



Office of Surface Mining

Annual Evaluation Summary Report
of
Missouri

for

Evaluation Year 1997
October 1, 1996 to September 30, 1997

November 1997

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1997 MISSOURI ANNUAL EVALUATION REPORT

I. Introduction

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining (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 Missouri Land Reclamation Program (LRP) and the effectiveness of the Missouri program in meeting the applicable purposes of SMCRA as specified in Section 102. The evaluation period covered by this report is October 1, 1996 to September 30, 1997.

OSM implemented a new oversight policy for the 1996 and 1997 evaluation periods. The primary focus of the new 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 new 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 new policy continued to encourage public participation as part of the revised oversight strategy. Besides 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.

During the 1996 evaluation period OSM refocused oversight to emphasize off-site impacts and final reclamation. This new oversight focus was phased in during the evaluation year, while issues identified in prior evaluation years continued to be addressed. The revised oversight strategy required OSM and Missouri to modify their respective roles and interactions so that the new policy could be successfully implemented. The two organizations cooperatively developed a Missouri specific negotiated performance agreement which documented the annual oversight evaluation program.

The new oversight guidance reemphasized that oversight is a continuous and ongoing process. To further the idea of continuous oversight, this annual report is structured to report on OSM and Missouri's progress in conducting evaluations and completing oversight activities, and on their accomplishments at the end of the evaluation period. Background information and finding reports for the program elements evaluated during the period are available for review and copying at the OSM Office in Alton, Illinois.

The following list of acronyms are used in this report:

AML	Abandoned Mine Land
AMLIS	Abandoned Mine Land Inventory System
BTU	British Thermal Unit
LRP	Land Reclamation Program
MCRCC	Mid-Continent Regional Coordinating Center
OSM	Office of Surface Mining
SMCRA	Surface Mining Control and Reclamation Act of 1977
TIPS	Technical Information Processing Systems
U.S.	United States

II. Overview of Coal Mining Industry

Missouri's coal ranges from lignite to high volatile A bituminous. The demonstrated coal reserve base is estimated to be 6 billion tons, or 1.26 percent of the United States coal reserves. The coal-bearing areas cover about 23,000 square miles, or 33 percent of the State. Twelve of the 20 coal seams have been actively mined. The coal has a high heat value averaging 22 million British Thermal Units (BTU) per short ton. The sulphur content of 95 percent of these reserves is relatively high, greater than 2.5 pounds of sulphur per million BTU and averaging 4 percent by weight. Economics limit production to beds greater than 28 inches thick. Coal production is confined to the western and north-central areas of the State.

Missouri was the first State west of the Mississippi River to produce coal commercially. Coal deposits were first mined in the late 1840's. Most of the early coal mines in the State were underground. Surface mining began in the mid-1930's and since the 1960's has accounted for virtually all the coal produced in the State. Missouri's coal production has been declining since a peak of nearly 7 million tons in 1984. A sharp decline occurred in 1993 to 627,774 tons, down from the 1992 production level of 2,908,012 tons. This reduction resulted from the State's largest operator ceasing production in early 1993. Missouri's 1996 production was 775,882 tons, as shown in Table 1. The 1997 production will surpass last year's tonnage, as existing operations expand and a new company begins operation. Missouri coal helps to supply the Midwestern coal market for blending with western coal. The current primary use of the coal is for power generation.

Approximately 67,000 acres were affected by coal mining in 48 Missouri counties before enactment of the SMCRA. The resulting hazardous conditions recorded in OSM's Abandoned Mine Land Inventory System (AMLIS) reveal the following: 82,421 feet of dangerous highwalls; 400 acres of dangerous piles and embankments; 634 acres of surface subsidence; 125 vertical openings; and 56 incidents of polluted water that adversely affects public health, safety, or welfare. No deaths associated with Abandoned Mine Land (AML) hazards were reported during this evaluation period.

