OSMRE
ANNUAL REPORT 1986

U.S. Department Of The Interior
Office Of Surface Mining Reclamation & Enforcement

U.S. Department of the Interior

DONALD PAUL HODEL, *SECRETARY*

Office of Surface Mining Reclamation and Enforcement

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FOREWORD

This report reflects a new approach for the agency's annual report to Congress. In it, we have tried to give the reader a clearer picture of the state of mine reclamation in the country today. We have also tried to place our findings in context and to give background on the natural conditions, such as geology and climate, that can affect coal mine reclamation.

Coal mine operators in each state face unique conditions that influence how they reclaim the land and affect the extent to which they are successful. State efforts to regulate those operations necessarily vary as well. Because of that diversity, this report presents data on the regulation of reclamation in individual state chapters, rather than solely on a nationwide basis as in the past.

In those chapters, we have tried to present a balanced picture of the state regulatory programs, describing not only the elements that need improvement, but also the elements that are working successfully and that are leading to effective reclamation of coal mined lands.

All too often, in the controversy over specific issues, one fact is overlooked—the Surface Mining Control and Reclamation Act is working. By and large, the thousands of coal mine operators across the country are effectively and efficiently reclaiming the lands affected by coal mining, while at the same time producing the coal that America needs.

The surface mining law is working, in large part, because of cooperation and communication between OSMRE, the state regulatory authorities, public interest groups, and the industry. States are doing a better job than ever before in enforcing their individual programs, and, as a result, OSMRE now has less need to play a dominant role in many states. When OSMRE does detect a problem with implementation of a state program, the state and OSMRE cooperatively develop an action plan, detailing steps to be taken to resolve the issue. In addition, the industry has now incorporated reclamation into its mining cycle, making reclamation more routine. At the same time, OSMRE has addressed several of the lingering problems that have followed the agency since its inception, including debt collection and computerization. As a result, the agency has finally turned the corner toward providing a stable regulatory environment in which industry and the states can operate.

We hope you find our 1986 report useful.

Jed D. Christensen

Director

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INTRODUCTION

The Office of Surface Mining Reclamation and Enforcement (OSMRE) was established in 1977 with passage of the Surface Mining Control and Reclamation Act (Public Law 95-87). In that law, Congress sought to establish a nationwide program to protect people and the environment from the adverse effects of surface coal mining operations. At the same time, it sought to "strike a balance between protection of the environment and agricultural productivity and the Nation's need for coal as an essential source of energy."

The law requires OSMRE to establish uniform nationwide standards for the reclamation of lands following coal mining. The states, if they choose to do so, then develop their own regulatory programs, to be consistent with Public Law 95-87 and the Federal regulations, while taking into account the diversity among states in climate, topography, and geology.

Following approval by OSMRE, the state program becomes the basis for "primacy," in which the state assumes primary responsibility for enforcing reclamation requirements and environmental protection standards. In the primacy states, OSMRE's function is one of support and oversight, monitoring the effectiveness of the states in enforcing the law and providing program grants and technical assistance when needed. OSMRE also retains responsibility for enforcing the surface mining law on Indian lands, in states that choose not to develop a regulatory program, and on Federal lands. Any state with an approved program, however, may elect to enter a cooperative agreement with the Secretary of the Interior to regulate coal mine reclamation on Federal lands within the state.

Under the provisions of the surface mining law, OSMRE also is charged with collecting a fee of 35 cents for every ton of coal mined by surface methods and 15 cents for every ton of coal mined underground or 10 percent of the value of the coal, whichever is less, and 10 cents for every ton of lignite mined, or 2 percent of the value of the lignite, whichever is less. The fees are deposited into the Abandoned Mine Reclamation Fund for use in reclaiming lands and water adversely affected by mining that occurred before passage of the surface mining law.

This report details the activities of the Office of Surface Mining Reclamation and Enforcement in carrying out its responsibilities during fiscal year 1986.

HIGHLIGHTS — FISCAL YEAR 1986

During fiscal year 1986, the Office of Surface Mining Reclamation and Enforcement conducted oversight activities in the 24 states with approved state programs. In nine states that have chosen not to develop or maintain regulatory programs, OSMRE conducted Federal programs. Those Federal program states are Georgia, Idaho, Massachusetts, Michigan, North Carolina, Oregon, Rhode Island, South Dakota, and Washington. In addition, Tennessee relinquished its regulatory program, so OSMRE now conducts a Federal Program in that state as well. Of the states with Federal Programs, only Tennessee and Washington had active coal mining operations during the year.

Also during fiscal year 1986, OSMRE allocated $109.5 million to states for use in reclaiming abandoned mine sites. The Interior Department itself used $13 million for emergency and high-priority mined land reclamation projects, and provided $6 million to the Department of Agriculture to administer and fund projects under the Rural Abandoned Mine Program. In addition, $1.5 million was used in the Small Operator Assistance Program. During fiscal year 1986, OSMRE collected more than $219 million in reclamation fees from coal producers.

OSMRE made substantial progress in the area of debt management during the year, and has now upgraded computerization of its records on civil penalties. As a result, for the first time since the agency was established, an accurate picture of the civil penalty case load and the amount owed now exists. OSMRE is also now using professional debt collection agents in an effort to collect or close out the older cases on the books.

In the area of training, OSMRE has completed the first year of a nationwide technical training program, stressing solutions to practical field situations faced by surface coal mine regulatory personnel. Courses are taught jointly to participants from Federal, Indian, and state offices to increase communication between the parties and to reduce conflicts in how the surface mining law is implemented at the local level. During fiscal year 1986, OSMRE conducted 10 courses, in which 225 state, Federal, and Indian personnel participated.

Also during the year, OSMRE worked hard to improve agency responsiveness to interested parties. In particular, the agency made a concerted effort to open its regulatory development efforts to participation by outside groups, actively seeking comments and recommendations from various interest groups and encouraging an open exchange of ideas and opinions early in the regulatory development process.

By the end of the fiscal year, four permanent program rules had been published as final in the ***Federal Register***. In addition, 11 rules were being prepared for publication as final, nine were under development as proposed rulemakings, and 33 rules had been scheduled for future development.

Also as part of its effort to understand the viewpoints of outside groups, OSMRE held three conferences during the year, addressing bonding problems, remining initiatives, and issues related to state program oversight. In addition, the agency established a task force to evaluate OSMRE's oversight of state regulatory programs.

Bonding Workshop: A workshop on bonding, held September 11, 1986, was attended by more than 100 participants from the coal and surety industries and from state regulatory authorities. Bonds, which are financial guarantees that reclamation will be completed even if the mine operator fails to do so, have become increasingly difficult for mine operators to obtain. The workshop was designed to provide a forum for identifying problems and potential solutions associated with bonding for coal mine operations. Three panels of experts discussed bond availability, regulatory flexibility, and surety industry concerns, in an effort to increase coal and surety industry understanding of each other's problems and to explore possible steps for government, coal operators, and surety companies to take.

Remining Meeting: On September 23, OSMRE sponsored a conference on land reclamation through remining — the mining of coal and reclamation of land in previously mined areas. Remining presents one possible way of arranging for reclamation of abandoned mines, without use of the Abandoned Mine Reclamation Fund. Approximately 50 persons attended the conference, representing environmental groups, trade associations, industry, state regulatory authorities, concerned citizens, and the General Accounting Office. The conference focused on the draft report, "Encouraging Abandoned Mine Land Reclamation; A Federal, State, and Industry Initiative," which discussed possible remining initiatives in three broad categories: data management, regulatory flexibility, and financial incentives. Comments from conference participants are now being reviewed, and plans are being developed for implementing specific initiatives. As part of the review effort, OSMRE will examine its regulations and possibly propose new rules or amendments to existing regulations to encourage reclamation through remining activities.

Oversight Conference: OSMRE's oversight of state programs has continued to be one of the most controversial aspects of the surface mining law. To encourage identification, discussion, and resolution of the problems, and to explore possible refinement of the process, OSMRE held a conference on oversight

on August 13 and 14. Attendees were asked to discuss OSMRE's policies for giving 10-day notices to the states and its procedures for reviewing state regulatory programs under the "733" process.

The "733" process, which takes its name from a section of the Code of Federal Regulations where the process is spelled out, is an open, public review of the state program. The process, which is initiated when the Secretary of the Interior has concerns that a state is not effectively implementing its program or a portion of the program, provides a forum for demonstrating how the state is fulfilling the conditions of its approved regulatory program or adjusting to new circumstances that could affect the program's operation. Unfortunately, the perception exists that the process is tantamount to direct Federal intervention, and has thus generated hard feelings in some states.

At the OSMRE conference, attendees had specific suggestions for revising the process, suggesting more informal meetings between the states and OSMRE before the formal process begins. State representatives indicated that more effort was needed to resolve differences over interpretation of program requirements, and requested additional meetings for that purpose as well.

The "10-day notice," which was also discussed at the conference, is the means by which OSMRE notifies a state of specific violations of program requirements that are found at a site during an inspection. If the state fails within 10 days after notification to take appropriate action, or to show good cause for such failure, an OSMRE inspector shall reinspect and, if the violation continues to exist, will issue a Federal Notice of Violation or Cessation Order, as appropriate, on the site.

Conference attendees in general agreed that OSMRE has a statutory mandate to issue 10-day notices to the states. Some expressed the opinion, however, that the statute does not provide OSMRE with the authority to issue a notice of violation on a site if a state responded inappropriately to the 10-day notice. Some stated that an inappropriate state response indicates a disagreement between the state and OSMRE on the proper implementation of the state's program and that the "733" process should therefore be instituted in such cases.

OSMRE is incorporating the comments from the conference in its review of the oversight process.

Task Force on Oversight: As fiscal year 1986 drew to a close, OSMRE completed plans for establishing a task group, composed of representatives from states, industry, the environmental community, and OSMRE, to evaluate the oversight process. In particular, the task force will explore options for motivating compliance with SMCRA, and will examine alternatives to the current oversight procedures. From the task force, OSMRE hopes to obtain specific recommendations that can be implemented during fiscal years 1987 and 1988.

Through those actions, OSMRE is aggressively seeking full implementation of the Surface Mining Control and Reclamation Act. Work on those issues is continuing, with the goal of ensuring effective, even-handed enforcement of the surface mining law, protecting people and the environment while assuring access to the Nation's coal reserves.

The Surface Mining Control and Reclamation Act (SMCRA) specifies that because of the diversity in terrain, climate, and other physical conditions in areas subject to mining operations, the primary government responsibility for surface mining and reclamation operations should rest with the states. To achieve primary regulatory authority, often referred to as "primacy," a state must submit a program that demonstrates the state's capability to carry out the provisions of SMCRA.

There are currently 24 states with primary regulatory authority for state surface mining laws and regulations approved under SMCRA. Those states have the authority to implement, administer, and enforce the program for regulating surface coal mining and reclamation, as well as coal exploration activities, consistent with the approved state program.

The elements of approved state programs include authority and responsibility to:

- review, approve or disapprove, and issue surface mining permit applications,
- inspect coal mine sites and issue notices of violation and cessation orders, assess penalties, and pursue alternate enforcement measures,
- process petitions to declare lands unsuitable for mining,
- enact and enforce regulations consistent with the Federal statute and regulations,
- provide necessary funding and staffing to implement the approved program, and
- coordinate the permit review and issuance of permits with other state and Federal agencies.

Once the Secretary approves a state's program, the state becomes the regulatory authority over coal mining on non-Federal and non-Indian lands within its borders. The Federal Government then assumes a monitoring role. Also, once a state has achieved primacy, the Secretary of the Interior may approve a program, commonly called an Abandoned Mine Land (AML) program, for the reclamation of lands disturbed by previous mining activities and left in an unreclaimed condition. Approval of the state reclamation plan entitles the state to receive funds allocated to it from the Abandoned Mine Reclamation Fund.

Any state with an approved regulatory program may elect to enter into a cooperative agreement with the Secretary to provide for state regulation of surface coal mining and reclamation operations on Federal lands within the state. This is discussed further under the section on Federal regulatory programs.

The following states had approved regulatory programs during fiscal year 1986: Alabama, Alaska, Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Missouri, Montana, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Texas, Utah, Virginia, West Virginia, and Wyoming.

Oversight

Once a state obtains approval of its permanent regulatory program, OSMRE's role becomes one of assistance to the state and verification that the requirements of the surface mining law are being met. This process is commonly termed "oversight." OSMRE's responsibilities in its oversight role are to:

- assist the state in implementing its approved program,
- make necessary investigations to ensure compliance with SMCRA,
- monitor the state's AML program,
- inspect any mining operations as may be necessary to evaluate the state's performance on inspections,
- issue cessation orders for violations which create an imminent danger to the health or safety of the public, or which cause or can reasonably be expected to cause significant, imminent environmental harm to land, air or water resources, and
- enforce any part of the state program not being enforced by the state, or implement a Federal program where necessary.

OSMRE conducts an annual evaluation of each state's performance in carrying out its approved program requirements. As part of that evaluation, OSMRE reviews permits issued by the state, performs oversight inspections of mine sites in the state, and conducts special studies of topics of interest in the state. OSMRE findings are discussed with the state and the state offers feedback on those findings.

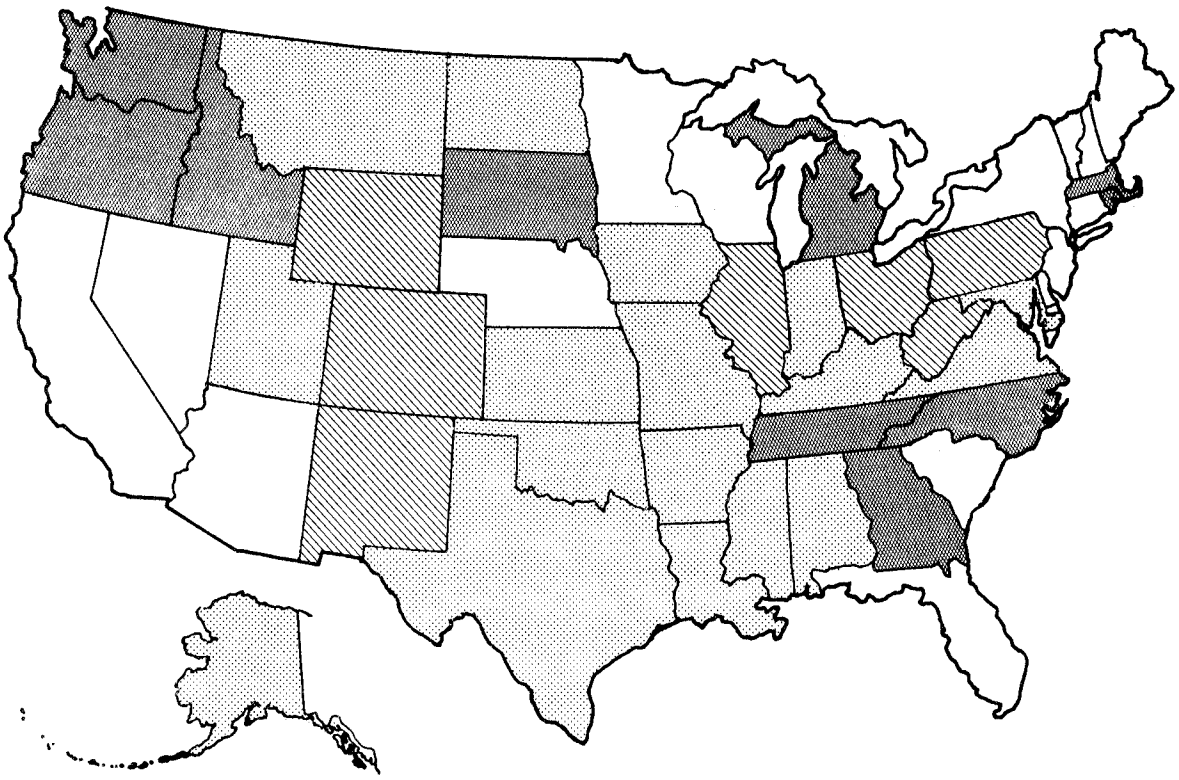
As a result of OSMRE's oversight activities and meetings with the state, an action plan is cooperatively developed on steps to resolve significant problems or deficiencies. The plan is to include actions to be

taken by the state and OSMRE, as well as a schedule for those actions. Every attempt is made to reach a mutually agreed upon plan.

To the extent some areas are not fully resolved, the action plan is to set forth actions that OSMRE will take to achieve resolution.

The chapters that follow summarize OSMRE's evaluation of individual state programs for the review period July 1, 1985 through June 30, 1986.

Coal production data is from the U.S. Department of Energy's report "Coal Production 1985", which presents the Federal Government's most up-to-date nationwide data.



STATE PROGRAM STATUS

FY 1986

FULLY APPROVED

CONDITIONALLY APPROVED

FEDERAL PROGRAMS

NON-PARTICIPATING STATES

ALABAMA

Introduction/Overview

The largest producing coal field in Alabama, the Warrior Coal Field, was discovered in 1821. Since that time, coal has become Alabama's leading industrial mineral, both in production and income. Alabama currently ranks 10th in the Nation in the production of coal. The continued production of Alabama's high quality, low sulfur coal will insure the State a place among the Nation's leaders in natural energy production.

Alabama contains both bituminous and lignite grade coal. The bituminous coal is mined with underground and surface methods from 4 major coal fields in 24 counties. From largest to smallest they are: The Plateau Field; The Warrior Field; The Cahaba Field; and the Coosa Field. The Plateau Field is characterized by steeply dipping coal seams associated with moderately deep southwesterly plunging anticlines. The Warrior Field represents Alabama's largest producing field and contains easily minable horizontal seams. The Cahaba and Coosa Fields are both more structurally complex than the two other major fields. The coal in these areas is associated with synclinal troughs and exhibits highly undulating thicknesses.

The State's lignite coal, which is located in southern Alabama, is not presently being mined. If the market dictates future extraction of lignite coal, however, two major factors will enhance Alabama's chance of economic recovery. First, the lignite coal in Alabama is of relatively good grade, and second, the deposits are very shallow and will be easily mined.

During fiscal year 1986, more than 9,000 workers participated in the operations of Alabama coal mines. Thousands more were employed in related industries, such as coal processing and the chemical industry.

Program Management and Budget

The regulatory program in Alabama is administered by the Alabama Surface Mining Commission (ASMC). The State gained primacy when its regulatory program was conditionally approved, effective May 20, 1982. The remaining conditions were removed July 5, 1984.

The state agency administering the Abandoned Mine Lands (AML) program is the Alabama Department of Industrial Relations. The AML program was granted full approval on May 20, 1982.

During the latter part of 1985 and the early part of 1986, the Alabama legislature's "Sunset" Committee attempted to abolish the Alabama Surface Mining Commission and return the program to OSMRE. This attempt failed and the Sunset Committee suspended action, for one year, in order to permit further evaluation.

In addition, some important changes were made in the Alabama law. One new provision prevents state regulations from being any more stringent than the comparable Federal regulations.

Although a Federal Lands Cooperative Agreement between Alabama and OSMRE became effective August 30, 1985, no mining is currently taking place on Federal lands in the State.

Permitting and Bonding

The State has implemented a well-organized, efficient permitting process that, during the annual permitting evaluation, revealed only minor areas where improvement could be made.

Those areas included informational requirements for probable hydrological consequences (PHC) and cumulative hydrological impact assessment (CHIA) as well as negative determinations of prime farmland. To resolve the issue of informational requirements for probable hydrological consequences, ASMC has implemented new guidelines for PHC preparation. The state is resolving the CHIA issue by incorporating OSMRE's draft CHIA guidelines document into the CHIA process. ASMC, not the applicant, will now make all prime farmland determinations, thus insuring that the data are included in the permit.

Two in-depth studies of drainage structures and topsoil substitution were conducted. Findings from the drainage study indicated that drainage structures were not always being constructed according to design. ASMC and OSMRE's Birmingham Field Office resolved the issue by requiring either reconstruction of the structures to match the certified design or, where existing structures meet all performance standards, submission of new design certifications to match the existing structures. As a result of the topsoil substitution study, ASMC has reviewed all previously approved topsoil substitution requests and deleted those that do not meet the standards. Also, ASMC plans to hire a soil scientist for its permitting staff.

In July 1985, the State implemented a new bond determination process that resolved previous concerns that bond amounts were too low to complete reclamation. OSMRE's Eastern Field Operations Office has

reviewed the revised bonding provisions and has concluded that bonds are now adequate to accomplish reclamation.

During the evaluation period, the OSMRE Birmingham Field Office concurred with the State's bond release actions in 76 percent of the cases reviewed. Most of the instances of non-concurrence occurred during the early part of the evaluation period. The quality of the bond releases approved by the State during the latter part of the evaluation showed a significant improvement over those released during the first half of the period, primarily because the State adopted a point frequency method for determining vegetative cover.

Approximately 50 sites inspected by the Birmingham Field Office during this evaluation period had existing conditions that indicated that the permittee's bond should be forfeited. On all sites on which a bond forfeiture was indicated, the State notified the permittee of its determination to forfeit the bond.

Inspection and Enforcement

Alabama has an effective inspection and enforcement program which requires minimal oversight. The effectiveness of the State's program is due, in part, to the cooperation of ASMC in promptly addressing those issues which require attention. The State has an excellent record with regard to its frequency of inspections, due primarily to increased computer capability, which allows for tracking inspections conducted on each permit. The increased computer capability also allows tracking of violations by type and has therefore enhanced the State's ability to determine patterns of violations.

On complete inspections, the State cited violations at approximately one third the rate at which violations were cited by the OSMRE Birmingham Field Office. Some of the apparent discrepancy may be attributed to poor documentation of individual violations on the State's inspection reports. OSMRE's Birmingham Field Office and the State are continuing to investigate and resolve this problem.

The State is currently using procedures that were approved on July 15, 1986, for detecting and prosecuting coal operators who are illegally posing as clay and shale operators. The effectiveness of State action under the new procedures is being evaluated. OSMRE's Birmingham Field Office is prepared to assist ASMC as needed until the situation is resolved.

Abandoned Mine Lands

The Alabama Abandoned Mine Lands Reclamation Program completed 25 AML projects during fiscal year 1986. These projects included backfilling portals, airshafts, and impoundments; reclaiming subsidence-prone properties; and eliminating highwalls, as well as general reclamation of abandoned surface mines.

The State has been very efficient in enforcing the timely start-up and completion of projects. A penalty system for late completions was enacted through which contractors are charged a daily fine for each day that work continues past the specified contract length. Only one late completion out of 25 projects occurred during the year.

Facts About Mining in Alabama

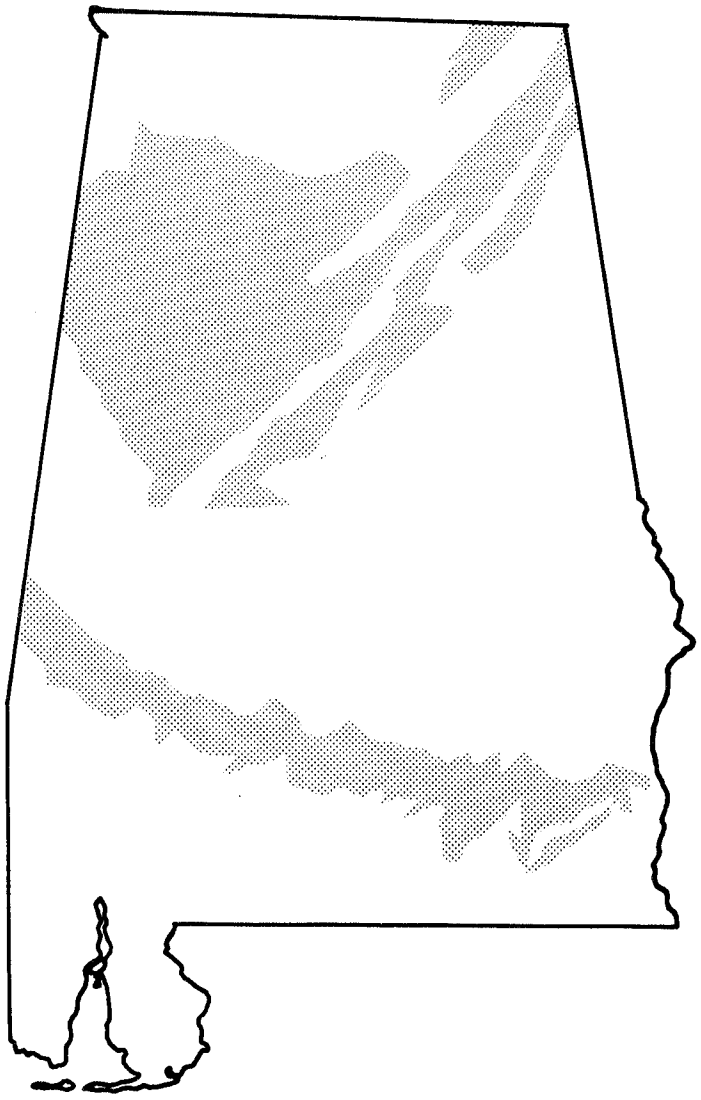
	Amount	% U.S. Total
Coal Production (tons)*	27,797,000	3.15
Surface Mining	13,357,000	2.51
Underground Mining	14,440,000	4.12
Producing Mines*	131	2.75
Surface	111	4.34
Underground	20	.90
Average Production/Mine**		
Surface	120,333	
Underground	722,000	
Acreage Under Permit	71,619	2.21

Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."

***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$11,859,982
Total Permits	427
Inspectable Units (All Lands)	413
Total Inspections (Partial and Complete)	4,258
Enforcement Actions (NOVs Issued)	426



Alabama

Coal Bearing Lands

Introduction/Overview

The coal deposits in Alaska occur in several major coal fields or basins in the State. The major coal fields are Nenana, Matanuska, Bering River, Susitna Lowland, Northern Coal, and Kenai. Of those, only Matanuska and Nenana have been developed significantly.

The deposits underlie about one-fourth of the State or an area larger than the State of Montana. Approximately 60 percent of the coal is bituminous and 40 percent is subbituminous. Less than one percent is lignite or anthracite.

Although the demonstrated coal reserve base is only 6.1 billion tons, or 1.25 percent of U.S. reserves, revised estimates place the hypothetical reserves at 5.5 trillion tons and the identified coal reserves at 170 billion tons. These differences are due to limited detailed exploration programs within the State.

The first significant and continuous coal mining operations in Alaska began in 1916 with the construction of the Alaska Railroad. Development of the Matanuska Field supplied the U.S. Navy and the Alaska Railroad with coal, while development of the Nenana Field supplied coal to the city of Fairbanks. Conversion of the Alaska Railroad to diesel in the 1950's and the subsequent conversion of the Anchorage utility and military installations to natural gas in 1967 resulted in the closures of the major Matanuska coal operations.

Today, the only producing coal mine in the State is the Poker Flat Mine, operated by Usibelli Mine, Inc. The mine is a surface operation in the Nenana Coal Field near Healey, Alaska. Usibelli produced 1,433,000 tons in 1985 for use by a mine-mouth power plant, three military bases, two public utilities, one retail customer, and one long-term Korean contract. The mine provides employment for an average of 78 miners working daily. The permit area for Usibelli is about 2,377 acres.

Certain conditions affecting mine reclamation are unique to Alaska because of its extreme northern latitude. For example, permafrost occupies about 75 percent of the State's land area; tundra vegetation occupies large treeless regions in the State; and extremely cold weather and a short summer season occur in many parts of Alaska. In addition, hydrologic conditions are considerably different from other states; major streams fed by heavily silt-laden glacial meltwater contain greater concentrations of natural sediment than the effluent discharge limits permitted by Federal regulation. In addition, certain locations in the State, such as the Beluga coalfield, are potentially subject to high seismic risk. These factors make mining and reclamation of coal land in Alaska more difficult than in other states.

Program Management and Budget

Alaska's program to regulate surface coal mining was approved on May 2, 1983. There were no conditions placed on the program. The Abandoned Mine Lands (AML) program was approved on December 23, 1983. No significant actions occurred during 1986 that affected the Alaska permanent program. There is no Federal lands cooperative agreement with Alaska.

Under the Alaska Surface Coal Mining Control and Reclamation Act, the Commissioner of the Department of Natural Resources is the regulatory authority for the surface mining regulatory program and for the abandoned mine land program. This authority was formally delegated to the Director of the Division of Mining and Geology, although the Commissioner does retain some of the final decision-making authority.

The Division of Mining and Geology has 5.64 full-time equivalent individuals in its coal reclamation program, and 1.15 positions for AML duties.

Permitting and Bonding

At the close of the 1986 evaluation period, Alaska had not yet issued a permanent program permit to the one active surface coal mine that was in existence when the Alaska regulatory program was approved. (That permit was issued May 27, 1987.)

Inspection and Enforcement

Although the number of partial inspections for the review period was adequate, two additional complete inspections should have been made. OSMRE will continue to monitor monthly inspections and to encourage the State to conduct the necessary number of inspections during fiscal year 1987.

Abandoned Mine Lands

Alaska received its first construction grant during this evaluation period, totaling $198,327. Of that, $135,400 has been obligated. The grant will cover work on five projects, all of which have been started.

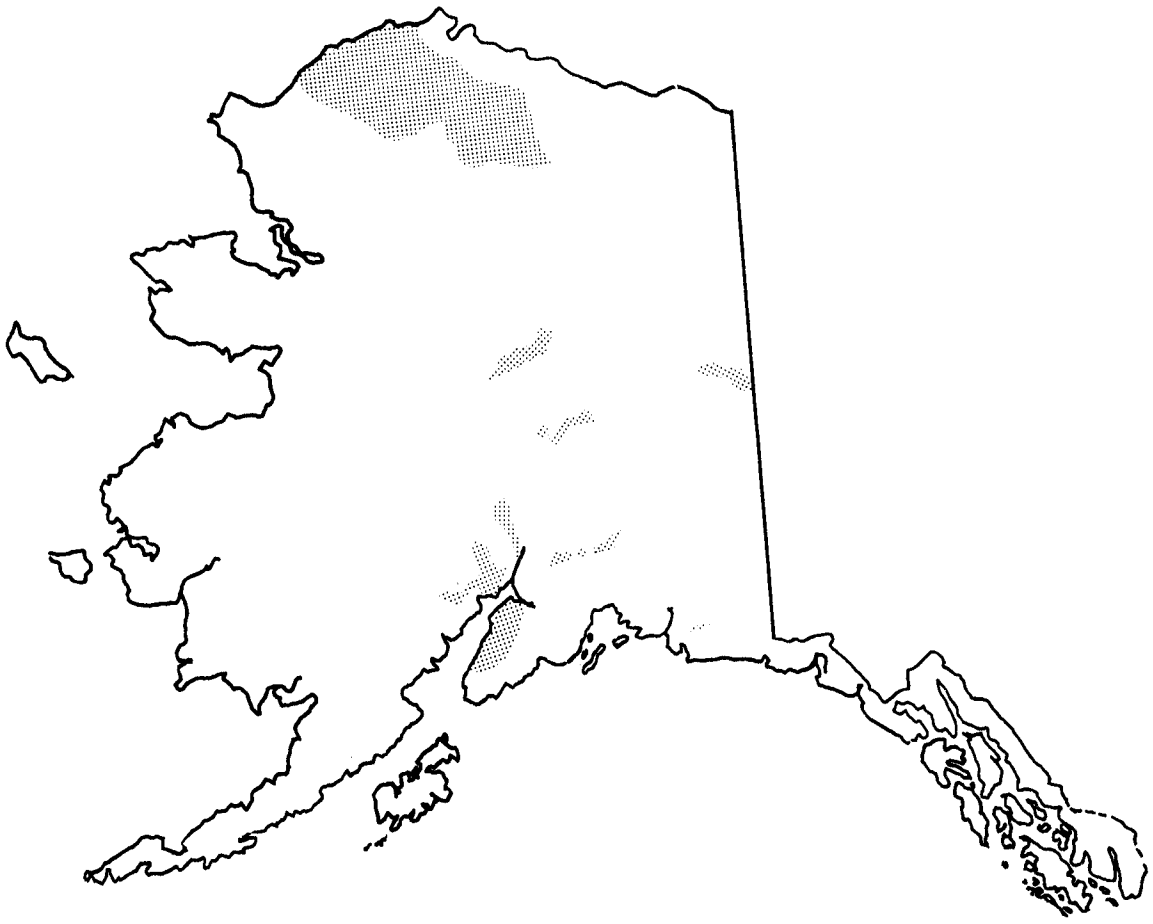
Facts About Mining in Alaska

	Amount	% U.S. Total
Coal Production (tons)*	1,433,000	.16
Surface Mining	1,433,000	.27
Underground Mining	0	0
Producing Mines*	1	.02
Surface	1	.04
Underground	0	0
Average Production/Mine		
Surface	1,433,000	—
Underground	0	—
Acreage Under Permit**	2,377	.07

**Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."*
***Interim Program Permit.*

Salient Statistics—1986 Review Period

Total Budget	$787,635
Total Permits	1
Inspectable Units (All Lands)	1
Total Inspections (Partial and Complete)	12
Enforcement Actions (NOVs Issued)	1



Alaska

Coal Bearing Lands

ARKANSAS

Introduction/Overview

Arkansas coal seams underlie about 1,400 square miles, or less than 2.7 percent of the total area of the State. The deposits are divided into the East and West Coal Districts within the Arkansas Valley. Both are located near the western border of Arkansas.

The demonstrated coal reserve base in Arkansas is 417.9 million tons, or less than one-tenth of one percent of the national reserve base. The coal is ranked as bituminous and semi-anthracite. Most of the commercial coal is mined from thin beds that are at least 14 inches thick. In some locations, however, the lower Hartshorne coalbed can be as much as eight feet thick.

Arkansas coal is presently used for the manufacture of metallurgical coke and fuel for smelters. The coal is well suited for domestic use and steam production because of its high heat value and low ash content. Arkansas low volatile bituminous is blended with 80 to 90 percent high volatile coal in the manufacture of metallurgical coke.

