impacts and improved reporting. But when off-site impacts occur, the descriptions of the impacts do not quantify the damage. OSM has advised ODM that investigations and descriptions of off-site impacts should be sufficiently detailed to describe the extent of damage to people, land, water, or structures.

Ninety-two percent of all inspectible units, or 92 of 100, were free of off-site impacts during the evaluation year. ODM reports off-site impacts on active or inactive permits as defined by 30 CFR 840.11, but has not been reporting off-site impacts on abandoned or forfeited permits. OSM and ODM personnel are discussing the means by which State inspectors should report off-site impacts on abandoned or forfeited sites. ODM and OSM are working together to ensure that all off-site impacts are counted, and that REG-8 is interpreted by both OSM and ODM inspectors in the same manner.

## **B. Reclamation Success**

OSM is evaluating reclamation success by comparing the number of acres released with acres bonded. At Phase I bond release Approximate Original Contour (AOC) has been achieved, and usually topsoil or an approved alternative soil medium has been replaced on disturbed areas. At Phase II bond release surface stability has been achieved, and vegetation established. Phase III bond release is the final step in reclamation performance bond release with implementation of the postmining land use, return of vegetation productivity and restoration of surface-and ground-water hydrology.

At the end of EY 2001, 31,840 acres were permitted for coal mining in Oklahoma. Phase III bond releases were 2,058 acres up from the previous year when 1,385 acres were released. Phase II bond release increased to 2,755 acres from 1,172 acres in EY-2000, while Phase I releases increased to 2,642 acres from 705 acres (Table 5). Oklahoma has continued to encourage reclamation, and the release of bond from mined areas. Based on bond release inspections in EY-2001, OSM concluded that ODM

successfully implemented its program so that reclamation success was assured on reclaimed lands where bonds have been released.

ODM and OSM have continued working together to refine the processes for ensuring that bonds are forfeited on abandoned sites, violations are corrected, and reclamation plans are completed. ODM completed all requested bond forfeitures in previous years. Therefore, no bond was forfeited in EY-2001 (See Table 6). However, bond forfeiture reclamation plans were developed and bond forfeiture reclamation was conducted at sites where bond was collected in previous years. ODM significantly improved the quality of reclamation plans for forfeited permits, and conducted reclamation in a professional manner that complies with the State program.

### **C. Customer Service**

Based on the review of citizen's complaints, bond releases, objections to bond releases, and the availability of records, OSM found that ODM provided opportunities for public participation in each of these areas.

ODM investigated 2 written complaints during the first 8 months of EY-2001. ODM also investigated five telephone complaints that were not followed by a written complaint. All complaints were reviewed to determine the level of customer service provided by ODM.

ODM's investigations of the two written complaints were completed in a timely manner, and complied with the State program, with the exceptions of not citing a violation when it was first identified, and not sending the complainant a description of the enforcement actions for 76 days. However, ODM had verbally notified the complainant of the outcome of the inspection within the 10 days required by 460:20-57-3.

ODM investigated five oral complaints that were not followed by a written statement from a citizen. ODM took enforcement actions where appropriate on these investigations. The State is not required to investigate oral complaints until a written statement is received; therefore, treating these as if they were written complaints provides a level of customer service that is above that required by the State program. The level of customer service on oral complaints was very high during the 2001 evaluation period.

OSM reviewed a sample of bond release applications and found that ODM provided citizens the opportunity to review the applications, participate in the bond release inspections, and offer comments about the releases.

ODM made records available to the public through a web page ([www2.mmind.net/](http://www2.mmind.net/))

odmmcfo) that captures all the information required to comply with 460:20-57-7. The web page contains lists of permits, revisions, and violations along with instructions for obtaining copies. The web pages are available to the public through internet accessible computers, including computers that are available to citizens at public libraries.