III. Overview of Public Participation in the Program

Historically, the State has rarely held special public meetings for the sole purpose of gathering input from industry and local citizens on the State regulatory processes. During the 1995 evaluation year, OSM and Missouri jointly held two informal public meetings to solicit comments on the effectiveness of the State's regulatory and AML programs and answer questions about OSM's oversight process. There was minimal participation from industry and local landowner's. The landowner's voiced concerns with not having their land returned to them in a timely manner and industry shared concerns that permit and bond release applications were not being processed in a timely manner. While no public meetings were held during evaluation years 1996 or 1997, the Performance Agreements for those years were sensitive in addressing the concerns voiced during the 1995 public meeting.

Missouri considers the bi-monthly Land Reclamation Commission meetings the principal forum for participation from industry, landowners, citizen groups, and other interested parties.

During this evaluation period, Missouri received four written citizen complaints. The State provided written responses to the complainants. In all four instances, Missouri responded in a timely and forthright manner.

IV. Major Accomplishments/Issues/Innovations

The State, in cooperation with the MCRCC, developed and submitted two acid mine drainage cleanup projects for the Clean Streams Initiative. The projects are on OSM's list for fiscal year 1998 funding consideration.

Missouri designs and constructs AML reclamation projects in an efficient and environmentally sound manner, and in accordance with project approval documents. Missouri is a minimum program state, receiving only \$1.5 million annually to operate its program. Projects are monitored and maintained to achieve long term stability, and eventual release from state management. Missouri continued to carry out its AML Reclamation Success Management process, initiated during the 1996 evaluation year. In this process, the reclamation project goals are stated up-front in the environmental assessment. The process also provides new mechanisms for evaluating project design changes against the previously defined goals of the project. This helps assure that reclamation projects achieve long term reclamation success and stability.

The LRP responds to public inquiries about the AML program in a timely manner. State management now monitors public inquiries and responses with a computerized tracking system.

Missouri continues to maintain an up to date and effective AML Reclamation Plan.

The State continues to maintain its part in AMLIS. Funded and completed project data is entered at appropriate times. New problem sites are entered into the database as they are identified. Missouri maintains internal systems to track contract obligations and expenditures, public inquiries, and project ranking and selection data.

Missouri abated health and safety problems by closing one open portal, sealing 20 vertical mine shafts, reclaiming 3300 feet of dangerous highwall, and 75 acres of dangerous embankments. Since program approval, Missouri has reclaimed 73 vertical mine shafts, 25 portals, 52,662 feet of dangerous highwall, and over 3,900 acres of abandoned mine lands.

A cooperative evaluation of the completed Tebo Creek AML Reclamation Project continued during the evaluation period. Missouri is cooperating with the Biological Resources Division and the Water Resources Division, of the U.S. Geological Survey, and citizens groups, to evaluate the restoration of the total stream environment within and downstream of the Tebo Creek site. Tebo Creek is a significant tributary of the Harry S. Truman Reservoir that is managed for flood control and recreation by the U.S. Corps of Engineers. Completion of the reclamation project is expected to eliminate one of the worst acid mine drainage sources in Missouri. Interim results of the cooperative biological assessment indicate both flora and fauna are reestablishing in the previously sterile stream. Additional funding is being sought for a total stream and wetlands assessment. The man-made wetlands are currently well established and are functioning as diverse ecosystems.

The State successfully negotiated the collection of the bonds on two bankrupt coal companies from the sureties, thus avoiding lengthy and costly litigation. The total disturbed acreage is more than 3,000 acres and composed of approximately 21 permits.

During evaluation year 1996, reclamation designs were completed and a contract awarded for the Midwestern Mining & Reclamation Company/AmEarth Reclamation Project in Vernon County. The contract provides for the reclamation of a coal processing facility, a railroad load-out site, correction of acid mine drainage problems, grading of spoil piles, and the revegetation of approximately 230 acres. This was Missouri's first attempt at total in-house project design. Currently, the project is 75 percent completed.