In 1985, seven permitted mines in Arkansas produced 80,000 tons of coal with conventional draglines and stripping shovels. These mines provided employment for an average of 23 miners working daily. Most of the active mines are close to past mining sites and remining of pillars of underground mines by surface methods is common.

The topography of the Arkansas Valley Coal Area is predominantly lowlands, with ridges that have average elevation of about 500 feet. The lowlands and ridges extend east and west. Usually the flat-topped ridges are capped with sandstone. Uplands are heavily forested with an oak-hickory-conifer forest, and the valley areas are used for crop and pasturelands. Precipitation ranges from 40 to 50 inches per year; the maximum occurs in the spring and early summer.

Program Management and Budget

The Arkansas surface coal mining reclamation and enforcement program is administered by the Arkansas Department of Pollution Control and Ecology (ADPCE). The State gained primacy when its regulatory program was conditionally approved on November 21, 1980, subject to the correction of four minor program deficiencies. The four deficiencies were resolved by the State and the Arkansas permanent regulatory program was fully approved on January 22, 1982. Authority for the State to administer its Abandoned Mine Land Reclamation Program was granted upon approval of the Arkansas Reclamation Plan on May 2, 1983.

During the oversight period of July 1, 1985 to June 30, 1986, two changes were made to Arkansas regulations that affected the State's permanent regulatory program. On August 15, 1985, OSMRE approved amendments that allowed a violation abatement period of more than 90 days under certain circumstances, and established procedures for conducting informal assessment conferences, On December 2, 1985, OSMRE approved an amendment which established a blaster training and certification program and changed certain performance standards with regard to the use of expolosives.

Because no coal is mined on Federal lands in the State, Arkansas and OSMRE have not pursued a cooperative agreement for surface coal mine reclamation and enforcement on Federal lands.

Permitting and Bonding

ADPCE has improved its performance in certain areas concerning permitting and bonding, and now requires that all information needed for permit approval be submitted in the permit application package. During the evaluation year, ADPCE made all required written findings before approving the applications.

ADPCE's performance in requiring pre-mine vegetation and land use data was consistent with Arkansas program criteria. The State adequately determined amounts of reclamation bonds and fulfilled all requirements with respect to cultural resources reconnaissance and mitigation measures. OSMRE noted no significant problems in procedures used by ADPCE for releasing bonds once reclamation activities were completed.

OSMRE did observe instances where ADPCE had approved sedimentation pond and diversion designs that did not demonstrate compliance with performance standards for effluent quality and erosion control. OSMRE also identified eight sites where conditions existed such that bond forfeiture was in order. ADPCE had issued Notices of Bond Forfeiture on three of these sites but had not taken action on the remaining five sites. The State is cooperating with OSMRE to resolve those problems, and an action plan addressing the issues has been developed.

Inspection and Enforcement

Currently, there are 38 inspectable units in Arkansas, 22 of which are active. ADPCE inspectors met or exceeded the number of required inspections on all the inspectable units during the review period.

Also during the review period, ADPCE conducted 478 inspections and issued 68 Notices of Violations and 18 Failure-to-Abate Cessation Orders. This indicates ADPCE is citing all observed violations.

ADPCE is experiencing problems in the collection of civil penalties. Approximately $3 million in total civil penalties are owed to ADPCE and have not been collected. ADPCE appeared to assign a low priority to collecting these penalties. In addition, ADPCE did not take necessary actions, allowed under its program, to compel compliance with 82 outstanding State-issued Cessation Orders. OSMRE and the State have developed an action plan to resolve these issues.

Abandoned Mine Lands

During the reporting period, ADPCE placed increased emphasis on its AML Program. Projects funded under a fiscal year 1984 construction grant have been completed and work is progressing satisfactorily on fiscal year 1985 construction projects.

OSMRE oversight inspections indicate that construction is proceeding according to project plans and inspections. Project designs are effectively abating all threats to the public health, safety, and general welfare identified at the sites.

Any problems identified in the Abandoned Mine Land Program have been minor in nature and were resolved immediately by ADPCE when noted.

Facts About Mining in Arkansas

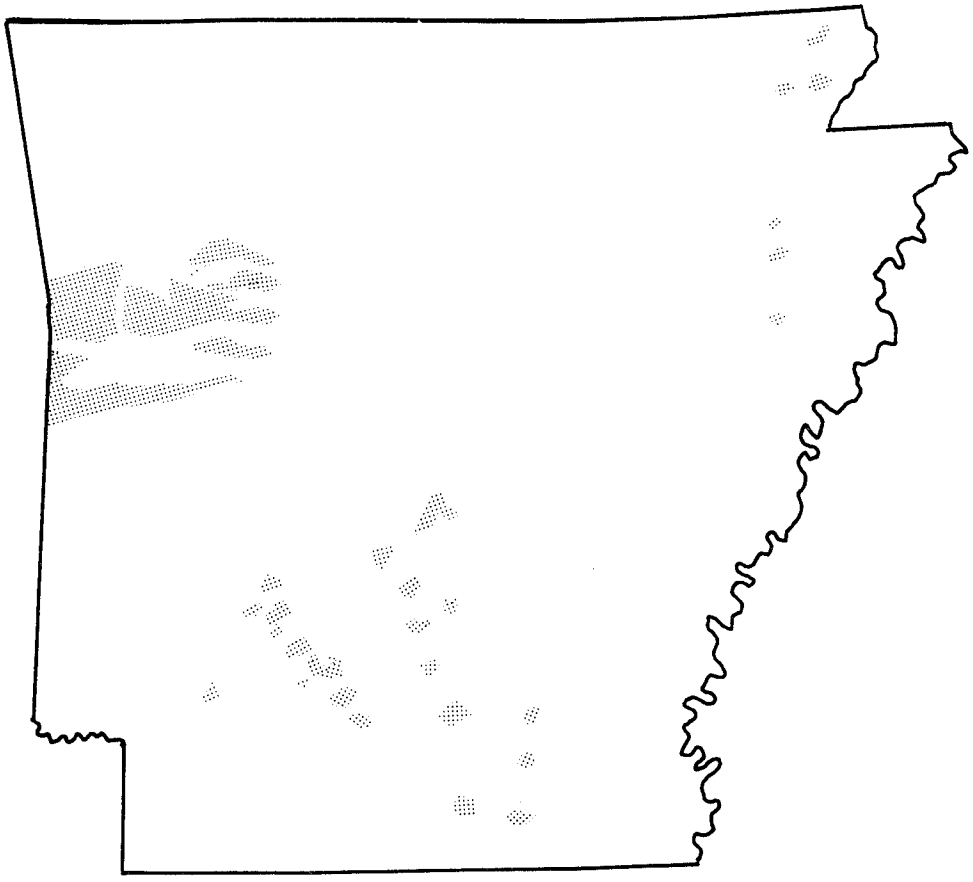
	Amount	% U.S. Total
Coal Production (tons)*	80,000	.009
Surface Mining	80,000	.02
Underground Mining	0	0
Producing Mines	7	.15
Surface	7	.27
Underground	0	0
Average Production/Mine (tons)**		
Surface	11,500	
Underground	0	
Acreage Under Permit	2,468	.076

Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."

***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$1,631,816
Total Permits	38
Inspectable Units (All Lands)	38
Total Inspections (Partial and Complete)	478
Enforcement Actions (NOVs Issued)	68



Arkansas

Coal Bearing Lands

Introduction/Overview

Coal-bearing regions cover approximately 29,600 square miles, which is 28.4 percent of the total area of Colorado. The most important coal-bearing regions, from a standpoint of both total in-place resources and present annual production, are the Green River and Uinta regions in the northwestern and west-central parts of the State, respectively. Colorado coal resources vary from lignite to anthracite. More than 70 percent are bituminous; 23 percent subbituminous; 5 percent lignite; and less than 1 percent anthracite. The demonstrated coal reserve base in the State is about 17.2 billion tons, or 3.5 percent of the national reserve base.

Commercial coal production in Colorado first began in 1861, while surface mining for coal began in the early 1950's. In 1962, 7 of Colorado's 117 mines were open pits, producing 14 percent of the State's total annual production of 3,400,000 tons. By 1973, 9 of 37 mines were surface mines, producing 53 percent of the State's total annual production of 6,960,685 tons.

In 1985, 12 of the state's 35 producing mines were surface operations and produced 10,865,000 tons of the state production of 17,243,000 tons. Colorado coal mines provided employment for an average of more than 2,800 miners.

Differences in elevations create many climatic zones in Colorado. Annual precipitation may range from 13 inches in the area of the Wise Hill Mine No. 5 in Craig, Colorado, to 17 inches in areas such as the Mount Gunnison Mine near Gunnison, Colorado. Generally, precipitation rates are low, making revegetation difficult. With careful selection of plant species, however, this problem can be overcome. The growing season can be up to 169 days at some sites, but is usually much less, especially in the mountainous regions of the State.

Program Management and Budget

The Colorado Mined Land Reclamation Division (CMLRD), a division of the Colorado Department of Natural Resources, administers the regulatory program in the State. Colorado gained primacy when its regulatory program was conditionally approved, effective December 15, 1980, subject to the correction of 45 deficiencies. By June 30, 1986, 6 of the conditions remained. OSMRE is currently working with the State to resolve those issues.

During the evaluation year, several program amendments were approved. Effective February 5, 1986, the number of inspections of inactive mine sites was decreased from an average of one inspection per month, including one complete inspection per calendar quarter, to an average of at least one complete inspection per calendar quarter. Also, CMLRD is now able to conduct aerial inspections, which are partial inspections. The State also revised its regulations to include a 30-day cap on the $750 daily assessment for Failure-to-Abate Cessation Orders.

Permitting and Bonding

During the evaluation year, CMLRD performed satisfactorily the program elements that had been selected for nationwide oversight evaluation. No deficiencies were found relative to the permitting aspects of CMLRD's policy on management of rilling and gullying or on the use of incidental boundary revision on non-Federal lands.

CMLRD is also effectively conducting the cultural resource portion of its coal program, and is using acceptable estimating techniques in determining reclamation bond amounts.

Inspection and Enforcement

Colorado increased its frequency of inspections from 41 to 91 percent during the evaluation year. The improvement is attributable to Colorado's actions to increase the number of inspection personnel, as well as a program amendment in 1986 that allowed reduced inspections at inactive mine sites and the use of aerial inspections for partial inspections. There are 27 inactive sites included in the total of 57 inspectable units in Colorado.

During the year, CMLRD inspectors conducted 613 inspections and issued 76 enforcement actions covering 81 violations; these include the issuance of 12 failure-to-abate cessation orders. Although Colorado's rate of citing violations was lower on complete inspections than what OSMRE oversight inspections indicated it should be, the majority of the violations cited by OSMRE inspectors were administrative-type violations, such as a lack of certification for fills, sediment pond inspection reports, and water monitoring records. OSMRE is working with the State to see that all violations are cited in the future.

CMLRD responded appropriately to all Ten-Day Notices, improving its rate for such responses from 90 percent the previous year.

CMLRD issued a total of 74 orders proposing assessments of civil penalties during the evaluation year. Through the assessment process, in which the operators request a conference on the penalty, 53 cases were settled. Civil penalties totaling $59,675 were collected during the review period. Included in this amount were the civil penalties of 27 cases from the previous year and 47 cases settled and collected this evaluation year.

Five partial bond release requests were received by CMLRD during the evaluation year. Two were approved, two were pending, and one was denied. Only one permanent program permit was forfeited during the evaluation year. The site involves approximately 150 acres and $39,071 in forfeited bond. CMLRD started bond forfeiture procedures on one initial program permit. The surety agreed to reclaim the site and contracted for the reclamation work before the bond forfeiture proceeding was held, however.

Abandoned Mined Lands

Colorado continued to administer an effective and efficient AML Program.

Approximately 93 percent (428 of 459) of Colorado's known Priority I, II, and III AML problem areas are now either abated or funded for abatement. The total cost of all AML work done to date and for abating all presently known AML hazards (including subsidence) is $38 million; of this, $18 million has already been funded.

Closing hazardous mine openings was the major force of the State's reclamation effort during 1985 and 1986. Colorado also used funds from the Abandoned Mine Reclamation Fund to abate health and safety hazards associated with subsidence from abandoned underground coal mine workings and to construct a new mine drainage improvement project. Selection of those sites was based primarily on data from the State AML inventory.

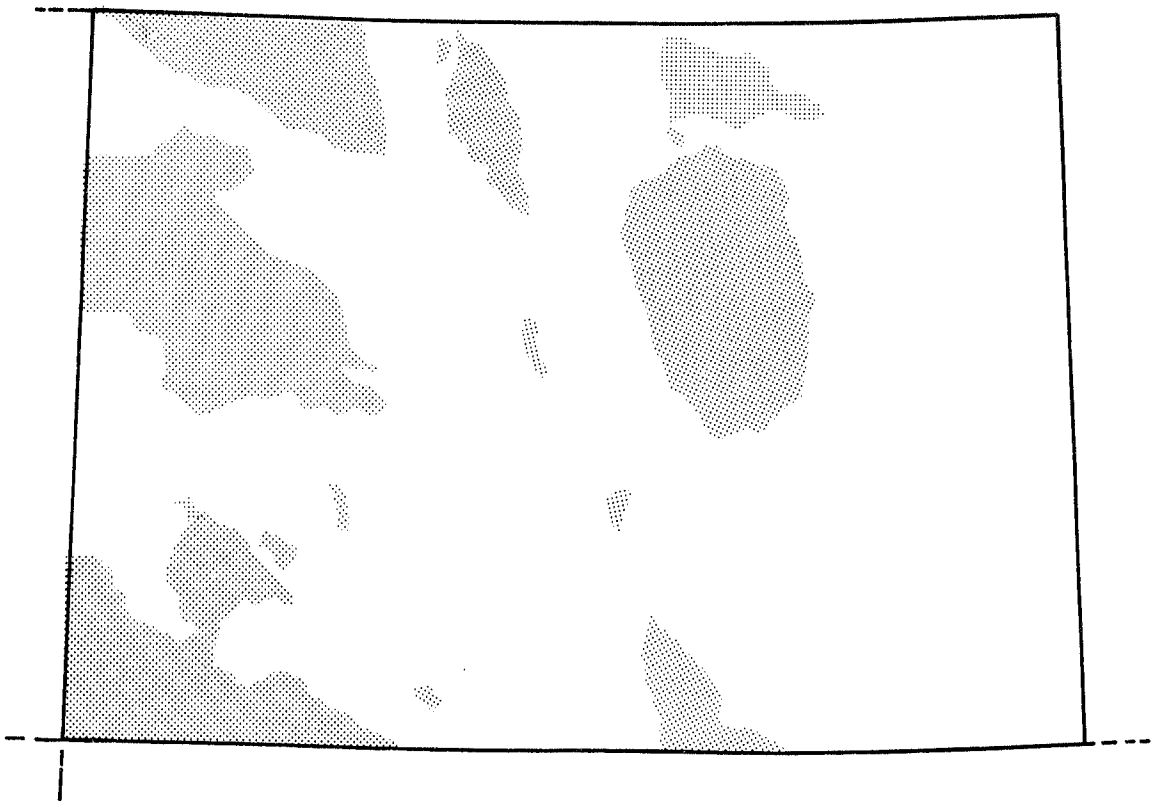
Facts About Mining in Colorado

	Amount	% U.S. Total
Coal Production (tons)*	17,243,000	1.95
Surface Mining	10,865,000	2.04
Underground Mining	6,377,000	1.82
Producing Mines*	35	.73
Surface	12	.47
Underground	23	1.04
Average Production/Mine		
Surface	905,416	*
Underground	277,260	*
Acreage Under Permit	92,045	2.84

Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."

Salient Statistics—1986 Review Period

Total Budget	$5,850,026
Total Permits	57
Inspectable Units (All Lands)	57
Total Inspections (Partial and Complete)	613
Enforcement Actions (NOVs Issued)	64



Colorado

Coal Bearing Lands

ILLINOIS

Introduction/Overview

Illinois has the largest reported bituminous coal resources of any state, and, in 1985, became the fourth largest coal producing state in the Nation, following Kentucky, Wyoming, and West Virginia.

Coal-bearing rocks underlie about 65 percent of Illinois, including all or parts of 86 of its 102 counties. An estimated 181 billion tons of coal resources are still in the ground. Using present mining methods, more than 30 billion tons are classified as recoverable. This represents almost one-eighth of the total recoverable reserves of all types of coal in the United States.

Through 1985, approximately 5.1 billion tons of coal had been mined in Illinois, and more than 1,150 square miles had been affected by surface mining. This latter figure represents one-half of one percent of the State's total land acreage.

With much of Illinois coal overlain by prime farmland, the relationship between mining and agriculture represents a major challenge to the surface mining industry and the farming community.

By the 1960's, surface mining methods accounted for more than 50 percent of the State's total production. Beginning in 1972, however, underground methods regained dominance, and by 1985 underground production accounted for 64 percent of total production.

Eighty-four percent of the coal produced in Illinois is used by electrical utilities in Illinois, adjoining states, and in states as far away as Florida. Exports have steadily increased during the past several years.

The number of working miners in 1985 stood at more than 13,000, representing an annual payroll of $475,000,000.

Program Management and Budget

The Illinois Department of Mines and Minerals administers the surface mining regulatory program, which was approved June 1, 1982. Five conditions were imposed at the time of approval, three of which have been met. The remaining conditions are being addressed by the State in its extensive regulatory reform submission, which is currently under review by OSMRE.

Illinois submitted blaster certification regulations, which were approved on October 30, 1985. OSMRE has approved a final rule that sets standards for productivity of reclaimed prime farmland. This rule, representing the joint effort of several state agencies and universities, is indicative of Illinois' commitment to full prime farmland restoration.

On May 8, 1986, oral arguments were heard on a suit filed by the Illinois South project and nine other organizations, challenging the Secretary of the Interior's decision to approve the Illinois Program and characterizing the program as inadequate. In a June 26, 1987, court decision, the Secretary was upheld on all counts.

Illinois has submitted a proposed cooperative agreement for Federal lands. The agreement is currently under review by OSMRE. If approved, the transfer of the Federal lands program to the State under this agreement would take place in 1987.

Permitting and Bonding

Illinois continues to employ effective permitting practices, reviewing and approving complex applications in an average of seven months from the time they are submitted. As confirmed in a recent study by the Office of Technology Assessment, Illinois is the leader not only in the reclamation of prime farmlands (of which Illinois has more than any other state), but also in the reclamation of other croplands that are not subject to prime farmland reclamation standards.

Permits approved by Illinois also effectively deal with other long-term environmental effects of mining peculiar to the Illinois Coal Basin. One such impact is the diversion and replacement of major streams and small rivers. Often several miles of streambed and riparian habitat are involved. Illinois' close attention to these matters enables the recovery of millions of tons of otherwise unminable coal while ensuring the restoration of important hydrologic and ecological resources.

Illinois is also effectively addressing the impacts of surface subsidence due to the use of longwall mining technology in underground mines.

OSMRE's 1986 review of the Illinois bonding procedures revealed continued compliance with the approved bonding program. The State procedure is yielding sufficient bond amounts to guarantee reclamation; revisions to bond amounts are being made as required. Bond forfeiture proceedings were initiated by the state at each site where such action was appropriate. At those forfeiture sites where reclamation was completed, work was found to be satisfactory.

Inspection and Enforcement

The State met or exceeded the required inspection frequency on all mines during the evaluation period. While the regulations required 1,359 inspections, 1,681 inspections were performed. The OSMRE review of various documents and field inspections, however, indicates that less-than-complete inspections are being conducted in some cases. The State disagrees with this conclusion, but has indicated that assuring quality inspections is a continuing priority.

The State has shown improvement in its rate of citing violations. OSMRE oversight indicates that Illinois cites close to 80 percent of all existing violations. Comparison with previous years' figures reveals that the citation rate for both the State and OSMRE is much lower and that the percentage of non-administrative violations has dropped. These factors indicate a trend toward increased overall compliance in Illinois.

Illinois is successfully administering the civil penalty provisions of the State program. Each violation was assessed; 38 percent of all assessments required a monetary penalty. The remaining 62 percent were appropriately waived under the supervisor's discretionary powers. To date, the State has averaged a collection rate of 79 percent for notices of violation and 11 percent for cessation orders. The low rate of collection for cessation orders can be attributed to the high percentage of bankrupt permittees receiving orders. There are currently $645,000 in outstanding penalties in Illinois, much of which may prove to be ultimately uncollectible due to permittee insolvency.

Abandoned Mine Lands

Illinois continues to pursue aggressively the reclamation of past coal mining sites. While the scope of work in recent construction grant submittals has been pared by as much as 30 percent because of reduced funding appropriations the number of acres being reclaimed has increased due to a gradual shift in emphasis to large environmental-hazard sites. The largest AML sites, being more visible to the public, have brought the Illinois AML program greater statewide recognition.

On January 1, 1986, the Illinois Abandoned Mined Lands Reclamation Council, the State authority charged with the AML program, became a separate agency within the Illinois State government and is no longer affiliated with the Illinois Department of Mines and Minerals. This action has streamlined operations and has resulted in reclamation being completed ahead of schedule more often.

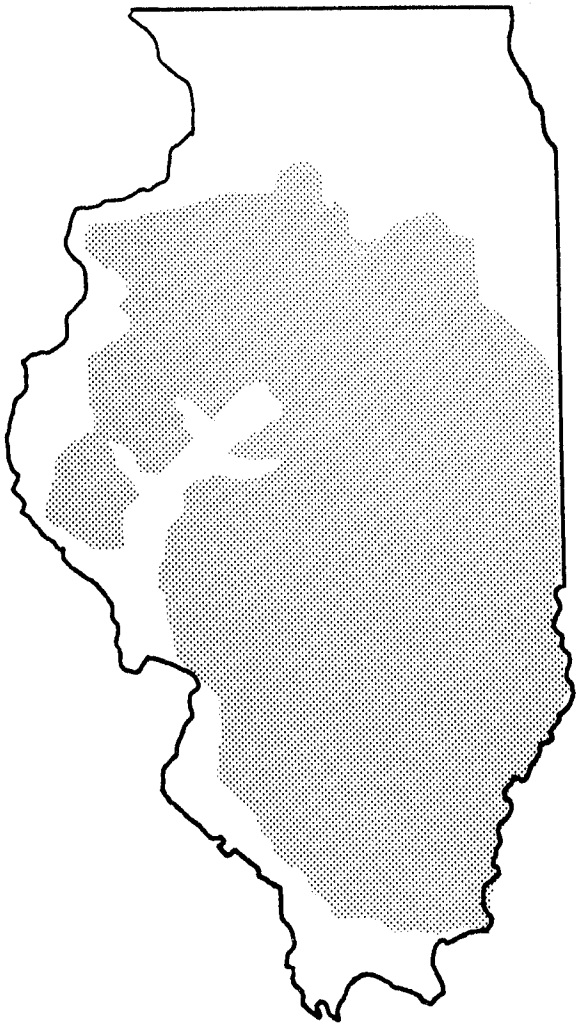
Facts About Mining in Illinois

	Amount	% U.S. Total
Coal Production (tons)*	59,201,000	6.7
Surface Mining	21,858,000	4.11
Underground Mining	37,343,000	10.64
Producing Mines*	54	1.13
Surface	20	.78
Underground	34	1.54
Average Production/Mine**		
Surface	1,092,000	
Underground	1,098,323	
Acreage Under Permit	110,800	3.42

**Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."*
***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$14,415,131
Total Permits	114
Inspectable Units (All Lands)	114
Total Inspections (Partial and Complete)	1,681
Enforcement Action (NOVs Issued)	154



Illinois

Coal Bearing Lands

Introduction/Overview

The State of Indiana has regulated the environmental impacts of coal mining since 1941. It was the second state in the Nation to pass legislation requiring mined land reclamation. The present permanent regulatory program was approved by the Secretary of the Interior and became effective on July 29, 1982.

The coal reserves in Indiana are located in the southwestern part of the State, with 25 counties in that region having significant known reserves. Coal is currently being mined in 17 of those counties. Recent estimates place the State's total in-ground reserves at approximately 55 billion tons. Recoverable reserves are estimated to range from 20 to 25 billion tons, of which less than 2 billion tons have been mined since 1837.

The bulk of Indiana's coal resources is found in seven major coal seams, with smaller amounts lying in rider seams that occur stratigraphically above and below the various major seams. The seams are present in the Pennsylvanian strata along the eastern flank of the Illinoisan Coal Basin and generally dip to the west and southwest with a gradual gradient. The flat to rolling terrain and the rather shallow depths of the coal seams (60 to 200 feet) make much of the State's coal reserves extractable by surface mining methods. Future plans, however, may call for the opening of more underground operations because of several newly mapped reserves with seams of up to 10 feet in thickness.

In 1985, 31,262,000 tons, which is 94 percent of the State's total production, were extracted by surface mining operations and 2,053,000 tons were extracted from underground mines. Production from underground mines has increased almost 90 percent since 1983, compared to an increase of about 1 percent for surface mining production.

Program Management and Budget

Full primacy was granted to the State of Indiana on July 29, 1982. The permanent program is administered by the Indiana Department of Natural Resources, Division of Reclamation. During the 1986 oversight year, Indiana proposed several program amendments which were approved by OSMRE and which have positively affected the State's implementation of its permanent program. Among the most significant of these amendments are the following:

- Indiana now has a fully approved blaster training and certification program. OSMRE initially approved the State blaster certification and training program contingent upon successful completion of a new blaster's examination. This examination was reviewed by OSMRE in August and found to substantially fulfill all requirements.
- Indiana has increased its permit fee amount from $50 per acre to $100 per acre. The additional income will be used by Indiana for administrative support of its approved program.

No mining has been proposed on any Federal lands in Indiana, so a cooperative agreement between the State and OSMRE has not been signed.

Permitting and Bonding

During this oversight period, Indiana submitted a number of program amendments to OSMRE for review and approval. For example, an amendment to add interim bond release revegetation standards has been approved by OSMRE. Permanent program revegetation bond release standards will be submitted by Indiana and approved by OSMRE prior to any 100 percent permanent program bond release.

The resolution of issues involving probable hydrologic consequences and cumulative hydrologic impact assessments (PHC/CHIA) is being pursued by OSMRE and the State. OSMRE has provided training courses and computer technology, and held discussions to establish a basis for the submittal of PHC data by operators, and for the management of such data and preparation of CHIAs by the State. The State has added a hydrologist to its staff and may get funding for a second. Staff members who are not hydrologists are also being trained to assist in the program.

OSMRE is working with the State to assure that in its implementation of the approved state program, prime farmland restoration is assured. Currently, Indiana's regulations and permit application form do not sufficiently identify acceptable methods and standards for measuring crop yield on prime farmland areas. The permit application form needs to be brought into conformance with State regulations because it allows measurement of soil properties rather than crop yield as a basis for bond release. The State's allowance of soils mixing and compaction has also been questioned by OSMRE. OSMRE is negotiating with the State to develop action plans for resolving these issues in a timely manner.

Inspection and Enforcement

During this evaluation period, significant progress was made in improving inspection frequency performance. Indiana exceeded inspection frequency requirements on 36 percent of its inspectable units. State inspectors are making more thorough inspections and more complete pre-inspection document reviews. The content and quality of inspection reports have improved for permanent program permits through the use of an expanded narrative description of mine site conditions. Documentation of citations has also improved, and now includes statements describing evidence gathered during inspections to support observed violations.

The collection of civil penalties continues to be an area of concern. Indiana is not pursuing collection of past due penalties as aggressively as it might. The State, however, recently developed a system to track all violations from issuance of notice of violation through penalty assessment and final collection, and this should markedly assist in resolving the problem.

Abandoned Mine Lands

During the evaluation period, Indiana used money from the AML reclamation fund to correct problems related to abandoned mine highwalls, open shafts, underground subsidence, and water pollution from coal waste and barren spoil piles. Significant improvements were made in program operations, especially in estimating construction costs and in meeting projected reclamation schedules. The State is becoming very efficient in the use of available program funds, with an average obligation rate of 95 percent of the first three construction grants approved. The Indiana program is progressing well in the reclamation of high-priority projects.

Issues addressed during this evaluation period include a question of State control of contractual reclamation work and concern with the State's procurement procedures. Regarding control of reclamation, it appears there is a need to clarify the delegation of reclamation monitoring responsibilities between the State's Division of Reclamation and Division of Engineering. The procurement issue focuses on Federal requirements for free and open competition in the selection of consultants. OSMRE anticipates early resolution of the construction monitoring issue through discussions with officials of the Indiana Department of Natural Resources. The procurement issue was resolved by clarifying Federal procurement requirements and by reaching agreement on future practice.

Facts About Mining in Indiana

	Amount	% U.S. Total
Coal Production (tons)*	33,316,000	3.77
Surface Mining	31,262,000	5.88
Underground Mining	2,053,000	.59
Producing Mines*	70	1.47
Surface	66	2.58
Underground	4	.18
Average Production/Mine**		
Surface	473,667	—
Underground	513,250	—
Acreage Under Permit	126,690	3.91

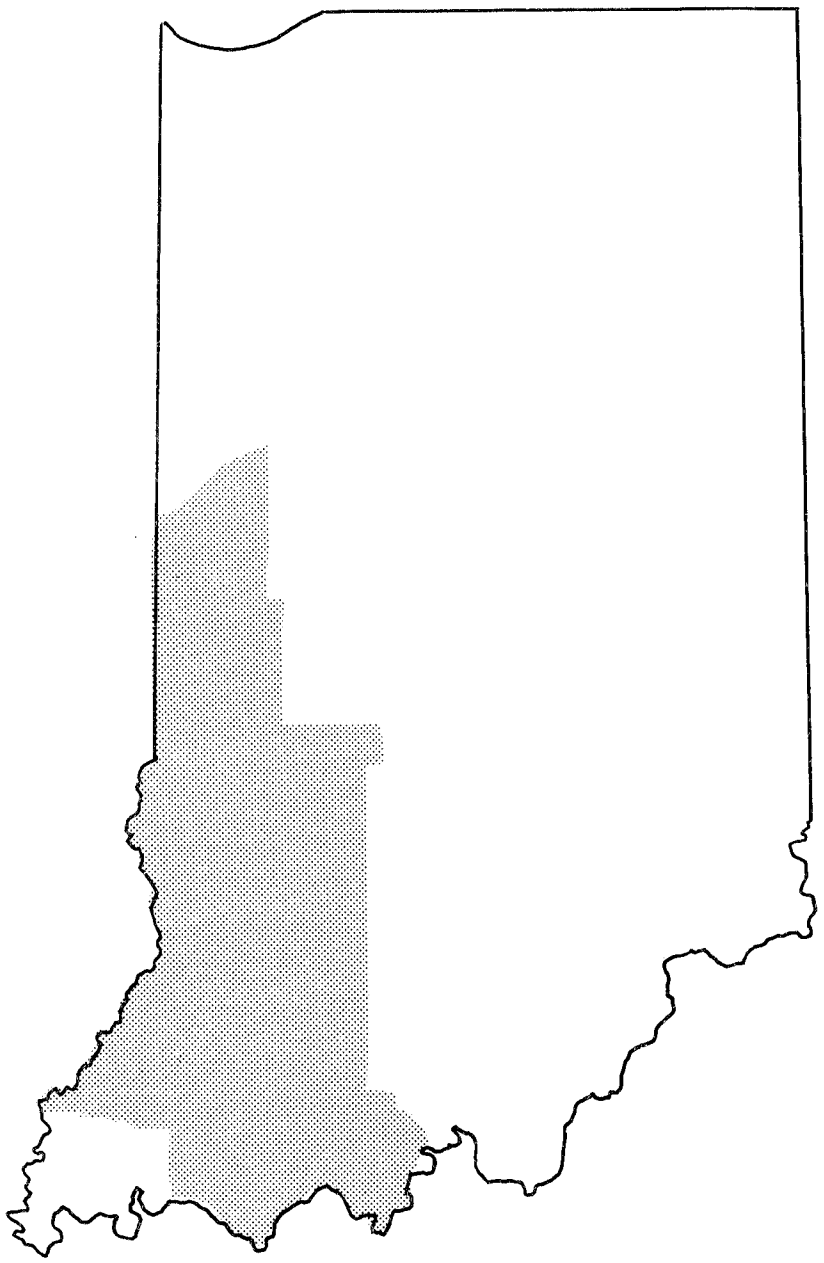
**Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."*
***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$8,157,211
Total Permits	578
Inspectable Units (All Lands)	578
Total Inspections (Partial and Complete)	7,430
Enforcement Actions (NOVs Issued)	456

Indiana

Coal Bearing Lands



IOWA

Introduction/Overview

Coal-bearing regions cover about one third of Iowa, primarily in the south-central part of the State. Coal ranges from subbituminous to high-volatile B bituminous, with the majority as high-volatile C bituminous. The demonstrated coal reserve base in the State is 2.2 billion tons, or less than one-half of one percent of the U.S. coal reserves. Coal beds are typically thin seams with a maximum thickness of five feet.

Coal deposits in Iowa were first mined in the 1840's for blacksmithing and domestic purposes. Demand for coal increased with the use of coal in steamboats and railroads. Production peaked in 1917 when Iowa produced 9 million tons of coal. Conversion to natural gas and fuel oil caused a decrease in coal demand until the 1940's. Since that time, demand by electrical power generating plants has caused a rebound in the production of coal

In 1985, Marion and Monroe Counties were the only coal-producing counties in the State. Four surface mines and one underground mine produced 419,000 and 172,000 tons respectively, for a total of 591,000 tons used primarily in generating electricity. Coal mines in the State provided employment for 127 miners working daily. Surface mines in the State primarily use conventional draglines. The surface mining productivity rate in the State is less than the national average, due to the thin seams being mined. The mining productivity rate for underground mines, however, is slightly higher than the national average.

The topography of the southern and southeastern Iowa coal region is rolling to hilly and is dissected by streams. Agricultural crops and pastures are the dominant land use, with steeper slopes remaining forested. To the west and southwest, the topography is the same but a higher percentage of the land is devoted to agriculture.