## **VI. OSM Assistance**

The State requested and OSM provided assistance in:

- Training through OSM's Branch of Training and Technical Information. ODM employees attended courses that were offered throughout the year, that addressed the technical aspects of mining and reclamation. These courses were provided for State and OSM employees as well as industry and others on a space available basis. During EY-2001 Oklahoma sent 32 participants to 27 OSM courses. OSM also sponsored two basic team building training sessions in November 2000. ODM sent all staff members from both the coal and non-coal programs to the team building sessions.
- OSM continued to assist ODM in the identification of deficient bonding instruments that could cause difficulty recovering bond monies, should forfeiture become necessary.
- OSM routinely provides training, support, hardware and software for Technical Information Processing System (TIPS). The TIPS system has been available to ODM for a variety of tasks for processing permit applications.
- OSM employees routinely participate on teams that develop policies for all aspects of the State's regulatory program.
- Providing technical assistance, through water sampling and the review of permitting documents to determine the most appropriate water treatment systems on several Title IV and Title V AMD sites.

Through the Administrative and Enforcement and Cooperative Agreement grants, OSM provided ODM with 61 percent of its operating costs for administration of its regulatory program (including 100 percent of the costs on Federal lands permits), and through AML Administration and Construction grants, 100 percent of funds for its AML reclamation program.

## **VII. General Oversight Topic Reviews**

## 2001 ANNUAL EVALUATION REPORT

---

Reports and other documents concerning topics reviewed during EY-2001 are available at OSM's Tulsa Field Office located at 5100 E. Skelly Drive, Suite 470, Tulsa, Oklahoma 74135-6547.

The following topics were evaluated in EY-2001:

- A. Mine-Site Evaluation:** During EY 2001, TFO conducted 7 complete inspections, 20 bond release inspections, and 1 other inspection of Oklahoma mines. OSM sent no Ten-Day Notices to Oklahoma during EY-2001. No Federal enforcement actions were issued in Oklahoma during the review period.

**B. Bonding Instruments and Records**

In prior Performance Agreements, OSM agreed to review performance bonds to help determine if deficiencies in bonding instruments could be the reason ODM has experienced difficulties collecting some forfeited bond.

ODM has implemented new policies and procedures for the review of bond documents. During the EY-2001 review, OSM identified one deficiency that required ODM to re-execute a Collateral Bond Agreement.

**C. Bonding for AMD Sites**

In April 1999, ODM and OSM created a self-directed team that drafted the Department's policy concerning unanticipated AMD. The purpose of the policy is to address bond shortfalls, respond to concerns raised through citizen input, and to give both ODM and coal industry employees guidelines for treating and bonding unanticipated AMD. The Team's draft policy is unique in that it is the result of a State/Federal effort that combines the most current water treatment and bonding ideas from several states, a Canadian program, and OSM. The team completed the policy and delivered it to the ODM Director in February 2000. The State is drafting the policy into regulation form, and reported being close to completing the draft regulation at the end of EY-2001.

In EY-1999, it was reported that OSM and ODM discussed at length the release of Phase I reclamation liability on one permit where a temporary Acid Mine Drainage (AMD) treatment facility is operating. During EY-1999, EY-2000, and EY-2001, OSM and ODM have been working together to determine the appropriate AMD treatment facility on a permit using the Best Technology Currently Available (BTCA), and the appropriate amount of bond for the permit. Shortly after the end of EY-2001, OSM completed, and supplied to ODM, a report on the BTCA and bonding aspects of the permit with AMD. The report shows that with a few improvements the "temporary treatment facility" can be the BTCA, and then ODM could determination an adequate

bond amount. OSM and ODM are continuing to pursue an improved treatment facility, while OSM and the permittee are discussing the manner in which to increase the bond.

**D. Contractor Reclamation with Forfeited Funds**

In the past, contractor reclamation was a significant issue identified in Oklahoma oversight because bond forfeiture funds used to reclaim abandoned sites were not causing violations to be abated nor compliance with the reclamation plan.

ODM has since refined a policy document detailing State procedures for contractor reclamation. ODM followed the policy when pursuing bids and developed a method to resolve disagreements between Department employees about what constitutes Title V reclamation.