Missouri continues to effectively implement a streamlined permit revision and permit review process. The development of this plan was necessary to address a significant backlog of permit revisions. The streamlining of the process has resulted in the elimination of the backlog and the time required for the review of new permit applications has been substantially reduced.

Missouri has experienced a significant backlog of bond release applications. In order to reduce the backlog, the State negotiated a contract with a consulting firm to help with the file reviews associated with the bond release applications. In addition, a joint State/OSM Total Quality Management Team was formed to evaluate Missouri's inspection and bond release

process and identify ways to streamline it. Although the goal of the team was to complete its work by December, 1996, the nature and complexity of the issues necessitated continuing the process into the 1997 calendar year. The Team completed its review and concluded that the inspection staff must change its methodology in evaluating and documenting performance standards related to bond releases, industry must be better informed of what is required in submitting an appropriate bond release package, and that industry must take more responsibility in evaluating the field conditions against the approved reclamation plans prior to submitting any request for release of bond(s). The recommendations were forwarded to the Director of The Missouri Land Reclamation Program.

The 1997 Performance agreement included an unresolved issue from the two previous review periods. A significant downward trend in the State's ability to cite all observed violations was previously identified. This review period found the State improving and progressing toward resolution of the issue. OSM and Missouri have met and will develop an implementation strategy that will resolve the issue during the 1998 evaluation year. Failure to resolve this issue could result in environmental harm, delayed reclamation, and an increase in reclamation liability to the State.

OSM conducted a topic review on Missouri's use of alternative enforcement to obtain environmental compliance. The findings suggest that environmental problems identified in the consent agreements are not being addressed by the operator in a timely fashion. The State and OSM will meet to discuss the preliminary findings and the inclusion of the topic into the 1998 Performance Agreement.

V. Success in Achieving the Purposes of SMCRA

To further the concept of reporting end results, the findings from performance standard evaluations are being collected for a national perspective in terms of the number and extent of observed off-site impacts and the number of acres that have been mined and reclaimed and which meet the bond release requirements for the various phases of reclamation. Individual topic reports that provide additional details on how the following evaluations and measurements were conducted are available at the MCRCC, in Alton, Illinois.

A. Off-site Impacts

The LRP and OSM conducted 245 and 44 inspections, respectively, to evaluate for off-site impacts on 68 permits. During three of the inspections, three violations were observed that resulted in three off-site impacts. The impacts were hydrologic in nature, and related to the land and water resources (Table 4). No significant environmental damage resulted from the off-site impacts.

The number of inspections represents approximately all the inspectable units in Missouri, excluding abandoned sites. Based on the number of mine sites reviewed,

the data suggests that only a small number of off-site impacts exist in the Missouri coal fields. OSM believes the State program is effective in protecting the public and environment from off-site impacts resulting from surface coal mining and reclamation operations.

B. Bond Releases

OSM conducted eight sample bond release inspections. These areas were for Phase I, II, and III release. In addition, OSM reviewed the hydrology and revegetation productivity data applicable to all Phase III releases approved by Missouri during the 1997 evaluation period.

The field reviews found that all applicable performance standards had been met on released areas. OSM's review of the hydrology and productivity data found no discrepancies that would prevent the release of those areas.

As of September 30, 1996, Missouri had 18,000 acres of mined land that had not received a Phase III release. During the 1997 evaluation period, Missouri approved bond releases on 5,764 disturbed acres, of which 2,459 were for Phase III release. This represents a final liability release of approximately one-seventh of the total number of mined acres existing at the end of 1996 (Table 5).

Based on the sample inspections, OSM believes the State program is requiring bond release performance standards to be met before the approval of the bond release.

VI. OSM Assistance

The MCRCC is available to provide support to the State through its Technology Development and Transfer Program. This program provides for such services as: direct technical assistance in project design and analysis, permitting issues, development of technical guidelines, and other topic specific technical training and support; Technical Information Processing Systems (TIPS) hardware, software, training and systems support; development and facilitation of electronic permitting initiatives, electronic data exchanges, and the dissemination of the newest computer technology; development and coordination of interactive forums, workshops and technology outreach programs.