The climate is temperate and continental, characterized by long winters with persistent snow cover, long summers with average July temperatures greater than 77 degrees Fahrenheit, and short spring and fall seasons. Climate does not pose a difficulty in the rehabilitation of mined lands.

Program Management and Budget

The Secretary of the Interior conditionally approved the Iowa permanent regulatory program on January 21, 1981, to be effective April 10, 1981. The Iowa Department of Soil Conservation assumed responsibility for the regulation of all surface coal mining operations and coal exploration operations in the State at that time.

Program approval was subject to the correction of three minor deficiencies. Those have since been corrected, and Iowa received full approval of its permanent regulatory program on March 28, 1982. An additional condition was placed on the Iowa program on November 8, 1983, concerning the State's lack of a civil penalty prepayment provision. Following approval of a program amendment to add that provision, the condition was removed on June 28, 1985.

Iowa has developed its abandoned mine land (AML) plan and prepared an inventory of projects. OSMRE approved the State AML plan on March 28, 1983.

On July 1, 1986, Iowa reorganized its government structure and placed the regulatory and AML functions under the newly created Division of Soil Conservation (DSC) in the renamed Iowa Department of Agriculture and Land Stewardship.

Iowa and OSMRE have not pursued a cooperative agreement for coal mine reclamation on Federal lands because no coal mining has occurred on these lands, nor is any anticipated in the near future.

Permitting and Bonding

By March 22, 1983, Iowa had completed the repermitting of all active coal mining operations under the permanent program. Through a long-term assistance effort, OSMRE and the State have entered into a cooperative exercise to resolve permitting deficiencies that OSMRE identified in Iowa's permanent program permits as they were first issued. Iowa has developed a draft permitting policy handbook for hydrology and geology and is in the process of developing additional handbooks to address other areas of permitting policy. Requirements for specific baseline information, which has been lacking from some permits, will be addressed in the new handbooks. The development of permitting policies has already resulted in an improvement in the quality of Iowa permits.

Bonding of all coal mining operations is required by DSC before a permit is issued. A minimum bond of $10,000 applies to all sites. During 1984, the State experienced several bond forfeitures where the amount of bond was insufficient to reclaim the mine site completely. A program to incrementally increase the bond amounts was initiated pursuant to requests by OSMRE. Bond amounts were increased during 1985, but were still found to be inadequate to cover the full cost of reclamation should the State be required to reclaim the site due to bond forfeiture. In a cooperative effort between Iowa and OSMRE, reasonable cost factors for moving overburden and administrative costs were agreed upon and all active permits were reevaluated for bond amount. On October 1, 1986, the State notified operators of active mines sites to submit revised bond amounts that should be adequate to effect reclamation.

In 1985, Iowa received applications from three operators eligible to participate in the Small Operators Assistance Program (SOAP). OSMRE allocated a SOAP grant to fund hydrology and geology permitting requirements for these small operators. Due to the length of time needed to prepare permitting policy guidelines to implement SOAP, the State requested an extension for its SOAP grant. There is currently one operator eligible for SOAP assistance.

Inspection and Enforcement

Iowa met 100 percent of its required inspection frequency on all inspectable units. Completeness of inspections has improved. Citizen complaints were adequately addressed. The quality of inspection reports also improved significantly during the past year. Iowa has responded adequately to Ten-day Notices issued by OSMRE. Enforcement actions taken by Iowa were issued in a timely manner and follow-up inspections were conducted in a more timely manner than last year.

Iowa has followed its approved procedures in the prompt service of citations to operators. Extensions of time for abatement of violations did not exceed the 90-day time limit. No problems were identified with the prescribed abatement measures. Modification, vacation, and termination of notices and orders were generally appropriate and improvements were noted in the documentation that supports these actions. No pattern of violations was found for operations in the state. Iowa had no problems with exploration operations, illegal and unpermitted operations, or exempt operations during the evaluation year.

Abandoned Mine Lands

Iowa started five construction projects during the year and an additional project was ready for construction at the close of the evaluation period. Iowa will have all funded projects under construction by August 1986. The State has acknowledged, however, that it has insufficient staff to monitor construction projects adequately and has agreed to rectify this matter.

During the year, Iowa used its OSMRE-allocated funds for an AML administrative grant and an amendment to its existing rural abandoned mine program construction grant. Iowa's AML administrative grant funding has increased because of additional engineering and design contracts. The administrative funding will remain at about its fiscal year 1986 level for the remainder of the program. The rate of obligation has been timely on the construction grant and all draw downs have been timely. The expected receipts for the state share of AML fee collections for fiscal year 1986 should be about $85,880.

Facts About Mining in Iowa

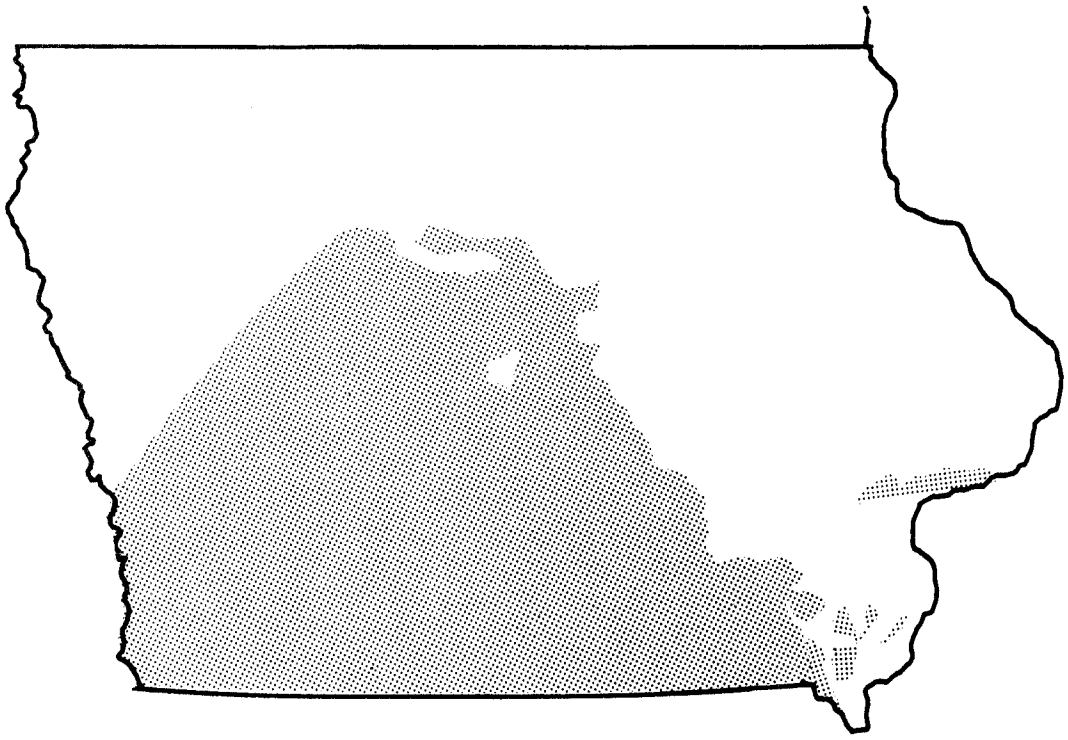
	Amount	% U.S. Total
Coal Production (Tons)*	591,000	.067
Surface Mining	419,000	.078
Underground Mining	172,000	.049
Producing Mines*	5	.1
Surface	4	.16
Underground	1	.04
Average Production/Mine (Tons)**		
Surface	104,750	—
Underground	172,000	—
Acreage Under Permit	3,460	.11

Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."

***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$599,331
Total Permits	26
Inspectable Units (All Lands)	26
Total Inspections (Partial and Complete)	332
Enforcement Actions (NOVs Issued)	24



Iowa

Coal Bearing Lands

Introduction/Overview

The coal-bearing areas of Kansas cover approximately 18,800 square miles or 23 percent of the total area of the State. The geologic age of the coal is mainly Pennsylvanian. Some thin lignite deposits, however, are found in Lower Cretaceous rocks. The strata of the Middle and Upper Pennsylvanian rock contain at least 53 seams of coal. Four of these seams are actively mined and at least 10 others were mined in the past. The remainder are too thin for economic production

Coal in Kansas ranges from lignite to high volatile A bituminous. The demonstrated coal reserve base is estimated to be 987,500,000 tons, approximately 0.2 percent of U.S. coal reserves. Coal beds are generally in thin seams up to 5 feet thick. The overburden-to-coal stripping ratios in Kansas are among the highest in the Nation, with some ratios up to 35 to 1, but typically 20 to 1.

The first commercial coal mining operation in Kansas opened at Fort Scott in Bourbon County, in 1865. As in other states, coal production in Kansas increased during the industrial revolution, and then fell as industry later converted to alternative fuels. The peak production occurred in 1916 and 1917 with annual production of 7,250,000 tons. The lowest recorded production occurred in 1975 with only 500,000 tons. Surface mining production exceeded underground mining for the first time in 1931. From 1964 to the present, coal production in Kansas has been solely by surface mining methods.

In 1985, five mines produced 994,000 tons, 0.11 percent of the U.S. production, by surface mining methods. These mines provided employment for 283 miners working daily. The productivity rate per miner hour is low because of the thin seams and high overburden-to-coal ratios. All of the present coal production is in the southeast part of the State.

The climate of the coal-bearing areas of Kansas is continental, with the average annual precipitation ranging from 30 inches in the northeast part of the State to more than 40 inches in the southeast part of the State. Rainfall is sufficient for most reclamation work.

Program Management and Budget

The State Corporation Commission, Mined Land Conservation and Reclamation Board (MLCRB) administers the mine reclamation and regulatory program in Kansas. The regulatory program was fully approved on April 14, 1982. In response to OSMRE's regulatory reform efforts, Kansas has amended its regulations to be consistent with the revised Federal regulations. OSMRE is currently reviewing those program amendments.

Because no coal is mined on Federal lands in the State, Kansas and OSMRE have not adopted a cooperative agreement for coal mine reclamation on Federal lands.

Permitting and Bonding

In this year's evaluation, OSMRE found that approved permits contained adequate baseline vegetation data for granting reclamation liability release and appropriately specified methods for measuring revegetation success. The findings indicate the State has resolved previously identified problems in those areas. In addition, MLCRB has reviewed, identified, and is resolving all permitting aspects of soils and topsoil handling deficiencies

MLCRB has established and is using for the first time a clearly defined cost-estimating guideline for determining bond amounts. OSMRE has determined that the bond amounts calculated for permits this year, using the new procedures, are adequate to cover the cost of reclamation.

OSMRE has expressed concern about MLCRB's approval of permits lacking information on which to base a finding that adverse impacts to threatened and endangered (T&E) species will not occur. OSMRE has provided technical support and training to MLCRB to assist in the development and implementation of an application review process that will assure proper T&E species clearance.

Permits that had earlier been identified as deficient are being revised. OSMRE provided technical support and training to enable the state to independently carry out permit reviews and assisted MLCRB in inventorying deficient permits.

Bonds on two permits were forfeited during the review period. Both bonds were collected and reclamation plans prepared. One of the bonds is insufficient to fully reclaim the site. The MLCRB is reclaiming forfeited sites to the extent that funds will allow and the State is exploring ways to complete reclamation on the one site where the bond forfeited was insufficient. Improvements made in the bond calculation process should provide for sufficient bonds to adequately reclaim future sites.

In last year's review, OSMRE found that Kansas was not issuing proposed penalty assessments within the required 30-day time frame. The 1986 review of 43 violations showed considerable improvement, and near the end of the review period, the MLCRB amended its civil penalty assessment procedures to comply with its regulations and correct the problem. OSMRE will monitor the results of the new procedures in 1987.

Inspection and Enforcement

Since Kansas initiated its new inspection system in September 1984, all required inspection frequency requirements have been met, During the year, the MLCRB conducted 617 inspections on 52 inspectable units and issued 43 enforcement actions (NOVs) covering approximately the same number of violations. A large percentage of the violations that are still outstanding (37 out of 43) can be attributed to one operator who filed for Chapter 11 bankruptcy. The enforcement actions against that operator were taken after the operator had filed for bankruptcy.

The State's responses to citizen complaints were timely and responses to OSMRE Ten-Day Notices were appropriate. Notices of Violations (NOVs) and Cessation orders (COs) were issued in a timely manner. Abatement inspections occurred within an acceptable average of 1.8 days of the abatement date.

MLCRB has complied with its approved program in processing the only bond release request received this review period. MLCRB performed a detailed evaluation of the bond release application and site inspection to ensure compliance with its permanent program before releasing the bond.

Abandoned Mine Lands

During this evaluation period, the Mined Land Conservation and Reclamation Board (MLCRB) started three of four planned construction projects. This was a significant accomplishment for the State, overcoming past delays in moving Abandoned Mine Land reclamation projects to the construction stage. The MLCRB construction projects are now progressing on a revised schedule.

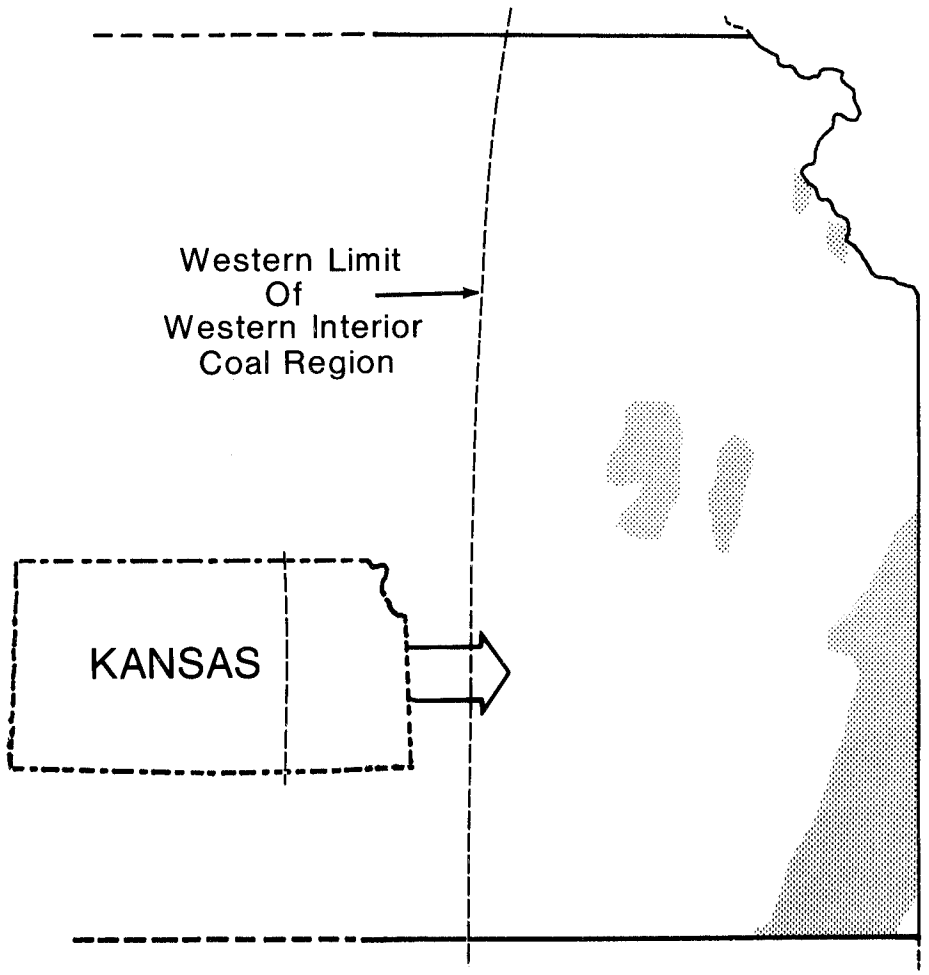
Facts About Mining in Kansas

	Amount	% U.S. Total
Coal Production (Tons)*	994,000	.1
Surface Mining	994,000	.19
Underground Mining	0	0
Producing Mines*	5	.1
Surface	5	.19
Underground	0	0
Average Production/Mine (Tons)*		
Surface	198,800	
Underground	0	
Acreage Under Permit	8,596	.27

**Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."*
***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$766,493
Total Permits	50
Inspectable Units (All Lands)	52
Total Inspections (Partial and Complete)	617
Enforcement Actions (NOVs Issued)	43



Kansas

Coal Bearing Lands

KENTUCKY

Introduction/Overview

Kentucky is the largest coal producer in the Nation. Because of the size and variety of its coal industry, Kentucky encounters practically every conceivable situation in surface coal mining and reclamation.

Kentucky has two separate areas with extensive coal deposits: the Eastern Coalfield, which is part of the Appalachian Coalfield, includes 39 counties; the Western Coalfield involves 18 counties.

State coal reserves in mapped areas are estimated at 65 billion tons, with 27 billion tons in eastern Kentucky and 38 billion tons in western Kentucky. Another 52 billion tons are estimated in unmapped and unexplored areas.

Kentucky coals are high in volatile matter, low in sulfur and ash, and relatively high in heating value (12,000 to 14,000 btu). Eastern coal fields possess a sulfur content of less than 1 percent.

Program Management and Budget

Conditional primacy was granted to Kentucky on May 18, 1982. Since that time, all conditions placed on it at the time of approval have been removed.

During the 1986 review period, a court order was issued, finalizing a settlement agreement in a suit by the Sierra Club against Kentucky and OSMRE. In the suit, which was filed in 1982, the Sierra Club had objected to OSMRE's approval of the State program, because of alleged inadequacies in the program. The court order requires certain changes in the State program, and the State has made commendable progress in complying with the order.

A suit was filed during the review period by the National Wildlife Federation, alleging State program deficiencies. A similar suit has been filed against OSMRE alleging failure to take proper enforcement action across the country.

In addition, the State legislature passed several major actions involving coal mining during the review period. They were:

(1) *An increase in the regulatory authority and budget for 28 additional people.*
(2) *A two-year moratorium on all coal-related regulation changes, except those necessary to retain primacy.*
(3) *A measure which allows for reclamation on areas outside the permit to be used as in-kind payment for penalties on violations.*
(4) *A bond pool as an alternative bonding method.*
(5) *A measure that provides for different regulatory requirements for operations involving secondary recovery of coal from previous waste deposits.*

OSMRE approved these changes but in most instances required that implementation be delayed until regulations are approved. The State also passed a measure which provides that all appeals of State decisions be held in local circuit courts rather than Franklin Circuit Court, but OSMRE has disapproved this amendment to the State program.

Permitting and Bonding

During the evaluation period, Kentucky revised its permit application form to provide more comprehensive coverage of the program requirements and improved its administrative review process through centralization in the Frankfort State office. These changes should greatly improve both the quality and consistency of the permitting process in the State.

Kentucky is implementing bonding procedures satisfactorily. One concern that surfaced during the review was that the bond calculation method currently in use does not include consideration of all reclamation costs. Another bonding concern was that the bond instruments do not contain the necessary provisions and riders. Discussions with the State are now underway to resolve these concerns.

Inspection and Enforcement

During the evaluation year many noteworthy improvements were observed in Kentucky's inspection and enforcement program, which has consistently been plagued with problems. Kentucky increased the number of violations written per inspection. At the same time, OSMRE observed a decline in violations in the field. Through the citing of more violations and initiatives in other areas of preventive enforcement, the State is beginning to achieve significant improvements in field conditions.

In September 1986, OSMRE and Kentucky signed a memorandum of understanding that sets out steps for strengthening the State's coal mine reclamation program. Under that agreement, the State agreed to intensify its investigations of operations claiming the exemption that excludes sites disturbing fewer than two acres from the surface mining law. That provision has been subject to abuse in the past.

The State has also agreed to establish an internal quality review team to evaluate inspector performance in an effort to improve the consistency and quality of inspections. The State will also pursue inspection and enforcement activities on coal exploration sites in recognized areas of past abuse.

During the year, Kentucky increased its use of alternative enforcement mechanisms, which are supplemental actions, such as individual civil penalty assessments and criminal actions, that can be taken to provide an additional deterrent to potential violators. Under the agreement, the State will now review each active enforcement case before the State's Office of General Counsel for possible alternative enforcement action. In addition, that office will review all active cases involving two-acre permits and will take alternative enforcement actions as appropriate within four years.

The State has also made several changes in its investigation procedures to help control illegal mining. Although those illegal mines are small to medium-sized, their cumulative impact, particularly in the counties where this type of mining proliferates, is substantial.

Abandoned Mine Lands

Surface and underground mining was extensive in Kentucky before passage of the Surface Mining Control and Reclamation Act of 1977. As a result, the State has a significant number of abandoned mine lands, creating a variety of adverse impacts on the health of the public and contributing to degradation of the environment.

The overall performance of the State Abandoned Mine Land program was good in the 1986 review period. The AML program is effectively fulfilling its objectives of reclaiming Kentucky's high priority abandoned mine lands. During the review period:

- The AML program continued to achieve high rates of grant fund obligation within the grant periods.
- The quantity and quality of projects completed improved considerably. In the previous evaluation period, 42 AML projects were completed, compared to 58 during the current period.
- Five projects involving public facilities were completed and are now providing potable water to communities where water sources had been depleted or contaminated by abandoned mine lands.
- The State made significant improvement in the accuracy of grant construction cost estimates in relation to contracted and final project construction costs. The disparity between grant estimates and actual costs has been a major concern in past evaluations.

While there are more accomplishments than problems in the AML Program, some issues remain. For example, the program needs to improve the success rate for establishing vegetation on AML projects. OSMRE has suggested two options to the State to remedy this problem: Hire a professional agronomist to review revegetation work; or require the contractor to guarantee revegetation success.

A second area of concern has been the need for better documentation for project site inspections. OSMRE believes project shortcomings can be overcome with improved inspection and monitoring. The State is taking steps to remedy this problem.

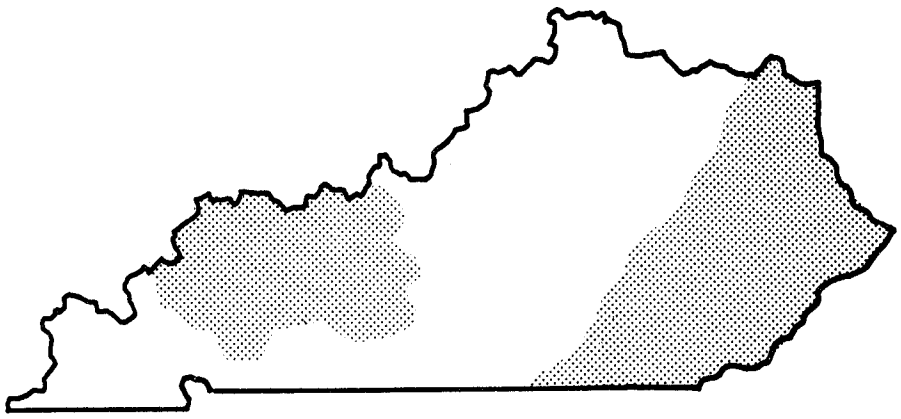
Facts About Mining in Kentucky

Total	Amount	% U.S.
Coal Production (Tons)*	152,272,000	17.25
Surface Mining	71,036,000	13.36
Underground	81,236,000	23.15
Producing Mines*	1,858	39.00
Surface	937	36.65
Underground Mining	921	41.73
Average Production/Mine (Tons)**		
Surface	75,812	
Underground	88,204	
Acreage Under Permit	882,441	27.23

Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."
***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$32,145,139
Total Permits	5,464
Inspectable Units (All Lands)	5,464
Total Inspections (Partial and Complete)	46,836
Enforcement Actions (NOVs Issued)	2,771



Kentucky

Coal Bearing Lands

Introduction/Overview

Louisiana's coal reserves consist entirely of lignite, with estimated recoverable reserves of about 1.0 billion tons. The lignite deposits are located in the northwestern part of the state, which is a moist, temperate region of highly erodible soils. Although lignite deposits were discovered in the early 1800's, the first documented use occurred at the Federal arsenal near Shreveport during the Civil War. By the late 1800's, lignite use was common by blacksmiths, railroads, and steamboats. Lignite production ceased, however, from the early 1900's until 1985.

On September 1, 1985, the Dolet Hills Mine, the only mine currently under permit in Louisiana, initiated operation, with projected annual production of 2.8 million tons. The operation's plan is somewhat unique because extraction was started at the portion of the permit area most distant from the associated mine-mouth power generating plant.

Program Management and Budget

The surface coal mining reclamation and enforcement program in Louisiana is administered by the Louisiana Office of Conservation (LOC), in the Department of Natural Resources. The Secretary of the Interior approved the State's permanent regulatory program on October 10, 1980, and its Abandoned Mine Reclamation Plan on November 10, 1986.

During the oversight period of July 1, 1985 to June 30, 1986, Louisiana submitted no amendments to its approved permanent regulatory program.

Permitting and Bonding

During the review period, LOC issued no new mining permits. In response to concerns expressed by OSMRE during permit review, LOC required a permitted operator to redesign and reconstruct an existing sedimentation pond and to reevaluate the design adequacy of the existing sediment control system. LOC further required the operator to obtain approval of all reevaluated designs before construction and specified certain elements to be addressed in each design package. These actions indicate LOC's willingness to promptly address OSMRE's concerns, and offer assurance that new permits will contain information to support satisfactory sediment and drainage control.

During the year, OSMRE observed LOC approving topsoil substitution operations without requiring the operator to provide a technically adequate justification. This problem has been observed in previous evaluations of Louisiana's program administration and OSMRE and LOC are continuing to discuss resolution of this issue.

With regard to determining amounts of reclamation bonds, OSMRE found LOC's performance to be consistent with program criteria. One application for partial bond release was received late in the review period but no action had been taken by June 30, 1986, the end of the evaluation period.

Inspection and Enforcement

During the review period, LOC inspectors continued to conduct all required inspections, citing 10 violations during 12 inspections. All violations were abated during the specified abatement period. Although all violations were reviewed for penalty assessment, none were found sufficiently serious to warrant a monetary penalty.

Abandoned Mine Lands

LOC submitted its proposed AML plan during this reporting period. OSMRE approved the plan on November 10, 1986.

Facts About Mining in Louisiana

Total	Amount	% U.S.
Coal Production (tons)*	207,000	.02
Surface	207,000	.04
Underground	0	2
Producing Mines*	1	.02
Surface	1	.04
Underground	0	0
Average Production/Mine (tons)		
Surface	207,000	
Underground	0	
Acreage Under Permit	29,573	.91

Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."

Salient Statistics—1986 Review Period

Total Budget	$545,343
Total Permits	1
Inspectable Units (All Lands)	1
Total Inspections (Partial and Complete)	12
Enforcement Actions (NOVs Issued)	10

Louisiana

Coal Bearing Lands

MARYLAND

Introduction/Overview

Coal mining plays only a minor role in the economy of the State of Maryland. It is, however, a major factor in the economy of the State's coal producing region, consisting of Garrett and Allegany Counties in the western-most part of the State. The Conemaugh and Allegheny geologic formations contain the five major minable seams in the State. With coal reserves estimated to exceed 850 million tons, some 100 million tons are considered recoverable by conventional mining methods.

Coal mining in Garrett and Allegany Counties provided employment for more than 807 persons. This figure does not include office workers, supervisory personnel, or independent truck haulers involved with mining. It also does not include indirect employment.

Program Management and Operations

The Maryland Department of Natural Resources is the State's coal mining regulatory authority. The Energy Administration is the first administrative subdivision under the Department with responsibilities for regulating coal mining and reclamation operations. Within the Energy Administration, the Bureau of Mines administers the State's coal programs.

Maryland's permanent program for regulating surface coal mining and reclamation operations was fully approved by the Secretary of the Interior on February 18, 1982.

On November 18, 1985, the Director of OSMRE approved in part certain statutory and regulatory modifications to the State's permanent program. The Director's approval required Maryland to make four amendments to its program. In an effort to satisfy the requirements, on January 14 and May 15, 1986, the State submitted additional program revisions concerning right-of-entry and coal exploration, which were approved in December 1986.

During the evaluation period, Maryland became one of the first states in the Nation to implement a blaster certification program. The program ensures that all blasters in the State receive training and testing, and are certified before they can conduct blasting activities on surface coal mining operations within the State.

On March 18 and April 23, 1986, Maryland submitted proposed emergency and permanent program rules for regulating previously unpermitted coal preparation plants in the State. The modifications are intended to bring four coal preparation facilities not located within the permit area of a mine under the jurisdiction of the Maryland program. A decision concerning the proposed amendments will be made shortly, after consideration of public comments.

During the evaluation period, OSMRE initiated a complete review of Maryland's permanent program to determine if it still met the requirements for approval following the revision of numerous Federal requirements. As a result of the review, on July 8, 1986, the Director of OSMRE formally notified the State that changes would have to be made in the State's approved program. These changes will be made through routine program amendment procedures.

Permitting and Bonding

During the evaluation period, the State Bureau of Mines issued four permits involving 277 acres. For the most part, OSMRE found that Maryland's permitting activities were satisfactory. OSMRE continued working with the State, however, to resolve several continuing problems, including a lack of documentation by the State of ground-water monitoring waivers, undocumented overburden analysis waivers, and insufficient site-specific geologic data in some permits. During the review period, OSMRE evaluated one permit involving auger mining and an adjacent two-acre operation. Although the auger mining area included an additional 1.3 acres beyond the two acres of disturbed area that was permitted by the State, Maryland did not consider the 1.3 acres above the auger mining operation to be disturbed and it was not included as part of the affected area. It is unlikely that this situation will occur again. OSMRE has recommended, however, that the State include such areas in the permit area when approving future two-acre operations which involve auger mining.

Maryland's bonding procedures were generally in compliance with the approved program standards. OSMRE recommended changes in the State's bonding procedures to ensure successful resolution of three deficiencies: Performance bond amounts were not based on estimated cost of reclamation; bond instruments did not require that the surety give prompt notice of actions involving insolvency, suspension, or bankruptcy; and letters of assignment from banks for certificates of deposit did not waive all right of set-off or liens as required by the State's regulations.

Inspection and Enforcement

During the evaluation period, Maryland met its required inspection frequency on 94 percent of the total inspectable units. The State conducted 1,913 inspections and initiated 122 enforcement actions. Maryland was successful in reducing the average time between the required abatement date and the actual inspection date from twelve days to only two days.

More than fifty percent of the violations cited by the State during the review period involved sediment control measures, effluent limits, and surface and groundwater monitoring. Based on a review of all 122 enforcement actions issued by the State during the evaluation period, OSMRE found that the State is complying with the enforcement provisions of its approved program. OSMRE did not identify any abatement measures or times for abatement that were inappropriate during its review of the State's enforcement actions.

During the evaluation period, the State conducted two show-cause hearings which resulted in the suspension of two permits.

Also during the review period, the State proposed penalties on 22 violations totalling $139,535.

The State Bureau of Mines collected penalties on four violations totalling $1,005 during this review period. Thirty-five cases were referred to the Attorney General for collection and four operator licenses were not renewed by the State for failure to pay penalties.

The Bureau of Mines initiated revocation proceedings on six permits during the evaluation period. Three permits involving 118 acres were revoked and their bonds in the amount of $203,200 were forfeited during this period.

Abandoned Mine Lands

The State made significant progress this evaluation year in the execution of its Abandoned Mine Land Reclamation Program. Sixty-seven percent of all projects completed by Maryland were accomplished during the evaluation period. Additionally, Maryland has done an excellent job in meeting or exceeding estimates for project start dates. Estimates of project costs also improved and Maryland's final costs consistently matched construction contract amounts.

Facts About Mining in Maryland

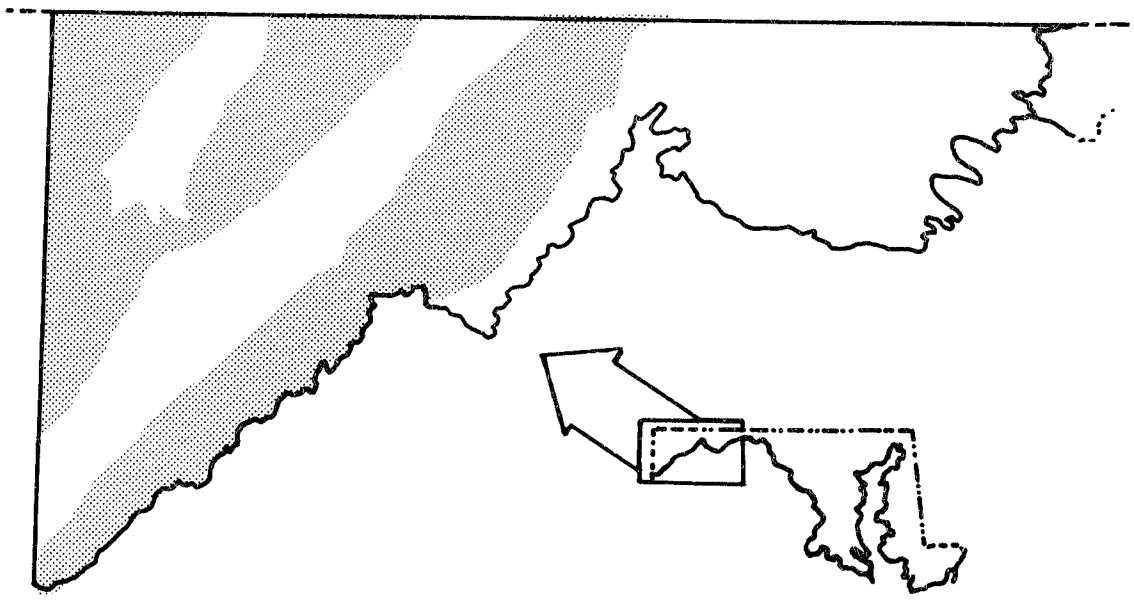
	Amount	% U.S. Total
Coal Production (tons)*	2,985,000	034
Surface Mining	1,200,000	.23
Underground Mining	1,785,000	.51
Producing Mines*	45	.94
Surface	39	1.52
Underground	6	.27
Average Production/Mine**		
Surface	30,769	
Underground	297,500	
Acreage Under Permit	9,231	.28

**Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."*

***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$2,009,007
Total Permits	118
Inspectable Units (All Lands)	118
Total Inspections (Partial and Complete)	1,913
Enforcement Action (NOVs Issued)	86



Maryland

Coal Bearing Lands

Introduction/Overview

At the present time there is no surface or underground coal mining activity in Mississippi. While Mississippi contains other mineral resources — such as zeolite, sand and gravel, limestone, and some of the richest top soil in the world — the economic potential of surface coal mining has yet to be realized.

