

**Annual Report of the
U.S. Department of the Interior
Office of Surface Mining**

Fiscal Year 1992



United States Department of the Interior

Manuel Lujan, Jr., *Secretary of the Interior*

David C. O'Neal, *Assistant Secretary for Land and Minerals Management*

Office of Surface Mining

Harry M. Snyder, *Director*

W. Hord Tipton, *Deputy Director for Operations and Technical Services*

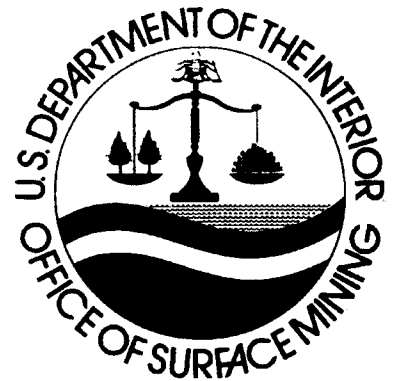


(COVER PHOTO) Reclaimed mine land near St. Clairsville, Ohio.

From 1975 until 1979, the R & F Coal Company removed more than 225,000 tons of coal from this site. Coal under the area shown in the foreground of this photograph was 80 feet beneath the surface. Reclamation at this mine site included backfilling and grading to the approximate original contour, replacing 18 inches of sub-soil, more than 7 inches of topsoil, and revegetating by planting grass. Following reclamation the land owner planted 62 acres of the site with conifers. Today, this reclaimed mine site is a very successful Christmas tree farm producing thousands of trees annually. In 1991, 57 trees from this site were used for the National Christmas Pageant of Peace in Washington, D.C.

During mining the reclaimed land shown on the cover resembled the scene in the photo to the left. This mine is typical of the well-run surface mines currently operating under SMCRA permits. Standing on the reclaimed site today, it is hard to imagine how it looked while mining was taking place.

**Office of Surface Mining
Annual Report
Fiscal year
1992**



**United States Department of the Interior
Office of Surface Mining Reclamation and Enforcement
Washington, D.C. 20240
January 1993**

CONTENTS

	Page
1. Introduction	1
2. Executive Summary	2
3. Program Administration and Finance	
Legislation	4
Budget and Appropriations	4
Debt Management	4
Net Worth Reports	6
Legal Action Against Debtors	6
Fee Compliance Audit	6
New Debt Management Initiatives	6
Financial Management	6
Audited Financial Statements	6
Technical Information Processing System (TIPS)	7
Applicant/Violator System (AVS)	7
SMCRA Modernization Plan	8
Monitoring Potential Conflicts of Interest	8
Equal Opportunity Complaint Processing Costs	8
OSM Workforce Profile	8
Career Development Resources Office	9
General Accounting Office (GAO) Audits	9
4. Regulatory Enforcement	
Regulatory Development	11
Significant Court Decisions	11
State Program Amendments	11
State Regulatory Programs	12
Grants to States	
Program Development Grants	15
Regulatory Grants	15
Federal Programs for States	15
Federal Oversight of State Regulatory Programs	15
Regulation of Surface Mining on Federal and Indian Lands	
Federal Lands Programs	17
Indian Lands Program	18
Hearings and Appeals	18
Pennsylvania Anthracite Regulatory Program	19
Reclamation Award Program	19
5. Technical Assistance	
Research	21
Technology Transfer	21
Experimental Practices	21
India Project	21
Technical Training	22
Small-Mine Operator Assistance Program (SOAP)	22
6. Abandoned Mine Land Reclamation Program	
Abandoned Mine Land Fund	23
Federal Reclamation Program	23
Emergency Projects	25
Post-Act Reclamation Program	25
Grants to States and Tribes	25
Minimum Program Grant Funding	27
State-Share Set-Aside Grants	30
Subsidence Insurance Program	30
Abandoned Mine Land Inventory System	30
National Abandoned Mine Land Reclamation Awards	30
Federal Reclamation Program Management System	
7. Office of Surface Mining Information	
Publications and Video Programs	32
8. Office of Surface Mining Directory	
Locations of OSM Offices	35

TABLES

	Page
1 OSM Appropriation History -- 1978-1992	5
2 Debt Management	6
3 Active and Completed GAO Reviews	9
4 Final Rules Published	11
5 Court Decisions	12
6 State Program Statistics	13
7 Regulatory Grant Funding	16
8 Federal Regulatory Programs	17
9 Federal Oversight of State Programs	18
10 Regulatory Activities on Indian Lands	19
11 Small-Mine Operator Assistance Program Grants	22
12 AML Fee Collections and Funding	24
13 Federal Reclamation Program Projects	26
14 Post-Act Reclamation Projects	27
15 AML Grants to Primacy States and Indian Tribes	28
16 High-Priority Reclamation Project Accomplishments	29

FIGURES

1 Organizational Chart	10
2 OSM Office Locations Map	10

1. INTRODUCTION

This report was compiled for the President and the Congress as required by Section 706 of the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The report describes the operations of the Interior Department's Office of Surface Mining Reclamation and Enforcement (OSM) for the period October 1, 1991, through September 30, 1992 -- Fiscal Year 1992¹. Included in this report are activities carried out under Title IV, Abandoned Mine Reclamation; Title V, Control of the Environmental Impacts of Surface Coal Mining; Title VI, Designation of Lands Unsuitable for Non-coal Mining; and Title VII, Administrative and Miscellaneous Provisions.

SMCRA responsibilities of other bureaus or agencies are omitted from this report. These responsibilities include Title III, the Mining and Mineral Resources and Research Institutes Program, which is administered by the U.S. Bureau of Mines; Titles VIII and IX, the University Coal Research Laboratories and the Energy Resource Graduate Fellowships, which are administered by the Secretary of Energy; and Section 406, the Rural Abandoned Mine Program (RAMP), which is administered by the Secretary of Agriculture. Information about those activities is reported directly to Congress by the agencies responsible.

This year's report format is similar to OSM's 1988-89, 1990 and 1991 annual reports, and facilitates easy comparison of data from year to year. This report, which contains current data and only brief background information, was prepared primarily for the President, the Congress, and the State regulatory authorities, rather than for distribution to the general public. Thus, its condensed format and more specific focus has resulted in production cost savings and strict adherence to the standards of the Joint Committee on Printing for federal agency annual reports. The information in this report is organized to facilitate either an examination of specific elements or a review of the entire program.

Section 2 summarizes OSM's principal accomplishments and outlines issues confronting the agency during 1992. Although these are further described with text and statistics in the body of the report, they are presented here to give the reader both an overview and a summary of OSM's activities during the past fiscal year.

Sections 3 through 6 describe OSM's administration of the SMCRA Regulatory and Abandoned Mine Land Programs. Statistics are provided in tabular form, and, where appropriate, graphs show current and historic levels so that trends since the beginning of the program are readily apparent.

Section 7 cites OSM technical publications, reports, and video programs developed during 1992. This eliminates extraneous text and should aid readers who require more detailed information about OSM operations. Some of these materials are unpublished; however, machine copies are available from OSM upon request.

Section 8 lists the Office of Surface Mining office locations.

Each year OSM has received a growing number of requests for statistical information that describes SMCRA implementation (including mining, regulation, and reclamation). A 15-year summary of statistical information was published as part of OSM's 15-year SMCRA progress report. Beginning with Fiscal Year 1993, OSM's annual report to Congress will have a revised format and this statistical information will be compiled and published as an appendix. Although the annual report will still be printed in limited quantities and distributed to Congress and those directly involved with SMCRA implementation, the statistical appendix to the Annual Report will be made available to the general public.

For information about OSM activities, news releases, and publications, or for additional copies of this report, contact:

Public Affairs
Office of Surface Mining
1951 Constitution Ave., NW
Washington, D.C. 20240
(202) 208-2553

1. Throughout this document, "1992" always refers to FY 1992, unless otherwise noted.

2. EXECUTIVE SUMMARY

August 3, 1992, was the 15th anniversary of both the Surface Mining Act and the Office of Surface Mining. In 1992, 15 years after Congress passed the Surface Mining law, land reclamation and environmental protection have become successful and routine parts of the coal mining process. During this 15-year period, more than 34,000 mining permits were issued for operations covering more than 4 million acres. The successful implementation of SMCRA has not been easy. The technical problems of reclamation are complex and not all mine operators complied with the law. During the past 15 years, and especially during the early part of that period, the problems created by a small number of irresponsible mining operators have generated disproportionate publicity, while there has been comparatively little recognition for the majority of operators, who are achieving excellent reclamation and are complying with the law.

SMCRA's success is measured by environmental conditions in the hollows of Kentucky, at the abandoned anthracite mines of Pennsylvania, on the farms of Illinois, and over the grasslands of Wyoming. And in 1992, major reclamation improvement can be seen on the ground when one compares pre-law conditions with mining and reclamation that occurred last year.

1992 was also important because many of the difficult, long-standing issues that have confronted OSM for years were finally resolved. This is especially noteworthy because the balanced state-federal partnership envisioned in SMCRA has been strengthened.

Following are the principal areas where OSM expended major effort during 1992:

APPLICANT/VIOLATOR SYSTEM (AVS)

AVS is being used effectively to ensure that individuals and companies associated with outstanding violations of SMCRA, or with outstanding penalties or fees, are not being issued new permits. Since 1990, over 14,089 applications have been reviewed by AVS, 11,156 applications received a recommendation of "issue," 1,550 applications received a recommendation of "deny," and 1,383 application received a recommendation of "conditional."

During 1992, the AVS reliability rating increased to over 96 percent, up more than ten percent from FY 1991. AVS continues to experience a significant increase in usage. Today every coal-producing state is using AVS.

In May 1992, the AVS Office received one of nine national awards from the President's Council on Management Excellence. The award recognized management improvement in the areas of administrative procedures, customer orientation, and data management, as well as AVS office cooperation with other OSM offices and federal agencies.

ABANDONED MINE LAND FUND

Based on initiatives proposed by OSM in 1991, the Office of Management and Budget asked OSM to assess the feasibility of revising the grant process OSM uses for its AML program. OSM is proposing to strengthen federalism by providing simplified AML grants to the states to use in carrying out reclamation activities.

During 1992 work began on restructuring the AML grant process to make it more efficient, more flexible, and more reflective of the philosophy of primacy. These changes will create a system similar to the one-time grant structure used to fund states under the regulatory program. This new grant process will be fully operational in FY 1993.

Simplified grant funding of state AML programs will streamline the current grant application process, which requires advance approval of each AML project before OSM awards a state grant for AML reclamation. Instead, within limits of existing authority, each state will receive an amount based on appropriated spending levels and will be held accountable for using those funds in accordance with its approved AML plan. OSM's role will move away from the cumbersome and detailed pre-award scrutiny of state grant applications.

REGULATORY REVIEW AND CROSSWALK

In accordance with a January 28, 1992, memorandum from the President, agencies reviewed their regulatory programs under a set of prescribed criteria designed to eliminate unnecessary and burdensome government regulations and to promote economic growth. OSM established a task force to perform the review to assure that existing and proposed rules conformed to these criteria. In addition to trying to reduce economic burdens on the coal industry, work focused on making OSM regulations less intrusive on primacy states. One of the targeted areas was the state program amendment review process. Changes were proposed to eliminate delays and streamline procedures for agency decisions on state submittals. This will save both OSM and the states workload and staff hours. In addition, work began with the Interior Department Solicitor's Office to speed up the current process for review and approval of amendments.

To assist in performing additional review of its regulations, OSM has prepared a "crosswalk," an electronic database linking rules to specific provisions of SMCRA, and tying regulatory sections to court decisions involving direct regulatory challenges. This valuable database will have long-term benefit to OSM's regulatory work in implementing SMCRA.

PRIMACY

During 1992, OSM's commitment to primacy as the fundamental basis for implementing the Surface Mining Act became better focused. Last year, the question of West Virginia primacy and the fundamental way OSM implements SMCRA were major issues. In 1992, West Virginia is well on its way to rebuilding a strong state program. In West Virginia, OSM worked closely and successfully with the state in what amounted to the biggest single effort to stave off a federal substitution.

NATIONAL ABANDONED MINE LAND RECLAMATION AWARDS

Building on the tremendous success of the Title V Excellence in Surface Coal Mining Awards, a Title IV award program was initiated in 1992 to give well-earned public recognition to those responsible for the nation's most outstanding achievements in abandoned mine land reclamation. 1992 awards will be presented for:

- Exemplary reclamation of land and water resources adversely affected by abandoned mine problems.
- Elimination of abandoned underground mine entries, shafts, and voids.
- Successful land reclamation that eliminated soil erosion and sedimentation problems.
- Elimination or treatment of water pollution problems created by mine drainage.
- Elimination or control of burning coal refuse disposal areas and burning coal in situ.
- Successful abatement and control of mine subsidence problems.