During the review period OSM provided Missouri with the following assistance:

MCRCC worked closely with Missouri to set up and conduct a regional wetlands workshop. Twenty-seven attendees from 4 state reclamation agencies and two OSM offices visited wetland sites on mined and unmined lands to improve their knowledge of wetland identification and protection. MCRCC and Missouri staff organized the

workshop, located field sites and instruction materials, and helped in the course instruction.

MCRCC conducted training on the Abandoned Mine Land Inventory System in December 1996.

Supplemental training of LRP inspection staff in the fundamentals of inspection and enforcement procedures was provided by OSM staff.

The OSM trained selected staff members in the use of the following computer programs: Introduction to ARC/Info, ARC/VIEW, Earthvision, SURVCADD, and Advanced ARC/Info.

OSM supplied staff for blasting complaint investigations. The complainants alleged damage to their residences from blasting at a nearby coal mine. It was concluded that none of the observed damage resulted from blasting.

Staff and money were provided to establish a network which gives five additional LRP personal computers access to OSM's TIPS. Hummingbird software was also provided so that the TIPS programs can be run from the desktop computers.

Missouri and OSM continued with a joint standing team to review the State's bond release process. The goal is to make the process more efficient, so that more effective service is provided to the Industry and the Public.

Assisted the State in an evaluation of the methodologies used in the review of hydrology data for release of Phase III reclamation liability.

VII. General Oversight Topic Reviews

The following oversight topics were reviewed during the 1997 evaluation period. The detailed finding reports are available at the MCRCC in Alton, Illinois.

Alternative Enforcement

This review topic was designed to evaluate the effectiveness of the State program in using consent agreements to obtain environmental compliance.

Customer Service - Permitting, Bond Releases, and Citizen's Complaints

The review topics were designed to evaluate the effectiveness of the State program in addressing the Public's rights and participation as it relates to the review topics.

Inspection Frequency

This review topic was designed to evaluate the effectiveness of the State program's implementation of its inspection frequency requirements.

Notices of Violation and Cessation Orders

The review was designed to evaluate the effectiveness of the State program's implementation of its enforcement requirements.

APPENDIX A

Tabular Summaries of Data Pertaining to Mining, Reclamation and Program Administration.

These tables present data pertinent to mining operations and State and Federal regulatory activities and the reclamation of abandoned mines within Missouri. They also summarize funding providing by OSM and Missouri. Unless otherwise specified, the reporting period for the data contained in all tables is October 1, 1996 to September 30, 1997. Additional data used by OSM in its evaluation of Missouri's performance is available for review in the evaluation files maintained by the MCRCC Office in Alton, Illinois.

TABLE 1

COAL PRODUCTION (Millions of short tons)			
Period	Surface mines	Underground mines	Total
Coal production^A for entire State:			
1995	0.54	0.00	0.54
1996	0.78	0.00	0.78
1997 ^B	0.20	0.00	0.20

^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.

^B First and second quarters.