There are several factors which hinder Mississippi from mining its deposits of bituminous coal. The bituminous coal that exists in Mississippi is part of the Pottsville coal deposits which, due to subsidence, are quite deep. Also, the coal deposits in Mississippi are overlain by Cretaceous sediments, compounding the problem of economically removing the overburden.

Lignite coal is present in a seam that extends from Northwestern Mississippi through North Central Mississippi and into the central section of the State. The lignite is deposited in the Tertiary sediments and is associated with shallow Wilcox and Claiborne groups. Exploration by some coal companies has revealed that just 200 feet below the surface there is an estimated 5.3 billion tons of lignite coal in Mississippi.

The outlook for future extraction of bituminous coal in Mississippi is not bright, but if the mining of lignite grade coal should become economical, Mississippi would then be able to compete in the energy production industry.

Program Management and Budget

The regulatory authority in Mississippi is the Department of Natural Resources, Bureau of Geology, Mining and Reclamation Section (MRS). Because there is no surface or underground coal mining or immediate prospect for such mining in Mississippi, the State's program has not been required to be implemented. Several personnel with the Bureau of Geology devote a small part of their time to matters pertaining to the program.

Due to the lack of mining activity in mississippi, the State elected not to apply for grant funds for fiscal year 1983 or any year since. The fiscal year 1982 Program Development Grant has been closed out.

Because there is no coal mined on Federal land in Mississippi, there is no Federal lands cooperative agreement.

Permitting and Bond Setting

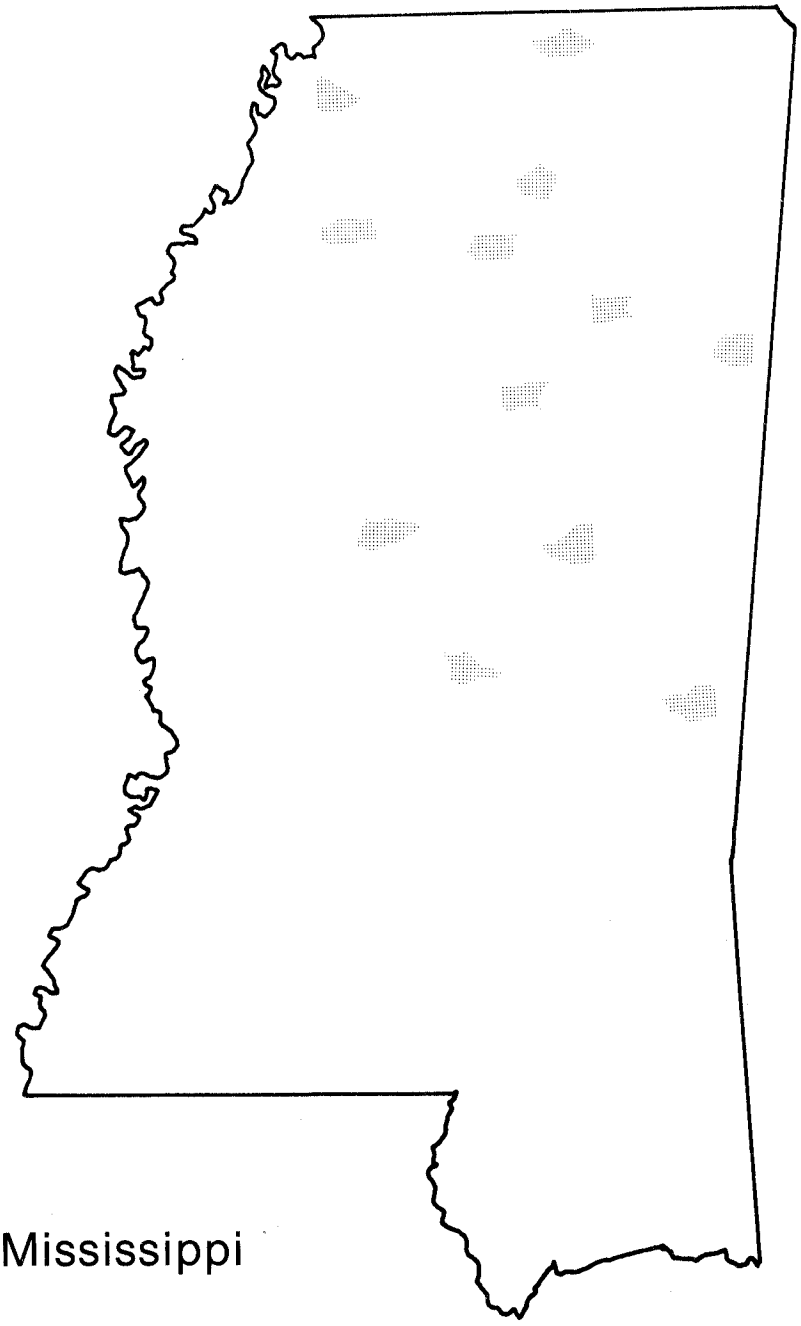
Due to the absence of mining activity in Mississippi, there has been no activity by the State in the areas of bonding and permitting.

Inspection and Enforcement

During the report period there was no activity by the State in the area of inspection and enforcement due to the absence of coal mining operations.

Abandoned Mine Lands

There is no Abandoned Mine Land Reclamation Program in Mississippi.



Mississippi

Coal Bearing Lands

Introduction/Overview

Coal-bearing beds underlie 23,000 square miles or about one third of the total area of Missouri. Twelve out of more than twenty named seams have been or are commercially mined. The remainder are too thin for commercial production.

The coal rank varies from high volatile A to C bituminous. The demonstrated coal reserve base is estimated to be 6.04 billion tons, or 1.24 percent of the U.S. coal reserves. Coal-bearing strata are generally thin seams which can be up to five feet thick. Typically, seams which are mined are 28 inches thick.

Coal deposits were first mined in Missouri in the 1840's, with the coal used primarily for domestic heating and blacksmithing. Production increased with the introduction of steamboats on the Mississippi and Missouri Rivers and the expansion of the railroads. Coal production in 1917 was 6 million tons. Decreases in production were caused by competition from inexpensive sources of alternative fuel, such as natural gas and fuel oil. In the 1940's, the introduction of surface mining to the State stopped the decline in production. A demand for the coal in steam power generating plants was also a factor in increasing coal production.

In 1985, 14 coal mines in 10 counties produced 5,566,000 tons of coal. The primary use of the coal was for the generation of electricity. These mines provided employment for about 1,200 miners working daily.

The climate is temperate and continental, characterized by long winters with persistent snow cover, long summers with average July temperatures greater than 77 degrees Fahrenheit, and short spring and fall seasons. No major climatic problems have been encountered that would cause difficulty in the reclamation of mined lands.

Program Management and Budget

The Missouri Land Reclamation Commission (MLRC) administers the mine reclamation and regulatory program. The regulatory program was conditionally approved November 21, 1980, subject to correction of 23 minor deficiencies included in 3 conditions. The deficiencies were corrected and the regulatory program was fully approved January 17, 1983.

On April 13, 1983, Missouri submitted a program amendment consisting of a proposed revision to the performance bonding and enforcement provisions. This amendment created and implemented a Coal Mine Land Reclamation Fund to be used to complete reclamation after any applicable performance bond has been exhausted. All permittees are required to pay an assessment to the fund based on the tonnage of coal shipped, sold, or otherwise disposed of. On May 8, 1984, this amendment was conditionally approved.

On January 30, 1986, OSMRE advised Missouri about the inadequacy of the alternative bonding system and the plans to resolve the current backlog of forfeiture sites. Missouri responded with legislation and rules increasing the required bond rate from $500 per acre to $2,500 per acre. The State has established a Task Force to address the problem of the reclamation cost exceeding the funding available. The State has also provided a scheduled outlining how the backlog of bond forfeiture sites will be addressed.

On June 11, 1986, OSMRE also advised the State about State regulations which were determined to be less effective than or inconsistent with the Federal requirements. Missouri has submitted a schedule to revise those regulations.

Presently, there is no coal mining on Federal lands. Therefore, Missouri and OSMRE have not adopted a cooperative agreement for coal mine reclamation on Federal lands.

Permitting and Bonding

Missouri made vast improvements in its cultural resource program during the evaluation period. The State is now requiring all coal surface mining permit applications to contain a letter of clearance from the State Historic Preservation Officer. As a result, Missouri's approved permit applications are now in full compliance with cultural resource permitting requirements.

Regarding the hydrology portion of coal surface coal mining permits, the State has revised its requirements for diversions to include more detailed designs in the permit applications. In addition, the State revised its guidelines to include data on groundwater in the Probable Hydrologic Consequences and Cumulative Hydrologic Impact Assessment sections, and revised its procedure for evaluation of permanent impoundments. Those actions by the State resolved three deficiencies that had been noted previously.

Bond release inspections in Missouri were well-documented and procedures were followed. Missouri approved 25 bond releases during this period. Missouri forfeited bonds on permits covering 943 acres during the reporting period.

During the evaluation year, OSMRE expressed concern that pond design criteria required by the State do not address effluent quality. Missouri's policy is to use the U.S. Soil Conservation Service (SCS) method to calculate retention time. The State contends that the SCS method is adequate and there is no evidence to suggest that existing ponds are in violation. OSMRE has initiated a study that compares the SCS method of calculating retention time with an OSMRE method that calculates the corresponding effluent quality. In those cases where the SCS method shows unacceptable potential water quality, field sampling is also planned. If the sampling indicates water quality is a problem, OSMRE will determine under what criteria the SCS method is acceptable.

OSMRE also raised two concerns with the State concerning soil productivity. Currently, Missouri does not require a demonstration in all cases that the productivity of proposed substitute soils will be equal to or exceed the productivity of adjacent undisturbed prime farmland soils. Also, Missouri is not requiring applicants to submit premining soil productivity information. An action plan has been developed to resolve these concerns.

During the 1986 review period, OSMRE also expressed concern that the State is not requiring permittees to submit as-built road certifications. An action plan has been developed to resolve this concern.

Inspection and Enforcement

Missouri initiated its inspection and enforcement system in November 1980. During the 1986 review period, as with previous review periods, inspections and inspection reports were complete and adequately covered all performance standards. During the year, the State conducted 935 inspections (both partial and complete inspections) on 94 inspectable units and issued 151 enforcement actions (NOVs).

Missouri responds to citizen complaints in most cases within the required 15 days for a written response and 10 days for a site inspection, if warranted. The State is loading complaint data into its computer system to augment manual tracking of complaints.

Missouri's response to ten-day notices has improved and was generally satisfactory. Appropriate responses increased from 70 percent in the previous reporting to 93 percent for this period. In addition, responses exceeding the ten-day response period decreased from 62 percent to 43 percent this reporting period.

In the past, Missouri's inability to meet inspection frequency requirements had been a concern, but considerable progress has been made in this area. While inspection frequency was 47 percent during the 1985 reporting period, it had increased to 87 percent during the 1986 reporting period. An action plan has been developed to assure 100 percent frequency in the future.

The State continues to have some problems with the timeliness of abatement inspections and issuance of Cessation Orders. An action plan has been cooperatively developed to resolve this concern.

Abandoned Mine Lands

During this evaluation period, Missouri started eight new reclamation construction projects. There were no delays in awarding contracts. Missouri continues to operate a very effective Abandoned Mine Land Reclamation Program.

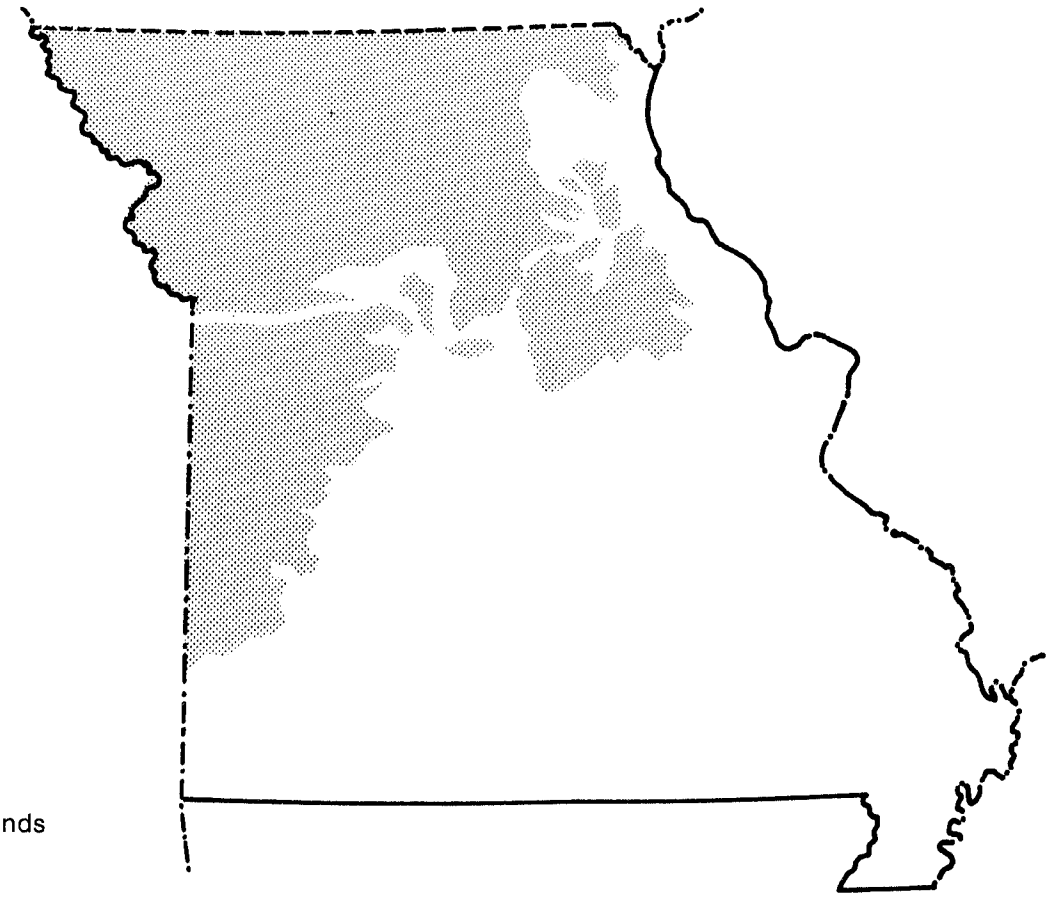
Facts About Mining in Missouri

	Amount	% U.S. Total
Coal Production (tons)*	5,566,000	.63
Surface Mining	5,566,000	1.05
Underground Mining	0	0
Producing Mines*	14	.29
Surface	14	.55
Underground	0	0
Average Production/Mine**		
Surface	397,571	
Underground		
Acreage Under Permit***	41,895	1.29

**Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."*

Salient Statistics—1986 Review Period

Total Budget	$1,717,993
Total Permits	94
Inspectable Units (All Lands)	94
Total Inspections (Partial and Complete)	935
Enforcement Actions (NOVs Issued)	151



Missouri
Coal Bearing Lands

MONTANA

Introduction/Overview

Montana's demonstrated coal reserve base is about 120.3 billion tons, 24.6 percent of the U.S. reserve base. This is the largest demonstrated coal reserve base in the Nation.

Coal fields are located throughout the State, primarily east of the Continental Divide. Three of the seventeen coal fields in the State have producing mines. These include the Fort Union, Powder River, and Bull Mountain Fields. Mines in the North Central and Red Lodge Coal Fields are under consideration for development. Coal resources range in rank from lignite to high volatile A bituminous. The majority of the coal currently mined is subbituminous in rank.

While Lewis and Clark mentioned the presence of coal along the banks of the Missouri River in Montana in 1805, the first major mine opened in 1867 at Chestnut, Montana, near Bozeman. It served Fort Ellis until the mine was bought by the Northern Pacific Railroad in 1883. By 1900, underground coal mining had developed throughout the State, primarily to supply the railroads. In the 1920's, large-scale surface mining began in Colstrip to fuel railroad steam engines. Currently, all coal production in the State is by surface mines.

In 1985, nine surface mines in four counties produced 33 million tons of coal. Nearly all the coal mined was used for the generation of electricity, with very small amounts being used for home heating. Montana coal mines provide employment for an average of 1,112 miners working daily. The productivity rate per miner for surface mining was second highest in the Nation.

The unique topography of the semi-arid West was given special recognition in the surface mining law. Section 510(b) (5) of SMCRA provides special protection for alluvial valley floors, many of which occur in the Power River Coal Basin of Montana. Generally, alluvial valley floors (AVF) are areas in the western U.S. that are located in valleys having an associated stream channel, are underlain by unconsolidated deposits whose surface usually has an appearance of flood plains or terraces, and have an agricultural importance derived from water availability. The surface mining law includes specific prohibitions on mining certain AVFs, stringent reclamation standards for those AVFs not prohibited from mining, and requirements that mining not materially damage the hydrologic functions of an AVF.

Most of the area currently mined in Montana is considered semi-arid. Two factors presenting problems to rehabilitation of mined lands are short growing seasons and a low annual precipitation rate. Despite these problems, most of the revegetation efforts, using mainly grasses, have been largely successful because much of the precipitation occurs during the summer months when the rainfall is needed for germination of the vegetation.

Program Management and Budget

The Office of Surface Mining Reclamation and Enforcement granted conditional approval to the Montana regulatory program on April 1, 1980, and final approval on February 11, 1982. The Montana Abandoned Mine Lands Program was approved on November 24, 1980. A Federal lands cooperative agreement was approved on May 8, 1981, with a substantial number of acres under permit in Montana on Federal lands.

The Montana Department of State Lands (DSL) implements both the Title IV, Abandoned Mine Lands Reclamation Program, and the Title V, Regulatory Program.

The Reclamation Division of the Department of State Lands has administered the initial regulatory program since February 3, 1978, and is responsible for administering the permanent regulatory program. The Reclamation Division is also responsible for carrying out the provisions of the Cooperative Agreement with the Department of the Interior to regulate surface coal mining operations on Federal lands.

The Montana Department of Health and Environmental Sciences (DHES) analyzes water quality samples collected from drainageways, sediment ponds, and other areas on or adjacent to coal mines for DSL. Water quality sample results are reported to DSL's Reclamation Division, which then takes appropriate action under the Montana Strip and Underground Reclamation Act. Also, the Water Quality Bureau of the Department of Health and Environmental Sciences enforces the Montana Water Quality Act and related rules by issuing Montana Pollutant Discharge Elimination System permits for coal mine discharges.

Permitting and Bonding

During the evaluation period, OSMRE reviewed Montana permanent program permits and found that the permits contain good information on premining vegetation, land use surveys, and revegetation plans.

OSMRE found that reclamation performance bonds adequately cover all aspects of regulatory liability in the event of bond forfeiture. OSMRE's permit review indicated that some small mine permits that were issued were inadequately documented. OSMRE is pursuing resolution of the problems with the small mine permits cooperatively with the state.

Also during the review period, the Montana legislature passed two bills that were approved by OSMRE as part of Montana's permanent program. One bill revises permit review response requirements. The second bill changes procedures for bond release.

Inspection and Enforcement

During the evaluation year, the Department of State Lands improved its inspection frequency on permitted mines. Montana overall exceeds the number of inspections required.

Also during the year, the Montana legislature passed a bill, which was approved by OSMRE as part of Montana's permanent program, regarding a 30-day limit for a maximum fine of $750 per day for a person or operator who fails to correct a violation.

Early in the evaluation period, DSL was not terminating violations, even though on-the-ground abatement had occurred. By the end of the review period, DSL was terminating all violations. OSMRE will continue to monitor this administrative responsibility

DSL did not always follow enforcement procedures of the permanent program in a timely manner. OSMRE will monitor for more timely enforcement procedures in the coming year.

Also during the year, DSL did not always assess violations within its own prescribed 30-day limit, with assessments taking an average of 24 additional days. The State has committed to meet the 30-day limit in the future. OSMRE will continue to monitor DSL's assessment activities and urge that it follow the approved program.

Abandoned Mine Lands

Montana is satisfactorily implementing its AML Program. The majority of abandoned mine land projects completed during the year were to close hazardous mine openings, conduct subsidence abatement, and remove hazardous structures that had been abandoned at mine sites.

During the evaluation year, OSMRE, the National Advisory Council for Historical Preservation, and DSL entered into a memorandum of agreement to mitigate adverse effects on two sites of historical importance prior to the reclamation of these abandoned mine sites.

Facts About Mining in Montana

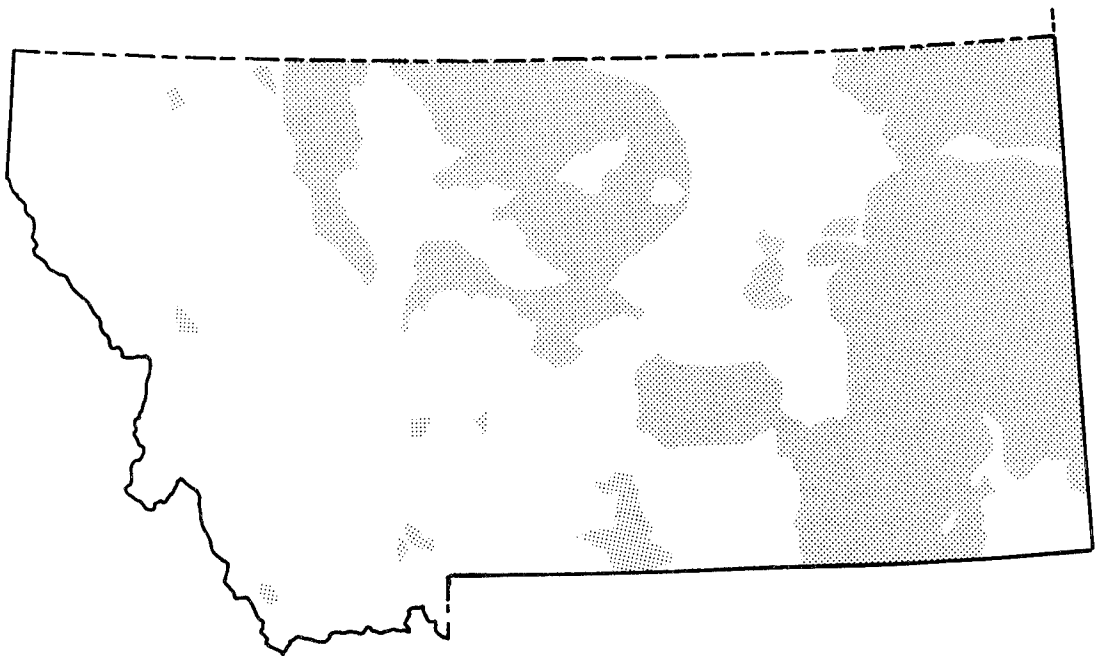
	Amount	% U.S. Total
Coal Production (tons)*	33,290,000	3.77
Surface Mining	33,290,000	6.26
Underground Mining	0	0
Producing Mines*	9	.19
Surface	9	.35
Underground	0	0
Average Production/Mine**		
Surface	3,290,000	
Underground	0	
Acreage Under Permit	29,978	.93

Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."

***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$6,177,616
Total Permits	20
Inspectable Units (All Lands)	21
Total Inspections (Partial and Complete)	287
Enforcement Actions (NOVs Issued)	19



Montana

Coal Bearing Lands

Introduction/Overview

Although early Spanish settlers used New Mexico coal several centuries ago, significant commercial coal mining in the State began in 1861, when the U.S. Army opened a mine to supply Fort Craig, New Mexico. Since then, coal from the State has been used to fuel railroads, lead and copper smelters, and other industry. As in other states, demand for coal in New Mexico decreased as use of alternative fuels grew. With the advent of inexpensive methods of stripping overburden, however, and the increased demand for coal by power plants seeking to supply electricity to the growing Southwest, New Mexico coal production has increased in recent years.

Most of the coal produced in the State today comes from the San Juan Basin in the northwest part of the State and the Raton Area in the north central part. The demonstrated coal reserve base is 4.65 billion tons, about one percent of the national reserve base.

During the review period from July 1, 1985 to June 30, 1986, 12 coal mines on 50,695 permitted acres of non-Indian lands produced 11,228,639 tons of coal. Two underground mines and ten surface mines produced 935,915 and 10,292,724 tons of coal, respectively. Coal mines on non-Indian lands in New Mexico provided employemnt for an average of 900 miners.

The climate of the State, particularly in the San Juan Basin, is arid. Records indicate that the average annual precipitation in that area is 6.13 inches. Most of the precipitation occurs as thundershowers in August to October. Revegetation in parts of the San Juan basic is extremely difficult because of low rainfall and high erosion potential.

Program Management and Budget

New Mexico's permanent regulatory program was conditionally approved by the Secretary of the Interior on December 31, 1980. The Energy and Minerals Department is the designated regulatory authority for New Mexico, and the Mining and Minerals Division (MMD) administers the program for the Department. The New Mexico Surface Mining Act established a regulatory program to assume jurisdiction over the regulation of surface coal mining and reclamation operations in the State. As part of that program, the Coal Surface Mining Commission (CSMC) was created. The Commission promulgates regulations to implement the State's Act and to hear appeals of decisions from the Director of the Mining and Mineral Division. The Division performs all permitting, inspection, enforcement, and administrative duties under the Act that are not expressly delegated to the Commission.

The New Mexico Abandoned Mined Lands Program was approved on July 17, 1981. Abandoned mined land concerns are handled by the Abandoned Mined Lands Bureau of the Mining and Minerals Division. The AML Bureau was created in February 1983.

Two sets of regulations are in effect in the New Mexico program: CSMC Rule 79-1, adopted on June 4, 1979, applies to those mines still operating under initial program permits; CSMC Rule 80-1 adopted May 15, 1980, applies to mines that are repermitted under the permanent program. AML Reclamation Program Provision, Section 884.13, includes the plan by which the AML program operates.

The Secretary's approval of a cooperative agreement delegating authority to New Mexico to regulate mining and reclamation on Federal lands was published in the ***Federal Register*** on December 20, 1982.

Permitting and Bonding

In fiscal year 1986, New Mexico repermitted all mines under the permanent regulatory program, except one underground mine that is on a schedule for final approval.

The State has resolved several problems with the permitting process that had been identified during 1985. For example, the MMD developed an effective method for ensuring that bond amounts are adequate; based its permit approval on sound technical information on topics that were identified as problem areas earlier; and resolved problems in planning for fish and wildlife protection. OSMRE is developing action plans in coordination with New Mexico to resolve the remaining problems of accepting incomplete designs for contour furrows and implementing alternative sediment control practices.

** Coal Mining on Indian Lands in New Mexico is regulated by OSMRE. Mines on other coal-bearing lands in the State are regulated by the New Mexico Mining and Minerals Division (MMD). This chapter discusses only those mines regulated by MMD on non-Indian lands. OSMRE's regulation of mines on Indian Lands is discussed in the chapter entitled "Indian Lands," included in the section on Federal Regulatory Programs.*

Inspection and Enforcement

During the review period, New Mexico took enforcement actions on-site whenever possible and cited all observed violations during joint and non-joint inspections. Also, MMD inspectors continued to improve their thoroughness of complete inspections and responded appropriately to all OSMRE Ten-Day Notices.

New Mexico maintained a high inspection frequency rate. All but one of the State's inspectable units had the required number of complete and partial inspections, resulting in an inspection frequency per inspectable unit of 92 percent. New Mexico also improved the quality of its inspection and enforcement program. A few problems remained from previous years. State inspectors did not always complete inspection reports in a timely manner, resulting in decreases in the quality and accuracy of inspection findings and thereby increasing the difficulty of enforcement and civil penalty actions.

As part of its development of a formal process for administration of the pattern of violation process, the State has started entering all New Mexico enforcement actions into a computer program that will automatically identify patterns and bring them to the attention of the MMD staff. OSMRE has been working with the State to develop a process through which the State will provide documentation showing that enforcement actions reaching the 30-day limit have been, or will be, considered for alternative measures, such as permit suspension or revocation, action against corporate officers, and criminal and individual penalties.

During the review period, New Mexico reviewed all violations for civil penalties and determined proposed penalty amounts in accordance with State program requirements. Revised assessments resulting from administrative proceedings, such as assessment conferences, and informal and formal hearings, were not marked by the same uniformity and reasoning as the proposed assessments, however. In particular, documentation was often not sufficient to allow a third party to determine if the adjustments were made in compliance with State program criteria.

OSMRE is working with New Mexico personnel to develop management action plans that address the previously mentioned problems.

Abandoned Mine Lands

The State's reclamation effort during the review period focused primarily on the closure of hazardous mine openings. New Mexico also used funds from the Abandoned Mine Reclamation Fund to abate health and safety hazards associated with abandoned underground coal mine workings. Selection of those sites was based primarily on data from the State AML inventory.

Facts About Mining in New Mexico

(NON-INDIAN LANDS ONLY)

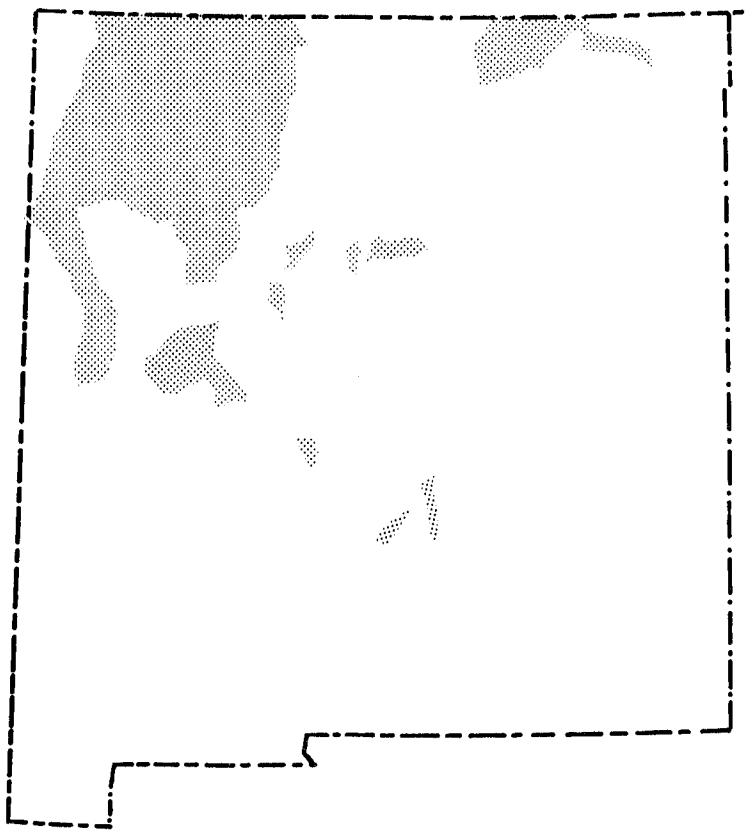
	Amount	% U.S. Total
Coal Production (tons)*	11,228,639	1.27
Surface Mining	10,292,724	1.94
Underground Mining	935,915	.26
Producing Mines*	12	.25
Surface	10	.39
Underground	2	.09
Average Production/Mine**		
Surface	1,029,272	—
Underground	467,957	—
Acreage Under Permit	50,695	1.56

**Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."*

***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$4,120,446
Total Permits	13
Inspectable Units (All Lands)	13
Total Inspections (Partial and Complete)	149
Enforcement Actions (NOVs Issued)	33



New Mexico

Coal Bearing Lands

NORTH DAKOTA

Introduction/Overview

All of the coal resource in North Dakota is lignite. The lignite fields of North Dakota cover approximately 40 percent of the total area of the State. These fields constitute part of The Great Plains Coal Province, located in the western part of the State. Most of the commercially produced tonnage is mined from six mining districts: (1) Noonan-Columbus, (2) Velva, (3) Beulah Zap, (4) Hegal, (5) Harmon, and (6) Lehigh. North Dakota coal seams are generally thick. For example, the Harmon seam can be up to 30 feet thick, while most seams are in the 10 to 12 foot range. The demonstrated coal reserve base in North Dakota is 9.86 billion tons, which is two percent of the U.S. base.

The first commercial mine in North Dakota opened in Morton County in 1873. As the railroads crossed the plains, demand for coal increased and was supplied by underground mines in the State. By 1884, the State lignite production had reached 35,000 tons. North Dakota was among the first states to shift from underground to large-scale commercial surface coal mining. By 1927, 40 percent of the total production was by surface mining, compared to 2 percent for the Nation as a whole. By 1959, 86 percent of the total production was by surface mining while the national average was 22 percent. Surface mining has been the exclusive method in North Dakota since 1966.

In 1985, 14 lignite producing surface mines located in nine counties produced 26.8 million tons of coal. The vast majority of the coal mined was used for generating electricity. North Dakota coal mines provide employment for more than 1,180 miners.

With rich topsoils and ample annual precipitation of 15 to 17 inches, North Dakota does not have the reclamation problems of the arid states. Saline overburden, however, can have adverse effects on the land and water resources if not carefully monitored.

Program Management and Budget

The North Dakota Public Service Commission (PSC) is the approved regulatory authority for the State of North Dakota.

North Dakota's regulatory program received conditional approval on December 15, 1980, and, following the approval of several amendments to the program, has now been given full approval.

A cooperative agreement between North Dakota and the U.S. Department of the Interior for the regulation and control of surface coal mining on Federal lands became effective September 15, 1983. Currently, 12 permits contain leased Federal coal, affecting a total of 6,650 acres of Federal land.