For the 2001 evaluation, OSM reviewed the bid packages for the forfeiture reclamation of three permits, interviewed ODM employees, and conducted a field review. The oversight of this topic showed that ODM has been following Policy and Procedures Document #15 (Contractor Reclamation). Discussions with ODM employees revealed that much design, redesign, and field work went into the bond forfeiture reclamation plans associated with the three permits reviewed for this report. The quality of the reclamation plans are significantly improved over the bond forfeiture reclamation plans of previous years. The majority of the improvement should be credited to the technical services team that have developed the reclamation plans.

**E. Alternative Enforcement Actions**

In 1993, the lack of AEA's were one of the dominant issues identified by OSM in Oklahoma. The State and OSM formed a self-directed team that addressed the AEA issues in 1996. In 1997 ODM developed new AEA Policies and Procedures. An evaluation of ODM's adherence to the policies was conducted in 1998, and concluded that the State was following the new procedures. An EY-1999 review of progress being made by ODM to pursue AEA's was to be conducted by the Office of the Solicitor, but the evaluation had to be rescheduled for EY-2001.

The review by the Office of the Solicitor was conducted in February 2001 and the draft report forwarded to ODM in October. The results of the solicitor's review, and ODM's response to it will be reported in the next Annual Evaluation Report.

**F. Surface Runoff Control Structures**

The designs of sediment ponds and diversion ditches have been programmatic issues since 1992. Because of the continued concerns identified during OSM inspections, the topic was reviewed again in EY-2000. In general, OSM's review found that the designs were improved in many ways, but some design problems remained. For

example, two of the three spillways reviewed on a particular permit had design flaws that were the same or similar to the problems identified in previous years; however, improvements were seen in areas such as minimizing short-circuiting. Diversion ditch designs also had shown some improvement while some of the historical problems continued to exist. ODM responded to OSM's EY-2000 review by committing to review the effects of the designs in the field with OSM personnel, and to create "inspector oriented" data sheets that can be used in the field to evaluate hydrologic structures.

ODM conducted field reviews of impoundments and diversion ditches identified by OSM in previous evaluations during March 2001. OSM and ODM conducted a joint field review of impoundments and diversion ditches in October 2001. The joint field review resulted in all parties agreeing that some aspects of existing pond designs can be improved. An OSM report on appropriate designs for spillways, sediment pond clean-out plans, sediment storage volumes, and diversion/terrace designs was pending at the end of EY-2001. ODM's plans for creating an "inspector oriented" data sheet that can be used in the field to evaluate hydrologic structures has been put on hold until ODM and OSM can agree on the hydrologic design problems and what can be done to improve these designs.

#### **G. Postmining Land Use**

The topic of postmining land use was reviewed in EY-1996 and again in EY-1998. In the EY-1996 review, OSM made the recommendation that ODM should not approve alternative postmining land uses that are not achievable. The same problems with land use justifications were found during the EY-1998 review.

During the EY-2000 and EY-2001 review periods, OSM found that most permit applications were approved with postmining land uses that complied with the State program. The majority of permitting actions reviewed require the mining company to return the land to AOC, and to reclaim to land use designs that are achievable. However, a few alternative postmining land use changes were also identified during OSM's review that may not be justifiable and requires further review and evaluation.

OSM and ODM have discussed this topic as it relates to justifications for large final pit impoundments on several occasions during the evaluation period. Both agencies explained their positions on the topic in several letters, and have agreed to continue discussing the justification of postmining land uses until agreement can be reached.

#### **H. Fish and Wildlife Resources**

An EY-1998 review of ODM's Fish and Wildlife permitting topics recommended that ODM should:

## 2001 ANNUAL EVALUATION REPORT

---

- require permittees to provide a quantitative estimate of the high quality wildlife habitat in a permit area;
- require permittees to provide an estimate of the potential wildlife habitat value of proposed reclamation plans;
- acquire a letter from the Oklahoma Department of Wildlife Conservation (ODWC) approving the minimum stocking and planting arrangements of tree and shrub species when fish and wildlife habitat is the approved postmining land use;
- require permittees to provide a statement of how they will minimize disturbances and adverse impacts on fish, wildlife, and related environmental values; and achieve enhancement of such resources where practicable.