TABLE 2

INSPECTABLE UNITS (As of September 30, 1997)												
Coal mines and related facilities	Number and status of permits								Permitted acreage^A (hundreds of acres)			
	Active or temporarily inactive		Inactive		Abandoned		Totals					
	IP	PP	Phase II bond release									
			IP	PP	IP	PP	Insp. Unit^D	IP	PP	Total		
STATE and PRIVATE LANDS REGULATORY AUTHORITY: STATE												
Surface mines	0	59	2	7	19	31	21	97	59	44	424	468
Underground mines	0	0	0	0	0	0	0	0	0	0	0	0
Other facilities	0	0	0	0	0	0	0	0	0	0	0	0
Subtotals	0	59	2	7	19	31	21	97	59	44	424	468
FEDERAL LANDS REGULATORY AUTHORITY: STATE												
Surface mines	0	0	0	0	0	0	0	0	0	0	0	0
Underground mines	0	0	0	0	0	0	0	0	0	0	0	0
Other facilities	0	0	0	0	0	0	0	0	0	0	0	0
Subtotals	0	0	0	0	0	0	0	0	0	0	0	0
ALL LANDS^B												
Surface mines	0	59	2	7	19	31	21	97	59	44	424	468
Underground mines	0	0	0	0	0	0	0	0	0	0	0	0
Other facilities	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	59	2	7	19	31	21	97	59	44	424	468
Average number of permits per inspectable unit (excluding exploration sites)											<u>2</u>	
Average number of acres per inspectable unit (excluding exploration sites)											<u>378</u>	
Number of exploration permits on State and private lands: <u>2</u>								On Federal lands:		<u>0</u>	^C	
Number of exploration notices on State and private lands: <u>0</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												
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	0	1	445	0	0	0	0	0	0	0	1	445
Renewals	12	12	2,583	0	0	0	0	0	0	12	12	2,583
Incidental boundary revisions	0	0	0	0	0	0	0	0	0	0	0	0
Revisions (exclusive of incidental boundary revisions)	90	90		0	0		0	0		90	90	
Transfers, sales and assignments of permit rights	4	3		0	0		0	0		4	3	
Small operator assistance	0	0		0	0		0	0		0	0	
Exploration permits	1	1		0	0		0	0		1	1	
Exploration notices ^B	0	0		0	0		0	0		0	0	
Totals	107	107	3,028	0	0	0	0	0	0	107	107	3,028

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.

TABLE 4

OFF-SITE IMPACTS												
RESOURCES AFFECTED		People			Land			Water			Structures	
DEGREE OF IMPACT		minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	major
TYPE OF	Blasting	0	0	0	0	0	0	0	0	0	0	0
IMPACT AND	Land stability	0	0	0	0	0	0	0	0	0	0	0
TOTAL	Hydrology	3	0	0	2	1	0	2	1	0	0	0
NUMBER OF	Encroachment	0	0	0	0	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0	0	0	0	0
EACH TYPE	Total	3	0	0	2	1	0	2	1	0	0	0
Total number of permits or mine sites with observed off-site impacts: Permits <u>3</u> or Mine Sites <u>3</u>												
Total number of permits or mine sites evaluated: Permits <u>68</u> or Mine <u>68</u> Sites												
Total number of observations made to evaluate mine sites or permits for off-site impacts <u>289</u>												

NOTE: Bond forfeiture sites were not evaluated by Missouri or OSM during EY 1997.

Report the degree of impact under each resource that was affected by each type of impact. More than one resource may be affected by each type of impact. Therefore, the total number of impacts will likely be less than the total number of resources affected; i.e. the numbers under the resources columns will not necessarily add horizontally to equal the total number for each type of impact. To report the number of mine sites or permits use the same criteria used to determine an inspectable unit in the State. Number of observations is based upon the criteria developed between each State and OSM and may include observations by both the State and OSM.

TABLE 5

ANNUAL STATE MINING AND RECLAMATION RESULTS		
Bond release phase	Applicable performance standard	Acreage released during this evaluation period
Phase I	<ul style="list-style-type: none"> ● Approximate original contour restored ● Topsoil or approved alternative replaced 	1,267
Phase II	<ul style="list-style-type: none"> ● Surface stability ● Establishment of vegetation 	2,038
Phase III	<ul style="list-style-type: none"> ● Post-mining land use/productivity restored ● Successful permanent vegetation ● Groundwater recharge, quality and quantity restored ● Surface water quality and quantity restored 	2,459
	Total number of disturbed acres at end of last review period (September 30, 1996) ¹	18,000
	Total number of acres disturbed during this evaluation year	Not Available
	Number of acres disturbed during this evaluation year that are considered re-mining	Not Available

¹ Disturbed acres in this category are those that have not received a Phase III or other final bond release (State maintains jurisdiction).