Nominations were due to the Abandoned Mine Land Programs by November 30, 1992, and winners will be selected in the spring of 1993. Award plaques and certificates will be presented to those responsible for the outstanding work (e.g., reclamation specialists who supervised and coordinated the work, engineers who designed the projects, and contractors who completed the on-the-ground reclamation).

OVERSIGHT

Changes in directives and operations resulted in the development of an appropriate oversight relationship with primacy states. The states now know more clearly their roles and responsibilities for implementing SMCRA, and the OSM responsibility is clearly defined.

ABANDONED MINE LAND EMERGENCY FUNDING

OSM continued its work in assisting states to take over administration of emergency AML funding. In 1992, Ohio was added to the list of states with emergency authority, and several additional states are expected to have emergency programs next year.

3. PROGRAM ADMINISTRATION & FINANCE

LEGISLATION

On October 24, 1992, the President signed into law the Energy Policy Act of 1992 (Public Law 102-486). The following provisions affect the implementation of SMCRA:

- Section 2503 - amends SMCRA to provide incentives to remine and reclaim abandoned mine sites.
- Section 2504 - requires the repair of, or compensation for, damages resulting from subsidence; requires OSM to use state definitions of "valid existing rights" (VER) for a period of one year, thereby delaying OSM's implementation of a "takings" test for VER decisions; restricts OSM's authority to conduct studies or research and demonstration projects; requires OSM, upon request, to enter into cooperative agreements with Abandoned Mine Land program states to control and extinguish coal outcrop fires.
- Section 2513 - provides assistance to small coal operators.
- Section 2514 - requires OSM to provide Title V grants to Indian tribes.
- Section 2515 - amends SMCRA to extend the collection of the abandoned mine reclamation fee through the year 2004.
- Section 19143(b), or Title XIX - amends SMCRA to extend the collection of the abandoned mine reclamation fee through the year 2004. Beginning in Fiscal Year 1995, the Secretary of the Interior is directed to transfer from the AML fund to the United Mine Workers Combined Benefit Fund any interest, less than \$70 million, estimated to be earned by and paid to the AML fund during the fiscal year.

■ Federal civil penalties collected under Section 518 of SMCRA can be used to reclaim lands abandoned after August 3, 1977. Civil penalties collected in 1992 for use by OSM totaled \$475,162, all of which was used for reclamation of such post-August 3, 1977, lands. In addition, \$706,333 of prior-year collections were awarded for post-August 3, 1977, reclamation in 1992.

■ State regulatory program grants were funded at \$48,481,000, an increase of \$822,000 in 1992.

■ Regulation and Technology funds were provided to fund the full cost to the states for implementing the Applicant Violator System.

In addition, \$187,803,000 was appropriated from the AML fund, and up to 20 percent of the funds recovered from the delinquent debts was authorized for continuing collection of these debts. In 1992, OSM spent \$1,162,000 to collect approximately \$6.3 million in delinquent AML fees and delinquent AML audit bills. The following provisions were included in the AML appropriation:

- State reclamation grants were funded at \$135,274,000, a reduction of \$13,940,000 from 1991.
- No state was permitted to receive more than 20 percent of the total funds available for emergency reclamation projects.
- Federal emergency program expenditures were limited to \$15,000,000.
- Fifty percent of a state's annual AML grant can be denied if the Secretary of the Interior finds the state has failed to enforce provisions of the approved state regulatory program.

All of the appropriation's provisions were met.

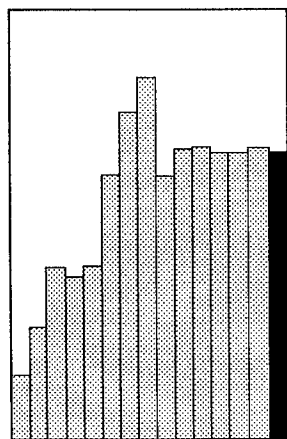
Table 1 provides a 1978-1992 appropriation history.

DEBT MANAGEMENT

OSM pursues delinquent debtors who owe civil penalties for mine site environmental violations and unpaid AML fees, including unpaid AML fees resulting from compliance audits. OSM's 1992 collection and the year-end debt are shown in Table 2. Civil penalties include administrative charges and late payment penalties not available for use by OSM.

Delinquent debt information is retained in OSM's Applicant/Violator System to prevent violators from receiving

BUDGET AND APPROPRIATIONS



OSM Budget 1978-92

The Department of the Interior and Related Agencies Appropriations Act of 1992, Public Law 102-154, appropriated \$109,700,140 from the General Fund for 1992 regulatory and enforcement activities, plus \$759,793, an amount equal to 1992 performance bond forfeitures. The regulation and technology appropriation included the following provisions:

TABLE 1
OSM APPROPRIATION HISTORY
1978-1992*
(Dollars in Thousands)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Regulation & Technology															
State Regulatory Grants	\$8,600	\$18,900	\$21,680	\$35,000	\$24,432	\$32,150	\$36,100	\$36,734	\$35,367	\$45,110	\$40,359	\$41,910	\$41,910	\$47,659	\$48,481
Regulatory Program Operations									17,704	19,221	20,078	20,310	20,450	22,576	21,513
Tech. Services, Training & Research									12,642	13,681	13,670	13,470	13,026	13,559	13,472
Kentucky Settlement Agreement											3,685	4,425	3,772	904	
Assessments and Collections									6,938	7,929	10,502	8,981	9,100	13,078	12,730
Program Operations & Inspections						10,493	13,776	23,729							
State & Federal Programs	3,300	4,007	14,352	22,492	15,246										
Inspection & Enforcement	7,520	13,360	16,622	15,717	12,193										
Technical Support	3,260	6,872	7,033	6,841	6,644	10,903	12,551	12,890							
Applied Research	2,500														
Mineral Institutes	5,700	5,800	10,000	9,629											
SOAP		5,000	15,000												
General Administration						7,332	6,268	6,964	8,103	14,062	13,831	11,969	12,970	13,067	13,504
Executive Direction									[1,359]	[1,664]	[1,677]	[1,761]	[1,589]	[1,659]	[1,873]
Administrative Support									[3,425]	[6,297]	[6,856]	[5,649]	[6,487]	[5,908]	[6,123]
General Services									[3,319]	[6,101]	[5,298]	[4,599]	[4,894]	[5,500]	[5,508]
Subtotal	30,880	53,939	84,687	89,679	58,515	60,878	70,695	80,347	80,774	100,003	102,125	101,095	101,228	110,843	109,700
Abandoned Mine Reclamation Fund															
State Reclamation Grants		10,000	25,000	26,200	46,936	173,528	233,100	236,840	149,441	160,600	159,660	151,660	145,780	149,214	135,274
Fund Management	4,784	8,680	9,124	9,987	6,794	5,131	6,498	6,599							
Fee Compliance									2,680	3,482	5,588	5,681	5,720	6,088	6,408
Reclamation Program Operations	15,875	21,835	39,376	29,364	41,680	23,064	26,452	39,371	28,715	24,592	13,662	19,005	22,264	25,238	27,154
AML-Technical Support	998	808	1,237	1,652	1,584	991	1,221	1,955							
RAMP	5,000	10,128	10,106	10,280	18,339	6,155	10,582	9,800	9,019	9,400	15,000	12,000	12,000	11,933	11,848
SOAP	10,000	10,000	10,000	5,000			(11,499)	(2,000)	2,949				2,000	1,492	1,851
General Administration						4,210	4,874	4,376	4,473	5,646	5,470	4,814	5,008	4,993	5,268
Executive Direction									[794]	[825]	[880]	[866]	[973]	[919]	[1,050]
Administrative Support									[1,912]	[1,992]	[2,311]	[1,592]	[1,711]	[1,509]	[1,649]
General Services									[1,767]	[2,829]	[2,279]	[2,256]	[2,424]	[2,565]	[2,569]
Subtotal	36,657	61,451	94,843	82,483	115,333	213,079	271,228	296,941	197,277	203,720	199,380	193,160	192,772	198,958	187,803

Total \$67,537 \$115,390 \$179,530 \$172,162 \$173,848 \$273,957 \$341,923 \$377,288 \$278,051 \$303,723 \$301,505 \$294,255 \$294,000 \$309,801 \$297,503

*Does not include Bond Forfeiture and Civil Penalty collections

**TABLE 2
DEBT MANAGEMENT**

Category	Amount Collected	Balance Owed
Civil Penalties	\$476,970	\$52,077,030
AML Fees	4,333,236	36,358,130
AML Audited Fees	2,011,325	21,145,366
Totals	\$6,821,531	\$109,580,526
Debt Not Delinquent		8,252,980
Total Delinquent		\$101,327,546

new mining permits. Of the \$109.58 million fiscal year-end 1992 debt balance, \$71.85 million (65 percent) is principal. The remainder represents interest, late payment penalties, and administrative charges on the unpaid balance.

NET WORTH REPORTS

OSM uses private contractors to determine the net worth of individuals and businesses with unpaid obligations. Net worth reports are requested to determine the ability of businesses and individuals to pay for the cost of reclaiming old mining sites or to pay their delinquent obligations, or both. During 1992, OSM requested net worth reports on 328 companies and individuals at a cost of approximately \$110,000.

LEGAL ACTION AGAINST DEBTORS

OSM is currently processing \$7.7 million of delinquent debt. When OSM exhausts its own avenues of debt collection, delinquent debts are referred to the Department of the Interior's Solicitor for appropriate legal action or bankruptcy proceedings. Of the total debt owed at the end of 1992, \$80.5 million has been referred to the Interior Department Solicitor. Of this amount, \$40.2 million is in bankruptcy proceedings and the remainder has been referred for collection action. An additional \$13 million of delinquent debt has been referred to the Department of Justice for appropriate legal action.

FEE COMPLIANCE AUDIT

OSM maintains regional and area audit offices in 13 cities throughout the nation's coal-producing regions. As the audit program has evolved, it has assumed an expanding role in the overall enforcement of SMCRA. While maintaining the basic audit program necessary to ensure compliance with reclamation fee requirements, the audit has also (1) performed special financial reviews, (2) expanded its scope of work to encompass ownership and control data for the Applicant/Violator System, and (3) assisted the Office of the Solicitor, Field Office Directors, and State Regulatory Authorities in specific enforcement efforts.

In 1992, OSM conducted 407 audits and audit-related projects and identified \$7.3 million in under-reported or non-reported AML fees. In addition to effecting structured audits of coal operators, OSM's audit staff has developed technical and programmatic policy; developed and implemented audit procedures and standards; developed and tested its Quality Assurance Review Program; developed an automated audit prioritization system; developed and implemented an Audit Appeals Program; and researched and coordinated the development of rules and regulations that impact the fee compliance program.

NEW DEBT MANAGEMENT INITIATIVES

The Division of Debt Management has a new Directorate Administration Reporting and Tracking System (DARTS) which is operational on a 100-user Novell network. Developed under the DataEase proprietary database management system by largely in-house resources, DARTS automates the process of assigning debt cases to collection specialists, and monitors the progress of those cases as they are worked. The system captures details concerning how the cases are being worked by means of an electronic "journal" that is updated by the collection specialists. There is no overnight processing; changes made are instantly reflected in DARTS. Besides tracking debt cases, DARTS produces the coding sheets used to update the AML and CMIS data systems.

FINANCIAL MANAGEMENT

Pursuant to authority granted by Congress in 1990 (P.L. 101-233), OSM began investing Abandoned Mine Land funds in 1992. OSM's investments are limited by law to special market-based Treasury bills, notes, and bonds. Total investment earnings received for 1992 was \$39.3 million. An additional \$1.2 million was earned in 1992 but will not be received until 1993. Average interest on investment during the year was 4.08 percent. At the end of the fiscal year, OSM had more than \$1 billion invested in Treasury securities.

AUDITED FINANCIAL STATEMENTS

In response to provisions of the Chief Financial Officers Act of 1990 (P.L. 101-576), OSM submitted its 1991 financial statements for audit by the Office of the Inspector General (IG). The auditor was expected to issue an unqualified opinion in December 1992. The 1991 financial statements mark the second set of bureau financial statements audited by the IG. The IG is expected to find that the statements are in conformity with generally accepted accounting principles for federal agencies (OIG Report No. E-IN-OSM-004-92, December 1992). This opinion covers the agency's financial position and budget reconciliation for the year ended September 30, 1991.

TECHNICAL INFORMATION PROCESSING SYSTEM (TIPS)

The Technical Information Processing System (TIPS) is a national computer system designed for use by the state regulatory authorities (SRA) and OSM to provide the automated technical and scientific analysis required for fulfilling OSM's regulatory responsibilities under SMCRA. TIPS has been installed in all coal-producing states and provides technical analytical capabilities to the states and OSM for the review of mining permit applications, abandoned mine land reclamation, and environmental assessments.