The EY-2000 review found that the State program had continued to improve, especially in the area of coordination between ODM and ODWC. ODM had not, however, fully implemented two of the four actions required in the EY-1998 review. These two corrective actions were designed to assure ODM is meeting the requirements of evaluating wildlife and habitat values as required in OAC 460:20-27-9 and OAC 460:20-43-35. The EY-2000 review also recommended three actions that would enhance the implementation of the ODM program.

During EY-2001 ODM continued to improve in two areas: (1) the coordination with Federal and State fish and wildlife agencies; and (2) has continued their efforts to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values, and enhance such resources. The State adopted, but has not had an opportunity to implement, a policy that requires permit application review staff to conduct a site visit of the proposed mine to document the location, amount, and quality of high value wildlife habitat at the start of the application review process.

The EY-2001 review also identified two areas in which ODM could improve, including: (1) to document the avoidance of, the enhancement to, or restoration of habitats of unusually high value, and (2) to require permittees to estimate the potential value of wildlife habitat in the proposed reclamation plan.

Because of changes in ODM personnel, OSM has offered to provide the State with any assistance they request for finding methods to improve its approved program. Fish and Wildlife reviews will be conducted in EY-2003 to determine if the new personnel and new policy results in improvement to the State program.



**I. Acid and Toxic Materials Handling Plans**

The subject of overburden handling plans for acid and toxic materials was reviewed by OSM in 1997, 1998, and 2000. The emphasis of the EY-2000 review was the potential for adverse impacts to hydrology and revegetation, because ODM was not requiring permittees to submit laboratory analysis on geological information that conforms to the most recent technical standards. ODM uses the geological information to determine the probable hydrologic consequences of proposed mining operations and to determine if reclamation, as required by SMCRA, can be accomplished. The EY-2000 review provided several recommendations that would improve the ability of ODM to properly implement its regulatory requirements. The EY-2000 review also made two proposals.

A joint OSM and ODM team has been proposed to review and recommend solutions for the issues raised during the EY-2000 review; such as methodology for adjustments to the acid-base accounting procedures, and resolution of discrepancies between ODM's CAM 14 and CAM 29.

During EY-2001, ODM conducted site visits on three of the permits to document any visual signs of negative impacts to vegetation on the reclaimed areas. No areas were identified that had obvious acid-forming material/toxic material impacts.

A joint ODM and OSM field review looked at four permits for identification of high Sodium Absorption Ratio's (SAR). These permits were selected because they had been identified in previous permit reviews as having the potential for adverse impacts from high levels of sodium, if the overburden was not handled in an appropriate manner. To keep the sample size manageable, no permits were selected for the identification of acid-forming materials. Field sampling for acid-forming materials will be conducted at a later date. The mines selected for the field review represented four different areas of the Oklahoma coalfields, and have mined different seams of coal. This review did not identify any "on-the-ground" SAR problems attributable to ODM not requiring the most recent technical methodology to make geology and hydrology permitting decisions. However, ODM should require permit applicants to provide complete geologic information, so that ODM can be sure that its determination concerning potential impacts from acid-or toxic-forming materials in the overburden is accurate, as required by CAM 29.

The joint OSM and ODM Acid and Toxic Materials Team must now determine the next step needed to conduct field sampling to evaluate reclaimed areas for the presence of acid-forming materials in the rooting medium.

**Appendix A: Tabular Summaries of Data**

These tables present data pertinent to mining operations and State and Federal regulatory activities within Oklahoma. They also summarize funding provided by OSM and Oklahoma staffing. Unless otherwise specified, the reporting period for the data contained in all tables is October 1, 2000 to September 30, 2001. Additional data used by OSM in its evaluation of Oklahoma's performance is available for review in the evaluation files maintain by TFO.