Permitting and Bonding

The PSC performed 59 permitting actions during the 1986 review period. Five new permit applications were received and one permit application was approved. Nine applications were received for permit renewal or repermit and six were approved. In addition, 46 permit revisions were approved.

The PSC requires performance bonds to cover the estimated cost to perform reclamation. The PSC has been criticized in the past for failure to have a detailed system for calculating reclamation costs and for not including all known costs in approved bonds. The PSC has now finalized procedures for calculating reclamation costs and will begin to recalculate performance bonds for permanent program permits. OSMRE will monitor the recalculation of performance bonds.

Inspection and Enforcement

The PSC conducted 1,035 partial inspections and 209 complete inspections during the year, and exceeded the required inspection frequency for all inspectable units. Inspections were complete and thorough.

The PSC's enforcement actions are timely and appropriate, and no continuing issues or remedial actions are pending.

There were no Ten-Day Notices issued by OSMRE to the PSC during the annual review period. The PSC cited only two violations during the annual review period. Neither violation resulted in environmental damage.

Abandoned Mine Lands

North Dakota has been aggressive in obtaining AML funds and reclaiming AML sites. To date, the PSC has obtained construction grant approval to expend $6,889,928 in Federal funds to reclaim 18 projects. The PSC has completed 11 projects since the inception of its program.

The PSC has a well-trained, highly professional AML staff consisting of five full-time and three part-time staff positions.

The staff conducts daily inspections on AML sites that are under construction and administers all functions of the AML program. All grant applications and associated reports are submitted in a timely manner. The AML staff is cooperative and dedicated toward achieving the goals of the surface mining law.

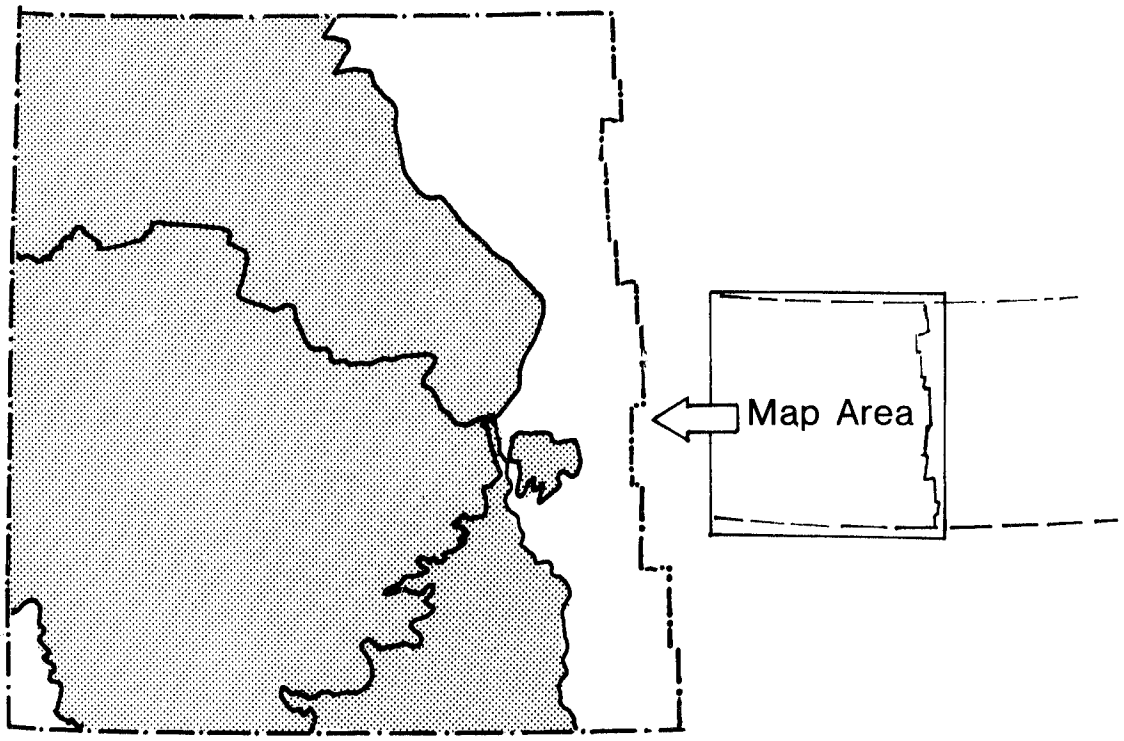
Facts About Mining in North Dakota

	Amount	% U.S. Total
Coal Production (tons)*	26,873,000	3.04
Surface Mining	26,873,000	5.05
Underground Mining	0	0
Producing Mines*	14	.29
Surface	14	.55
Underground	0	0
Average Production/Mine**		
Surface	1,919,500	—
Underground	0	—
Acreage Under Permit	45,618	1.41

**Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."*
***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$1,286,696
Total Permits	45
Inspectable Units (All Lands)	47
Total Inspections (Partial and Complete)	1,222
Enforcement Actions (NOVs Issued)	2



North Dakota

Coal Bearing Lands

Introduction/Overview

The State of Ohio has an estimated 46 billion tons of coal beneath 12,000 square miles of the eastern third of the State. Recoverable coal reserves within this vast resource are estimated at 21 billion tons, 3.2 billion tons of which have been mined since 1800.

Coal resources in Ohio lie in as many as 60 identifiable coal seams in the Pennsylvanian and Permian rocks along the northwestern flank of the Appalachian coal basin. Except where interrupted by minor faults and erosional discontinuities, these rocks dip gently and uniformly to the east, simplifying the mining methods needed to extract the coal. Fourteen of the sixty coal seams are considered to be important, although nineteen seams were mined in 1985.

Coal production in 1985 totaled 35,602,000 tons, continuing the downward trend of the past 10 years. Of the 1985 production, 21,956,000 tons (62 percent) were produced by surface mining operations and 13,646,000 tons (38 percent) by underground mining operations. A total of 9,052 employees took part in these mining operations, with total wages of $293,450,861. Employment figures for 1985 represent an eleven percent reduction in the Ohio mining work force from 1984, and a four percent reduction in total wages paid.

Program Management and Budget

The State of Ohio received primacy to regulate the surface coal mining operations within the State on August 16, 1982. Granting of primacy was conditioned on Ohio's addressing 28 items that did not fulfill the requirements of SMCRA. All of the conditions have now been addressed by Ohio except for one concerning a requirement to provide a showing that the performance bonding system is adequate to assure timely reclamation. OSMRE is presently reviewing a proposed amendment to the Ohio approved program to determine if the amendment provides for an adequate bonding system.

The Division of Reclamation is the regulatory authority in Ohio. It is one of ten divisions within the Department of Natural Resources. The Division of Reclamation is composed of six sections with 184 staff positions. Of these, 162.15 full-time equivalent positions are supported in part with Federal funds.

The Wayne National Forest is the only Federal land within the Ohio coal fields. There are 878 acres of Federal land presently under permit in connection with 12 mining operations. Those 12 constitute 1.0 percent of the total number of mining operations in Ohio and 0.6 percent of the total acreage permitted. The Department of the Interior and Ohio have established a cooperative agreement, under which Ohio assists the Department in the regulation of operations on Federal lands. No additional funding is provided to Ohio for this activity.

Permitting and Bonding

The State has eliminated a backlog of permanent program re-permit applications, including the permitting of underground mines and coal preparation plants and the timely processing of new permit applications. That is a significant accomplishment.

The regulatory authority also corrected permitting deficiencies relating to public notice, public participation requirements, and the use of alternative resoiling materials. Remaining deficiencies in the permitting area, including ones concerning hydrologic requirements, coal waste disposal, and excess spoil, are presently being resolved.

The Ohio program has an alternative system of performance bonding. Instead of requiring the amount of bond to equal the potential cost to the State of reclaiming a mining operation, the amount of bond is fixed at $2,500 per acre of area to be disturbed. This alternative system includes the use of a fund that is available to supplement the bond for a permit if additional funds are necessary. The fund has $2 million available and can be supplemented with up to $1 million annually as additional funds are needed. The fund is supported by revenue generated from a state excise tax on the production of coal and other minerals.

OSMRE had approved the Ohio program with a condition that the alternative bonding system be shown to be adequate to assure timely reclamation. OSMRE is proceeding with a study of the bonding system and is considering changes to the system proposed by Ohio.

Inspection and Enforcement

Ohio has improved its performance in meeting the inspection frequency requirements from 60 percent in 1985 to 93 percent in 1986. The improvement is mostly attributable to revised rules modifying the inspection requirements on inactive mine sites. Ohio is not conducting required inspections on pre-bond forfeiture sites but has assured OSMRE that these sites will be inspected at the required frequency in the future.

OSMRE has continued to express concern about the failure of the regulatory authority inspectors to cite violations that occur on coal mining operations. OSMRE's annual evaluation of the Ohio State Program indicated that 46.8 percent of the violations encountered by OSMRE inspectors had been present during the previous complete inspections by State inspectors. OSMRE, however, has observed a trend by Ohio to cite more violations since October 1985, decreasing the number of uncited, previously existing violations found by OSMRE since that time.

The encouraging trend can be attributed to the State's communicating to its inspection staff that all violations are to be cited and that follow-up inspections by supervisory and management personnel would occur to assure compliance with the approved program.

Abandoned Mined Lands

During the 1986 review period (including the interim period of April 1 to June 30, 1985), Ohio had two AML administrative grants and four AML construction grants in effect. These six grants approved a total of $41,444,844 for 316 preliminary design, final design, or construction projects.

Accomplishments by the Ohio AML Program during the 1986 review period included an improvement in the obligation rate on construction grants and an improvement in the monitoring of construction projects by the State.

The 1986 OSMRE evaluation of Ohio's AML Program identified remaining problems with inadequate processing of construction completion certificates and associated AML liens and incomplete landowner rights-of-entry for AML projects. Ohio has initiated corrective actions in these areas.

During the 1986 review period, Ohio completed 35 of 136 construction projects at a total cost of $10,005,000. Also during the 1986 review period, OSMRE approved 11 emergency projects in Ohio totaling $1,160,500.

Facts About Mining in Ohio

	Amount	% U.S. Total
Coal Production (tons)*	35,602,000	4.03
Surface Mining	21,956,000	4.13
Underground Mining	13,646,000	3.89
Producing Mines*	204	4.28
Surface	190	7.43
Underground	14	.63
Average Production/Mine**		
Surface	115,557	—
Underground	974,714	—
Acreage Under Permit	82,363.7	2.54

Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."

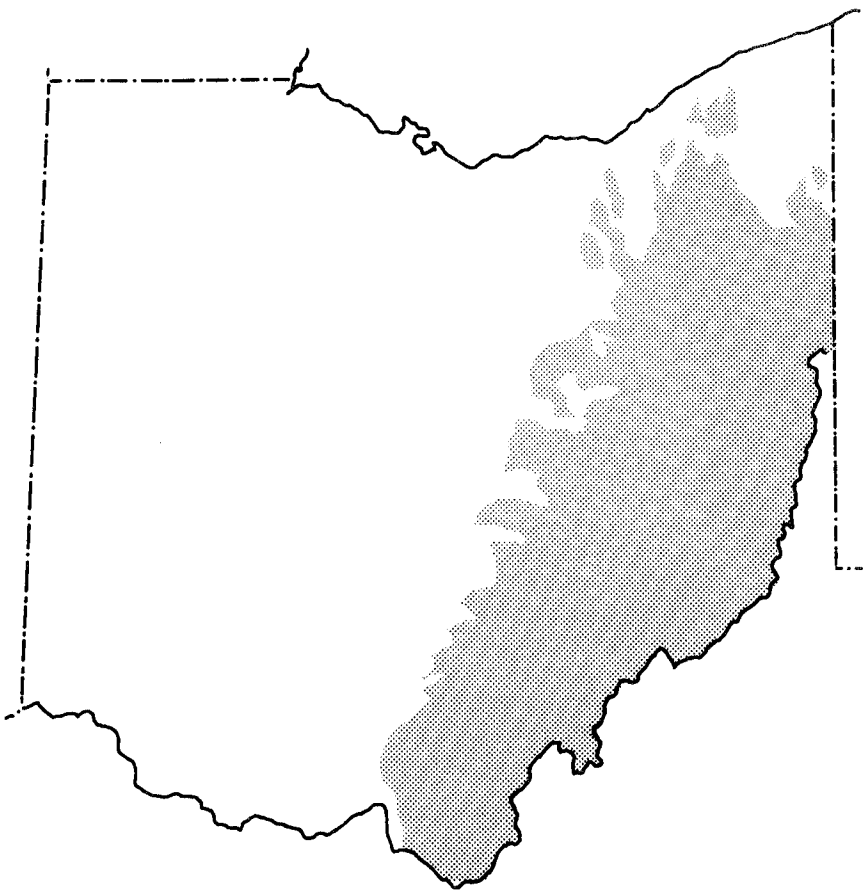
***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$12,690,088
Total Permits	982
Inspectable Units (All Lands)	1,172
Total Inspections (Partial and Complete)	11,921
Enforcement Actions (NOVs Issued)	1,764

Ohio

Coal Bearing Lands



OKLAHOMA

Introduction/Overview

The coal-bearing strata of Oklahoma occur in the eastern part of the State over an area of 14,500 square miles, 20.7 percent of the total area of the State. The deposits of present commercial value cover about 8,000 square miles and are bituminous, Middle Pennsylvanian seams ranging from ten inches to five feet thick. Demonstrated coal reserves in Oklahoma are 1.6 billion tons, amounting to 0.3 percent of U.S. coal reserves. In 1985, 28 mines in 10 counties produced 3,337,000 tons, equivalent to 0.37 percent of U.S. coal production from surface mines. The primary use of Oklahoma coal was for the generation of electricity. The climate of the coal-bearing area of Oklahoma is continental. Most surface mines are reclaimed as pastureland.

Program Management and Budget

The surface coal mining reclamation and enforcement program in Oklahoma is divided between two State agencies, the Oklahoma Department of Mines (ODM) and the Oklahoma Conservation Commission (OCC). ODM is responsible for regulating the reclamation of current coal mine operations and OCC is responsible for administering the abandoned mine land program.

Oklahoma gained primacy when its regulatory program was conditionally approved on January 19, 1981, and the last condition was satisfied on January 14, 1986.

Authority for the State to administer the Abandoned Mine Land program in Oklahoma was granted upon approval of the Oklahoma Reclamation Plan on January 21, 1982.

The surface coal mining reclamation and enforcement program on Federal lands in Oklahoma is administered by OSMRE.

On April 30, 1984, the Director of the Office of Surface Mining Reclamation and Enforcement substituted direct Federal enforcement of the inspection and enforcement portions of the Oklahoma program. This substituted enforcement was based upon a finding that ODM had not effectively implemented, maintained or enforced the inspection and enforcement portions of its program. Effective January 1, 1986, ODM's inspection and enforcement authority was reinstated for all sites where mining had been completed or the site abandoned. On those sites where mining is active or under temporary cessation, OSMRE retained inspection and enforcement authority pending an affirmative demonstration by ODM that each affected permit and reclamation bond has been reevaluated and appropriately revised. ODM is working toward this goal with OSMRE assistance.

Despite the concerns raised during this evaluation and delays in resuming full program authority, Oklahoma has made progress in implementing its approved program. Oklahoma is conducting a program that achieves most of the SMCRA requirements critical to the primary goal of protecting the public and the environment from adverse effects of surface coal mining. OSMRE is working with the State to resolve outstanding concerns and to ensure an expeditious return of full program authority. It is expected that these concerns will be resolved by June 30, 1987.

Permitting and Bonding

In the period since the Director instituted partial Federal enforcement of the Oklahoma program, ODM has increased the size and technical capabilities of its permitting staff. OSMRE has noted improvement in permits issued by ODM, especially in the areas of geologic information, reclamation and operation plans, bond calculations, and bond release. It should be noted that problems identified in this report are general concerns that are not indicative of overall program deficiencies.

During the 1986 review period, ODM approved eight permit applications and two exploration operations for greater than 250 tons. ODM corrected problems identified in the 1985 review period by ensuring that topsoil handling plans were adequate and that applicants did not have any outstanding violations that would preclude permit issuance.

As part of OSMRE's plan for returning full program authority to Oklahoma, ODM is required to upgrade existing active permits to meet permanent program standards. ODM's progress in this area has been slow with only five of the 37 permits being upgraded during the review period. OSMRE and ODM have developed a plan to ensure a more timely improvement of these permits.

OSMRE is also working with the State to improve the quality of permit approval as well.

ODM did not forfeit bonds when conditions warranted such a forfeiture. Out of 51 Notices of Forfeiture issued on Initial and Permanent Regulatory Program sites, only six bonds have been collected. An action plan has been developed to resolve the problem.

Inspection and Enforcement

During the period since the Director instituted partial Federal enforcement of the Oklahoma program, ODM has increased its inspection staff from 5 to 11 and has ensured that its inspectors are properly trained. This increase in the number and training of ODM's inspectors should resolve the inspection and enforcement deficiencies that led to Federal enforcement.

In this review period, ODM made the required inspections on 190, or 87 percent, of its 217 inspectable units. Oklahoma did not have inspection and enforcement authority in the 1985 review period, and most of the concerns with inspection frequency were attributed to the problems associated with the return of partial authority to ODM.

ODM conducted 1,172 inspections during the review period and cited 69 violations. OSMRE noted that ODM cited over one-third of its violations on the 57 inspections conducted with an OSMRE inspector. OSMRE is continuing to work with ODM to ensure that all observed violations are cited.

ODM reviewed all violations for assessment and fully documented decisions regarding proposed civil penalties. ODM has developed a backlog with respect to holding assessment conferences, however. The collection of penalties remains a problem, with ODM needing to make more progress in collecting approximately $2.4 million in penalties owed since 1984. ODM has not consistently held formal hearing when appeals were filed. OSMRE identified 191 cases where hearings were requested but have yet to be held. At the close of the evaluation period, the State was developing a new system for tracking and scheduling hearings. The backlog of hearings will be resolved early in 1987.

Abandoned Mine Lands

Oklahoma has identified approximately 30,000 acres of abandoned mine lands. OCC is using its share of the Abandoned Mine Land Reclamation Fund to reclaim eligible lands. Projects are selected for funding in accordance with the approved AML Plan.

Reclamation of selected sites is progressing at a satisfactory rate. Completed projects are successful in abating threats to the public health and safety or the environment.

Facts About Mining in Oklahoma

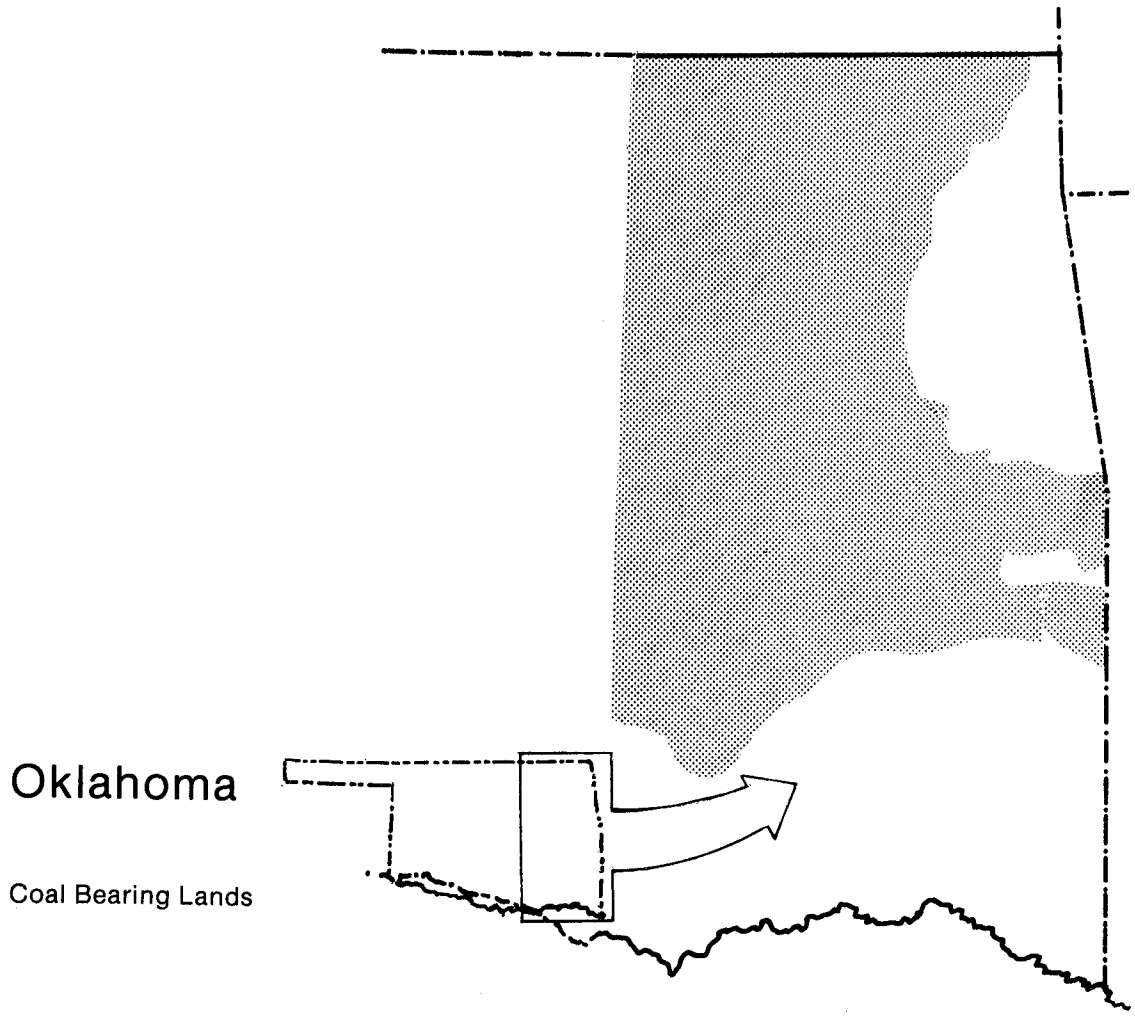
	Amount	% U.S. Total
Coal Production (tons)*	3,337,000	.37
Surface Mining	3,337,000	.63
Underground Mining	0	0
Producing Mines*	28	.59
Surface	28	1.1
Underground	0	0
Average Production/Mine (tons)**		
Surface	119,178	
Underground	0	
Acreage Under Permit	17,127	.53

Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."

***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$3,460,982
Total Permits	244
Inspectable Units (All Lands)	217
Total Inspections (Partial and Complete)	1,172
Enforcement Actions (NOVs Issued)	69



Introduction/Overview

For more than a century, coal has played an influential role in the economic and industrial development of Pennsylvania, particularly the steel making industry located in Pittsburgh, Bethlehem, and Johnstown, and has historically employed thousands of workers. In recent years, Pennsylvania's coal production has experienced a steady decline. In 1985, Pennsylvania dropped to the fifth largest coal producer in the Nation, producing approximately 70 million tons, down 10 percent from 1984 production levels. Coal employment has similarly fallen to a level of approximately 24,800.

Pennsylvania operators produced more than 66 million tons of bituminous coal from 466 surface mines and 91 underground mines, which were located primarily in the southwestern part of the state. An additional 4.7 million tons of anthracite coal were produced by 112 surface mines and 105 underground mines in the anthracite fields of the eastern part of the state. Bituminous reserves total 23 billion tons, or 5.3 percent of U.S. reserves, while anthracite reserves total 7.1 billion tons, or 97 percent of U.S. reserves. The State is now the only producer of anthracite in the country.

The geology of Pennsylvania is dominated by the Appalachian Mountains, running from the northeast to the southwest and dividing the State into distinct geographic and climatic regions. The western part of the State, where the majority of bituminous mines are located, is characterized by mountains and gently rolling hills. Areas within this region containing acidic overburdens demand special reclamation efforts. The anthracite fields in the east are characterized by steeply pitching seams, some with dips in excess of 60 degrees. Such seams require highly specialized mining techniques, and present unique challenges for solving problems such as mine subsidence associated with abandoned anthracite mines.

Areas affected by surface mines generally range from 10 to 300 acres. Underground operations in the State, on the other hand, generally affect from 5 to 50 surface acres, including roads, mechanical installations, processing and loading facilities, and storage and office buildings. Surface mining coal employment is generally characterized by operations with fewer than 50 workers at a site. Underground mining shows great variance in size ranging from very small, one or two man operations, in the anthracite region, to very large and complex operations employing hundreds of miners at mines generally located in the southwestern portion of the State.

Program Management and Operations

The Pennsylvania Department of Environmental Resources (DER) is the agency authorized to administer both Title IV and V programs pursuant to the Surface Mining Control and Reclamation Act of 1977. Pennsylvania acquired primary jurisdiction for the enforcement of regulatory provisions of the Act effective July 31, 1982, when its program was conditionally approved. At that time, primacy and continued funding of the Pennsylvania program was subject to the correction of 10 minor deficiencies. An eleventh condition was later added in 1983. Effective May 19, 1986, all but one of these conditions had been satisfied. The sole remaining condition, involving the award of expenses and attorney fees in administrative proceedings, will not be addressed until Federal rules on the subject are finalized.

Several program amendments introduced during 1986 will significantly affect future implementation of the Pennsylvania regulatory program. In response to OSMRE's expressed concerns on the manner in which DER administered several civil penalty and related enforcement provisions, Pennsylvania submitted a program amendment proposing to limit accrual of mandatory civil penalties at 30 days, and initiate alternative enforcement actions. Approval of that amendment on September 8, 1986, authorized Pennsylvania to allow for a 30-day civil penalty cap, but it also rejected bond forfeiture and license denial as alternative enforcement options. Additional program amendments are now under consideration that provide for the reclamation of abandoned mine land as a substitute for payment of civil penalties; reduced staffing requirements; and changes to the present bond forfeiture and licensing provision necessitated by Pennsylvania Act 181 of 1984, amending the State's surface mining law.

On July 9, 1986, OSMRE notified Pennsylvania that certain State regulatory program provisions pertaining to permitting requirements associated with roads no longer met the requirements of SMCRA or Federal regulations. Changes to DER regulations involving the definition of "surface mining activities" and "haul roads" were necessary to make it clear that the construction of any road or similar disturbance outside a permit area for any purpose related to a surface mining activity is deemed a surface mining activity.

A formal cooperative agreement between Pennsylvania and OSMRE on the reclamation of coal mines located on Federal lands is not necessary since no coal is presently being mined on Federal lands in Pennsylvania. With Federal lands constituting only two percent of Pennsylvania and with no mining anticipated for those areas, the pursuit of such an agreement is unlikely in the future.

Permitting and Bond Setting

The principal program initiative in permitting during 1986 involved a concentrated effort to complete the process of repermitting approximately 600 interim operations, which are primarily underground mining operations and preparation plants located in the anthracite and bituminous coal fields. At year's end, DER had completed review of nearly all interim permits. Of those, any operation failing to secure required bonds will be ordered to cease mining and to immediately begin reclamation. Although Pennsylvania required an extended timeframe to complete the repermitting of pre-primacy operations, on-the-ground impacts have been minimal due to DER's enforcement policy that requires interim sites to adhere to permanent program performance standards.

Combined efforts of DER and OSMRE during 1986 have resulted in the modification of the bituminous surface mine permit application to solicit an adequate Probable Hydrologic Consequence (PHC) determination. In turn, the PHC provides supportive information for the proper implementation of an administratively complete and technically proficient Cumulative Hydrologic Impact Assessment (CHIA) process. Based upon the CHIA process, DER will be able to conduct an evaluation of a proposed mining operation in concert with existing and anticipated mining operations to assure the hydrologic balance of the entire area is properly protected. Field evaluation of this process has been initiated.

As part of its permitting process, the State requires a minimum bond of $3,000 per acre for shallow surface mines, and progressively higher per acre amounts depending on the depth of the mining pit. Minimum bond for each surface mining and coal refuse disposal operation is $10,000, and for all other mining operations is set at $5,000 minimum. In addition, the State collects a $50 per acre permit fee, which is used primarily in reclaiming sites where the operator has defaulted on his bond and the bond is insufficient to cover reclamation. In 1985, $1.2 million was collected in state permit fees.

Pennsylvania's bond forfeiture program, currently under consideration for amendment, clarifies the $50 per acre permit fee as an alternative bonding mechanism and provides criteria for the use of the reclamation fund as a supplement to forfeited bonds. The adequacy of Pennsylvania's bonding structure and reclamation fund is presently under study by OSMRE. Findings of that study will be incorporated into the assessment of the pending program amendment.

Inspection and Enforcement

Pennsylvania again sustained a high level of inspection activity during 1986. DER reported that it conducted 41,406 inspections in 1986. That amounts to a 21 percent improvement over 1985 inspection records and a 67 percent improvement from 1984, when inspection frequency was identified as a major program deficiency. DER is presently conducting 92 percent of the required number of inspections. This increased inspection activity has been accompanied by a similar rise in the number and rate at which violations are being cited. The Pennsylvania rate of citing violations when compared to OSMRE violation rates was 1 DER violation to 1.8 OSMRE violations, which is a 25 percent improvement over the previous year. Most significantly, overall violation occurrence showed a 20 percent decrease, indicative of an improved compliance record by the Pennsylvania coal mining industry.

A corresponding rise in DER enforcement activity also occurred during 1986. The 7,247 reported violations resulted in the issuance of 4,744 Inspection Report notices of violation and 2,190 compliance orders. The vast majority of these violations were resolved without need for further action, by mine operators taking the appropriate action to correct the identified problems within the allotted time. Only 327 cessations were needed as follow-up enforcement action.

Pennsylvania was also successful during 1986 in reaching penalty agreement in 574 cases resulting in the collection of $498,411.50. The issuance of 2,190 compliance orders, however, necessitated that assessments be made on an additional 1,500 cases. Efforts to reduce last year's civil penalty backlog of 1,400 unresolved cases resulted in 41 formal assessments being issued. At the end of the review period, Pennsylvania faced an outstanding backlog of approximately 2,848 unresolved civil penalty cases. DER's present civil penalty program has proved inadequate to keep pace with Pennsylvania's improved inspection and enforcement activities. The State is now taking steps to eliminate the backlog.

Pennsylvania released 1,827 performance bonds based upon the acceptance of the reclamation at various stages on 46,880 acres of mined land. DER was compelled to forfeit 65 interim and 7 permanent program permits as a result of long standing unabated violations. The total bonds declared forfeit amounted to $4,401,617. Collection of bonds during 1986 amounted to $2,060,109. The collection of bonds declared forfeit by Pennsylvania has been significantly delayed because of a growing backlog of appeal cases pending before the Environmental Hearing Board. The State has recently hired additional hearing examiners in an effort to reduce the backlog.

Abandoned Mine Lands

The legacy of mining in Pennsylvania has produced acres of scarred landscape, massive coal refuse piles, and extensive areas honeycombed with abandoned underground passages that are responsible for severe subsidence problems. Due to the magnitude and severity of these safety and environmental hazards, Pennsylvania continues to be a major recipient of Abandoned Mine Reclamation Fund monies. During 1986 Federal funds have been extensively used by Pennsylvania to repair environmental damage from subsidence and burning waste banks, and to fill abandoned mine shafts. Priority selection for project funding is made from the data contained in the National Abandoned Mine Land Inventory. DER has revised the Pennsylvania listings to update data in line with the current data management processes.

The Pennsylvania construction grant request in 1986 totaled $71 million, a net increase of 20 percent over the 1985 grant. OSMRE remains concerned with the low level of construction grant contract obligation under Pennsylvania's current practices. While $34.4 million in construction grant funds were added during 1986, only about $9 million in construction grant obligations were realized. Only two percent of the 1985 grant was obligated as of June 30, 1986. The overall construction grants awarded Pennsylvania to date, however, were at a 44 percent fund obligation level as of June 30, 1986, but had increased to 60 percent by December 31, 1986, thus showing significant improvement.

Cooperation and coordination between DER and OSMRE in AML grant management and emergency response activities remains excellent, providing for the prompt abatement of numerous hazardous conditions in the State caused by mining before passage of SMCRA.

Facts About Mining in Pennsylvania

	Amount	% U.S. Total
Coal Production (tons)*	71,408,000	8.09
Surface Mining	34,818,000	6.55
Underground Mining	36,590,000	10.43
Producing Mines*	774	16.25
Surface	578	22.60
Underground	196	8.88
Average Production/Mine**		
Surface	60,238	
Underground	186,683	
Acreage Under Permit	754,492.6	23.29

**Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."*

***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$75,252,347
Total Permits	4,103
Inspectable Units (All Lands)	4,103
Total Inspections (Partial and Complete)	41,406
Enforcement Actions (NOVs Issued)	2,190

Pennsylvania

Coal Bearing Lands

Introduction/Overview

About 97 percent of the near-surface coal resources in Texas is lignite coal. The most significant bituminous resources are in the north-central and southern part of the State. The demonstrated coal reserve base is 13.76 billion tons or about three percent of the U.S. coal reserves. The average thickness of coal seam mined in Texas is approximately 8 feet.

In 1985, 14 mines in 11 counties produced 45,459,000 tons of coal, 5.1 percent of the national output, by surface methods, primarily by conventional draglines. The primary use of the coal was for electric power generation. The coal production figures make Texas the Nation's sixth largest coal-producing state. These mines provided employment for 2,274 miners working daily.

The lignite producing area of Texas is divided into three topographic areas: (1) The East Texas Timberlands, (2) the Blackland Prairies and Claypan, and (3) the South Texas Plains. The Timberlands are characterized by gently rolling forested land used primarily for timber production. The Blackland Prairies and Claypan areas are more undulating with more rangeland and less forests. The South Texas Plains topography is mostly level to gently rolling and slightly to moderately dissected. The primary land use of the South Texas Plains is rangeland.

Climate is not a limiting factor to reclamation in the lignite-producing area of Texas. Rainfall is adequate, ranging from 20 to 56 inches per year over the coal regions. Acid-producing material in the overburden has caused difficulty in the reclamation of some areas. Selective overburden handling techniques are generally necessary to achieve reclamation success.