TIPS is fully operational and in 1992 OSM provided TIPS support in the following areas:

- Implementation of satellite global positioning and surveying for the states of Oklahoma, Montana, Tennessee, Wyoming, New Mexico, Missouri, and Colorado.
- Analysis of a proposed nuclear processing waste disposal site, in cooperation with the Environmental Protection Agency.
- Installation of a computer training facility capable of handling 15 students at a time.
- Creation of a large library of ground water modeling software, and update of all western state TIPS workstations.

APPLICANT/VIOLATOR SYSTEM (AVS)

Section 510(c) of SMCRA and corresponding regulations (30 CFR 773) prohibit the issuance of permits to applicants with previous uncorrected violations and to applicants related to violators through ownership and control. AVS, a computer data base, was developed to assist OSM and the state regulatory authorities to ensure compliance with these requirements. AVS identifies association between permit applicants or their affiliates and uncorrected violations of SMCRA. This information is used by OSM and states to help determine whether a permit should be issued or denied.

This year the AVS Office improved its communication and cooperation with other offices within OSM. This resulted in the production of cleaner data, improved reporting, and a reduction in both the number of outdated AML mailings and the number of AVS recommendations overturned.

In May 1992, the AVS Office received one of nine national awards from the President's Council on Management Excellence. This recognition was for management improvement in the areas of administrative procedures,

customer orientation and data management and for its cooperation with other OSM offices and federal agencies.

Since 1991, in order to avoid an AVS Office permit "deny" recommendation, companies paid over \$1,424,572 in AML fees and federal civil penalties which would not have been paid otherwise. Some companies also signed settlement agreements to resolve uncorrected violations by performing reclamation work and providing lists of their contract operators.

OSM signed Memoranda of Understanding with 23 state regulatory authorities which will govern regulatory authority review of permit applications and maintenance of accurate and current data in AVS. To reduce the operation and maintenance costs of AVS, OSM assumed various computer processing control functions previously performed entirely by the AVS contractors. The daily batch backup costs were reduced by 65 percent, providing a \$200,000 annual savings. Computer processing costs at the U.S. Geological Survey (USGS) experienced an average monthly cost reduction of \$40,000. The removal of outdated AVS data from the USGS computer resulted in an additional \$30,000 annual savings.

In working to improve the usefulness of the system, the AVS Office developed and implemented a number of specific enhancement to AVS, including the following:

- Multiple coal mine operators may be evaluated during the application evaluation process;
- Entity evaluations are tracked on the system;
- Data entry and update procedures were simplified;
- Ownership and control information provided by the Mine Safety and Health Administration was included on the system;
- State cessation order violations were added to the system for use by regulatory authorities for permit evaluation purposes;
- The Application/Permit Maintenance program was modified to allow SRA's to update current and former operators; and
- As part of their oversight function, OSM Field Offices can now update the AVS application evaluation data.

OSM published in the *Federal Register* a proposed rule designed to establish new regulations requiring regulatory authorities to use AVS and other information sources to identify ownership and control links between permit applicants and violators. Additionally, the proposed rules would (1) establish methods, procedures, and standards

for challenging ownership and control information shown in AVS and prior to entry of such information into AVS; (2) provide a means, under certain circumstances, for challengers of ownership or control links to secure temporary relief from permit blocking while their challenges are pending; (3) clarify OSM's oversight authority to review the compliance of regulatory authorities with proposed rules; and (4) impose certain follow-up duties upon a regulatory authority once a permitting decision has been made. If finalized, this rule will serve to enhance the validity and usefulness of AVS.

AVS is being used effectively to ensure that individuals and companies associated with outstanding SMCRA violations, or with outstanding penalties or fees, are not being issued new permits. Since 1990, over 14,089 applications have been reviewed by the AVS; 11,156 applications received a recommendation of "issue," 1,550 applications received a recommendation of "deny," and 1,383 applications received a recommendation of "conditional." During 1992, the AVS reliability rating increased by over 10 percent from the previous year to over 96 percent and it continues to experience a significant increase in usage, especially by all OSM field offices, fee audit offices, solicitor offices, the Tennessee Valley Authority (TVA), state regulatory authorities, and the U.S. Department of Labor, Mine Safety and Health Administration.

SMCRA MODERNIZATION PLAN (SMP)

The SMCRA Modernization Plan begun in 1990 is a long-term blueprint for upgrading the automated data processing capability at OSM. Progress on the plan continued in 1992, which strengthened the objectives of increasing accuracy, credibility, and timeliness of mission support information at OSM concurrently with cost containments of the automated information delivery process. Important steps achieved during this period were in the areas of continued strategic planning, technology upgrades, and system upgrades.

Other major areas of accomplishments in 1992:

- The Information Resources Management Strategic Plan was updated to contain major automated data processing technology initiatives that were adopted by OSM management during 1992.
- Procurement of mini-computer hardware and operating system software to operate the Applicant/Violator System more cost-effectively; procurement of new micro-computers to replace all obsolete workstations on the agency's local-area networks; procurement of compact-disk-based storage systems to provide on-line technical reference materials; and procurement of electronic imaging systems to eliminate the large filing and storage requirements for official documents.

- Automated data processing upgrade accomplishments, including AVS and Abandoned Mine Land systems began operation on the new agency mini-computers; the inspection and enforcement tracking system containing oversight data was standardized and made operational on field office local-area networks; and core software was standardized.

MONITORING POTENTIAL CONFLICTS OF INTEREST

Sections 201(f) and 517(g) of SMCRA prohibit any federal or state employee "performing any function or duty under this Act" from having "direct or indirect financial interest in underground or surface coal mining operations." In monitoring these provisions, OSM provides oral and written guidance and assistance to personnel of affected state and federal agencies, including OSM's own employees. Through this process, OSM has increased awareness and understanding of these provisions, and violations have steadily decreased. In 1992, 1,088 employees filed financial disclosure statements. One Divestiture Order was issued under the conflict of interest provision of SMCRA: the situation was favorably resolved.

As part of OSM oversight with regard to the State Ethics Program, a review was conducted in June 1992 on the Alabama program. The review covered an analysis of the financial disclosure statements on file and an evaluation of the procedural processes in place for the program. In both Titles IV and V, no major problems were identified. OSM has now completed 9 reviews in 24 of the states where primacy was granted under SMCRA.

EQUAL OPPORTUNITY COMPLAINT PROCESSING COSTS

In 1992, complaint-processing costs decreased approximately 50 percent from 1991. It is anticipated that processing costs will continue to decrease as OSM moves toward internal investigation and alternative procedures for resolving disputes.

OSM WORK FORCE PROFILE

1992 ended with a net loss of 13 full-time permanent employees (to 1,025 from 1,038). Headquarters showed a decrease of six; while the Western Support Center showed an increase of eight. The field offices decreased by a total of six, and the Eastern Support Center decreased by nine. This employment reduction was the result of right-sizing OSM to balance work assignments with budget constraints.

CAREER DEVELOPMENT RESOURCES OFFICE

During 1992, in response to many employee requests, the Career Development Resources Office was established. This office provides employees with a means to obtain training, development, and information on growth opportunities to help them achieve their potential and meet the needs of OSM. On request, the office makes available self-improvement and motivational material, identifies OSM employees' training needs and priorities, and arranges for and conducts in-house training. Talented employees have already volunteered to develop and conduct training courses. During the next year training modules will be prepared on personnel management and equal employment opportunity issues.

GENERAL ACCOUNTING OFFICE (GAO) AUDITS

During 1992, GAO completed one audit but did not initiate any new audits. Table 3 lists this audit and its status.

**TABLE 3
1992 GAO REVIEWS**

Audit or Review Title	Status
Protecting/Preserving Wetlands	Completed, GAO/RCED 92-079FS

The Office of Surface Mining Reclamation and Enforcement

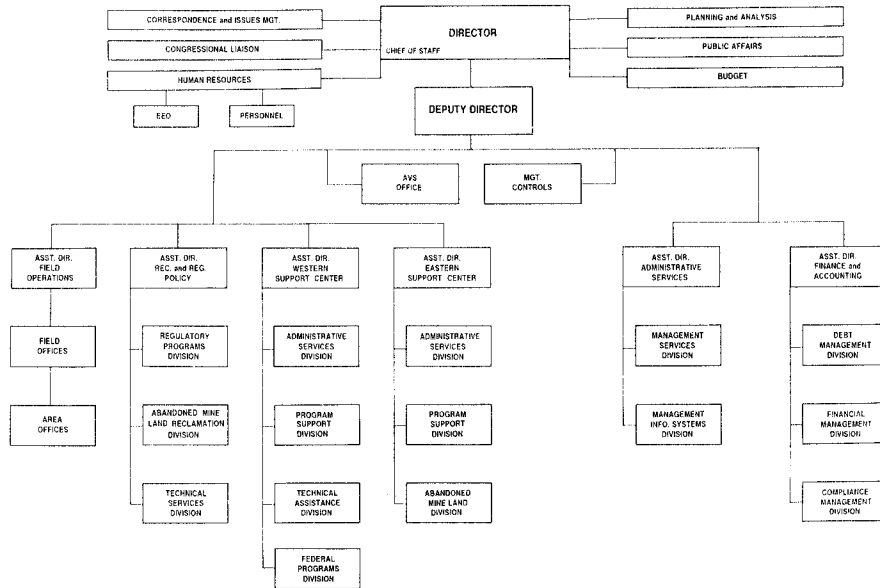
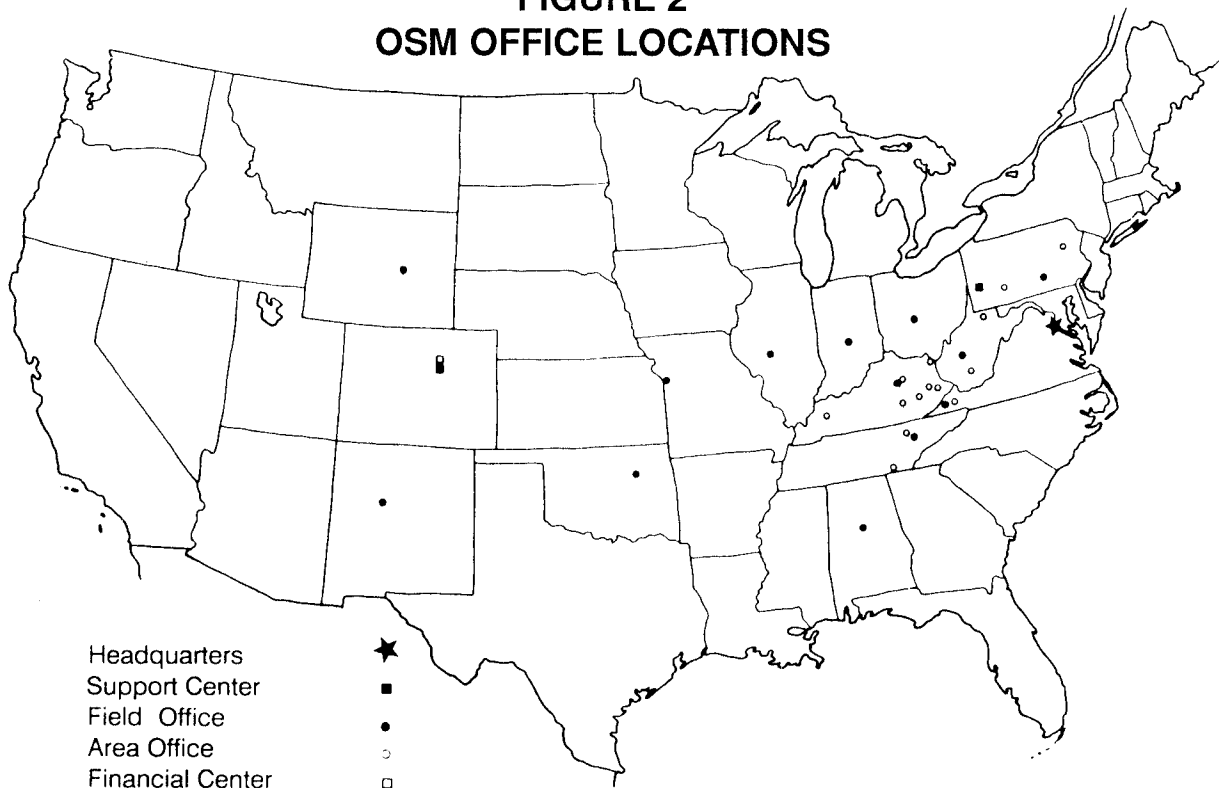
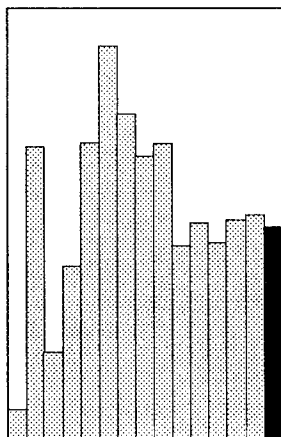


FIGURE 2
OSM OFFICE LOCATIONS



4. REGULATORY ENFORCEMENT

REGULATORY DEVELOPMENT



Final Rulemaking Actions
1978-92

rulemaking activities.