TABLE 1

<b>COAL PRODUCTION</b> (Millions of Short Tons)			
<b>Annual Evaluation Period</b>	<b>Surface mines</b>	<b>Underground mines</b>	<b>Total</b>
Coal production <sup>A</sup> for entire State:			
1998	1.400	0.300	1.700
1999	1.400	0.200	1.600
2000	1.300	0.240	1.540

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, 2001													
Coal mines and related facilities	Number and status of permits									Permitted acreage <sup>A</sup> (hundreds of acres)			
	Active or temporarily inactive		Inactive Phase II bond release		Abandoned		Totals		Insp. Units <sup>D</sup>				
	IP	PP	IP	PP	IP	PP	IP	PP		IP	PP	Total	
	<b>STATE AND PRIVATE LANDS</b> REGULATORY AUTHORITY: STATE												
Surface mines	0	33	0	11	14	26	14	70	0	14	228	242	
Underground mines	0	0	0	1	0	0	0	1	0	0	0.4	0.4	
Other facilities	0	1	0	0	0	0	0	1	0	0	1	1	
Subtotals	0	34	0	12	14	26	14	72	0	14	229.4	243.4	
<b>FEDERAL LANDS</b> REGULATORY AUTHORITY: STATE													
Surface mines	0	12	0	0	0	1	0	13	0	0	73	73	
Underground mines	0	1	0	0	0	0	0	1	0	0	2	2	
Other facilities	0	0	0	0	0	0	0	0	0	0	0	0	
Subtotals	0	13	0	0	0	1	0	14	0	0	75	75	
<b>ALL LANDS<sup>B</sup></b>													
Surface mines	0	47	0	11	14	27	14	83	0	14	301	315	
Underground mines	0	1	0	1	0	0	0	2	0	0	2.4	2.4	
Other facilities	0	1	0	0	0	0	0	1	0	0	1	1	
Totals	0	49	0	12	14	27	14	86	0	14	304.4	318.4	
Average number of permits per inspectable unit (excluding exploration sites)									<u>1</u>				
Average number of acres per inspectable unit (excluding exploration sites)									<u>320</u>				
Number of exploration permits on State and private lands:									<u>1</u>		On Federal lands <sup>C</sup> :		<u>0</u>
Number of exploration notices on State and private lands:									<u>0</u>		On Federal lands <sup>C</sup> :		<u>0</u>
IP: Initial regulatory program sites													
PP: Permanent regulatory program sites													
<sup>A</sup> When a unit is located on more than one type of land, include only the acreage located on the indicated type of land.													
<sup>B</sup> Numbers of units may not equal the sum of the three preceding categories because a single inspectable unit may include lands in more than one of the preceding categories.													
<sup>C</sup> 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.													
<sup>D</sup> 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, 2001												
Type of Application	Surface mines			Underground mines			Other facilities			Totals		
	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres <sup>A</sup>	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres
New Permits	2	1	405	0	0	0	0	0	0	2	1	405
Renewals	4	2	1,930	0	0	0	0	0	0	4	2	1,930
Transfers, sales and assignments of permit rights		0		0	0		0	0		0	0	
Small operator assistance	0	0		0	0		0	0		0	0	
Exploration permits	0	0		0	0		0	0		0	0	
Exploration notices <sup>B</sup>		0			0			0			0	
Revisions (exclusive of incidental boundary revisions)			21			0			0		21	
Incidental boundary revisions			5			0			0		5	150
<b>Totals</b>	<b>6</b>	<b>29</b>	<b>2,485</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>29</b>	<b>2,485</b>

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

0<sup>A</sup> Includes only the number of acres of proposed surface disturbance.<sup>B</sup> State approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

TABLE 4

DEGREE OF IMPACT		OFF-SITE IMPACTS RESOURCES AFFECTED													
		People			Land			Water			Structures			Total	
		minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major		
TYPE OF IMPACT	Blasting	1	0	0	4	0	0	0	0	0	0	1	0	0	6
	Land Stability	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Hydrology	0	0	0	1	0	0	5	0	0	0	0	0	0	6
	Erosion/encroachment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	Total	1	0	0	5	0	0	6	0	0	0	1	0	0	13
Total number of inspectable units:		100													
Inspectable units free of off-site impacts:		92													
DEGREE OF IMPACT		OFF-SITE IMPACTS ON BOND FORFEITURE SITES RESOURCES AFFECTED													
		People			Land			Water			Structures			Total	
		minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major		
TYPE OF IMPACT	Blasting	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Land Stability	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Hydrology	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Erosion/encroachment	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Other	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total number of inspectable units:		N/A			Data Not Gathered on Forfeiture Sites										
Inspectable units free of off-site impacts:		N/A			Date Not Gathered on Forfeiture Sites										

Refer to the report narrative for complete explanation and evaluation of the information provided by this table.