TABLE 6

STATE BOND FORFEITURE ACTIVITY (Permanent Program Permits)			
	Sites	Dollars	Acres
Bonds forfeited as of October 1, 1996 ^A	6	\$923,146	2,312
Bonds forfeited during EY 1997	2	\$2,760,350	3,000
Forfeited bonds collected as October 1, 1996 ^A	6	\$528,883	2,312
Forfeited bonds collected during EY 1997	2	\$2,760,350	3,000
Forfeiture sites reclaimed during EY 1997	4	\$2,200,000 ^B	600
Forfeiture sites repermited during EY 1997	0		0
Forfeiture sites unreclaimed as of September 30, 1997	4		4,000
Excess reclamation costs recovered from permittee	0	\$0	0
Excess forfeiture proceeds returned to permittee	0	\$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 7

MISSOURI STAFFING (Full-time equivalents at end of evaluation year)	
Function	EY 1997
Regulatory program	13.7
Permit review	5.5
Inspection	4.9
Other (administrative, fiscal, personnel, etc.)	3.3

TABLE 8

FUNDS GRANTED TO MISSOURI BY OSM (Millions of dollars)		
Type of grant	Federal funds awarded	Federal funding as a percentage of total program costs
Administration and enforcement	\$0.42	50%
Small operator assistance	N/A	N/A
Totals	\$0.42	50%

TABLE 9

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	2.3	0.0	10.0	12.3		
Clogged stream lands	Acres	15.7	0.0	1,407.8	1,423.5		
Dangerous highwalls	Lin. Feet	28,659.0	1,100.0	52,662.0	82,421.0		
Dangerous impoundments	Count	2.0	0.0	5.0	7.0		
Dangerous piles & embankments	Acres	156.8	0.0	243.4	400.2		
Dangerous slides	Acres	1.0	0.0	0.0	1.0		
Gases: hazardous/explosive	Count	0.0	0.0	0.0	0.0		
Underground mine fires	Acres	0.0	0.0	0.0	0.0		
Hazardous equip. & facilities	Count	9.0	0.0	23.0	32.0		
Hazardous water bodies	Count	8.0	0.0	5.0	13.0		
Industrial/residential waste	Acres	30.9	0.0	70.5	101.4		
Portals	Count	18.0	0.0	25.0	43.0		
Polluted water: agric. & indust.	Count	11.0	1.0	24.0	36.0		
Polluted water: human consumption	Count	5.0	0.0	15.0	20.0		
Subsidence	Acres	631.4	0.0	2.6	634.0		
Surface burning	Acres	0.0	0.0	19.0	19.0		
Vertical opening	Count	52.0	00.0	73.0	125.0		
Priority 3 (Environmental restoration)							
Spoil areas	Acres	5939.3	33.0	714.8	6,687.1		
Benches	Acres	2.0	0.0	0.0	2.0		
Pits	Acres	443.3	17.0	71.9	532.2		
Gob piles	Acres	121.4	0.0	129.2	250.6		
Slurry ponds	Acres	18.9	0.0	69.0	87.9		
Haul roads	Acres	73.3	0.0	1.4	74.7		
Mine openings	Count	17.0	0.0	0.0	17.0		
Slumps	Acres	415.6	0.0	0.3	415.9		
Highwalls	Lin. Feet	186,176.0	6,800.0	10,024.0	203,000.0		
Equipment/facilities	Count	27.0	0.0	4.0	31.0		
Industrial/residential waste	Acres	8.7	0.0	2.9	11.6		
Water problems	Gal./min.	384.0	0.0	86.0	470.0		
Other	---	20.1	0.0	4.0	24.1		
<p>Note: All data in this table are taken from the Abandoned Mine Land Inventory System (AMLIS). Since information concerning noncoal-related problems and accomplishments did not have to be included in AMLIS until November 26, 1991, the table may not reflect all noncoal-related accomplishments.</p>							

APPENDIX B

State Comments on Report

The State's comments were received telephonically and were grammatical in nature.