SMCRA charges OSM with the responsibility for publishing rules and regulations as necessary to carry out the purposes of the Act. OSM's permanent regulatory program, and related rules provide the fundamental mechanism for assuring that the goals of SMCRA are achieved. One of OSM's major objectives is to establish a stable regulatory program by improving the regulatory development process and obtaining a broad spectrum of viewpoints on

The 1992 rulemaking process included discussions with representatives of the coal industry, environmental groups, and the state regulatory authorities to obtain their input and suggestions. OSM also completed a review of its existing regulations in compliance with the President's January 28, 1992, memorandum on "Reducing the Burden of Government Regulations." During 1992 OSM published two proposed permanent program rules in the *Federal Register*: AML Reauthorization on November 8, 1991, and the removal of Parts 718 and 720 on August 11, 1992. Two final permanent program rules were published. The final rule *Federal Register* notices published during this period represent a 50 percent decrease over the final rules published during 1991. Table 4 describes final regulations published in the *Federal Register* during

1992. Each regulation is identified with the *Federal Register* citation that gives the volume and page number, effective date, Code of Federal Regulations (CFR) number, and date of publication. The reduction in the volume of OSM's rule-making activity resulted from the moratorium on new regulations announced by the President on January 28, 1992, which was in effect for the remainder of the year.

SIGNIFICANT COURT DECISIONS

During 1992, the federal courts rendered a number of significant decisions relating to SMCRA. These cases are described in Table 5.

STATE PROGRAM AMENDMENTS

The federal regulations governing permanent regulatory programs were initially promulgated in 1979. The regulations were completely revised in 1981-83 to allow states and operators greater flexibility in the means by which they achieve compliance with SMCRA. In response to extensive litigation and agency policy, these rules have been further revised, beginning in 1985 and continuing to the present. In 1992 OSM published 76 proposed (including 17 reopenings) and 57 final state program amendments in the *Federal Register*.

States have the right to propose to amend their programs at any time for an appropriate reason. In addition, whenever SMCRA or its implementing regulations are revised, OSM is required to notify the states of the changes needed to ensure that state programs remain consistent with federal requirements. This is known as a "Part 732 notification."

TABLE 4
FINAL RULES PUBLISHED DURING 1992

Areas Unsuitable for Mining; Special Categories of Mining; Surface Mining Activities; Underground Mining Activities

56 FR 65612 1/16/92 (30 CFR Parts 761, 780, 784, 785, 816, and 817) Published 12/17/91

This rule amends OSM program regulation in five general subject areas: (1) Definition of no significant recreational, timber, economic, or other values incompatible with surface coal mining; (2) AOC variances; (3) disposal of excess spoil; (4) coal mine waste; and (5) contemporaneous reclamation/backfilling and grading

Bond and Insurance Requirements

56 FR 59992 12/26/91 (30 CFR Part 800) Published 11/26/91

This rule amends OSM program regulations by requiring an operator requesting the release of all or part of a performance bond to certify that reclamation has been completed in accordance with the approved reclamation plan.

TABLE 5 1992 SIGNIFICANT COURT DECISIONS

APPLICANT/VIOLATOR SYSTEM (AVS) ISSUES

SOCM v. Lujan, No. 90-5374 (D.C. Cir.)(industry challenge to settlement agreement).

On May 22, 1992, a three-judge panel of the Court of Appeals for the District of Columbia rendered a unanimous decision in this case, vacating the September 1990 order of the district court that had approved the parties' January 1990 settlement agreement, and remanding the case to the district court with instructions to dismiss the action. The court held that citizen suits under section 520 of SMCRA can only be brought in the district in which the mining operations complained of are located.

Pittston Co. v. Lujan, No. 91-6-A (W.D. Va.), appeal pending, No. 92-1606 (4th Cir.).

On February 24, 1992, the district court entered an expanded preliminary injunction in this challenge to OSM's finding that plaintiffs' ownership and/or control of violator companies provided a basis for blocking permits to plaintiffs. That order enjoined OSM from directly or indirectly requiring plaintiffs to abate violations of their owned or controlled entities, regardless of the location of the violations, until the Government gives defendants a due process hearing on whether plaintiffs themselves have violated any laws. On May 12, 1992, the district court dismissed the complaint for lack of jurisdiction, but issued a stay that extends the expanded preliminary injunction pending appeal. Plaintiffs appealed to the Fourth Circuit. The Fourth Circuit denied the Government's motion to dissolve the stay. Briefing and oral argument have been completed. On October 20, 1992, the Fourth Circuit issued an order staying further proceedings in this case until a final order is issued in National Wildlife Fed'n v. Lujan, Nos. 88-3464, etc. (D.D.C.) (consolidated), the challenge to OSM's ownership and control regulations pending in the D.C. district court.

RULE CHALLENGES

Indiana Coal Council, Inc. v. Lujan, Nos. 91-5397, 91-5405 (D.D.C.) (consolidated), appeal pending, Nos. 91-5397, 91-5405 (D.C. Cir.) (historic properties rule challenge).

On October 7, 1991, the district court concluded that State permitting decisions in primacy States are Federal undertakings within the meaning of the NHPA. The court thus held that OSM must apply its historic property regulations to the States' permitting actions in order to comply with its NHPA responsibilities. The Government appealed this decision. On October 29, however, the President signed the omnibus water bill, which, among other things, amends the NHPA's definition of "undertaking" to include programs subject to State or local regulation and administered pursuant to a delegation or approval by a Federal agency. The bill is therefore expected to render this appeal moot.

National Wildlife Fed'n v. Lujan, No. 90-5352 (D.C. Cir.).

On December 10, 1991, the court of appeals reversed the district court's invalidation of the Secretary's termination of jurisdiction regulation. This regulation allows a regulatory authority to terminate its enforcement jurisdiction over a reclaimed surface mining site when, among other circumstances, the regulatory authority releases the performance bond securing the reclamation work of the surface mining operator. Jurisdiction must be reasserted, however, upon a showing that "fraud, collusion, or a misrepresentation of a material fact" accompanied the earlier termination of such jurisdiction. The court held that the Secretary's interpretation of when regulatory jurisdiction may be terminated was permissible. In doing so, it emphasized that the regulation's provision for reassertion of jurisdiction, which adopts an objective standard, adequately addresses concerns raised by the district court and NWF. The court declined to vacate the district court's decision invalidating on the abandoned sites regulation, finding that the district court's decision does not preclude the Secretary from adopting a new rulemaking, as suggested in the Government's brief.

ATTORNEY'S FEES

Save Our Cumberland Mountains, Inc. v. Lujan, Nos. 91-5399, 91-5400 (D.C. Cir.)

On October 6, 1992, the Court of Appeals for the District of Columbia vacated the order of the district court awarding plaintiffs \$823,686 in attorney fees and expenses. The case was remanded to the district court for reconsideration in light of the court of appeals' jurisdictional ruling in SOCM v. Lujan, 963 F.2d 1541 (D.C. Cir. 1992). The court stated that it "express[ed] no opinion as to the continuing availability of a fee award in this case, or of restitution of fees already paid," leaving those issues to be addressed by the district court on remand. The Government had argued that both a July 1991 interim fee award and the October 1991 final award in the case should be vacated, and that plaintiffs should be required to refund to the Government the \$400,853 they had been paid under the interim award.

The result has been the submission of a large number of complex amendments from the states. OSM has taken several steps to process these submissions more efficiently. For example, the amendment review process within OSM has been decentralized, and format and content guidelines for state program amendment submittal have been issued to the states. Also, steps have been taken to assure that states' schedules for rulemaking in response to Part 732 notification are reasonable to accomplish timely state program revisions.

STATE REGULATORY PROGRAMS

Since May 3, 1978, all surface coal mining operations have been required to be permitted by the states and to comply with OSM regulations. Currently there are 24 primacy states that administer and enforce programs for regulating surface coal mining and reclamation under SMCRA. In addition, during 1992, three states had federal programs where OSM regulated surface coal mining and reclamation. Table 6 summarizes state program statistics during the period from July 1, 1991, through June 30, 1992. (OSM's annual statistics on state and federal regulatory programs are compiled on a July-June cycle.)

TABLE 6
STATE PROGRAM STATISTICS
1992 (July 1, 1991 - June 30, 1992)

Alabama Alaska Arkansas Colorado Illinois Indiana Iowa Kansas Kentucky Louisiana Maryland Missouri

State Staffing (FTE's 6/30/92)

Regulatory Program	36	4.75	8.05	20.3	79	73	4.75	4.85	523	4	12.7	14.5
--------------------	----	------	------	------	----	----	------	------	-----	---	------	------

AML Program	32	1	5	12.9	36	22	4.55	4.4	51	2	2.4	13.4
-------------	----	---	---	------	----	----	------	-----	----	---	-----	------

Permits

New Permits Issued	47	0	2	1	10	12	0	1	150	0	1	3
--------------------	----	---	---	---	----	----	---	---	-----	---	---	---

Inspections

Inspectible Units (6/30/92)	317	2	40	59	113	499	32	29	4,246	2	101	100
-----------------------------	-----	---	----	----	-----	-----	----	----	-------	---	-----	-----

Complete Inspections	3,318	6	155	224	148	1,504	112	121	16,052	8	813	291
----------------------	-------	---	-----	-----	-----	-------	-----	-----	--------	---	-----	-----

Partial Inspections	594	18	207	338	1,076	3,621	200	244	23,225	16	898	607
---------------------	-----	----	-----	-----	-------	-------	-----	-----	--------	----	-----	-----

Citations Issued

Notices of Violations (Actions)	366	4	14	37	67	182	28	6	1,775	4	88	21
---------------------------------	-----	---	----	----	----	-----	----	---	-------	---	----	----

Failure-to-Abate Cessation Orders	95	0	0	0	0	14	0	0	333	0	3	5
-----------------------------------	----	---	---	---	---	----	---	---	-----	---	---	---

Imminent Harm Cessation Orders	0	0	0	0	0	0	0	0	23	0	0	0
--------------------------------	---	---	---	---	---	---	---	---	----	---	---	---

Bonds

Forfeitures	0	0	0	0	0	0	0	0	1	0	0	9
-------------	---	---	---	---	---	---	---	---	---	---	---	---

Abandoned Mine Lands

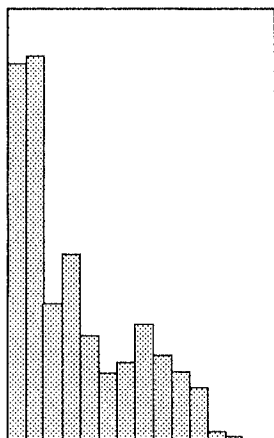
Acreage Reclaimed	180.41	1	105	47.3	561	203.1	47	48.1	990.5	0	48	56
-------------------	--------	---	-----	------	-----	-------	----	------	-------	---	----	----

TABLE 6 Continued
STATE PROGRAM STATISTICS
1992 (July 1, 1991 - June 30, 1992)

	Montana	New Mexico	North Dakota	Ohio	Oklahoma	Pennsylvania	Texas	Utah	Virginia	West Virginia	Wyoming
State Staffing (FTE's 6/30/92)											
Regulatory Program	20.9	15	9.7	106.81	42.35	310	47	21.5	99	130	29.81
AML Program	6.5	7	5.8	43.7	5	142	17	8.75	18	60.6	11
Permits											
New Permits Issued	0	0	4	112	9	166	1	0	48	127	0
Inspections											
Inspectable Units (6/30/92)	20	14	45	918	147	3,350	30	32	953	3,401	41
Complete Inspections	72	55	197	3,494	916	12,091	139	137	4,053	1,932	187
Partial Inspections	144	114	641	5,781	1,008	9,999	335	214	4,458	1,585	369
Citations Issued											
Notices of Violations (Actions)	11	16	2	596	90	2,356	23	71	460	2,944	17
Failure-to-Abate Cessation Orders	2	1	0	117	15	118	0	3	23	371	1
Imminent Harm Cessation Orders	1	0	0	20	1	1	3	2	15	29	0
Bonds											
Forfeitures	0	0	0	43	0	16	0	0	27	122	0
Abandoned Mine Lands											
Acreage Reclaimed	166	0	264	184	48	897	163	24.6	60.5	528.4	2,477

GRANTS TO STATES

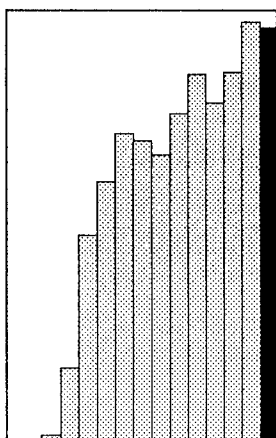
PROGRAM DEVELOPMENT GRANTS



Program Development Grants 1978-92

Section 201 of SMCRA authorizes OSM to assist the state regulatory authorities in developing or revising surface mining regulatory programs. In 1992 no program development grants were awarded.