TABLE 5

<b>ANNUAL STATE MINING AND RECLAMATION RESULTS</b>		
<b>Bond release phase</b>	<b>Applicable performance standard</b>	<b>Acreage released during this evaluation period</b>
Phase I	- Approximate original contour restored - Topsoil or approved alternative replaced	2,642.20
Phase II	- Surface stability - Establishment of vegetation	2,755.60
Phase III	- Post-mining land use/productivity restored - Successful permanent vegetation - Groundwater recharge, quality and quantity restored - Surface water quality and quantity restored	2,058.05
	<b>Bonded Acreage Status<sup>A</sup></b>	<b>Acres</b>
	Total number of bonded acres at end of last review period (September 30, 2000) <sup>B</sup>	33,342.45
	Total number of bonded new acres during this evaluation year	555.60
	Number of acres bonded during this evaluation year that are considered <u>remining</u> , if available	0.00
	Number of acres where bond was forfeited during this evaluation year (also report this acreage on Table 7)	0.00

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

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

TABLE 6

<b>STATE BOND FORFEITURE ACTIVITY (Permanent Program Permits)</b>		
<b>Bond Forfeiture Reclamation Activity by SRA</b>	<b>Number of Sites</b>	<b>Acres</b>
Sites with bonds forfeited and collected that were unreclaimed as of September 30, 2000 (end of previous evaluation year) <sup>A</sup>	8	1,340.00
Sites with bonds forfeited and collected during Evaluation Year 2001 (current year)	0	0.00
Sites with bonds forfeited and collected that were re-permitted during Evaluation Year 2001 (current year)	0	0.00
Sites with bonds forfeited and collected that were reclaimed during Evaluation Year 2001 (current year)	2	299.30
Sites with bonds forfeited and collected that were unreclaimed as of September 30, 2001 (end of current year) <sup>A</sup>	6	1,040.70
Sites with bonds forfeited but uncollected as of September 30, 2001 (end of current year)	0	0.00
<b>Surety/Other Reclamation (In Lieu of Forfeiture)</b>		
Sites being reclaimed by surety/other party as of September 30, 2000 (end of previous evaluation year) <sup>B</sup>	9	5,029.80
Sites where surety/other party agreed to do reclamation during Evaluation Year 2001 (current year)	0	0.00
Sites being reclaimed by surety/other party that were re-permitted during Evaluation Year 2001 (current year)	0	0.00
Sites with reclamation completed by surety/other party during Evaluation Year 2001 (current year) <sup>C</sup>	1	860.50
Sites being reclaimed by surety/other party as of September 30, 2001 (current evaluation year) <sup>B</sup>	8	4,169.30
<sup>A</sup> Includes data only for those forfeiture sites not fully reclaimed as of this date		
<sup>B</sup> Includes all sites where surety or other party has agreed to complete reclamation and site is not fully reclaimed as of this date		
<sup>C</sup> This number also is reported in Table 5 as Phase III bond release has been granted on these sites		



TABLE 7

<b>OKLAHOMA</b> (Full-time equivalents at the end of evaluation year)	
<b>Function</b>	<b>EY 2001</b>
<b>Regulatory Program</b>	
Permit review	4.7
Inspection	4.20
Other (administrative, fiscal, personnel, etc.)	18.70
<b>Regulatory Program Total</b>	<b>27.60</b>
<b>AML Program Total</b>	<b>6.00</b>
<b>TOTAL</b>	<b>33.60</b>

**TABLE 8**

<b>FUNDS GRANTED TO OKLAHOMA BY OSM (Millions of dollars) EY 2001</b>		
<b>Type of Grant</b>	<b>Federal Funds Awarded</b>	<b>Federal Funding as a Percentage of Total Program Costs</b>
Regulatory - Administration & Enforcement	\$1,049,180.00	61%
<b>Regulatory Totals</b>	<b>\$1,049,180.00</b>	<b>61%</b>
AMLR - Administration & Construction	\$1,858,135.00	100%
<b>AMLR Totals</b>	<b>\$1,858,135.00</b>	<b>100%</b>
<b>Total Regulatory &amp; AMLR</b>	<b>\$2,907,315.00</b>	