Program Management and Budget

The surface coal mining reclamation and enforcement program in Texas is administered by the Railroad Commission of Texas (RCT).

The State gained primacy when its regulatory program was conditionally approved on February 16, 1980. The program was fully approved on June 18, 1980. Authority for the State to administer the Abandoned Mine Land Reclamation program was granted upon approval of the Texas Reclamation Plan on June 23, 1980.

During the oversight period of July 1, 1985 to June 30, 1986, one change was made to Texas regulations that will affect the State's permanent regulatory program. On July 9, 1985, OSMRE approved an amendment which consisted of modifications to the Texas regulations on effluent limitations and prime farmland.

Because no coal is mined on Federal lands in the State, Texas and OSMRE have not pursued a cooperative agreement for surface coal mine reclamation and enforcement on Federal lands.

Permitting and Bonding

During the 1986 evaluation period, RCT and OSMRE entered into an Action Plan Agreement designed to resolve previously identified deficiencies in the RCT program. The agreement set forth specific actions to be taken by each agency and established a timetable for the completion of each step. As a result the issues are now being resolved.

Additional issues that surfaced during the 1986 evaluation are also being addressed in action plans cooperatively developed with the state. Those issues include OSMRE concern that technical issues were not being properly resolved in the RCT hearings process before issuance of permits, and that the findings prepared by RTC were therefore based on inadequate technical information or upon information to be submitted at a later time.

The action plan also sets out steps for preventing instances in which RCT approved topsoil sustitution operations based on inadequate technical data and operations plans and made significant permit changes associated with topsoil substitution operations without following approved permit revision procedures.

Bond amounts set by RCT are adequate to cover reclamation costs and are adjusted when appropriate. The bond forms accepted by RCT are approved under the Texas program and are properly executed.

Inspection and Enforcement

RCT met all inspection frequency requirements during the 1986 review period. The required inspection frequency was also met during the previous review period. Currently, there are 22 inspectable units in Texas, all of which are active.

During the review period, RCT conducted 387 inspections and issued 31 Notices of Violations (NOVs). All NOVs were terminated within the specified abatement period; therefore, no failure-to-abate Cessation Orders were warranted nor were any alternate enforcement actions necessary. RCT improved its rate of citing violations on joint versus non-joint inspections and by the end of the review period was citing all observed violations as required by the approved Texas program.

The OSMRE review of NOVs issued by RCT showed that some NOVs were terminated prior to the abatement of the violation. In instances where designs must be approved before corrective actions are initiated or where very extensive remedial actions are required, RCT terminates the NOV based on the submission of designs, plans, or schedules. Many times these NOVs are terminated before corrective action has been initiated. RCT has submitted a proposed amendment that will allow NOVs to be extended beyond 90 days. OSMRE's Tulsa Field Office is continuing to work with RCT to ensure resolution of this problem.

Abandoned Mine Lands

The year was primarily used to develop a design contract for approximately 1,300 acres of abandoned mine land. The planning and design will use a major portion of the State's AML fund. The project construction is expected to begin in fiscal year 1988 and continue through the life of the program. RCT is completing one non-coal project, closing 71 dangerous cinnabar mine shafts.

RCT has been slow to implement AML construction projects. OSMRE has discussed the lack of progress by RCT in reclaiming abandoned mine lands and the continued administrative expense of the program without significant construction progress. RCT has indicated that construction grants will be requested soon and that its AML fund will be utilized.

Facts About Mining in Texas

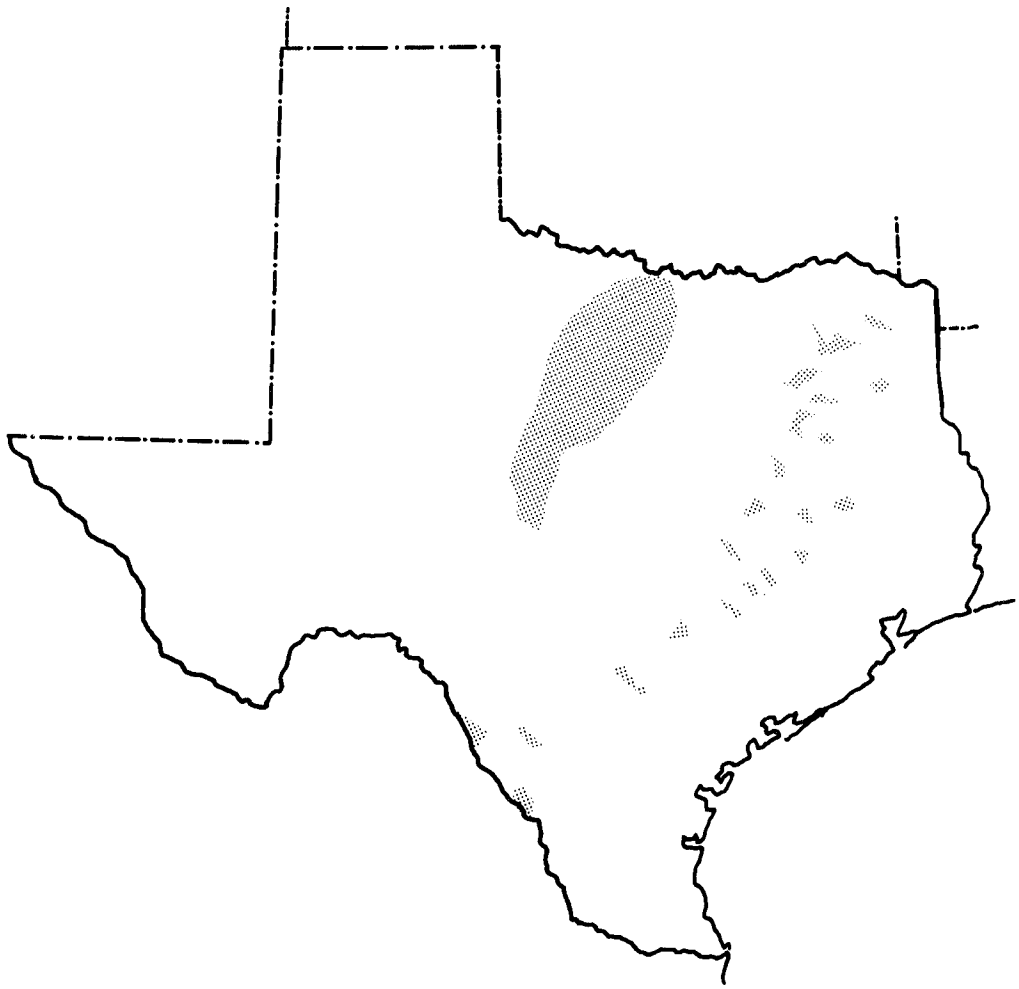
	Amount	% U.S. Total
Coal Production (tons)*	45,459,000	5.15
Surface Mining	45,459,000	8.55
Underground Mining	0	0
Producing Mines*	14	.29
Surface	14	.55
Underground	0	0
Average Production/Mine**		
Surface	3,247,071	—
Underground	0	—
Acreage Under Permit	109,929	3.39

Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."

***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$3,144,914
Total Permits	22
Inspectable Units (All Lands)	22
Total Inspections (Partial and Complete)	387
Enforcement Actions (NOVs Issued)	31



Texas

Coal Bearing Lands

UTAH

Introduction/Overview

While coal occurs beneath about 18 percent of the State of Utah, only 4 percent of the State has minable reserves. These coal fields are broken up into the Northern, Central, Eastern, and Southwestern Utah Coal Regions. The most productive region has been, and is, the Central Utah Coal Region, which includes the Book Cliffs, Wasatch Plateau, and Emery Coal Fields. Most Utah coals are bituminous.

All current coal production in Utah is by underground mining method, which is unique for any state in the Nation. Most current operations mine seams that are greater than 8 feet thick. The demonstrated coal reserve base in Utah is about 6.3 billion tons, 1.3 percent of the national reserve base. Most of Utah's coal resources are held by the Federal government and Indian Tribes.

In 1985, 22 underground mines in three counties produced 12,780,000 tons of coal. Utah coal mines provided employment for an average of 2,525 miners working daily.

The climate for the Central Utah coal region is characterized by hot, dry summers and cold, relatively moist winters. Because this coal region is greatly influenced by the mountainous terrain, normal precipitation can vary from 6 inches in the lower valleys to more than 40 inches on some high plateaus. The growing season can be up to five months in some of the valleys but only two and one half months in the mountainous regions of the State. Thus, without a good balance of these factors, mine land reclamation can be difficult in this region.

Program Management and Operations

The Regulatory and AML programs in Utah are administered by the Department of Natural Resources, Division of Oil, Gas and Mining (DOGM). The State gained primacy when its regulatory program was conditionally approved on January 21, 1981, subject to the correction of 12 minor deficiencies. A thirteenth condition was added 6 months later. Following OSMRE's review and approval of amendments submitted by DOGM, the Secretary removed several conditions on June 22, 1982; four on December31, 1982; and the remaining two on March 7, 1983.

DOGM currently performs all enforcement activities and a portion of permitting activities on Federal lands in Utah under a cooperative funding agreement. A Federal Lands Cooperative Agreement was signed in March 1987. There are no active mining operations on Indian lands in the State.

Permitting and Bonding

With one exception, repermitting of active mines in Utah is completed. DOGM has completed the technical analysis for repermitting the remaining active mine and has recommended approval of the permit application. Because a Federal coal lease is being mined, the mining plan must be approved by the Assistant Secretary for Land and Minerals Management. At the close of the 1986 oversight year, the decision document was under review by OSMRE.

Four inactive mines are currently being repermitted. The four mines submitted repermitting applications, but coal mining operations ceased before DOGM could complete the processing and approval of the permit applications. In all cases, mining operations cannot be reinstituted until a permanent program permit is approved. At OSMRE's request, DOGM had placed a high priority on the repermitting of active mines, so is now completing the repermitting of the four remaining inactive mines. DOGM anticipates that the permits for final reclamation of the four mines will be issued in the 1987 annual evaluation period.

For 33 performance bonds in DOGM's permanent program, bonds for surface disturbance from underground mines averaged approximately $14,000 per acre. Bond costs per acre vary from a high of $74,600 to a low of $5,000 per acre. DOGM has required permittees to post a bond amount in excess of the minimum amount of bond ($10,000) before issuing permits.

Inspection and Enforcement

During the 1986 review period, 79 percent of Utah mines were inspected as frequently as mandated, unlike 1985 when the State had a 100 percent inspection frequency. In addition, DOGM had problems with scheduling inspections, resulting in excessive periods of time between complete inspections. That issue has been addressed in an action plan developed with the State.

DOGM inspectors accomplish thorough inspections and readily recognize violations. They do not, however, issue or terminate violations in a timely manner. In 1986, 38 percent of the violations contained in NOV's were issued from the office, rather than in the field during inspection, and 48 percent of abatement inspections were done after the abatement date. OSMRE is also working with the State to resolve those issues.

Abandoned Mined Lands

To date, 92 abandoned mine land coal sites have been approved for funding. In addition, 43 non-coal sites have been funded. The non-coal projects were requested and funded in conformity with Section 409 of SMCRA.

During the 1986 reporting period, three persons were killed and one injured in the State in accidents at abandoned non-coal mine sites. In another incident, two people were lost for two and one-half days while exploring a non-coal abandoned mine. The State requested reclamation funding to eliminate the hazards at these non-coal sites. The problems were abated with funds transferred from other projects.

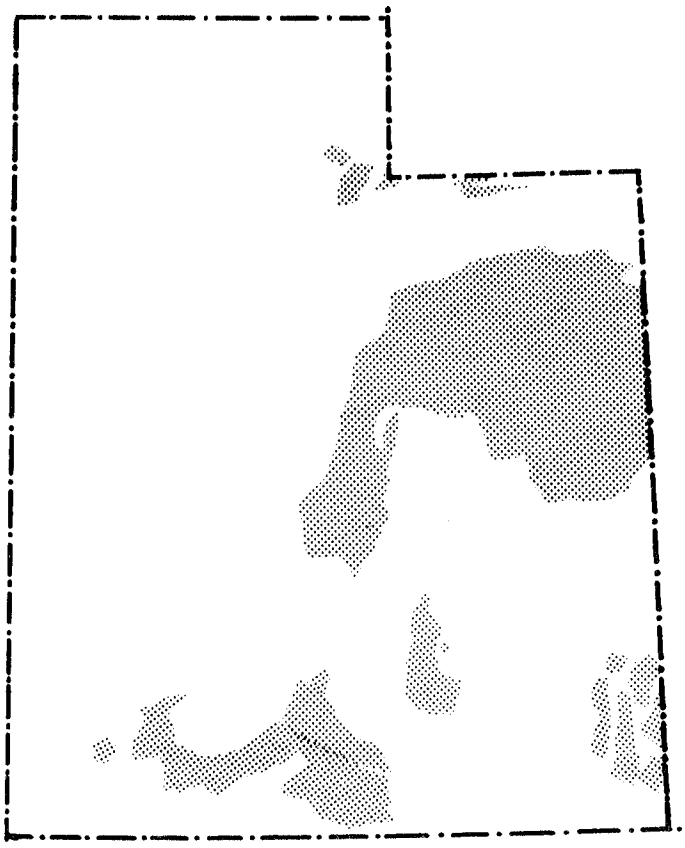
Facts About Mining in Utah

	Amount	% U.S. Total
Coal Production (tons)*	12,780,000	1.48
Surface Mining	0	0
Underground Mining	12,780,000	3.64
Producing Mines*	22	.46
Surface	0	0
Underground	22	1.0
Average Production/Mine**		
Surface	0	—
Underground	580,909	—
Acreage Under Permit	151,425	4.67

**Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."*
***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$2,584,329
Total Permits	29
Inspectable Units (All Lands)	29
Total Inspections (Partial and Complete)	292
Enforcement Actions (NOVs Issued)	62



Utah

Coal Bearing Lands

Introduction/Overview

Although coal is found in the Richmond and Farmville Basins, and Valley Coalfields of Virginia, almost all recent mining has occurred in the Southwest Virginia field. That area consists of Buchanan, Dickenson, Lee, Wise, Russell, and Tazewell Counties.

Topography of the coal region is characterized by narrow valleys, steep slopes, and long, narrow ridges with occasional flat plateaus. Coal ranges from high-to low-volatile bituminous, and seams average three to four feet in thickness. Approximately 80 percent of coal production in Virginia is by underground mining operations. Potentially minable reserves are estimated at 2.6 billion tons—slightly less than 1 percent of the national total.

The coal industry employs directly only 0.3 percent of Virginia's population, according to the 1980 census, but, within the southwest coalfields, 23 percent of the population is directly employed by the industry. The local economy in that area is almost totally dependent on coal mining and processing. Statewide, the industry accounted for 1.2 percent of the State's gross economic production.

A total of 7,887 acres in Virginia is under permit, with mining operations ranging in size from less that 1 acre to 1,700 acres, and averaging 7.7 acres.

Program Management and Budget

The Virginia Division of Mined Land Reclamation (DMLR) administers the permanent regulatory program, which the Secretary of the Interior approved December 15, 1981. Nineteen conditions were placed upon the program at that time and one additional condition was added in August 1983. All 20 conditions have now been satisfied.

A program amendment was submitted addressing changes made in Federal regulations during OSMRE's regulatory reform efforts in 1982 and 1983. That amendment was approved on November 25, 1986.

During the fiscal year 1986 evaluation period, Virginia amended its program to alter the criteria used to determine whether a surface coal mining operation qualified for the two-acre exemption—a provision in SMCRA exempting mines that disturb fewer than two acres from the reclamation requirements of the Act. DMLR now applies the same criteria as OSMRE, thus resolving the most significant program deficiency identified by OSMRE.

DMLR and OSMRE entered into a cooperative agreement for state regulation of surface coal mining operations on Federal lands in April 1987. There are currently three permits on Federal lands in Virginia.

Permitting and Bonding

The State has made several improvements in permitting and bonding since the 1985 evaluation. For example, DMLR now performs a more thorough review of an applicant's history of violations and reclamation fee payment to determine if permits should be denied due to outstanding violations, penalties, or reclamation fees. Also, fish and wildlife surveys now contain adequate data, comments from landowners concerning post-mining land uses are now required, and complete written findings are made on all permit approvals.

In addition, surety companies are now required to attach riders to bonds, obligating them to notify DMLR of any circumstances preventing them from fulfilling their obligations under the bond.

DMLR's implementation of permitting requirements in the areas of subsidence control plans, mining operations plans, and plans for continued use of existing structures continue to be of concern. Program standards in all three of these areas are adequate as written. The State and OSMRE are now taking steps to fully implement those standards.

Inspection and Enforcement

For the fiscal year 1986 evaluation period, 10,005 inspections were conducted (6,028 partial and 3,977 complete). The required inspection frequency was met on 96 percent of the mine sites sampled, compared to 79 percent during the fiscal year 1985 evaluation.

Excluding violations pertaining to programmatic issues resolved during this review period, such as the two-acre exemption, DMLR responded appropriately to 88 percent of the violations referred to them by OSMRE by way of Ten-Day Notices. This is an improvement over the previous evaluation period when DMLR responded appropriately to 50 percent of the violations referred by Ten-Day Notices.

The timeliness of follow-up inspections has improved. Failure-to-abate cessation orders were issued an average of 9.5 days following expiration of the abatement dates set under Notices of Violation. For the previous evaluation period, the orders had been issued an average of 31 days after abatement dates had expired.

Abandoned Mine Lands

Virginia significantly upgraded its inventory of abandoned mine lands (AML) problems during the review period, yielding a more effective tool for program planning and for monitoring progress. Virginia has continued to obligate approved funding, resulting in more than 200 acres of AML reclamation in the past year.

In an effort to improve program effectiveness, Virginia implemented formal plans during the year to monitor completed projects and overall program progress. In addition, steps were taken that yielded savings in contracted inspection and engineering services. Virginia has continued to administer an effective AML program, and no significant problems were identified during the 1986 review period.

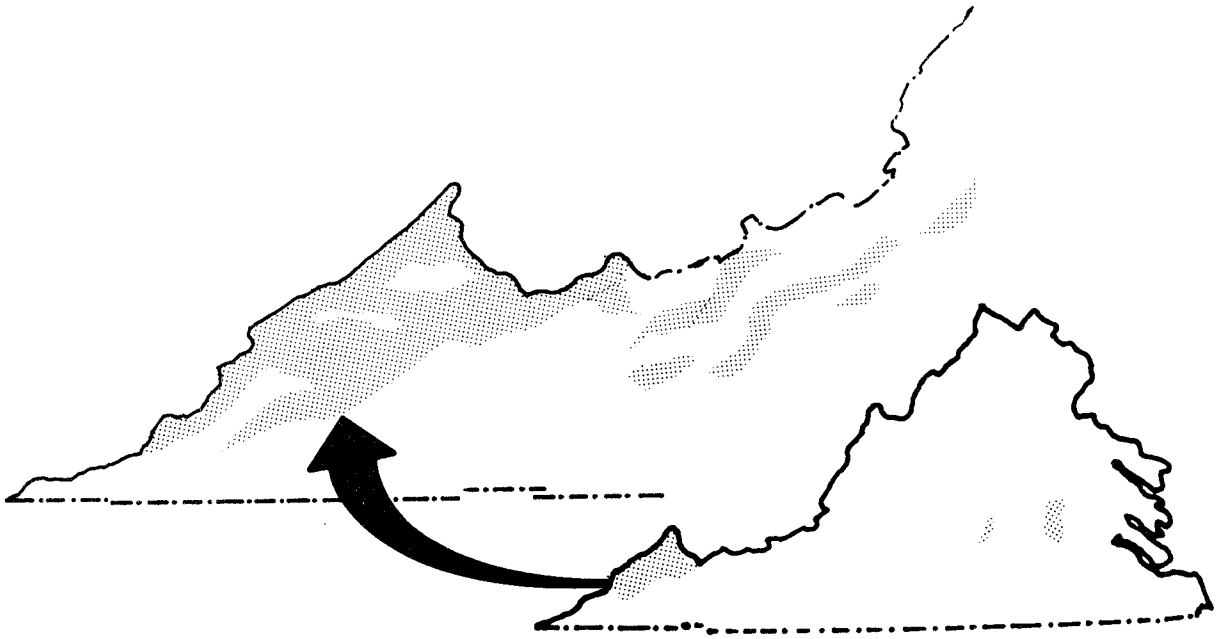
Facts About Mining in Virginia

	Amount	% U.S. Total
Coal Production (tons)*	40,940,000	4.64
Surface Mining	7,390,000	1.39
Underground Mining	33,550,000	9.56
Producing Mines*	509	10.68
Surface	119	4.65
Underground	390	17.67
Average Production/Mine**		
Surface	62,100	
Underground	86,025	
Acreage Under Permit	7,887	0.24

**Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."*
***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$8,593,930
Total Permits	1,015
Inspectable Units (All Lands)	1,015
Total Inspections (Partial and Complete)	10,005
Enforcement Actions (NOVs Issued)	654



Virginia

Coal Bearing Lands

WEST VIRGINIA

Introduction/Overview

West Virginia ranks third in the Nation in coal production, surpassed only by Kentucky and Wyoming, and usually accounts for 15 to 20 percent of the total national production. Coal occurs in seams of minable thickness in all but 9 of the 55 counties in West Virginia. There are two coal-producing regions, the Northern field and the Southern field.

Coal is mined by both underground and surface methods. The underground mines in West Virginia account for approximately 52 percent of the mining operations and 80 percent of the total coal production. The surface mines are generally contour operations and, especially in the Southern field, are in steep slope areas, with slopes greater than 20 degrees. Many of the surface mines are removing multiple seams. Other surface mining methods, such as mountaintop removal, area mining, and augering, are used to a lesser degree in the State.

Although coal continues to play a major part in the State's economy, its role has declined from past levels. Coal production records, beginning with the establishment of the State in 1863, show a general increase in coal production and employment through the 1920's, a decline during the 1930's, and then a peak in the 1940's. The highest level of coal production occurred in 1947 when 173,653,816 tons were mined. During this period, coal mines were employing more than 100,000 persons, with 130,457 employees reported in 1940.

Mine employment has declined in recent years without a corresponding decline in production. In 1985, surface mines employed 6,292 persons and produced 24,011,000 tons of coal. Underground mines employed 29,621 persons and produced 103,753,000 tons. This total of 127,764,000 tons is a decrease of 2.4 percent from 1984.

Recoverable coal reserves in West Virginia total in excess of 56 billion tons of bituminous coal, which is approximately half the estimated original minable reserves in the State.

Program Management and Budget

The regulatory program in West Virginia was conditionally approved by the Secretary of the Interior on January 19, 1981. It is administered by the Department of Energy (DOE), which was established by an act of the West Virginia legislature during the 1985 session. Before creation of the DOE, the Department of Natural Resources administered the program through its Division of Reclamation. Within DOE, the Division of Mines and Minerals is responsible for the day-to-day administration of the approved program. The new organizational structure decentralized the permitting, inspection, and enforcement functions to six regional offices located throughout the State.

During the evaluation period of July 1, 1985 to June 30, 1986, OSMRE approved the State's revised surface mining reclamation and coal refuse disposal regulations, resulting in the removal of ten conditions that had been placed on the West Virginia program when it was approved. The deadline for resolving six remaining conditions as well as nine required amendments to the statute has been extended.

During the year, OSMRE identified areas where the West Virginia program appears to be inconsistent with the Federal program due to changes made in OSMRE regulations as a result of regulatory reform or court decisions. OSMRE met with the State in July to discuss these issues and, after reviewing the State's comments, notified the State of the amendments that will be required to its approved program.

Coal mining activities in West Virginia on Federal land are regulated by the State as provided in the cooperative agreement between OSMRE and DOE. Currently, there are seven operations on Federal lands within West Virginia. All are within the Monongahela National Forest, as is an approved exploration operation. DOE has received an application, which is currently under review, for an underground mining operation in the Forest as well.

Permitting and Bond Setting

The reorganization that resulted from the creation of the DOE placed responsibility for reviewing permit applications with the six regional offices of DOE. The DOE office in Charleston now provides only final approval or disapproval of the application, and issues the permits.

The review process continues to provide for presubmission site reviews by the field staff, thereby providing for early identification of problem areas and required site-specific information. This procedure reduces the number of requests for additional information or data during the review process and generally provides for a more timely decision on the permit application.

The State has made only minimal progress in implementing the hydrologic protection provisions of SMCRA. Cumulative Hydrologic Impact Assessments (CHIAs) are not being prepared by DOE and problems continue to exist in the adequacy of statements of probable hydrologic consequences (PHCs) and in the use of inadequate baseline hydrologic data.

To resolve the problem, the state has hired a full-time hydrologist. In addition, the State and OSMRE are developing an action plan that will provide further steps for resolving the issue.

A lack of coordination between DOE and the State Historic Preservation Officer (SHPO) and the need for a reliable cultural resource data base is also a deficiency in the State permitting process. Provisions intended to protect cultural and historic resources have not yet been fully implemented. DOE and the SHPO are working on ways to improve coordination. An action plan, being developed in cooperation with the state, also provides steps for resolving the issue.

The State's alternative bonding system continues to provide the environmental protection guarantees envisioned by SMCRA while at the same time greatly reducing the administrative burden of calculating and continually reviewing the actual cost of site reclamation. The West Virginia system requires a bond of $1,000 per acre, with a $10,000 minimum bond. In the event of bond forfeiture, the bond amount will be supplemented, if necessary, by a special reclamation fund, called a bond pool, to insure that sufficient funds are available to complete reclamation of the site. The bond pool is funded primarily by a one cent per ton tax on coal production. The tax is collected any time the fund balance drops below $1 million. Collection continues until the fund balance exceeds $2 million.

Inspection and Enforcement

During the evaluation period, DOE issued a new policy directive, clarifying the required inspection frequency for sites with partial bond release. This revised policy should increase the percentage of operations receiving the required number of inspections. In addition, DOE revised its policy on sites being mined under the State's one-acre landowner exemption to require that access roads be included when calculating whether the operation qualifies for the exemption.

DOE has also developed and implemented an effective, easily managed system for identifying patterns of violation. Under the new system, each time a violation is cited, all violations issued for that permit in the previous year will be reviewed. If the review identifies three or more violations of the same or similar standards within the past year, the inspector and his supervisor must review the case and submit it to DOE headquarters for a decision on whether the operator will be required to show cause why his permit should not be suspended or revoked.

DOE routinely investigates all citizen complaints, regardless of whether the complaints are written or oral. These investigations are documented on a special Citizen Complaint Investigation form, which records all pertinent information and any action taken in response to the complaint. The form, however, does not identify whether the complaint was oral or written nor does it include documentation that the citizen was informed of the right to accompany the inspector to the mine site or of the right to an informal review of the DOE action on the complaint. An action plan is being developed by OSMRE and the state to resolve the inadequacy of the form.

Abandoned Mine Lands

The West Virginia AML Program continues to excel in the accomplishment of on-the-ground reclamation to eliminate health and safety problems caused by past mining practices. Approximately two-thirds of all reclamation and almost one-half of all projects started since the program began were completed during the 1986 evaluation period.

Compared with previous years, the State's rate of obligating administrative grant funds has improved. Data on project starts and costs, however, confirm that construction grant funds are requested before they are needed, resulting in a large backlog of 97 projects. This backlog is expected to decline over time as design capability increases.

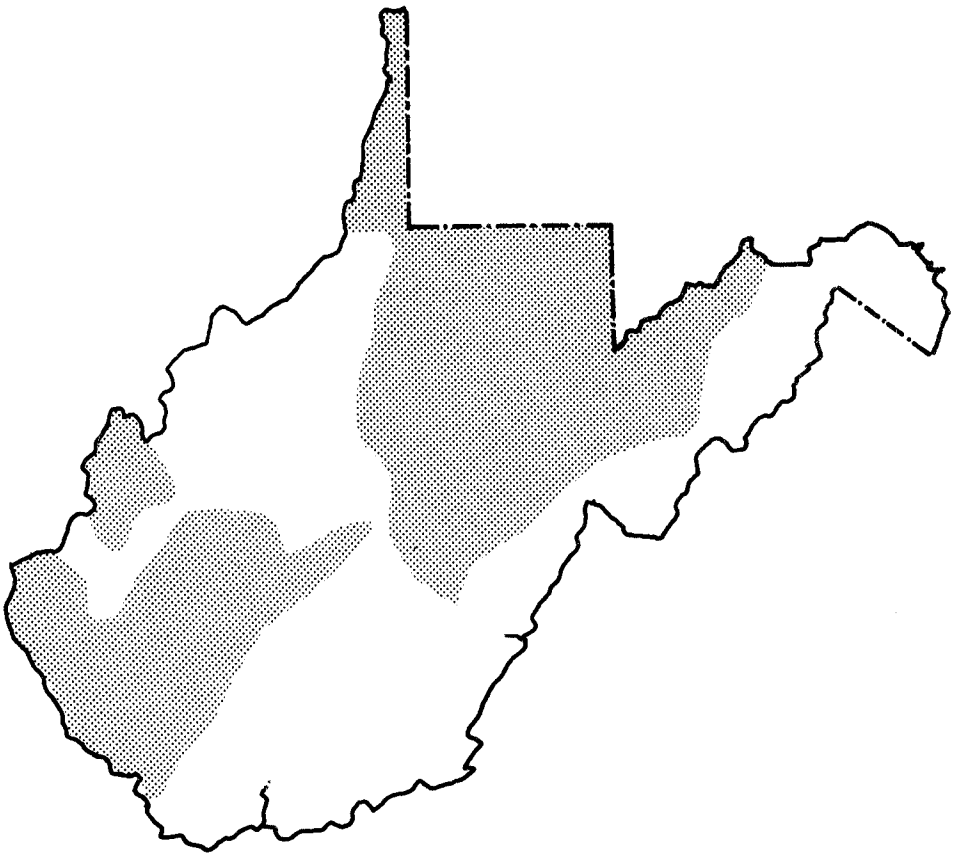
Facts About Mining in West Virginia

	Amount	% U.S. Total
Coal Production (tons)*	127,764,000	14.48
Surface Mining	24,011,000	4.52
Underground Mining	103,753,000	29.57
Producing Mines*	797	16.73
Surface	295	11.54
Underground	502	22.75
Average Production/Mine**		
Surface	81,393	
Underground	206,679	
Acreage Under Permit	201,514.5	6.22

Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."
***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$24,505,686
Total Permits	3,208
Inspectable Units (All Lands)	3,208
Total Inspections (Partial and Complete)	29,779
Enforcement Actions (NOVs Issued)	1,450



West Virginia

Coal Bearing Lands

WYOMING

Introduction/Overview

Wyoming, which is the second highest coal-producing state in the Nation, is noted for its extensive coal resources and extremely thick coal seams. The demonstrated coal reserve base of the State is about 69.3 billion tons, or 14.2 percent of the U.S. coal reserve base. Coal seams range generally from 10 to 80 feet in thickness, but one seam is as much as 220 feet thick.

The coal-bearing areas of Wyoming underlie approximately 41 percent of the total land area of the State. The coalfields are divided into the Rocky Mountain Coal Province and the Northern Great Plains Coal Province, which includes the highly productive Powder River Coal Basin. Wyoming coals rank from lignite to high volatile A bituminous. The majority of the coal produced is subbituminous in rank and comes from the Powder River Coal Region.

The presence of coal in Wyoming was discovered before 1834 on the Belle Fourche River. In 1865, the Denver and Salt Lake Stage Company opened the first mine in Carbon County, Wyoming. With the completion of the Trans-Continental Railroad, the demand for coal increased. Union Pacific Mines were opened in Carbon, Point of Rocks, and Rock Springs in 1869. The coal production for that year was 58,186 tons. Although the importance of coal as a major State industry decreased between 1910 and 1945, the State coal production remained above 6 million tons per year.

By 1958, however, the annual State coal production was down to 1.6 million tons. Production has steadily increased since the 1960's because of a demand for low-sulfur coal to fuel electric generating plants.

Until 1954, underground mines out-produced surface mines, but in that year, surface mines began to dominate production. Presently, only one underground mine remains active. About 80 percent of the coal produced in the State is shipped out-of-state. The majority of the mines in the Powder River Coal Basin began production in the early to mid-1970's.

In 1985, coal production in the State totaled 140,714,000 tons. One underground mine and 29 surface mines produced 1,058,000 and 139,656,000 tons of coal, respectively. Wyoming coal mines provided employment for an average of 4,476 miners working daily in that same year. The productivity rate for the Wyoming surface coal miner, which is 14.48 tons per miner hour, is the highest in the country and is due to the exceptionally large coal seams mined. Areas under permit for surface mines range from 92 to 38,490 acres with the average (mean) area being 7,052 acres.

Wyoming is one of the few states that must deal with thin overburden situations because of the extremely thick coal seams. The overburden-to-coal stripping ratio in a number of instances can be less than 1:1, which is highly unusual in other states. The Kemmerer Mine and Skull Point Mine qualify for the special provisions for bituminous coal mines, provided in section 527 of SMCRA. Essentially, these mines are large Western open pit mines with steeply dipping multiple seams, greater than 15 degrees, that began production before January 1, 1972. These mines are not exempted from reclamation, but variations are allowable from certain requirements regarding spoil handling, regrading to approximate original contour, elimination of depressions, and creation of impoundments.

Farming in alluvial valleys in the semi-arid West is another unique regional condition and is protected by section 510(b) (5) of the surface mining law. Generally, alluvial valley floors (AVF) are areas in the western U.S. which are located in valleys having an associated stream channel, are underlain by unconsolidated deposits whose surface usually has an appearance of flood plains or terraces, and have an agricultural importance derived from water availability. Such alluvial valley floors exist in the Powder River Coal Basin. The surface mining law includes specific prohibitions against mining certain AVFs, stringent reclamation standards for those AVFs not excluded from mining, and requirements that mining not materially damage the hydrologic functions of any AVF.