REGULATORY GRANTS



Permanent Program Regulatory Grants 1978-92

Section 705 of SMCRA authorizes OSM to provide grants to states with approved regulatory programs in amounts not exceeding 50 percent of annual state program costs.

In addition, when a state elects to administer an approved program on federal lands through a cooperative agreement, the state becomes eligible for financial assistance of up to 100 percent of the amount the federal government would have expended in regulating coal mining on those lands.

Table 7 shows grant amounts provided to states during 1992 to administer and enforce regulatory programs.

FEDERAL PROGRAMS FOR STATES

Section 504(a) of SMCRA requires OSM to regulate surface coal mining and reclamation activities on non-federal and non-Indian lands in the state if:

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

Although OSM 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. Thus, these states became federal program states, with surface coal mining and reclamation operations regulated by OSM. Full federal programs are in effect in eleven states: California, Georgia, Idaho, Massachusetts, Michigan, North Carolina, Oregon, Rhode Island, South Dakota, Tennessee, and Washington. Of the federal program states, only California, Tennessee, and Washington have active coal mining. Table 8 summarizes OSM's regulatory actions in those three states during 1992.

FEDERAL OVERSIGHT OF STATE REGULATORY PROGRAMS

SMCRA Section 517(a) states that OSM shall make such inspections as are necessary to evaluate the administration of approved state programs. In meeting this requirement, OSM reviews permits, conducts oversight inspections of mine sites, and undertakes oversight review on topics of concern in the 24 states with approved primacy programs. Oversight inspections are conducted on a random-sample basis and in response to citizen complaints. If OSM has reason to believe a violation of the state program exists, OSM must notify the state (except in the case of imminent danger to the public or the environment, in which case OSM must immediately inspect the site and issue a cessation order when a state has not taken appropriate action). OSM notifies the state of a possible violation by issuing a "Ten-Day Notice." Once notified of a possible violation, the state then has 10 days in which to take appropriation action to cause the violation to be corrected, or to show good cause for not doing so. In the relatively few instances where OSM determines that a state has not taken appropriate action or shown good cause, a federal inspection is conducted, and, if a violation is found to exist, a federal Notice of Violation or a Cessation Order is issued.

Since 1989, changes have been implemented in the manner in which OSM conducts oversight of state programs. These changes include revised requirements for the field office director's report on each state program, an emphasis on oversight tailored to specific areas under each state program (based on perceived need or to follow up on prior problems), and the use of action plans developed jointly between field office directors and states to resolve problems when they occur. Field offices are also required to ensure that data needed to assess state progress in monitoring on-the-ground conditions are included in their annual reports. Table 9 summarizes OSM's oversight inspection and enforcement activities during 1992.

TABLE 7
REGULATORY GRANT FUNDING
1992 OBLIGATIONS

State	Federal Lands	Non-Federal Lands (Federal Share)	Total Federal Funding*
Alabama	\$19,422	\$1,024,471	1,089,483
Alaska	0	206,985	206,985
Arkansas	0	160,512	160,512
Colorado	906,650	237,467	1,138,117
Illinois	91,500	1,951,761	2,077,965
Indiana	0	2,054,118	2,078,328
Iowa	0	135,000	135,000
Kansas	0	106,046	106,046
Kentucky	0	12,807,887	13,422,892
Louisiana	0	192,725	192,725
Maryland	0	462,208	517,336
Mississippi	0	58,169	58,769
Missouri	0	324,931	324,931
Montana	620,081	243,169	863,250
New Mexico	259,984	344,290	604,274
North Dakota	278,655	163,559	442,214
Ohio	0	3,009,767	3,091,707
Oklahoma	22,066	909,385	931,451
Pennsylvania	0	9,942,065	10,124,334
Texas	0	1,130,910	1,130,910
Utah	1,335,766	271,386	1,607,152
Virginia	5,885	2,953,103	3,115,006
West Virginia	0	4,712,761	5,224,696
Wyoming	1,312,601	264,459	1,577,060
Crow Tribe	0	0	0
Hopi Tribe	0	0	0
Navajo Tribe	0	0	0
Total	\$116,807	\$38,976,910	\$50,221,144

* Included obligation for AVS, TIPS, Kentucky Settlement, and other Title V cooperative agreements.

REGULATION OF SURFACE MINING ON FEDERAL AND INDIAN LANDS

FEDERAL LANDS PROGRAMS

Section 523(a) of SMCRA requires the Secretary of the Interior to establish and implement a federal regulatory program applicable to all surface coal mining and reclamation operations taking place on federal lands. OSM promulgated the current federal lands program on February 16, 1983.

The federal lands program is important because the federal government owns significant coal reserves, primarily in the West. The development of these reserves is governed by the Federal Coal Management Program of the U.S. Department of the Interior's Bureau of Land Management. Of the 234 billion tons of identified coal reserves in the western U.S., 60 percent is federally owned.

Through cooperative agreements, the administration of most surface coal mining requirements for the federal lands program may be delegated by the Secretary to

states with approved regulatory programs. By the end of 1992, the Secretary had entered into such cooperative agreements with Alabama, Colorado, Illinois, Montana, New Mexico, North Dakota, Ohio, Oklahoma, Utah, Virginia, West Virginia, and Wyoming.

Under SMCRA, once the Secretary and the state have signed a cooperative agreement, the state regulatory authority assumes permitting, inspection, and enforcement responsibilities for surface coal mining activities on federal lands in that state. OSM maintains an oversight function to ensure that the regulatory authority fully exercises its delegated responsibility under the cooperative agreement. In states without cooperative agreements, the required permitting, inspection, and enforcement activities under SMCRA are carried out by OSM. During 1992, 15 permitting actions were completed by OSM on federal lands in Kentucky.

For all states with leased federal coal, OSM prepares Mining Plan Decision Documents required by the Mineral Leasing Act, as amended, and documentation for other non-delegable authorities for approval by the Secretary. During 1992, 10 mining plan actions were prepared and approved for mines on federal land.

TABLE 8
FEDERAL REGULATORY PROGRAMS
STATE WITH ACTIVE MINING
1992 (July 1, 1991 - June 30, 1992)

	Tennessee	Washington	California
Permits			
Existing and New Permit Applications	51	3	3
New Permits Issued	6	0	0
Permit Revisions and Renewals Issued	208	21	3
Permits Suspended or Revoked	5	0	0
Total Acres Permitted	1,831	14,834	26
Inspections			
Inspectable Units	577	4	4
Complete Inspections	2,374	14	15
Partial Inspections	4,421	24	30
Citations Issued			
Notices of Violations	266	0	2
Failure-to-Abate Cessation Orders	46	0	0
Imminent Harm Cessation Orders	4	0	1
Bonds*			
Final Bonds Released	13	0	0
Forfeitures Initiated	15	0	0
Bonds Collected	8	0	0
Default Sites Reclaimed	3	0	0
Designation of Lands Unsuitable for Mining			
Petitions Received	0	0	0
Acres Designated Unsuitable	0	0	0

*Permanent Program Sites only.

INDIAN LANDS PROGRAM

Pursuant to Section 710 of SMCRA, OSM regulates coal mining and reclamation on Indian lands. In the Southwest, mines on the Navajo and Hopi reservations and a portion of a coal haul road on the Ute Mountain Ute reservation are permitted under the permanent Indian lands program. In addition, OSM, in cooperation with the Bureau of Indian Affairs (BIA) and the Navajo Nation, is overseeing the final reclamation of three mines on the Navajo reservation regulated under the interim program.

On the Crow Ceded Area in Montana, OSM and the Montana Department of State Lands continue to administer applicable surface mining requirements pursuant to a Memorandum of Understanding that includes both permitting and inspection functions. Table 10 provides statistics on regulatory activities on Indian lands during 1992.

HEARINGS AND APPEALS

SMCRA requires the Secretary of the Interior to provide administrative review of OSM actions, including the opportunity for hearings governed by the Administrative Procedure Act. The Secretary has delegated this administrative review function to the Department's Office of Hearings and Appeals (OHA), which is not part of OSM but which handles all the administrative review responsibilities of the Department of the Interior.

OHA consists of a Hearings Division -- staffed by administrative law judges who hold hearings under the Administrative Procedure Act -- and several appeals boards established to review appeals arising from decisions of certain program bureaus within the Department of the Interior. The appellate functions of the Secretary under SMCRA have been delegated to the Interior Board of Land Appeals (IBLA). Under SMCRA, a person adversely

TABLE 9
FEDERAL OVERSIGHT OF STATE PROGRAMS
1992 (July 1, 1991 - June 30, 1992)

State	Number of OSM Inspections		Violations Cited in OSM Enforcement Actions	
	Random	Other	NOV's*	CO's**
Alabama	162	34	0	0
Alaska	3	0	0	0
Arkansas	15	11	0	0
Colorado	20	7	0	0
Illinois	56	45	0	0
Indiana	158	39	1	0
Iowa	12	0	0	0
Kansas	13	5	0	1
Kentucky	430	1,197	0	0
Louisiana	1	4	0	0
Maryland	56	34	1	0
Missouri	33	7	0	0
Montana	9	8	0	0
New Mexico	7	2	1	0
North Dakota	25	0	0	0
Ohio	267	56	1	1
Oklahoma	71	81	1	2
Pennsylvania	348	416	7	0
Texas	14	1	0	0
Utah	16	3	4	0
Virginia	275	88	4	1
West Virginia	343	662	10	8
Wyoming	18	7	3	0

*Notices of Violation.

**Imminent Harm or Failure-to-Abate Cessation Orders.

affected by a written decision of the Director of OSM, or by a delegate of the Director, may appeal directly to IBLA if the decision specifically grants the right to appeal. Administrative review under SMCRA presented the administrative law judges and IBLA with a variety of issues for resolution. In 1992, IBLA issued decisions in 23 SMCRA cases.

PENNSYLVANIA ANTHRACITE REGULATORY PROGRAM

Section 529 of SMCRA provides an exemption from federal performance standards for anthracite coal mining operations, provided the state law governing these operations was in effect on August 3, 1977. Pennsylvania is the only state with an established regulatory program qualifying for the exemption, and thus regulates anthracite mining independent of SMCRA permanent program standards.

The Pennsylvania anthracite coal region is located in the northeast quarter of the state and covers approximately 3,300 square miles. More than 20 different coal beds vary in thickness from a few inches to 50 or 60 feet. The anthracite region is characterized by steeply pitching seams, some with dips steeper than 60 degrees. Such strata require highly specialized mining techniques and present unique challenges to ensure that highwalls are eliminated and the area is restored to productive post-mining land use. The long history of mining in the anthracite region has produced a legacy of abandoned mine land problems. However, because most current mining operations affect previously disturbed land, a large percentage of abandoned mine land is eventually restored to productive use.

In 1992 Pennsylvania anthracite mining produced 4.8 million tons, approximately 7.0 percent of Pennsylvania's annual coal production. The Pennsylvania anthracite program covers 439 inspectable units permitting over 102,000 acres, and includes 113 underground mines, 252 surface mines, 20 preparation plants, and 54 combination operations. Production of anthracite coal continues to reflect the increased mining of anthracite culm banks to fuel the eight cogeneration plants in the region. Anthracite operators mined approximately 2.0 million tons from culm banks, 2.4 million tons from strip mines, and 0.4 million tons from underground mines in 1992.

Pennsylvania's Department of Environmental Resources continues to carry out the provisions of the anthracite program successfully. Only 16 interim permits remain in the anthracite region. The hiring and training of a full complement of inspectors has effectively eliminated a staffing shortfall that previously affected attainment of mandated inspection requirements. One area emphasized in the anthracite program over the past year has been enhanced consistency in enforcement, accomplished through additional training and increased supervisory monitoring and review of violation citation activity.

EXCELLENCE IN SURFACE COAL MINING AND RECLAMATION AWARDS PROGRAM

To give well-earned public recognition to the people responsible for the nation's most outstanding achievement in environmentally sound Title V mining and land reclamation, OSM initiated the annual awards program in 1986. Since then, 56 awards for exemplary performance

**TABLE 10
REGULATORY ACTIVITIES ON INDIAN LANDS
1992**

	Number
Indian Lands in Arizona and New Mexico	
Total Permits	8
Total Acres Permitted	94,635
Permitting Actions	43
Inspectable units (All lands)	10
Total Inspections (Partial and Complete)	91
Enforcement Actions (Notice of Violations issued)	0
Indian Lands in Montana	
Total Permits	1
Total Acres Permitted	3,250
Permitting Actions	0
Inspectable Units (All lands)	1
Total Inspections (Partial and Complete)	16
Enforcement Actions (Notice of Violations issued)	0

under SMCRA have been presented. The 1991 awards, presented by Deputy Secretary Frank Bracken and OSM Director Harry Snyder at the American Mining Congress's Coal Convention 1992 in Cincinnati, Ohio, were::

THE DIRECTOR'S AWARD

- The Central Ohio Coal Company and its parent companies, Ohio Power and American Electric Power, for exemplary reclamation resulting in recreation as a post-mining land use at its Muskingham Mine, near Cumberland, Ohio.