TABLE 9

<b>OKLAHOMA INSPECTION ACTIVITY</b>		
<b>PERIOD: OCTOBER 1, 2000 - SEPTEMBER 30, 2001</b>		
<b>Inspectable Unit Status</b>	<b>Number of Inspections Conducted</b>	
	<b>Complete</b>	<b>Partial</b>
Active*	185	342
Inactive*	61	33
Abandoned*	147	168
<b>Total</b>	<b>393</b>	<b>543</b>
<b>Exploration</b>	<b>4</b>	<b>8</b>

\* Use terms as defined by the approved State program.

**TABLE 10**

<b>OKLAHOMA ENFORCEMENT ACTIVITY</b>		
<b>PERIOD: OCTOBER 1, 2000 - SEPTEMBER 30, 2001</b>		
<b>Type of Enforcement Action</b>	<b>Number of Actions*</b>	<b>Number of Violations*</b>
<b>Notice of Violation</b>	15	20
<b>Failure-to-Abate Cessation Order</b>	0	0
<b>Imminent Harm Cessation Order</b>	0	0

\* Do not include those violations that were vacated.

**TABLE 11**

<b>LANDS UNSUITABLE ACTIVITY OKLAHOMA</b>			
<b>PERIOD: OCTOBER 1, 2000 - SEPTEMBER 30, 2001</b>			
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

TABLE 12

ABANDONED MINE LAND RECLAMATION NEEDS AND ACCOMPLISHMENTS SINCE PROGRAM APPROVAL							
Problem nature	Unit	Coal-related problems				Noncoal-related problems	
		Abatement status			Total	Abatement status	
		Unfunded	Funded	Completed		Funded	Completed
Priority 1 & 2 (Protection of public health, safety, and general welfare)							
Clogged streams	Miles	0.8	0	12.2	13	0	0
Clogged stream lands	Acres	142	1	0	143	0	0
Dangerous highwalls	Lin Feet	843,211	2,000	212,969	1,058,180.0	0	0
Dangerous impoundments	Count	2	0	0	2	0	0
Dangerous piles and embankments	Acres	773	0	0	773	0	0
Dangerous slides	Acres	0	0	0	0	0	0
Gases: hazardous/explosive	County	0	0	0	0	0	0
Underground mine fires	Acres	0	0	0	0	0	0
Hazardous equip. & facilities	Count	15	0	18	33	0	0
Hazardous water bodies	Count	520	2	171	693	0	0
Industrial/residential waste	Acres	43	0	7.1	50.1	0	0
Portals	Count	71	19	173	263	0	0
Polluted water: agric. & indust.	Count	3	1	3	7	0	0
Polluted water: human consumption	Count	8	0	2	10	0	0
Subsidence	Acres	100.7	2.8	13.5	117	0	0
Surface burning	Acres	0	0	0	0	0	0
Vertical opening	Count	21	12	116	149	0	0
Priority 3 (Environmental restoration)							
Spoil areas	Acres	0	0	0	0	0	0
Benches	Acres	0	0	0	0	0	0
Pits	Acres	0	0	0	0	0	0
Gob piles	Acres	0	0	0	0	0	0
Slurry ponds	Acres	0	0	0	0	0	0
Haul roads	Acres	0	0	0	0	0	0
Mine openings	Count	0	0	0	0	0	0
Slumps	Acres	0	0	0	0	0	0
Highwalls	Lin Feet	0	0	0	0	0	0
Equipment/facilities	Count	0	0	0	0	0	0
Industrial/residential waste	Acres	0	0	0	0	0	0
Water problems	Gal/min	0	0	0	0	0	0
Other		0	0	0	0	0	0

2001 ANNUAL EVALUATION REPORT

---

**Appendix B: State Comments on Report**