The climate of the Rocky Mountain Coal Province in Wyoming is somewhat harsh and is subject to long, cold winters and short summers. The average growing season varies from 59 to 103 days per year. The average annual precipitation is 8 to 11 inches. Much of the precipitation is snowfall, which is subject to uneven distribution and high sublimation rates. Revegetation with cool-season plants is used in this province.

The climate of the Northern Great Plain Coal Province is less harsh. It is semi-arid with an average of 13 inches of annual precipitation. Seventy-five percent of that precipitation falls during the growing season, which is from 124 to 152 days long. The establishment of vegetation on mined lands in both the coal provinces can be very difficult due to the low precipitation rates.

Program Management and Budget

The Wyoming Department of Environmental Quality, Land Quality Division (DEQ, LQD), has responsibility for the Wyoming Permanent Program. The agency implements the Abandoned Mine Lands Reclamation Program and the Regulatory Program.

OSMRE granted Wyoming conditional approval of its regulatory program on November 26, 1980. The Wyoming Abandoned Mine Lands Program was approved on February 14, 1983. A Federal lands cooperative agreement, which was initially approved on January 7, 1981, was renewed in December 1986. A substantial number of acres permitted in Wyoming (154,696 acres) are Federal lands.

The Land Quality Division has administered the initial regulatory program since August 3, 1977, and is responsible for administering the permanent regulatory program. The LQD is also responsible for carrying out the provisions of the Federal Lands Cooperative Agreement with the Department of the Interior to regulate surface coal mining operations on Federal Lands, and for regulating non-coal mining activities in Wyoming.

Permitting and Bonding

During the 1986 evaluation period, OSMRE reviewed the administrative completeness of two permit application packages. No significant omissions were discovered.

OSMRE also reviewed the adequacy of the State's bond determination or alternative bonding program, as well as State action in three areas regarding hydrology—water quality and effluent limitations; water rights and uses; and cumulative hydrologic impact assessments. No problems were identified in either the bonding or hydrology reviews.

Inspection and Enforcement

As a general rule, Wyoming inspections and reviews successfully identify potential problems in early stages of development, thereby preventing conditions that would result in violations being issued. Such preventive measures include:

- Repairing berms and diversions before they actually breach and become a violation;
- Reseeding or remulching an area with poor vegetative cover to prevent severe erosion; or
- Examining an area stripped of topsoil in advance of excavation and reminding the operator to widen the area when necessary to prevent loss of topsoil.

Abandoned Mine Lands

During the evaluation period, the Wyoming AML program conducted work on the Rock Springs subsidence control project (Project 6A). The project, which was designed as a slurry backfill operation of underground mines, was terminated before completion because citizens of Rock Springs alleged that the backfill activities were accelerating surface subsidence problems. Two independent studies commissioned by the State to determine the relationship of the backfill operation to the subsidence were inconclusive, giving no indication that the subsidence was accelerated by the work.

During fiscal year 1985, OSMRE had noted that grant reports were not received in a timely manner. The State initiated steps to correct the problem at the close of fiscal year 1985, and, during the 1986 evaluation period, all semi-annual and closeout reports were submitted on time.

Also during 1986, abandoned coal pits and spoil areas were reclaimed and environmental problems corrected both on and off the project site. Reclamation of bentonite pits has greatly improved the landscape and water quality of surrounding areas and has eliminated or controlled severe erosion problems. Almost all of the AML reclamation accomplished in the State has had site revegetation as a part of the project.

Facts About Mining in Wyoming

	Amount	% U.S. Total
Coal Production (tons)*	140,714,000	15.94
Surface Mining	139,656,000	26.26
Underground Mining	1,058,000	.30
Producing Mines*	30	.63
Surface	29	1.13
Underground	1	.04
Average Production/Mine**		
Surface	4,815,724	
Underground	1,058,000	
Acreage Under Permit	282,663	8.72

Source: U.S. Department of Energy, Energy Information Administration, "Coal Production 1985."
***Data unavailable on a per mine basis, so figures do not provide a weighted average.*

Salient Statistics—1986 Review Period

Total Budget	$17,748,180
Total Permits	44
Inspectable Units (All Lands)	44
Total Inspections (Partial and Complete)	513
Enforcement Actions (NOVs Issued)	13

Wyoming

Coal Bearing Lands

Federal Programs for States

OSMRE is required to regulate surface coal mining and reclamation activities on non-Federal and non-Indian lands in a State if:

- the State's proposal for a permanent program is not approved by the Secretary of the Interior;
- the State does not submit its own permanent regulatory program; or
- the State fails to implement, enforce, or maintain its approved State program.

Although OSMRE encourages and supports state primacy in the regulation of surface coal mining and reclamation operations, certain states with coal reserves elected not to submit, or maintain, regulatory programs. These states therefore became Federal Program States, with surface coal mining and reclamation operations regulated by the Office of Surface Mining Reclamation and Enforcement. Full Federal Programs are now in effect in Georgia, Idaho, Massachusetts, Michigan, North Carolina, Oregon, Rhode Island, South Dakota, Tennessee, and Washington. Of these, only Tennessee and Washington have active coal mining.

Federal Lands Program

Section 523(a) of the Surface Mining Control and Reclamation Act requires the Secretary of the Interior to issue and implement a Federal program applicable to all surface coal mining and reclamation operations taking place on Federal lands. On February 16, 1983, OSMRE promulgated the current Federal Lands Program.

The Federal Lands Program is critical because the Federal Government owns significant coal reserves, primarily in the West, that must be developed under the Federal Coal Management Program of the Bureau of Land Management, U.S. Department of the Interior. Of the 234 billion tons of identified coal reserves in the western region, 60 percent is Federally owned.

Administration of most surface coal mining requirements for the Federal Lands Program may be delegated by the Secretary to states with approved regulatory programs through cooperative agreements. However, certain responsibilities cannot be delegated and must be retained by the Secretary.

Once the Secretary and a state have reached a cooperative agreement, the state regulatory authority assumes responsibility for permitting, inspection, and enforcement of surface coal mining activities on Federal lands in the state. OSMRE, however, maintains an oversight function to ensure that the regulatory authority fully exercises its delegated responsibility under the cooperative agreement. In states not having a cooperative agreement, the required permitting, inspection, and enforcement activities are carried out by OSMRE.

By the end of fiscal year 1986, the Secretary had entered into cooperative agreements with the States of Alabama, Colorado, Montana, New Mexico, North Dakota, Ohio, West Virginia, and Wyoming. In addition, work was continuing on cooperative agreements with Virginia, Utah and Illinois. (The cooperative agreement with Utah was signed in March 1987, and the agreement with Virginia was signed in April 1987.)

Indian Lands Program

OSMRE has issued rules implementing a Federal program for Indian lands, as required by Section 710(d) of the Act. The rules make most of the permanent program requirements applicable to Indian lands.

In addition, under existing agreements with the Crow, Hopi, and Navajo Tribes, OSMRE continues to provide technical and financial assistance for developing mining and reclamation programs on tribal lands.

Designation of Lands as Unsuitable for Mining

The surface mining law provides that citizens have the right to petition the regulatory authority to have an area designated as unsuitable for surface coal mining operations if they believe the land is fragile, historic, or cannot be reclaimed successfully. During fiscal year 1986, OSMRE received petitions to designate land as unsuitable for surface coal mining operations on certain lands in Tennessee and Georgia. Evaluation of these petitions has been initiated.

Also in fiscal year 1986, two active petitions were carried over from fiscal year 1985. One of these is the Black Diamond Petition in King County, Washington, whch is in the final stages of processing. The other is the Rock Creek Petition in Tennessee, which is also in the final phase of an unsuitability determination.

During fiscal year 1986, OSMRE made a decision on the Red Rim (Wyoming) Lands Unsuitable Petition. Although no land was designated as unsuitable for surface coal mining operations, OSMRE did set conditions upon any future mining within the area; the conditions serve to protect pronghorn antelope in the most critical parts of the area.

Valid Existing Rights

The surface mining law prohibits surface coal mining in certain areas, including national parks, wilderness areas, wildlife refuges, recreation areas, and wild and scenic river areas, subject to "valid existing rights" (VER).

During fiscal year 1986, four requests for determinations of VER were processed. Work progressed on promulgating a new definition of VER, to comply with an order of the District Court for the District of Columbia, which had ruled that OSMRE's earlier promulgation of the definition of VER had not been in compliance with the Administrative Procedure Act.

Mining Plan Review

During fiscal year 1986, OSMRE continued its review of mining plans and permit applications for coal mining on Federal lands, Federal Program lands, and Indian lands. Mining plan reviews are conducted to determine whether the mine operators are complying with the requirements of the Mineral Leasing Act of 1920, as amended, and the operation and reclamation plan requirements of the Surface Mining Control and Reclamation Act.

The operator must address the effects of mining before a mining plan or permit will be approved on Federal land. (Where the authority to approve permits on Federal lands has been delegated to a state under a cooperative agreement, the state issues a permit on the Federal lands.)

During fiscal year 1986, one mining permit and one mining plan were approved on lands subject to a Federal Program. OSMRE also issued 26 permits and approved 30 mining plans for coal mining on Federal lands in non-Federal Program States.

FEDERAL MINING PLAN/PERMIT APPLICATION STATUS

State or Indian Tribe	EIS's Published	Mining Plans Approved	Permits Issued by OSMRE
FEDERAL PROGRAM STATES			
Tennessee	1	0	0
Washington	0	1	1
Total	1	1	1
FEDERAL PROGRAM STATES			
Eastern States:			
Illinois	0	0	1
Kentucky	0	0	3
Ohio	0	0	0
Virginia	0	0	0
West Virginia	0	0	0
Subtotal	0	0	4
Western States:			
Colorado	0	6	1
Montana	1	2	2
New Mexico	0	2	2
North Dakota	0	3	1
Oklahoma	0	0	0
Utah	0	5	4
Wyoming	0	12	11
Subtotal	0	30	21
Total	1	30	25
INDIAN LANDS PROGRAM			
Arizona	0	0	0
Montana	0	0	0
Wyoming	0	0	0
Total	0	0	0
GRAND TOTAL	**2**	**31**	**26**

TENNESSEE

Introduction/Overview

Tennessee is the largest Federal Program State in the Nation, with 811 surface and underground coal mining operations, 118 of which are actively producing coal. Permitted operations range in size from 3 acres to 600 acres, the average size being approximately 40 to 50 acres. These mines extend from the Kentucky border to the Alabama border in the east central portion of the State.

Tennessee's coal resources lie in 22 identifiable coal seams spread over 22 counties, 12 seams of which are being mined at this time. Mining in the northern counties is primarily in steep slope areas in the Cumberland Mountain Range. Mining in the southern counties is area-type-mining due to the relatively flat terrain associated with the Cumberland Plateau. As a result of a moderate climate and significant rainfall, reclamation activities can be performed in a timely manner with satisfactory results.

As of 1986, coal reserves in mapped areas were estimated at 4 billion tons, representing less than 1 percent of U.S. coal reserves. Tennessee coal, which is a highly volatile bituminous with variable percentages of sulfur, is used primarily for the generation of electric power, with some coal suitable for the manufacture of coke.

Tennessee produced approximately 7.5 million tons of coal in 1985. Although slightly more than 1984, the figure continues to reflect a downward trend in coal production during the past few years.

Of the 1985 production, 2,242,000 tons (30 percent) were produced by surface mining operations and 5,204,000 tons (70 percent) were produced by underground mining operations. The 1985 production, down 37 percent from the record high production of 11,900,000 tons in 1979, represents 1 percent of U.S. production for the same year. Due to the small size of the mining industry in Tennessee, coal production and coal sales are not a major source of revenue in the state economy.

Program Management and Operations

The State of Tennessee gained primacy August 10, 1982, when its regulatory program was conditionally approved, subject to the correction of several deficiencies.

On May 16, 1984, the Tennessee General Assembly repealed most of the Tennessee Coal Surface Mining Law of 1980, effective October 1, 1984. The legislation also repealed the implementing regulations effective the same date.

With this action, Secretarial withdrawal of the State Regulatory Program became a formality. On October 1, 1984, the OSMRE Knoxville Field Office became the regulatory authority in Tennessee.

Permitting and Bond Setting

During the 1986 reporting period, the Field Office's permitting work efforts were in three main activities: processing new permit applications, reviewing permits issued by the State of Tennessee under its permanent program per section 504(d) of SMCRA, and reviewing and processing petitions requesting that certain lands be designated unsuitable for mining.

New Permit Applications. The Field Office had 145 applications on hand as of July 1, 1985, the beginning of the review year. Seventy-eight permit applications were received during the reporting period, 39 permits were issued, and seven successor-in-interest applications were approved.

Lands Unsuitable Petitions. The Field Office had one petition to have lands designated as unsuitable for mining pending and received another one during the reporting period. Both petitions are presently being processed with decisions expected before August 1987.

Review of State Issued Permits. Section 504(d) of the surface mining law provides that permits are valid even though issued under a state program for which approval is later withdrawn. Those permits, however, must be reviewed for compliance with the requirements of SMCRA once a Federal program is instituted in the State. During the 1986 reporting period, the Knoxville Field Office continued its review of the 222 permanent program permits issued during state primacy. The target date for completion of the 504(d) review process is March 30, 1987.

Bond Setting. As part of its permitting process, the Field Office requires a minimum bond based on the critical point in the approved reclamation plan, including allowances for indirect costs. This method of bond calculation ensures the availability of adequate reclamation funds regardless of when forfeiture may occur during the permit term. All bonds on new permits were determined by this bond calculation method. The average bond per acre for surface and underground mines respectively was $2,398 and $6,554.

Inspection and Enforcement

Inspection Mandate. The Field Office conducted the required number of partial and complete inspections on its 811 inspectable units. Excluding exploration-related inspections, 10,429 inspections were completed. There are 126 Notices of Intent to explore for surface coal on file, for which 989 inspections were made. A notice of violation was issued in 8 percent of the total number of inspections, with sediment control and water-related deficiencies constituting the highest percentage of violations (35 percent). Revegetation problems accounted for 9 percent of the violations cited. Sixteen imminent harm cessation orders were issued for mining without a permit.

Bond Release. During this period, the Field Office approved 17 Phase I bond releases on permanent program permits, resulting in release of $642,888 in bond liability. No Phase II or III release applications were processed during this period. In repealing the Tennessee Coal Surface Mining Law of 1980, the Tennessee General Assembly did not provide clear authority for the State to continue to hold bonds on interim program permits except where bond forfeiture had been initiated prior to the effective date of the repealing statute. As a result, the State was required to return interim program bonds which were not in the forfeiture process. The return of these bonds began in February 1985. While the Field Office does not have authority to require bonds on these interim program permits, it continues to exercise enforcement jurisdiction over these sites until the required reclamation is accomplished.

Bond Replacement. Acceptable replacement bonds were obtained for 88 percent of the 222 permanent program bonds transferred to the Field Office from the State at the end of primacy. Enforcement actions were taken against the permittees for the remaining 26 bonds that were not replaced.

Abandoned Mine Lands

Pursuant to Section 405(c) of the surface mining law, the Secretary of the Interior is prohibited from continuing to fund an abandoned mine reclamation program unless the state has an approved regulatory program. Accordingly, as of October 1, 1984, Tennessee's AML program was no longer eligible for Abandoned Mine Land grants. In May 1986, the State filed suit in U.S. District Court against OSMRE for not releasing AML grant funds. On June 17, 1986, OSMRE and the State announced plans to spend $2 million in Federal funds and $1 million in State funds for mine reclamation through a series of cooperative agreements. This funding comes from the Secretary's Discretionary Fund for reclamation of abandoned surface mines rather than the State's 50 percent share of AML fees.

In September 1986, cooperative agreements to reclaim five abandoned mine sites in East Tennessee were signed by OSMRE and the Tennessee Department of Conservation. The total costs of the projects are $1,037,000. Actual work on the sites is expected to begin in the spring of 1987. Four additional projects have been identified for inclusion in fiscal year 1987 funding, with a total projected cost of $1,009,000. All nine projects should be completed by the end of 1988.

Continuing Issues

When the General Assembly repealed its surface mining law effective October 1, 1984, it gave up its authority to regulate surface mining in Tennessee. Since then OSMRE has awarded the State two program development grants to assist the State in its efforts to reassume primacy. In addition, the Knoxville Field Office Director and his staff have been working with the State on a transition team to facilitate the State's becoming once again the regulatory authority.

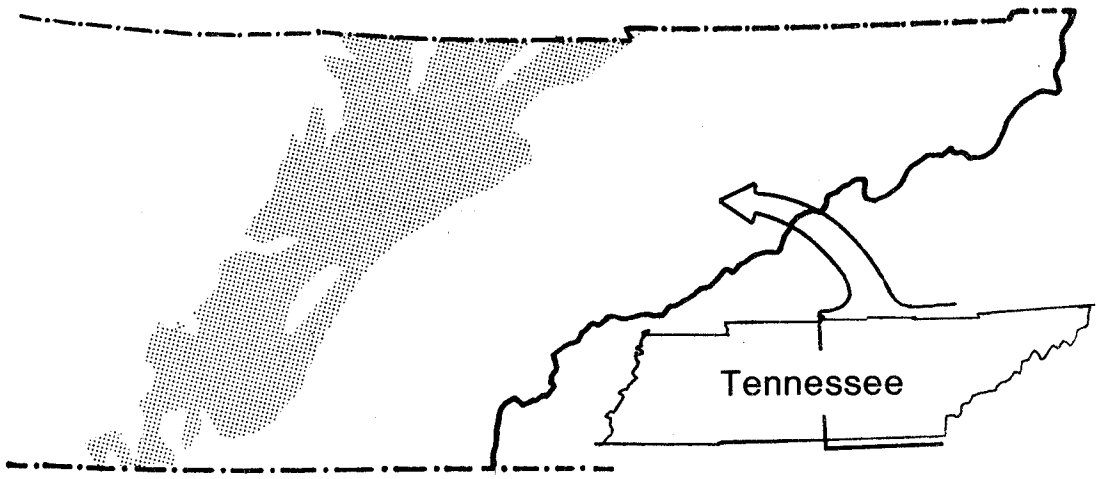
Facts About Mining in Tennessee

	Amount	% U.S. Total
Coal Production (tons)*	7,446,000	.84
Surface Mining	2,242,000	.42
Underground Mining	5,204,000	1.48
Producing Mines*	118	2.48
Surface	48	1.88
Underground	70	3.17
Average Production/Mine		
Surface	46,708	
Underground	74,343	
Acreage Under Permit**	26,869	.83

Source: U.S. Department of Energy Information Administration, "Coal Production 1985."
***Based on July 19, 1986 Inspectable Units List of Knoxville Field Office.*

Salient Statistics—1986 Review Period

Total Budget (OSMRE Field Office)	$5,514,226
Total Permits	723
Inspectable Units (All Lands)	811
Total Inspections (Partial and Complete)	10,429
Enforcement Actions (NOVs Issued)	829



Tennessee

Coal Bearing Lands

Introduction/Overview

The State of Washington is a Federal Program State in which OSMRE has responsibility for assuring the reclamation of lands affected by coal mining.

Most of Washington's coal-bearing regions lie west of the Cascade Mountains. The major mining districts include Whatcom County, Skagit County, Issaquah-Grand Ridge, Green River, Wilkeson-Carbonado, Fairfax-Ashford, Centralia-Chehalis, Morton, Eastern Lewis County, Kelso-Castle Rock, Roslyn, and Taneum-Manastash. Coal seams in these areas are severely folded and faulted, contributing to problems in mining. The demonstrated coal reserve base of the State is 1.46 billion tons, about 0.3 percent of the Nation's coal reserves. Steeply dipping minable seams range from 2.5 to 25 feet in thickness.

The occurrence of coal in Washington has been documented since the early days of settlement, and, at one time, coal production played a significant role in the economy of the State. During the late 1800's and early 1900's, coal was second only to lumber in Washington's industrial production. Production declined, however, with the use of oil as a fuel, the availability of low-cost hydroelectric power, and increased imports of coal from Wyoming and Utah. By 1959, production was at 200,000 tons. Although production is much greater now, the availability of low-cost hydroelectric power in the Pacific Northwest stalled the construction of coal-fired power plants and the associated coal productivity boom that was experienced in other states.

In 1985, the one surface mine in the State produced 4,438,000 tons of coal, used solely to fuel an electric power-generating facility. Also, during the 1986 reporting period, a permit was issued to an operator to open a new surface coal mine operation in the historic Black Diamond District of King County.

Washington's climate is mild and is not a limiting factor to reclamation work in the State. The coal-bearing regions of the State experience ample precipitation, ranging from 32 to 96 inches annually, with the majority of the precipitation falling between the months of November to mid-April.

Program Management and Budget

Regulation of the coal mine operation in Washington is conducted by OSMRE's Casper (Wyo.) Field Office, with assistance from the OSMRE office in Olympia, Washington. The agency's Western Field Operations office in Denver, Colorado processes all permit applications and calculates reclamation bonds. Inspections of mine and reclamation sites in Washington are conducted by one OSMRE reclamation specialist located in Olympia.

Permitting and Bonding

During the evaluation period, OSMRE's Western Field Operations office issued a surface coal mine permit to an applicant who qualified for assistance under the Small Operator Assistance Program (SOAP). The financial assistance from OSMRE provided the applicant with qualified professional laboratory analysis and assistance in gathering and evaluating data required to obtain a permit to operate. The permit, issued to Pacific Coast Coal Co., is for 422 acres located in King County and carries with it a reclamation bond in the amount of $9,752,600 for the 5-year permit period.

Inspection and Enforcement

The responsibility for inspection and enforcement activities in Washington State lies with the Casper Field Office through its Olympia, Washington office. During the evaluation period, the Olympia office was staffed with one reclamation specialist who has responsibility for conducting on-site evaluations of active sites, monitoring reclaimed sites until final bond release occurs, conducting necessary field activities associated with sites that are in the process of bond forfeiture or other litigation, and taking appropriate enforcement actions as required.

The reclamation specialist also was available to provide field support to the Western Field Operations office for abandoned mine land activities.

During the evaluation period, there were four inspectable units in Washington, consisting of the following: one active surface coal mining operation, one active coal preparation plant, one reclaimed initial program permit operation, and one mine site that is currently in the bond forfeiture stage.

Abandoned Mine Lands

As with the regulatory program, the Abandoned Mine Land reclamation program in Washington State is a Federal program, administered by OSMRE. During the 1986 reporting period, two reclamation projects and four emergency projects were completed. The projects were on schedule and within budget.

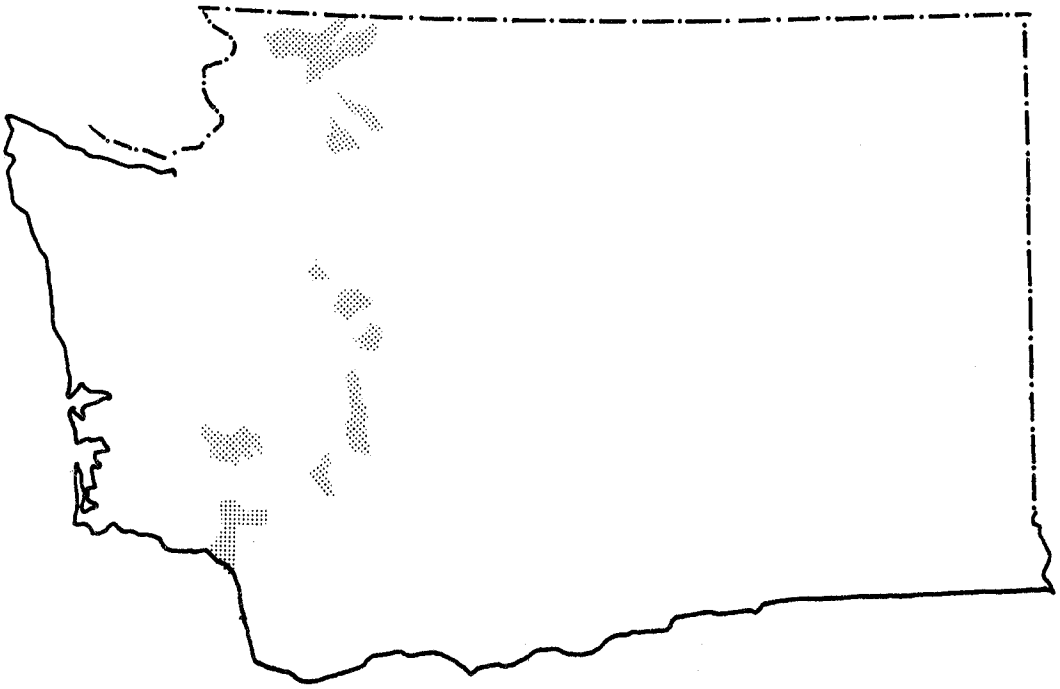
Facts About Mining in Washington

	Amount	% U.S. Total
Coal Production (tons)*	4,438,000	.50
Surface Mining	4,438,000	.83
Underground Mining	0	0
Producing Mines*	1	.04
Surface	1	.07
Underground	0	0
Average Production/Mine		
Surface	4,438,000	
Underground	0	
Acreage Under Permit	14,160	.44

**Source: U.S. Department of Energy Information Administration, "Coal Production 1985."*

Salient Statistics—1986 Review Period

Total Permits	4
Inspectable Units (All Lands)	4
Total Inspections (Partial and Complete)	41
Enforcement Actions (NOVs Issued)	1



Washington

Coal Bearing Lands

INDIAN LANDS

Introduction/Overview

OSMRE regulates coal mining on the lands of the Navajo, Hopi, and Crow Indian Tribes. The Navajo Reservation encompasses parts of Utah, Arizona, and New Mexico, while the Hopi Reservation is limited to Arizona. The Peabody Coal Company Black Mesa and Kayenta Mines are located in Arizona (in the northeast corner of the State) on the Navajo Reservation, with part of the mine on the Hopi/Navajo joint-use area. Surface ownership of the two mines belongs exclusively to the Navajo Tribe. The Hopi have a 50 percent mineral interest in the joint-use area. Surface coal mining operations on the Navajo Reservation in New Mexico are the Consolidation Coal Company Burnham Mine, which is located approximately 25 miles south of Farmington; Utah International, Incorporated, Navajo Mine, which is approximately 15 miles west of Farmington; and the Pittsburg and Midway Coal Company McKinley Mine, located approximately 25 miles northwest of Gallup. The McKinley Mine is somewhat unique in that it lies both inside and outside the southern boundary of the Navajo Indian Reservation. Approximately 75 percent of the mine surface and 40 percent of the coal is Indian-owned (including reservation, allotted, and fee title).

In Arizona, the principal coal-bearing region is the Black Mesa coal field, underlying about 3,200 square miles in the northeast part of the State. The coal field is totally within the boundaries of the Navajo and Hopi Indian Reservations and represents a significant part of the economy of these Tribes. The demonstrated coal reserves in the field are estimated to be 352.2 million tons, which is less than one-tenth of one percent of the U.S. coal reserves.

Black Mesa coal was first mined by prehistoric Indians to fuel cooking and heating fires. It was estimated that the Indians removed more than 100,000 tons between 1300 and 1600 AD. From 1926 to 1964, fewer than 300,000 tons were mined by commercial underground mining methods. Most of this coal was used on the Reservations for heating Indian homes and schools, but limited quantities were used in the towns of Holbrook, Winslow, and Flagstaff, Arizona.

Since 1964, the Peabody Coal Company has been securing lease agreements with the Tribes. Currently, 66,751 acres of land are under lease and permitted. Approximately 14,000 acres of lease-hold are underlain with coal that is recoverable by conventional draglines. Two separate surface mines have been developed: the Black Mesa Mine and the Kayenta Mine. In 1984, the two mines produced 11.5 million tons of coal. The coal is used in two electric power-generating plants. The Black Mesa Mine supplies coal to the Mohave generating station in Nevada via a 273-mile slurry pipeline; and the Kayenta Mine supplies the Navajo Station at Page, Arizona, via an electrified railroad.

The two mines, with as many as eight seams, are operated with a total of six conventional draglines. Seam thickness ranges from 3 to 28 feet, but seams of 6 to 8 feet thick are most common. The maximum economic stripping depth is 130 feet.

The primary land use of the Black Mesa coal field is rangeland. Arid conditions in Arizona make reclamation and revegetation of the land difficult, and wind and water erosion have hampered some reclamation efforts to date.

The coal-bearing region of New Mexico within the Navajo Reservation is located in the San Juan Basin. The Burnham and Navajo Mines are in the Navajo Field, and the McKinley Mine is in the Gallup Field.

The Burnham Mine began surface coal mining operations in 1980. Those operations were suspended in mid-1984 due to loss of contract, and the mine is currently inactive. The Navajo Mine, which began operation in 1963, produces coal for use at the Four Corners Power Plant near Fruitland, New Mexico. During the period of July 1, 1985, to June 30, 1986, the Navajo Mine produced 6,341,832 tons of coal. The McKinley Mine, which began operations in 1962, ships approximately 1.5 million tons of coal annually to the Salt River Project's Coronado Plant. Coal from the McKinley Mine is also shipped to the Arizona Public Service Company's Cholla Plant near Joseph City, Arizona. During the period of July 1, 1985, to June 30, 1986, the McKinley Mine produced 3,786,062 tons of coal from the Indian parts of the mine.

New Mexico's climate, particularly in the San Juan Basin, is arid. Records indicate that the average annual precipitation at the Navajo Mine is 6.13 inches. Most of the precipitation occurs as thundershowers from August to October. Revegetation in parts of the San Juan Basin is extremely difficult because of low rainfall and high erosion potential.

The Crow Indian Reservation is located in the southeastern part of Montana, stretching from near Billings to the Wyoming border. Coal seams on the reservation are part of the Fort Union Coal Region. One mine is now operating on the reservation..

Program Management and Budget

The Surface Mining Control and Reclamation Act of 1977 requires that the Indian Tribes await Congressional enactment of specific legislation before assuming primacy. Until such legislation is enacted, the Federal government regulates coal mining operations on Indian lands pursuant to Section 710 of SMCRA. Mines on the Navajo and Hopi Reservations are within the responsibility of OSMRE's Albuquerque (New Mexico) Field Office and Western Field Operations, in Denver, Colorado, while the mine on the Crow Reservation in Montana is within the responsibility of OSMRE's Casper, Wyoming field Office and Western Field Operations. In Montana, OSMRE and the Montana Department of State Lands have developed a memorandum of understanding under which the State assists OSMRE in the permitting and inspection function on the Crow Reservation.

Permitting and Bonding

In Arizona, the Black Mesa permit application has been reviewed by OSMRE's Western Field Operations office, and the operator is now responding to OSMRE concerns with the application. A permit for the Wild Ram Valley Dam was issued during the review period. This reservoir replaced four existing sediment control structures that were undersized.

During the review period in Arizona, no bonds were released and no bond forfeitures were warranted.

In New Mexico, the Pittsburg and Midway Coal Company was issued a permanent program permit during the review period. Three permanent program permit applications were received and reviewed.

Also in New Mexico, the Amcoal mine submitted an application for release of a substantial portion of its bond. OSMRE is now reviewing the application.

On the Crow Reservation, only minor permitting revisions were handled during the period. One bond release was made. There are no outstanding issues.

Inspection and Enforcement

Because OSMRE is the regulatory authority on Indian lands, the responsibility for conducting regular inspections and pursuing enforcement actions, when necessary, on Indian land in Arizona and New Mexico lies with OSMRE's Albuquerque Field Office.

Representatives from the Navajo Coal Mining Commission and the Hopi Division of Mining and Reclamation Enforcement regularly participate in the inspection and enforcement processes. OSMRE solicits comments and concerns from the Tribal representatives during and as a result of inspections. Their role, however, is somewhat limited by Section 710 of SMCRA. Tribal representatives participated in 80 percent of the partial inspections and 74 percent of the complete inspections.

Montana's Department of State Lands (DSL) and OSMRE's Casper (Wyoming) Field Office inspect the one producing mine on the Crow Indian Reservation. During the reporting period, DSL conducted twelve partial and six complete inspections, meeting the required inspection frequency. OSMRE conducted seven partial and three complete inspections during the period. No inspection or enforcement problems occurred during the period.

Abandoned Mined Lands

In Arizona, OSMRE has cooperative agreements with the Hopi and Navajo tribes, providing for reclamation of abandoned mine sites. There were two construction projects during the review period. The projects are on schedule and within budget.

One project was completed in the State of New Mexico, at Pescada Pits. Under a cooperative agreement with the Zuni Tribe, three subsidence sites and open adits were filled, and several gob pile fires were extinguished. The areas were then revegetated.

On the Crow Reservation in Montana, OSMRE funded four construction projects during the review period. These projects are currently under construction and are on schedule and within projected budgets. Projects are expected to be limited in the future because of the lack of AML sites. No concerns have been identified with the program.

Facts About Mining on Crow Indian Reservation
(MONTANA)

	Amount	% U.S. Total
Coal Production (tons)*	3,112,595	.35
Surface Mining	3,112,595	.59
Underground Mining	0	0
Producing Mines*	1	.02
Surface	1	.04
Underground	0	0
Average Production/Mine		
Surface	3,112,595	
Underground	0	
Acreage Under Permit	3,255	.1

Source: State of Montana, Department of State Lands.