EXCELLENCE IN SURFACE COAL MINING AND RECLAMATION AWARDS

- The Aluminum Company of America (ALCOA), for reclamation which resulted in new pasture lands and wildlife habitat at ALCOA's Sandow Mine, near Austin, Texas.
- Boich Mining Company, for exemplary remining and reclamation of the 850-acre Betsy Mine, near Bloomingdale, Ohio. Boich created a recreation area for hunting and fishing.
- Coal-Mac, Inc., and its contract operator, the Rifle Coal Company, for innovative remining and reclamation at a mine site near Debord, Kentucky. Rifle Coal reclaimed the mountainous terrain at the site into a series of terraces, eliminating the flat-top landscape typical of a mountaintop removal operation.
- Drummond Company for its Morris Mines near Morris, Alabama. Outstanding reclamation by Drummond resulted in the right-of-way for a section of Interstate 65, an airport for a remote-control model airplane club, rerouting and improving county roads, and enriching the soil with municipal sludge.
- Foertsch Construction Company, for outstanding reclamation at the Little Sandy Mine, near Montgomery, Indiana. Foertsch restored more than 99 percent of the mine site to prime farmland conditions even though regulations did not require so high a level of reclamation.
- KEM Coal Company, a subsidiary of Acecoal, for its reclamation at the Shop Hollow Mine, near Hazard, Kentucky. KEM reclaimed the 600-acre mountain-top removal operation and constructed a regional airport, including a 3,500-foot runway and a terminal building.
- Patriot Mining Company, for exemplary reclamation and drainage control at its mine near Steyer, Maryland.

- R & F Coal Company, a subsidiary of Shell Mining, for reclaiming the abandoned Phillips Mine area, near Barnesville, Ohio. R & F turned the site into productive agricultural land and natural wildlife habitat.

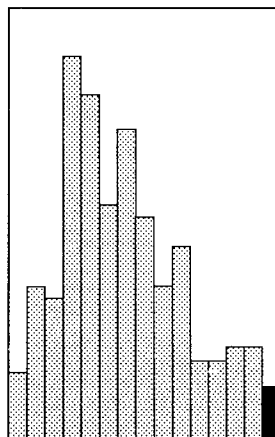
- Savitski Brothers Coal Sales, the first anthracite operator to win an OSM reclamation award, for exemplary reclamation by a small coal mine operator.

- Solar Sources, Inc., for exemplary reclamation of pre-existing abandoned mine problems at its Elberfeld and Perry Mines, near Lynnville and Petersburg, Indiana.

Nominations for the 1992 award program were due November 30, 1992, and winners will be selected in the spring of 1993. Information materials, which have been distributed to encourage participation in the program and communicate reclamation information to mining companies throughout the U.S., included a video program describing winning reclamation, a flyer, and journal articles illustrating specific attributes of the winning reclamation projects.

5. TECHNICAL ASSISTANCE

RESEARCH



Number of Research Projects Funded 1978-92

OSM conducts research studies to find ways to help mine operators and state and federal regulators do a better job of handling the everyday problems associated with implementing SMCRA. Such short-term research studies are directly related to the implementation of Title V regulations affecting active mining operations and provide practical answers to specific problems. In 1992, OSM research funding totaled \$505,166. These research funds were provided

to universities and to other federal agencies. Research funds were provided to universities in support of the following projects:

- Evaluation of the Biotic Potential of Microorganisms and Higher Plants to Enhance the Quality of Constructed Wetlands;
- Investigations and Assessment of Aquifer Response to Longwall Mining, Illinois;
- Constructed Vertical Flow Aerated Wetlands; and
- Optimizing Wetlands Creation on Coal Mined Lands.

Additionally, research funds were provided to the U.S. Geological Survey, the Bureau of Mines, and OSM's Eastern Support Center to conduct research on the effects of blasting on nearby structures. Research monies were also provided to support a cooperative reclamation research project involving OSM, the government of India, and Pennsylvania State University.

Seven research projects were completed during 1992.

TECHNOLOGY TRANSFER

OSM published five issues of its reclamation technology newsletter, *RecTec*, during 1992. *RecTec* provided current information on meetings, papers, and publications covering ground water, risk assessment and bonding, impoundments and dam safety, wetlands, and new surface mining reclamation-related publications.

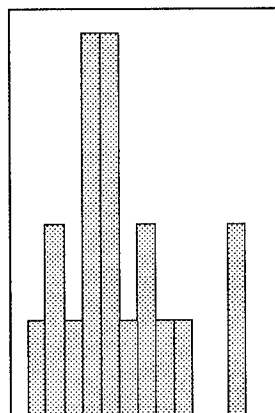
OSM participates in the Technology Transfer Program sponsored by the National Technical Information Service (NTIS). To date, OSM has transferred 249 technical

reports and related abstracts to NTIS for dissemination to the public. Six reports resulting from research under Title V of the Act were transferred to NTIS during 1992.

Additionally, a water database management system for application to the Western United States was developed and has been provided to the Wyoming Department of Environmental Quality.

Other forms of technology transfer include OSM's sponsorship of the Billings Symposium on mining and reclamation, which is conducted every other year, and direct assistance to state regulatory authorities by OSM's Eastern Support Center in Pittsburgh and OSM's Western Support Center in Denver.

EXPERIMENTAL PRACTICES



Experimental Practices Started 1978-92

Section 711 of SMCRA allows alternative mining and reclamation practices that do not comply with Sections 515 and 516 performance standards as a way of encouraging advances in mining technology or to allow innovative industrial, commercial, residential, or public post-mining land uses. However, the experimental practices must meet all other standards established by SMCRA and must maintain protection of the environment and the public. Approval and monitoring of a permit containing an experimental practice results in a close working relationship between the mine operator, the state, and OSM.

In 1992, the experimental practices directive was updated to encourage close federal, state, and industry cooperation and to streamline the OSM review process. In addition to nine on-going projects, four new experimental practices were under review. No projects completed during 1992.

INDIA PROJECT

In 1984, through the United States-India Fund, OSM received the equivalent of \$420,000 from the government of India for mining and reclamation technology transfer. Working directly with the Indian government, OSM planned three research projects and signed contracts to begin the work. The ongoing projects are:

- A conceptual environmental management plan for the Jharia Coal Field, including reclamation of existing

unreclaimed lands which have been in operation for approximately 100 years.

- A conceptual environmental management plan for the Singrauli Coal Field. This project will result in the development of contemporaneous reclamation standards for a relatively new coal field.
- An environmental model for water quality resulting in treatment facilities for improved water quality in the Jharia Coal Field. The U.S. Environmental Protection Agency is assisting with this project.

In 1992, data gathering efforts by Indian scientists were performed under these three projects.

In addition, a new project was approved by the government of India titled "Reclamation, Revegetation, Land Use Planning and Environmental Protection of Large Scale Continuous Surface Mining in a Complex Ground Water Hydrologic Regime" was approved by the government of India. This project is a collaborative effort between OSM and the Pennsylvania State University, Neyveli Lignite Corporation, Ltd., and the government of India. The three tasks included in the project are mine planning and design; reclamation, revegetation, and environmental protection; and the development of techniques for ground water management.

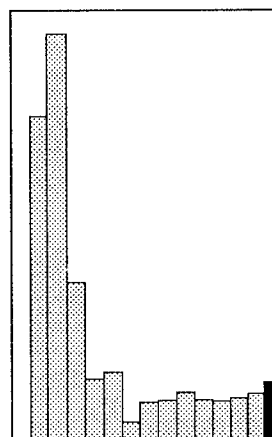
During 1993, OSM will continue assistance to the government of India on these projects.

TECHNICAL TRAINING

In 1992 nationwide training continued for federal, state, and private surface coal mining regulatory and reclamation personnel. The 17 courses offered in 1992 included Acid-Forming Materials Workshop, Administration of Reclamation Projects, Applied Hydrology, Basic Inspection Workbook, Blasting and Inspection, Bonding Workshop, Enforcement Procedures, Engineering Principles for Program Personnel, Evidence Preparation and Testimony, Historical and Archeological Resources, Instructor Training Course, NEPA Procedures, Principles of Inspection, Soils and Revegetation, Spoil Handling and Disposal Practices, Surface and Groundwater Hydrology, Technical Writing, and Underground Mining Technology.

There were 1,145 participants in attendance at 54 training sessions during 1992. Participation by state and tribal personnel totaled 69 percent of program attendance, while federal and private attendance increased from 29 percent in 1991 to 31 percent in 1992.

SMALL-MINE OPERATOR ASSISTANCE PROGRAM (SOAP)



SOAP Grants 1978-92

Section 401(b)(1) of SMCRA authorizes that up to 10 percent of the fees collected for the Abandoned Mine Reclamation Fund may be used for technical assistance to help qualified small mine operators obtain technical data needed for permit applications. Operators who produced fewer than 100,000 tons of coal per year were eligible for assistance in 1991. Effective October 1, 1991, the Abandoned Mine Reclamation Act of 1990 increased from 100,000 to 300,000 the tonnage limit that defines whether operators qualify for assistance. SOAP helps small mine operators meet requirements for the determination of the probable hydrologic consequences for proposed mining operations and the statement of the results of test boring or coal samplings. The "determination" is an analysis of the effect of the proposed operation on the quantity and quality of surface and ground water. The "statement" is an analysis of the overburden and coal that provides information on their chemical and physical makeup, especially if acid- and toxic-producing materials are present.

The data are collected and analyzed by qualified laboratories and consulting firms. OSM originally approved 379 laboratories throughout the United States. Qualification of laboratories is now the responsibility of the state regulatory authorities.

Regulations for SOAP place responsibility with the states that have approved permanent programs. In states with federal programs, OSM operates SOAP. In 1992, 115 small mine operators received assistance. This is a decrease from 147 operators in 1991. Table 11 provides a breakdown of SOAP grant awards by state during 1992.

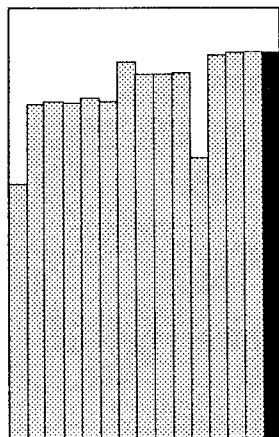
TABLE 11
SMALL-MINE OPERATOR ASSISTANCE
1992 GRANT AWARDS

State	Grant Amount
Kentucky	\$437,114
Maryland	20,000
Ohio	238,000
Pennsylvania	1,400,000
Virginia	10,000
West Virginia	180,000
Total	\$2,285,114

6. ABANDONED MINE LAND PROGRAM

Title IV of SMCRA -- the Abandoned Mine Land (AML) Program -- provides for the restoration of lands mined and abandoned or left inadequately restored before August 3, 1977, with priority given to projects that alleviate danger to public health and safety.

AML FUND



AML Fund Collections 1978-92

through September 30, 1992, the fund has collected \$3,212,764,894.

Expenditures from the fund are made through the regular budgetary and appropriation process. SMCRA specifies that 50 percent of the reclamation fees collected in each state with an approved reclamation program, or within Indian lands where the Indian tribe has an approved reclamation program, are to be allocated to that state or tribe for use in its reclamation program. This 50 percent is designated as the state or tribal share of the Fund. The remaining 50 percent (the federal share) is used by OSM to complete high-priority and emergency projects under its Federal Reclamation Program; to fund the Rural Abandoned Mine Program (RAMP), administered by the U.S. Department of Agriculture; to fund the Small Operator Assistance Program (SOAP); and to fund reclamation directly through state reclamation programs. In 1991, at the direction of Congress, a formula to distribute federal-share money to the state reclamation programs was established based on historic coal production. Table 12 shows fee collections and funding by states for 1992.