Facts About Mining on Indian Lands
(NEW MEXICO and ARIZONA)

TOTAL	Amount	% U.S.
Coal Production (tons)*	19,670,584	2.23
Surface Mining	19,670,584	3.7
Underground Mining	0	0
Producing Mines*	4	.08
Surface	4	.15
Underground	0	0
Average Production/Mine**		
Surface	4,917,646 Tons	
Underground	0	
Acreage Under Permit***	84,241 acres	2.6

Source: U.S. Department of Energy Information Administration, "Coal Production 1985."
***Data unavailable on a per-mine basis, so figures do not provide a weighted average.*
****Does not include 31,806 acres at the Utah International, Inc., Navajo Mine, which is currently operating under the authority granted by 30 CFR 750.11(c)(3) until its permanent program permit application is approved.*

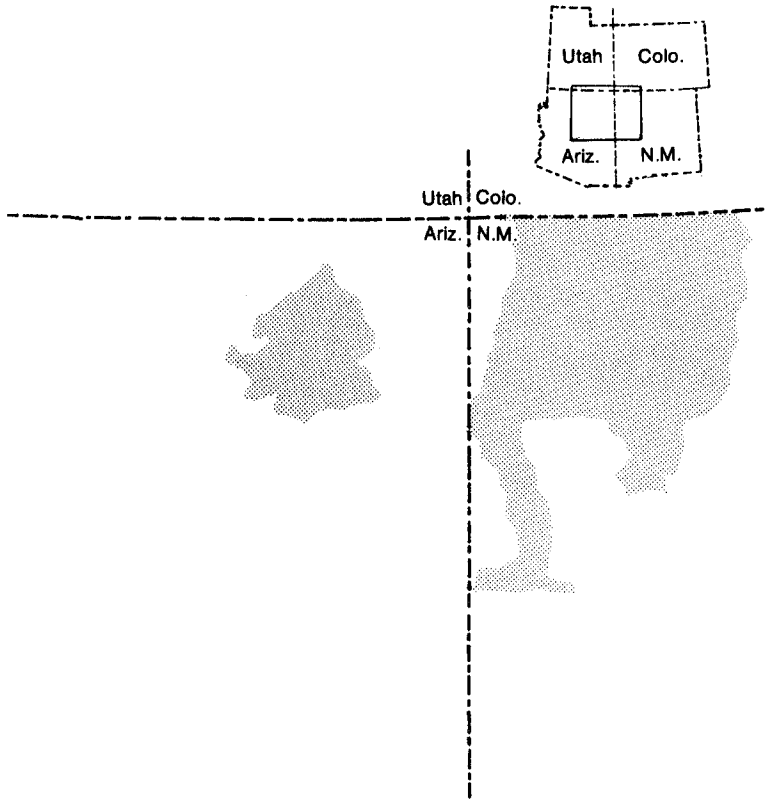
Salient Statistics—1986 Review Period
(INDIAN LANDS IN MONTANA)

Total Permits		1
Inspectable Units (All Lands)		1
Total Inspections (Partial and Complete)	18*	10**
Enforcement Actions (NOVs Issued)	0	

*Conducted by Montana Department of State Lands.
**Conducted by OSMRE Casper Field Office.

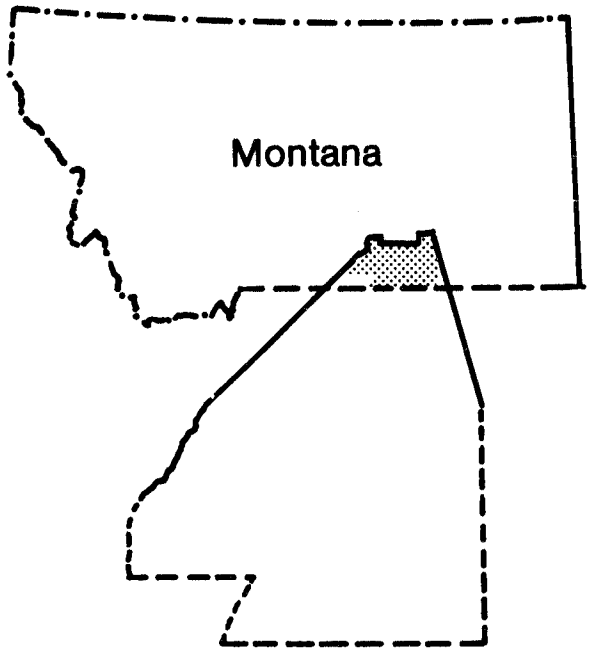
(INDIAN LANDS IN ARIZONA AND NEW MEXICO)

Total Permits	5
Inspectable Units (All Lands)	5
Total Inspections (Partial and Complete)	62
Enforcement Actions (NOVs Issued)	19



Hopi, Navajo and Zuni Tribes

Coal Bearing Lands



Crow Indian Reservation

Coal Bearing Lands

REGULATORY DEVELOPMENT

SMCRA charges OSMRE with the responsibility of publishing rules and regulations as necessary to carry out the purposes of the Act. OSMRE's permanent regulatory program and related rulemakings provide the fundamental mechanism for assuring that the purposes of SMCRA are achieved. A major objective of OSMRE is to establish a stable regulatory program by improving its regulatory development process and by obtaining a broad spectrum of viewpoints on rulemaking activities. A central staff, reporting to the Director, has the primary function of managing the process of regulatory development.

The first major activity of this staff was to establish the OSMRE Rulemaking Outreach Program to obtain the early involvement of major constituent groups in the regulatory program. During fiscal year 1986, meetings were held with representatives from the coal industry, environmental groups, and state regulatory authorities to obtain input to assist OSMRE in establishing regulatory development schedules. OSMRE also established a process for obtaining pre-rulemaking review and recommendations on regulatory issues from constituent groups. As part of the outreach effort during fiscal year 1986, OSMRE held a meeting to identify regulations that could be developed using various approaches to negotiated or facilitated rulemaking. OSMRE plans to use facilitated rulemaking during the coming year. OSMRE also conducted working sessions with interest groups to consider bonding and state oversight issues.

By the end of fiscal year 1986, four permanent program rules had been published as final in the ***Federal Register***, 11 rules were being prepared for publication as final, nine rules were under development for publication as proposed rulemakings, and 33 rules were scheduled for future development or were being studied prior to establishing a schedule for their development. These 58 rules cover a broad range of issues, including lands unsuitable for mining, subsidence resulting from underground mining, permit approval conditions, exemptions from the requirements of SMCRA, reclamation performance standards, and fish, wildlife, and historic property protection.

ALTERNATIVE ENFORCEMENT

In addition to its inspection activities, OSMRE uses a number of alternative enforcement mechanisms to assure compliance with the surface mining law.

During fiscal year 1986, OSMRE continued to implement several such programs that were started as a result of a February 1, 1985, court order, which has become known as the Revised Parker Order. Those programs include: (1) permit blocking systems to implement section 510(c) of the Act; (2) alternative enforcement actions stemming largely from Federal program enforcement activities; (3) disposition of alternative enforcement actions already referred to the Office of the Solicitor; and (4) the promulgation of new regulations to enhance alternative enforcement.

At the Federal and state levels, OSMRE is developing an applicant/violator system (AVS). When complete, the computerized system will identify and match surface coal mining permit applicants with violators through common ownership or control to determine whether permit applicants, or those who own or control such applicants, are in violation of the Act. Development of the computerized system will provide state regulatory authorities with information that can be used to withhold or deny permits to violators who do not take corrective action to abate violations or pay penalties or AML fees.

OSMRE continued to use an interim permit blocking system where mining is proposed on Federal lands that are regulated under approved state programs and in states where OSMRE is the regulatory authority.

During fiscal year 1986, OSMRE reviewed 189 surface coal mining permit applications from 134 companies. Of these, 60 applicants were found to be in full compliance with the Act and 74 applicants were found to have (or were linked to entities having) outstanding violations or unpaid civil penalties or AML fees. Permit blocking continued to be an effective tool to bring about settlements leading to necessary reclamation and improved collection of monies owed the Federal government.

As an additional measure, OSMRE has continued to implement procedures to suspend or revoke improvidently issued permits. These permits are ones that were inappropriately issued to an entity with (or linked to through common ownership or control to an entity with) unabated Federal violations or unpaid civil penalties. When OSMRE pursues such actions against a violator who also owes AML fees, OSMRE also seeks to collect those fees as well. In fiscal year 1986, OSMRE investigated 74 cases where permits were suspected of having been improvidently issued. As a result, Federal enforcement action was taken in 29 instances in six states. OSMRE was also successful in entering into an agreement with eight companies to reclaim the land or pay civil penalties or AML fees owed the Federal government. Cooperation with state agencies resulted in the cessation of mining at ten operations and the suspension or revocation of eight permits. OSMRE's Nationwide Violator List was circulated quarterly to the states, as it has been in the past. The list has proven to be an effective tool in preventing violators from receiving permits.

During fiscal year 1986, OSMRE accomplished much through the implementation of alternative enforcement, particularly through the use of injunctions. OSMRE's commitment to taking enforcement action against violators who incur failure-to-abate cessation orders resulted in the review of 737 enforcement actions. Of those reviewed by OSMRE during fiscal year 1986, 626 recommendations for injunctive relief were referred to the Office of the Solicitor for legal action.

OSMRE is taking measures to act on the cases reviewed under earlier court orders stemming largely from SMCRA's initial regulatory program. The Revised Parker Order provides for the Secretary to make use of Departmental resources to assist in this effort. In some cases, entities and parties responsible for violating the Act are insolvent, and additional litigation or collection actions would be fruitless. Therefore, in order to continue to set priorities and focus valuable resources where they can be put to best use, OSMRE and the Office of the Solicitor are identifying cases that should be pursued for judicial action and cases that should be closed. OSMRE is determining the net worth of each entity found to have an unabated cessation order, as well as the net worth of the entity's president or chief executive officer. These net worth determinations are being used to evaluate whether an entity or individual possesses sufficient assets to compel compliance with the Act. If the net worth determination establishes that an entity is insolvent, then the case is closed and prosecution is not pursued. During fiscal year 1986, OSMRE ordered from its contractor 1,175 net worth determinations. OSMRE and the Office of the Solicitor are presently analyzing the net worth determinations received thus far. The net worth determinations will be used in deciding which enforcement actions to litigate.

Section 402(a) of the surface mining law requires that operators pay a reclamation fee for each ton of coal produced. The fees are deposited with the U.S. Treasury in a fund called the Abandoned Mine Reclamation Fund and are used to reclaim sites that were mined and left unreclaimed before the surface mining law was enacted in 1977. Money from the Fund is also used to administer the Small Operator Assistance Program (SOAP) and the Department of Agriculture's Rural Abandoned Mine Program (RAMP).

States with an approved state regulatory program are eligible to administer a state abandoned mine land (AML) reclamation program, following approval of a reclamation plan by OSMRE. Of the 24 states with regulatory primacy, all but Mississippi and Louisiana had approved AML programs and received funding for them from OSMRE during fiscal year 1986.

OSMRE collected more than $219 million in reclamation fees from coal producers during fiscal year 1986. Grant requests from 22 states were approved for $193.1 million, and were used to fund projects reflecting the highest reclamation priorities, as required by law.

In addition, approximately $13.4 million was awarded for Federal construction projects or cooperative agreements with the states. Approximately $8.8 million was obligated in the RAMP Program, with $2.8 million of that used in administration, design, and investigation of projects and $6.0 million used for construction.

Small Operator Assistance Program (SOAP)

Section 401(b)(1) of the Act authorizes a specified amount of the fees collected for the Abandoned Mine Reclamation Fund to be used to support the Small Operator Assistance Program (SOAP). The program is designed to assist small coal mine operators (those producing fewer than 100,000 tons per year at all sites) in meeting certain technical permit application requirements. The regulatory authority assumes the cost of preparing an analysis of probable hydrologic consequence and characterizing the geology and overburden materials at a proposed mining site.

These analyses are performed by qualified public or private laboratories under contract to the regulatory authority. The SOAP is administered by state regulatory authorities in those states that have gained primacy, or by OSMRE in Federal Program States.

During fiscal year 1986, OSMRE provided $1.5 million in operational grants to the states for small mine operator assistance.

ABANDONED MINE RECLAMATION FUND STATUS

State or Indian Tribe	Fees collected (FY 1986)	Interior projects (FY 1986)	RAMP projects (FY 1986)/2	SOAP grants (FY 1986)	State allocation (FY 1986)	Revenues collected (FY 1978-1986)
Alabama	$6,465,461	$1,543,901	$217,930		$3,232,731	$54,736,779
Alaska	469,555	15,000	0		234,778	2,729,430
Arkansas	21,088	0	135,000		10,544	514,282
Colorado	4,619,018	95,462	0	50,000	2,309,509	42,514,210
Georgia	15,645	503,310	0		7,823	134,926
Illinois	13,955,442	38,122	114,999	75,000	6,977,721	119,932,593
Indiana	10,881,427	364,718	(21,483)	60,000	5,440,714	89,209,398
Iowa	163,115	2,000	1,060,872		81,558	1,521,126
Kansas	479,878	42,141	441,168		239,939	3,583,394
Kentucky	35,287,587	2,567,764	942,854		17,643,794	299,108,829
Louisiana		0	0		0	139,847
Maryland	832,104	3,367	105,595		416,052	7,796,741
Missouri	1,655,230	16,785	0		827,615	16,813,306
Montana	10,556,068	693,213	0		5,283,034	82,909,143
New Mexico	3,692,137	280,734	0		1,846,069	24,387,145
North Dakota	2,550,200	66,222	22,998		1,275,100	16,129,572
Ohio	10,110,925	351,527	811,390		5,055,463	93,318,928
Oklahoma	1,168,050	186,545	180,674		584,025	13,759,533
Pennsylvania	19,406,076	1,984,887	985,119	1,184,000	9,703,038	181,953,521
Tennessee	1,505,832	1,557,145	167,500		752,916	16,912,681
Texas	4,683,467	4,089	28,343		2,341,734	29,625,645
Utah	2,176,333	31,029	0		1,088,167	16,562,193
Virginia	7,792,975	40,602	58,686		3,896,488	59,473,568
Washington	1,638,737	461,350	0		819,369	13,903,588
West Virginia	24,301,380	957,455	924,496	132,500	12,150,690	189,872,045
Wyoming	47,188,337	83,170	(127,836)		23,594,169	311,684,552
Other States	0	1,480,068	0		0	0
Crow Tribe	511,283	0	0		255,642	9,800,445
Hopi Tribe	951,333	0	0		475,667	5,032,368
Navajo Tribe	5,933,425	0	0		2,966,713	58,948,010
Total	$219,022,108	$13,370,606	$6,048,305	$1,501,500	$109,511,054	$1,763,007,798

[1]*Funds obligated from Secretary's Discretionary Share*
[2]*Funds obligated by SCS/USDA as well as through State RAMP grants.*

AML STATE AND INDIAN PROGRAM ASSISTANCE
(FUNDED AMOUNT OF AWARD)
FY 1986 AWARDS

State or Indian Tribe	Plan Preparation	First Annual Submission of Projects	Subsidence Insurance Grants	Administrative Grants	Construction Grants
Alabama				$1,657,448	$7,925,070
Alaska				187,649	198,327
Arkansas				147,816	0
Colorado			$3,000,000	914,203	2,253,067
Illinois				1,293,671	10,937,888
Indiana				953,419	
Iowa				477,484	2,703,145
Kansas				351,362	0
Kentucky			3,000,000	722,630	18,898,838
Louisiana		$211,764		0	0
Maryland				282,477	788,500
Missouri				914,065	1,830,230
Montana				2,308,852	4,139,395
New Mexico				578,905	1,622,852
North Dakota				302,764	369,482
Ohio			1,000,000	2,940,682	264,500
Oklahoma				237,620	1,888,044
Pennsylvania				2,303,159	47,956,506
Tennessee				0	0
Texas				709,677	46,250
Utah				453,781	784,183
Virginia				1,038,388	3,730,466
West Virginia				3,183,181	16,164,395
Wyoming				5,435,429	28,587,873
Crow Tribe	$41,213			0	0
Hopi Tribe	27,777			0	0
Navajo Tribe		281,600		0	0
TOTAL	$68,990	493,364	$7,000,000	$27,394,662	$157,073,564

INTERIOR DEPARTMENT AML PROGRAM
COMPLETED OR UNDER CONTRACT IN FY 1986/1

	High Priority		Emergency	
	No.	Amount	No.	Amount
Alabama	0	$0	3	$7,803,213
Alaska	2	177,973	0	0
Arkansas	0	0	0	0
Colorado	3	124,519	8	43,132
Georgia	5	1,515,699	0	0
Illinois	0	0	1	338,518
Indiana	1	815,453	11	804,407
Iowa	0	0	0	0
Kansas	2	1,498,209	2	1,042,752
Kentucky	1	2,133,707	39	7,666,341
Louisiana	0	0	0	0
Maryland	1	300,000	1	454,607
Missouri	5	5,706,228	1	16,785
Montana	7	420,258	0	0
New Mexico	4	147,837	1	134,352
North Dakota	2	66,222	0	0
Ohio	5	923,663	20	1,716,189
Oklahoma	1	108,175	2	5,280
Pennsylvania	19	17,853,264	148	15,126,007
Tennessee	2	71,714	1	1,575,827
Texas	1	50,000	1	39,089
Utah	2	30,580	0	0
Virginia	5	3,129,280	7	1,005,796
Washington	6	784,651	4	97,290
West Virginia	0	0	29	3,246,270
Wyoming	5	456,824	3	26,171
Other States	20	1,738,707	1	85,029
Crow Tribe	4	600,519	0	0
Hopi Tribe	3	943,105	0	0
Navajo Tribe	6	914,009	1	6,400
TOTAL	**112**	**$40,510,596**	**284**	**$41,234,001**

[1]*Funds obligated from Secretary's Discretionary Share. Total project obligations since projects were initiated.*

INTERIOR DEPARTMENT AML PROJECTS STARTED SINCE FY 1978/1

	High Priority		Emergency		Total	
	No.	$ Amount	No.	$ Amount	No.	$ Amount
1978	4	2,269,886	3	101,068	7	2,370,954
1979	79	9,507,614	26	358,790	105	9,866,404
1980	153	47,982,176	105	3,931,334	258	51,913,510
1981	10	3,170,802	97	10,450,844	107	13,621,646
1982	40	14,244,183	98	6,734,196	138	20,978,379
1983	38	19,610,468	151	15,951,010	189	35,561,478
1984	37	7,271,709	211	19,411,464	248	26,683,173
1985	13	(558,819)	186	26,017,200	199	25,458,381
1986	40	423,722	208	11,878,949	248	12,302,671
TOTAL	**414**	**$103,921,741**	**1,085**	**$94,834,855**	**1,499**	**$198,756,596**

[1]*Funds obligated from Secretary's Discretionary Share.*

NON-AML FUND PROJECTS[1]

Funding Source	State	No.	Federal funds Obligated in FY 1986
Anthracite Mine Drainage and Flood Control Act, P.L. 84-162 (1955) and P.L. 87-818 (1962).	Pennsylvania	1	0
Extinguishment of Outcrop and Underground Fires, P.L. 83-738 (1954).	Colorado	3	48,129
	Montana	2	(3,038)
Appalachian Regional Development Act P.L. 89-4 (1965).	Maryland	1	674,625
	Ohio.....	2	(7,362)
	Pennsylvania	2	0
Total		**11**	**$712,354**

[1]*U.S. Bureau of Mines programs transferred to OSMRE by Secretarial Order 3074, dated February 1, 1982.*

SMALL OPERATORS ASSISTANCE PROGRAM
(FUNDED AMOUNT OF AWARD)
AS OF 9/30/86

State	Operation Grants FY 1985	FY 1986
Alabama		
Alaska		
Arkansas		
Colorado	50,000	50,000
Illinois	100,000	75,000
Indiana	125,000	60,000
Iowa	109,950	
Kansas		
Kentucky		
Louisiana		
Maryland	140,000	
Michigan		
Mississippi		
Missouri		
Montana		
New Mexico	15,000	
North Dakota		
Ohio		
Oklahoma		
Pennsylvania	825,000	1,184,000
Rhode Island		
Tennessee		
Texas		
Utah		
Virginia		
West Virginia	50,000	132,500
Wyoming		
Crow		
Hopi		
Navajo		
TOTAL	**$1,414,950**	**$1,501,500**

RESEARCH PROGRAM

During fiscal year 1986, OSMRE conducted research, under Title V of SMCRA, on problems affecting current mining operations and, under Title IV, on problems occurring because of abandoned mines. At year's end, the Title IV AML research program was transferred to the Bureau of Mines.

Research and Experimental Practice Program

The Title V regulatory research program of OSMRE is an important part of the mining and reclamation program. In the active mining area, the research is divided into two groups—one dealing with studies of interest to regulatory authorities and mine operators and the other concerned with experimental practices. In both instances, research programs are modest, short term (less than 3 years, in most cases), and have practical applications. In all studies, OSMRE personnel oversee the technical aspects of the project to assure compliance with contractual obligations and to detect areas that may require future work.

Applied Research Studies

In fiscal year 1986, 12 projects were awarded for a total of $348,162, and 13 studies that had been started in previous years were completed. Research projects can originate from virtually any source—within OSMRE, a university, another Federal agency, or a private contractor—and are reviewed and evaluated by OSMRE technical personnel.
Some projects awarded in fiscal year 1986 were:

- Investigation of Blasting Vibrations and Subsidence of Abandoned Underground Coal Mines
- Soil and Plant Selenium Study
- Development of Quality Seed and Plant Materials for Use in Coal Mine Reclamation
- Determination of Threshold Level Salt Damage to Crops Irrigated with Water Containing Mine Effluents

Examples of completed projects are:

- Federal High-Altitude Photography Program
- Prime Farmland Special Study—Soil vs. Crop Production as a Measure of Soil Productivity for Bond Release
- Second Workshop on Surface Subsidence Due to Underground Mining
- Development of Subsidence Damage Criteria
- Monitoring of a Highwall Retention Practice at Seminoe No. 1 Mine, Carbon County, Wyoming.

Experimental Practices

Experimental practices are cooperative efforts among mine operators, state regulatory authorities, and OSMRE to develop and investigate innovative measures to accomplish mine operations and reclamation. A practice which varies from a design or performance standard of the regulations can be proposed and, if approved, put into operation by the mine operator. OSMRE oversees use of the practice. If the experimental practice proves equivalent to the standards in the regulations, it may be incorporated into the regulations through the use of rulemaking procedures. During fiscal year 1986, four practices continued to receive funding for monitoring.

Typical experimental practices deals with overburden backfiling and grading, excess spoil disposal, sedimentation ponds, and revegetation of slurry ponds.

EXCELLENCE IN SURFACE MINING AWARDS

The Office of Surface Mining Reclamation and Enforcement developed its first Excellence in Surface Mining Achievement Awards during fiscal year 1986. Using recommendations from state regulatory authorities as the basis for entries, the awards were developed as part of the President's "Take Pride in America" campaign. The major goals of the awards program are to encourage citizen and private sector involvement in the care of America's resources, recognize the outstanding reclamation that is being achieved by companies under the surface mining law, capture and infuse in others a spirit of commitment to restoring the land after it is mined for coal, and provide a catalyst for the transfer of new or innovative technology for wider use. The first awards will be presented in mid-1987.

INFORMATION SYSTEMS MANAGEMENT

Fiscal year 1986 saw significant achievements in OSMRE's Systems Development and Management processes.

During the year, Science Management Corporation (SMC) of Landover, Maryland, was awarded a contract to undertake the development of the Applicant Violator System. The Applicant Violator System (AVS) will be a computerized data information system that will contain data by which Federal and state permitting agencies can determine whether mining permits should or should not be issued to applicants, based on whether the applicants have outstanding violations or old penalties under the surface mining law. By court order, the system is to be operational on October 1, 1987. During 1986, SMC began development of the system software and started the process of collecting data from permit application files maintained by Federal and state permitting entities. A test data base, consisting of data from the States of Kentucky, Tennessee, and Wyoming, was developed and analyzed by the end of the calendar year. An Ad Hoc committee of state representatives assisted OSMRE in addressing systems and policy issues related to the Applicant Violator System.

Also during 1986, OSMRE awarded a three-year, $13,000,000 contract to Computer Data Systems, Inc. (CDSI), of Rockville, Maryland, for operation and maintenance of all OSMRE data systems. Over the three-year period, CDSI will be responsible for providing technical assistance to OSMRE headquarters and field offices that maintain data systems, and for providing technical support to OSMRE and the states in carrying out information systems requirements needed for the effective administration of SMCRA.

The MITRE Corporation, OSMRE's systems engineering contractor, undertook the development of a systems integration plan (SIP), which is a long-range information systems management plan for OSMRE. The SIP will lay out systems alternatives for OSMRE over a five to seven-year period and will be the blueprint for the development of the Coal Data Management Information System (CDMIS), which will ultimately replace all existing OSMRE systems. The underlying concept of CDMIS is what is referred to as the SMCRA "continuum," beginning at the first action under the law, the submission of a permit application, and stretching to the final action under SMCRA, release of a bond. All points on the continuum are examined to determine the information needed to support administration of SMCRA at the Federal and state levels. Funds for the initiation of CDMIS are included in the fiscal year 1988 budget and the requirements analysis and initial systems development phase for CDMIS will be undertaken in early 1987.

The Technical Information Processing System (TIPS) was also initiated during 1986. TIPS is a program whereby advanced technical information and technical processes, such as computerized modeling and complex engineering and scientific analyses, are made available to Federal and state regulatory agencies through a host computer, which will be located in Denver, Colorado. The services of TIPS will be made available to state regulatory agencies at no charge to them as part of OSMRE's continuing program to provide technical assistance and service to state regulatory agencies.

OSMRE feels that information systems management is the key to the successful continued implementation of SMCRA. As a regulatory agency, OSMRE is totally dependent upon high quality, accurate, and current information to support its regulatory mission and the mission of those states that have assumed primacy. To that end, Information Systems Development and Management will continue to have a high profile in OSMRE in the years to come.

Reflecting that importance, a new Assistant Directorate for Information Systems Management was created on October 1, 1986, under the aegis of the Deputy Director for Administration and Finance. Among the other systems management functions that had already been formed by the Information Systems Management Staff, a new program information division was created to assume responsibility for the collection, validation, and maintenance of program-related statistics and data. For the first time, OSMRE will have a program by which data and statistics to support its mission will be collected and maintained in an efficient environment.

OSMRE's systems development budget has tripled over the past two years. This is a concrete indication of the Department's and Congress' support for enhanced information systems management and development as a key to the effective administration of the Surface Mining Control and Reclamation Act.

Assessments and Collections

During fiscal year 1986, 1,805 citations for 2,869 coal mining violations were received from field inspectors for penalty assessments. OSMRE issued 2,632 notices of proposed assessment in the amount of $22,715,020. A total of $539,797 in escrow payments was received for cases under review by the Office of Hearings and Appeals, and $1,590,884 in payment of outstanding assessments was received. In addition, 1,711 Final Orders of the Secretary in the amount of $32,943,915 were mailed to debtors, and 319 cases showing a delinquent debt of $7,726,270 were referred to the Solicitor's Office for legal action.

Implementation of the requirements of the Debt Collection Act and the use of a private collection contractor resulted in a more sophisticated and tougher approach in the agency's civil penalty collection efforts during fiscal year 1986. In addition, the agency established a lockbox for receipt of civil penalty payments. Debtors now send payments directly to the lockbox, thus providing for faster processing of payments and crediting of funds to the Treasury's account.

Plans were initiated during the year for decentralization of the assessments function. Completion of this effort is scheduled for fiscal year 1988. With decentralization, the assessment and penalty review functions will be located closer to the source of violations and, as a result, the time between the inspection and the development of the assessment will be reduced.

During fiscal year 1987, resources will be concentrated in the collection area to reduce the backlog of civil penalty cases. There are approximately 4,400 cases which must be reviewed for action. Once action has been taken on these cases, the agency's collection efforts will be able to focus solely on pursuing current debt.

Audit and Internal Control

Audit

Organization—In 1986, OSMRE's Fee Audit Program was placed under the control of the Division of Compliance Management (DCM). The DCM created a headquarters support group, Branch of Audit Coordination and Support, and three regional offices for control and direction of the audit program. In 1987, the division will further streamline and improve control of field operations by eliminating one-person offices that currently exist, and geographically consolidating offices for supervisory and program control.

Planning and Procedures—A new audit procedures manual was developed and implemented during the year and all auditors and technicians were trained in the use of the new manual. A national audit plan was developed by representatives of the field and headquarters staff for scheduling, prioritizing, and allocating resources for the 1987 program year. The plan takes into consideration all aspects of the coal industry structure and coal flow process. During 1986, the Division embarked on a rigorous plan for second and third party verification of operator coal sales, analyzing information collected by state and other federal agencies involved in the reporting of coal data.

Audit Results—While primarily concerned with maximizing voluntary fee compliance, through the use of selective targeting and effective auditing techniques OSMRE identified $1.3 million of additional fees through its audit program. In addition, the Two-Acre Fee audit task force in the States of Kentucky and Virginia identified $322,541 in unreported fees and collected $113,733, for a 35 percent collection rate.

Internal Control Review Program

In 1982, President Reagan signed into law the Federal Manager's Financial Integrity Act. SInce that time, in accordance with Departmental guidance, OSMRE has established an internal control review program to ensure that Federal programs are not vulnerable to fraud, abuse, and waste.

In fiscal year 1986, OSMRE conducted 11 internal control reviews, and identified only two significant weaknesses. In the area of Assessments and Collections, adequate procedures had not been implemented to provide necessary management reports for monitoring assessments and collections activity and for ensuring full compliance with the Debt Collection Act. OSMRE is correcting the problem by modifying the Collection Management Information System to indicate interest, administrative costs, and penalties, and by implementing procedurues for referring debt to credit bureaus and the Internal Revenue Service. By June 30, 1987, all corrective action will be completed.

The second identified weakness was in the area of Acquisition Management. OSMRE found that technical project officers had occasionally exceeded their designated authority by extending the scopes of work and performance periods for contracts and by allowing contract modifications to be negotiated after contract expiration. Corrective actions included increased training for technical project officers and increased supervisory control. All corrective actions will be completed by September 30, 1987.

Monitoring Potential Conflict of Interests

OSMRE continued to monitor the state and Federal ethics programs by providing affected state and Federal agencies with guidance on the Act and corresponding statutes and regulations. In this endeavor, OSMRE published a final rule on "Restriction on Financial Interests of State Employees" in the October 17, 1986, ***Federal Register***. This amendment is intended to ensure that multi-interest board members do not act on coal-related matters in which they have a direct or indirect financial interest.

Decentralization

The organizational realignment of OSMRE, which took place in October 1985, established two new Assistant Directorates, East and West, with primary responsibility for field program operations. At the same time, the Director commissioned studies on the need for additional decentralization of functions to the field.

Two studies were conducted, with one addressing administrative functions and the other addressing programmatic functions. Both studies were based on the assumptions that any needed decentralization had to be accomplished within existing personnel ceilings, and any recommended changes had to significantly improve service to state regulatory agencies, the mining community, the public and OSMRE employees. Both study groups submitted reports early in 1986 and a combined Summary of Decisions was released in June 1986.

Based on the studies, implementation teams were organized, and major decentralization actions were completed by the target date of October 13, 1986.

Major changes in the organization resulting from the decentralization include:

- Establishment of two Administrative Service Centers, with one located in Pittsburgh, Pennsylvania and the other in Denver, Colorado. The service centers are responsible for providing administrative support services, such as personnel, management services, and budget administration, to the field offices.
- Establishment of a new Assistant Directorate for Information Systems Management, with responsibility for operational and planning activities for the agency's automated information systems and for assuring the needed support for those systems.
- Establishment of two Deputy Assistant Director positions at Field Operations East and one Deputy Assistant Director position in Field Operations West.
- Redistribution and specialization of the program evaluation, internal control review, and audit processes.
- Addition of certain functions, including communication and technology transfer, grants administration, and equal employment opportunity, to the responsibilities of the Assistant Directors for Field Operations, East and West.

BUDGET
($ in thousands)

Activity	FY 1986	FY 1987	FY 1988[1]
Regulation and Technology			
State Regulatory Program Grants	$35,387	$45,110	$45,110
Federal Regulatory Programs	37,302	40,831	45,253
Regulatory Program Operations	(17,772)	(19,221)	(20,743)
Technical Services, Training and Research	(12,642)	(13,681)	(13,681)
Assessments and Collections	(6,938)	(7,929)	(10,829)
General Administration	8,103	14,062	15,242
Executive Direction	(1,359)	(1,664)	(1,794)
Administrative Support	(3,425)	(6,297)	(8,747)
General Services	(3,319)	(6,101)	(4,701)
Total, Regulation and Technology	**$80,792**	**$100,003**	**$105,605**
Abandoned Mine Land Fund			
State Reclamation Program Grants	$149,441	$160,600	$150,660
Federal Reclamation Programs	40,414	37,474	29,849
Fee Compliance	(2,680)	(3,482)	(5,622)
Reclamation Program Operations	(28,715)	(24,592)	(23,727)
Rural Abandoned Mine Program	(9,019)	(9,400)	(500)
Small Operator Assistance Program	2,949	----	----
General Administration	4,473	5,646	6,290
Executive Direction	(794)	(825)	(886)
Administrative Support	(1,912)	(1,992)	(3,125)
General Services	(1,767)	(2,829)	(2,279)
Total, AML Fund	**$197,277**	**$203,720**	**$186,799**
Total, Office of Surface Mining Reclamation and Enforcement	**$278,069**	**$303,723**	**$292,404**

[1] *Estimate*

STAFFING (SEPTEMBER 30, 1986)

Office	Authorized Positions
PERMANENT FULL-TIME POSITIONS	
Washington, D.C.	437
Field Operations:	
East (Pittsburgh, PA)	14
West (Denver, CO)	22
Finance (Denver, CO)	27
Technical Centers:	
East (Pittsburgh, PA)	107
West (Denver, CO)	86
Field Offices:	
Albuquerque, NM	24
Big Stone Gap, VA	29
Birmingham, AL	16
Casper, WY	21
Charleston, W. VA.	14
Columbus, OH	18
Harrisburg, PA	17
Indianapolis, IN	15
Kansas City, MO	17
Knoxville, TN	58
Lexington, KY	15
Springfield, ILL.	14
Tulsa, OK	15
Area Offices:	
Beckley, WV	8
Chattanooga, TN	13
Hazard, KY	11
Johnstown, PA	12
London, KY	11
Madisonville, KY	5
Morgantown, WV	9
Norris, TN	45
Pikeville, KY	9
Wilkes-Barre, PA	25
Total	**1,114**

EMPLOYMENT CEILINGS	
Permanent full-time	1,114
Permanent part-time	35
Temporary	23
Total	**1,172**