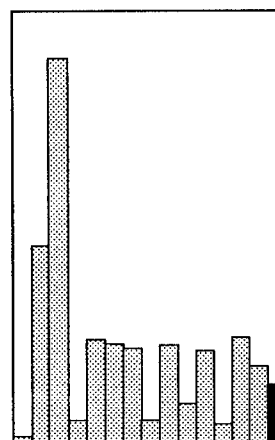
The Abandoned Mine Reclamation Act of 1990, Public Law 101-508, became effective October 1, 1991, and extended fee collection authority through September 30, 1995. This act included the following amendments to Title IV of SMCRA:

- Allocation of 50 percent of fee collections only to the

state/tribe, with the remaining 50 percent of fee collections, plus all interest, penalty, and investment interest, to the federal-share allocation as follows: 40 percent to states/tribes based on historic coal production, 40 percent for federal program expenses, and 20 percent to fund the Rural Abandoned Mine Program;

- Investment of the portion of the AML Fund not needed for current withdrawals and crediting of that interest to the Fund's federal-share balance;
- Set-asides for acid mine drainage abatement and treatment and future coal-related reclamation projects;
- Increase in the ownership and control information required from mine operators;
- Development of a procedure to allow states/tribes that have certified completion of known coal problems to utilize state-share funds for non-coal reclamation;
- Reclamation of abandoned interim program sites and insolvent surety sites;
- An increase in the tonnage requirement from 100,000 to 300,000 tons to qualify under the Small Operator Assistance Program (SOAP); and
- An increase in the minimum state program to \$2,000,000.

FEDERAL RECLAMATION PROGRAM



Interior Department Projects 1978-92

Under Sections 402 and 407 of SMCRA, the Secretary of the Interior is authorized to expend fund monies for non-emergency reclamation of high-priority AML sites that present an extreme danger to the public. A non-emergency situation is defined in 30 CFR 870.5 as "a condition that could reasonably be expected to cause substantial harm to persons, property, or the environment and to which persons or improvements on real property are currently exposed."

Until states or Indian tribes received approval of their AML programs, all reclamation was carried out as Department of the Interior projects administered by OSM. However, as state programs were approved, beginning in 1980, and as the states assumed responsibility for correcting AML

TABLE 12
AML FEE COLLECTIONS AND FUNDING
1992

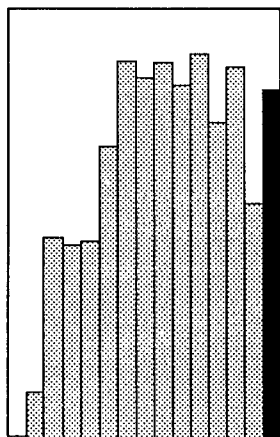
State/ Tribe	Fees Collected	Federal Projects	RAMP Projects	State Share Allocation	Federal Share Allocation	Emergency Allocation
Alabama	\$5,813,444	\$0	\$383,566	\$1,907,537	\$1,195,098	\$300,000
Alaska	533,871	0	0	160,882	0	0
Arkansas	13,312	0	472,000	0	2,000,000	25,000
California	8,914	0	0	0	0	0
Colorado	4,387,905	10,277	0	1,428,046	571,954	0
Georgia	0	43,212	0	0	0	0
Illinois	12,066,774	0	140,592	3,991,554	4,427,415	550,000
Indiana	10,800,860	123,651	288,116	3,207,413	1,441,427	0
Iowa	114,217	33,093	0	8,313	1,991,687	0
Kansas	108,186	0	124,775	122,040	1,877,960	465,000
Kentucky	35,595,377	5,046,353	823,362	10,675,702	4,339,146	0
Louisiana	335,152	0	0	82,700	0	0
Maryland	729,063	10,521	197,500	306,424	1,693,576	0
Michigan	0	150,099	0	0	0	0
Missouri	822,857	0	0	353,947	1,646,053	0
Montana	12,377,684	0	0	3,452,889	0	100,000
New Mexico	3,805,943	0	0	1,191,864	808,136	0
North Dakota	3,056,030	4,927	98,000	1,000,276	999,724	0
Ohio	7,691,489	2,329,189	912,596	2,628,252	2,714,062	0
Oklahoma	699,478	22,701	575,053	198,658	1,801,342	0
Pennsylvania	15,004,826	1,745,986	1,187,773	4,638,706	14,311,600	0
Tennessee	903,752	694,545	449,796	0	0	0
Texas	5,567,159	19,236	0	1,644,741	355,259	0
Utah	3,270,053	0	0	969,091	1,030,909	0
Virginia	7,814,324	0	235,840	2,642,427	1,331,820	300,000
Washington	1,868,521	698,844	0	0	0	0
West Virginia	34,055,839	279,997	1,261,394	9,013,750	8,225,174	5,045,040
Wyoming	64,913,245	1,650	0	17,793,517	0	0
Crow Tribe	803,584	0	0	722,043	0	0
Hopi Tribe	1,138,369	0	0	748,571	634,679	0
Navajo Tribe	7,654,257	0	0	6,075,636	0	0
Federal Share*	(60,593)					
Undist. Emer.						126,760
Total	\$241,953,915	\$11,394,651	\$7,150,363	\$74,964,979	\$53,397,021	\$6,911,800

*During 1992, refunds from the Federal Share exceeded collections.

problems, OSM has greatly reduced its direct participation in this portion of the program. During 1992, work was accomplished on 21 projects. These high-priority projects were principally in federal program states and, to a lesser extent, on National Park Service land in West Virginia.

Each year OSM evaluates federal reclamation projects that were completed at least three years ago. The objective is to identify abatement or control methods that are effective over time, as well as those with demonstrated deficiencies that need to be corrected. The evaluation report issued in 1992 describes 34 of the 284 projects completed in 1988. The evaluation team found the overall quality of federal reclamation work and the abatement of emergencies to be excellent. No major deficiencies in design or control work were found and no recommendations for improvement were contained in the report.

EMERGENCY PROJECTS



OSM Emergency Projects 1978-92

Emergency projects are those involving abandoned coal mine lands that present a danger to public health, safety, or general welfare and which require immediate action.

Under Section 410(a) of SMCRA, the Secretary is authorized to expend monies from the fund for the emergency restoration, reclamation, abatement, control, or prevention of the effects of coal mining practices if an emergency exists.

Since the beginning of the program, OSM has encouraged states to take over emergency project responsibility. Beginning in 1983, Arkansas and Montana assumed emergency project responsibility, followed by Illinois in 1984. During 1988 and 1989, Kansas, Virginia, and West Virginia took over responsibility for their emergency projects. Alabama assumed responsibility in 1990, followed by Ohio in 1992. In 1989, OSM established an emergency policy that provided federal-share funds, in addition to the formula-based allocation, to states with emergency programs.

Because of concern over recurring shortfalls in available funds for the federal emergency program, a study was undertaken by OSM to review how the emergency program is operated. The study contained recommendations, now being implemented, aimed at tightening the scope of the emergency program, while ensuring that all immediate threats to public health, safety, or general welfare are dealt with promptly.

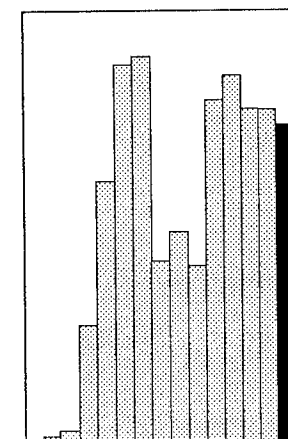
In 1992 the average number of days required to respond to complaints (notification of a possible emergency problem) averaged 1.9 in the East and 1.8 in the West. The total days from complaint referral to construction averaged 77.3 days in the East and 13.7 in the West. This represents a 52.8 percent improvement in response, or a 0.92 percent reduction in days from complaint referral to construction, as compared to 1991. Of the 226 emergency complaint investigations referred by OSM field offices, 179 resulted in declaration of emergencies. Of the emergency complaints investigated, 34 were determined to be not of an emergency nature, and 11 were considered not related to coal mining or were reclaimed by the landowner. The 34 mining-related complaints not of an emergency nature were referred to the states for their consideration as high-priority AML grant projects.

During 1992 OSM declared 179 new emergency projects. Due to funding limitations all of these projects were not funded; however, obligations were made on 228 projects, including newly declared emergencies and contract amendments to pre-1992 projects. The eight states with emergency programs initiated 110 emergency projects in 1992. Table 13 summarizes high-priority and emergency project obligations by state for 1992.

POST-ACT RECLAMATION PROGRAM

As authorized in the 1992 appropriation (P.L. 102-154), federal civil penalties collected under Section 518 of SMCRA were used to reclaim lands mined and abandoned after August 3, 1977. In 1992 OSM funded 10 reclamation projects costing a total of \$1,181,495. An additional \$304,647 in unobligated funds will be carried over for use in reclaiming 1993 projects. Table 14 summarizes 1992 post-Act reclamation projects.

GRANTS TO STATES AND TRIBES



Grants & Cooperative Agreements 1978-92

Beginning with Texas in 1980, OSM has approved state reclamation programs so that currently all primacy states except Mississippi have approved AML programs. During 1988, the Navajo and Hopi Tribe programs were approved, and in 1989 the Crow Tribe received approval for its program. The states and the tribes received grants totaling \$172,295,791 in 1992. Since 1981, when the states began receiving AML administrative grants to operate their programs and construction grants to complete

TABLE 13
FEDERAL RECLAMATION PROGRAM PROJECTS
1992 OBLIGATIONS

State or Tribe	Emergency	High Priority	Total 1978-92*
Alabama	\$0	\$0	\$13,994,015
Alaska	0	0	194,638
Arkansas	0	0	84,904
California	0	0	1,048,643
Colorado	10,277	0	1,826,545
Georgia	0	43,212	1,769,695
Illinois	0	0	5,376,749
Indiana	123,651	0	3,563,299
Iowa	53,274	0	1,074,948
Kansas	0	0	5,094,172
Kentucky	5,046,353	0	66,286,791
Maryland	10,521	0	2,016,986
Michigan	150,099	0	1,709,352
Missouri	0	0	7,720,688
Montana	0	0	729,058
New Mexico	0	0	2,364,696
North Carolina	0	0	205,407
North Dakota	4,927	0	1,715,613
Ohio	2,329,189	0	18,154,921
Oklahoma	22,701	0	1,182,499
Oregon	0	0	42,275
Pennsylvania	1,745,986	0	79,625,324
Rhode Island	0	0	556,229
Tennessee	19,545	675,000	14,790,749
Texas	19,236	0	283,849
Utah	0	0	123,791
Virginia	0	0	10,149,859
Washington	15,170	707,835	3,722,173
West Virginia	0	256,820	29,032,758
Wyoming	1,650	0	1,065,121
Cheyenne River Sioux Tribe	0	150,000	2,312,372
Crow Tribe	0	0	1,097,895
Fort Berthold Tribe	0	0	69,972
Fort Peck Tribe	0	0	147,991
Hopi Tribe	0	0	1,263,409
Jicarillo Apache Tribe	0	0	50,998
Navajo Tribe	0	0	2,222,792
Northern Cheyenne Tribe	0	0	580,005
Southern Ute Tribe	0	0	94,206
Rocky Boy Tribe	0	0	60,188
Uintah/Ouray Tribe	0	0	137,638
Ute Mountain Ute Tribe	0	0	14,300
White Mountain Apache Tribe	0	0	1,838
Wind River Tribe	0	0	71,767
Zuni Tribe	0	0	125,009
Total	\$9,532,398	\$1,862,253	\$283,756,127

* Includes prior year contract deobligations.

reclamation projects, states have received \$1,799,758,783 from the Fund. Grant amounts for 1992 are shown in Table 15. On-the-ground coal mine reclamation accomplishments resulting from grant funding through 1992 are summarized in Table 16.

Based on initiatives proposed by OSM in 1991, the Office of Management and Budget asked OSM to assess the feasibility of revising its grant process used for the AML program. OSM is proposing to strengthen federalism by providing simplified AML grants to the states to use in carrying out reclamation activities. Simplified grants would provide the states with more authority, flexibility, and responsibility in operating their AML programs.

Simplified grant funding of state AML programs will streamline the present grant application process, which currently requires advance approval of each AML project before OSM awards a state grant for AML reclamation. Instead, within limits of existing authority, states will receive amounts based on appropriated spending levels and will be held accountable for using those funds in accordance with their approved AML plan. OSM's role will move away from the cumbersome and detailed pre-award scrutiny of state grant applications.

Empowering the states in this manner visibly recognizes the states' acknowledged record of accomplishment in AML work and reflects OSM's confidence in the states' ability to operate effective AML programs.

During 1992 accomplishments in this area included the following:

- A proposed change to current National Environmental Policy Act procedures was published in the *Federal Register* on August 19, 1992. Comments received are under review and publication of a final notice is expected in 1993.
- A draft Federal Assistance Manual revision to implement AML simplified grants was circulated for comment, and the final directive was expected to be issued in December 1992.
- Part 886 AML grant regulations are being modified to reflect the simplified process. A proposed rule is scheduled to be published in the *Federal Register* in March 1993.

**TABLE 14
POST-ACT RECLAMATION PROJECTS
1992**

State	Project Name	Civil Penalty Funds	Other Funds*
Arkansas	Harmony	\$155,000	\$0
Arkansas	Sugarloaf	50,000	5,000
Colorado	New Pryor	3,260	0
Montana	Divide	175,000	33,500
Kentucky	Little Fork	262,384	0
Kentucky	Rocky Branch	232,384	0
Oklahoma	Bills Tipple	174,000	0
Oklahoma	Hefner	1,741	45,000
Tennessee	B & A Coal	1,109	0
Virginia	Cox Creek	30,000	0
Virginia	Pilkenton	155,000	0
Total		\$1,181,495	\$83,500

*Includes bond forfeiture funds outstanding on the project, and other state funds.

TABLE 15
AML GRANTS¹ TO PRIMACY STATES AND INDIAN TRIBES
1992

State/ Tribe	Subsidence Insurance	10% Program Set-Aside	Administration	Construction	Emergency	Total
Alabama	\$0	\$0	\$1,746,746	\$1,869,457	\$300,000	\$3,916,230
Alaska	0	0	241,307	0	0	241,307
Arkansas	0	0	405,380	1,632,793	25,000	2,063,173
Colorado	0	200,000	821,436	1,060,646	0	2,082,082
Illinois	0	0	1,710,174	7,472,000	549,419	9,731,593
Indiana	0	464,884	1,537,045	13,320,306	0	15,322,235
Iowa	0	0	359,279	1,728,355	0	2,087,634
Kansas	0	0	460,895	1,550,000	463,071	2,473,966
Kentucky	0	0	3,771,688	26,002,346	0	29,774,034
Louisiana	0	0	100,057	0	0	100,057
Maryland	0	0	181,762	2,522,980	0	2,704,742
Missouri	0	35,394	686,333	2,385,082	0	3,106,809
Montana	0	0	2,050,000	3,400,000	100,000	5,550,000
New Mexico	0	0	674,501	0	0	674,501
North Dakota	0	200,000	564,541	725,232	0	1,489,773
Ohio	0	0	1,229,078	4,986,419	434,462	6,649,959
Oklahoma	0	0	849,681	1,800,455 ²	0	2,650,136
Pennsylvania	0	0	8,138,287 ³	13,764,889	0	21,903,167
Texas	0	0	980,330	3,668,300	0	4,648,630
Utah	0	0	997,346	1,185,149	0	2,182,495
Virginia	0	0	1,313,513 ⁴	3,783,093	300,000	5,396,606
West Virginia	695,226	0	6,275,267	11,529,220	5,370,522	23,870,235
Wyoming	0	0	2,741,948	17,072,263	0	19,814,211
Crow Tribe	0	0	464,707	511,157	0	975,864
Hopi Tribe	0	0	141,323	362,918	0	504,241
Navajo Tribe	0	0	1,448,000	934,123	0	2,382,123
Total	\$695,226	\$900,278	\$39,890,626	\$123,267,185	\$7,542,44	\$172,295,791

1. Funding for these grants is derived from the FY 1992 distribution and funds recovered or carried over from previous years. Downward adjustments of prior-year awards are not included in the totals.

2. Includes \$87,000 in construction costs from reimbursable cooperative agreement (GR299401).

3. Includes inventory grants.

4. Includes coalbed mapping grant.

TABLE 16
HIGH-PRIORITY RECLAMATION PROJECT ACCOMPLISHMENTS*
1977-1992

State/ Tribe	Acres Reclaimed	Number of Mine Portals Closed	Number of Vertical Shafts Closed	Acres Protected From Subsidence	Feet of Highwall Reclaimed
Alabama	3,993	755	147	71	83,230
Alaska	72	6	7	0	2,000
Arkansas	664	16	22	0	25,390
California	16	28	39	2	0
Colorado	872	603	1,969	36	28,280
Georgia	148	3	2	1	0
Illinois	8,249	111	364	23	13,210
Indiana	3,715	73	159	16	23,062
Iowa	1,260	0	15	5	41,155
Kansas	450	0	81	40	10,345
Kentucky	10,908	1,366	107	6,450	9,293
Maryland	671	24	14	1	34,000
Missouri	3,341	4	28	3	20,550
Montana	4,302	1,710	1,133	758	8,832
New Mexico	233	239	149	47	0
North Dakota	2,583	2	4	521	56,650
Ohio	6,713	191	137	343	97,053
Oklahoma	1,302	13	4	7	39,770
Pennsylvania	7,628	403	396	3,056	204,155
Tennessee	1,490	228	16	0	40,320
Texas	838	7	73	3	4,585
Utah	297	627	152	4	2,625
Virginia	1,404	514	65	7	9,953
Washington	32	22	61	14	0
West Virginia	5,573	992	32	520	76,385
Wyoming	22,878	161	96	1,085	231,500
Crow Tribe	75	20	1	19	4,350
Hopi Tribe	12	12	2	1	3,910
Navajo Tribe	1,949	72	6	0	0
Total	91,636	8,562	5,220	13,019	1,070,603

* Source: Data presented in this chart is from two sources and provides the sum of reclamation financed wholly or in part from the Abandoned Mine Land Fund. Reclamation results from projects completed by the state Abandoned Mine Land Program are reported annually to the OSM field offices. This information was added to similar data tabulated by the OSM support centers in Pittsburgh and Denver, which complete emergency and federal reclamation projects in non-primacy states.

MINIMUM PROGRAM GRANT FUNDING

The minimum-level AML program was established by Congress in 1988 to assure funding of existing high-priority projects in states where the annual state-share allocation is too small for the state to administer a program and initiate reclamation.

Arkansas, Colorado, Iowa, Kansas, Maryland, Missouri, New Mexico, North Dakota, Oklahoma, Texas, Utah, and the Hopi Tribe were eligible for minimum-level program funding during 1992 and received such grants during the year. Authorized funding of the minimum-level program was raised from \$1,500,000 for 1991 to \$2,000,000 for 1992. Eligible states received contributions from non-minimum program states/tribes totalled \$4,494,184 in federal-share money and \$7,788,210 in state-share money during 1992. These contributions bring the 12 states/tribes to the minimum-program level. Once minimum-program states/tribes complete their high-priority projects listed in the National Inventory of AML Problems, annual funding is limited to state-share money. In 1992 the Hopi Tribe received a reduced minimum program grant because its inventory of high-priority problems did not total \$2,000,000. In addition, Colorado became eligible for a minimum program when contributions for minimum program states dropped its allocation below \$2,000,000.

STATE-SHARE SET-ASIDE GRANTS

Beginning in 1987, Public Law 100-34 authorized states to set aside up to 10 percent of the state-share portion of their annual AML reclamation grants. Set-aside money was deposited into special trust funds, and became available, along with interest earned, for use by the state for reclaiming AML problems after August 3, 1992, the original expiration date for the collection of AML reclamation fees, which was subsequently extended to September 30, 1995, by legislation. Statutory amendments contained in Public Law 101-508 created a new set-aside program which does not supersede the transfer funds deposited under the original 1987 program. The funds set aside under the new program may be utilized only after September 30, 1995, and only to reclaim eligible Priority 1 and 2 coal problems. The states and Indian tribes may deposit up to 10 percent of the total state/tribe share and federal share funds granted annually and have the option to use these funds and earned interest for either a future reclamation set-aside program or an acid mine drainage abatement program.

In 1992, four states set aside \$900,278.

SUBSIDENCE INSURANCE PROGRAM

Public Law 98-473 authorized states and tribes with approved reclamation programs to use abandoned mine land funds for establishing self-sustaining, individually administered programs to insure private property against damage caused by land subsidence resulting from abandoned underground coal mines. Implementing rules were promulgated in February 1986. Under those rules, states can receive a subsidence insurance grant of up to \$3,000,000, awarded from the state's share of the AML Fund. In 1992 one subsidence insurance grant was issued. Through 1992, OSM has granted a total of \$10,485,107 to Colorado, Indiana, Kentucky, Ohio, West Virginia, and Wyoming to develop and administer subsidence insurance programs.

ABANDONED MINE LAND INVENTORY SYSTEM (AMLIS)

During 1992, OSM established policies and procedures needed to implement the 1990 amendments to SMCRA that established additional reclamation programs under Title IV of the Act, and which included a requirement for the Secretary to note on the inventory at least annually those projects completed under Title IV. The policy was issued in Directive AML-1 on November 26, 1991. Included in the directive was a revised Problem Area Description form (OSM-76) which is the instrument used to collect data about reclamation projects and accomplishment from states, tribes, the Department of Agriculture (RAMP), and from within OSM (Federal Reclamation Program). The OSM-76 form was approved by the Office of Management and Budget in February 1992, and was distributed to users in April.

Currently, OSM has initiated a work plan for upgrading and enhancing its AMLIS system in order to capture and report the collected data. During 1992 a requirements analysis, functional analysis, and the enhanced system's module for entering data were completed. In addition, data from the prior AMLIS system had been transferred to the enhanced AMLIS. Initial summary reporting capabilities are in place on a local-area network, and a system prototype was demonstrated within OSM and to the states and tribes in August.

In 1993 OSM plans to focus on ways to allow those states wishing to do so to submit data for inclusion into AMLIS electronically, and to allow more direct access to AMLIS reports.

NATIONAL ABANDONED MINE LAND RECLAMATION AWARDS

OSM Director Harry Snyder announced the first call for nominations for an annual OSM national abandoned mine land reclamation award program at the 1992 Association of State AML Programs meeting. Building on the tremendous success of the Title V Excellence in Surface Coal Mining Awards, a second awards program was initiated to give well-earned public recognition to those responsible for the nation's most outstanding achievements in abandoned mine land reclamation. Awards for 1992 will be presented for:

- Exemplary reclamation of land and water resources adversely affected by abandoned mine problems.
- Elimination of abandoned underground mine entries, shafts, and voids.
- Successful land reclamation that eliminated soil erosion and sedimentation problems.
- Elimination or treatment of water pollution problems created by mine drainage.
- Elimination or control of burning coal refuse disposal areas and burning coal in situ.
- Successful abatement and control of mine subsidence problems.

Nominations were due to the Abandoned Mine Land Programs by November 30, 1992, and winners will be selected in the spring of 1993. Award plaques and certificates will be presented to those responsible for the outstanding work (e.g., reclamation specialists who supervised and coordinated the work, engineers who designed the projects, and contractors who completed the on-the-ground reclamation). In addition, illustrated materials will be distributed to aid transfer of the experience gained to others carrying out Title IV reclamation.

7. OSM INFORMATION

The OSM publication and tapes listed below, as well as others that were completed in previous years, are distributed upon request. Published technical research reports are also available from the Department of Commerce's National Technical Information Service (NTIS). Information made available in 1992 is listed below, with location of availability shown in parenthesis after each citation.

U.S. Department of the Interior, 1992. *Office of Surface Mining Annual Report, Fiscal Year 1991*. Office of Surface mining, Washington, D.C., 31 pp. (Public Affairs Office, OSM Headquarters)

U.S. Department of the Interior, 1992. *Surface Coal Mining Reclamation: 15 Years of Progress, 1977-1992: A report on the protection and restoration of the Nation's land and water resources under Titles IV and V of the Surface Mining Control and Reclamation Act of 1977, Part 1*. Office of Surface Mining, Washington, D.C., 53 pp. (Public Affairs Office, OSM Headquarters or Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock No. ISBN 0-16-037977-6. Price \$8.50 per copy.)

U.S. Department of the Interior, 1992. *Surface Coal Mining Reclamation: 15 Years of Progress, 1977-1992: A report on the protection and restoration of the Nation's land and water resources under Titles IV and V of the Surface Mining Control and Reclamation Act of 1977, Part 2 Statistical Information*. Office of Surface Mining, Washington, D.C., 78 pp. (Public Affairs Office, OSM Headquarters)

U.S. Department of the Interior, 1992. 1991 Excellence in Surface Coal Mining and Reclamation Awards Video Program -- A 12-minute VHS video program describing the 1991 winning reclamation operations. Office of Surface Mining, Washington, D.C. (Available on loan from Public Affairs Office, OSM Headquarters)

U.S. Department of the Interior, 1992. *1992 Excellence in Surface Coal Mining and Reclamation Awards: Call for nominations*. Office of Surface Mining, Washington, D.C., flyer, 6 pp. (Public Affairs Office, OSM Headquarters)

U.S. Department of the Interior, 1992. *1992 National Abandoned Mine Land Reclamation Awards: Call for nominations*. Office of Surface Mining, Washington, D.C., flyer, 6 pp. (Public Affairs Office, OSM Headquarters)

U.S. Department of the Interior, 1992. "Office of Surface Mining Reclamation and Enforcement Information Resources Management Strategic Plan: Fiscal Years 1992-1996," Office of Surface Mining, Washington, D.C. (Information Systems Management, OSM Headquarters)

U.S. Department of the Interior, 1992. *TECHNOTES Techniques to Reduce Soil Compaction in Reclaimed Soils*, TN92-1. Office of Surface Mining, Pittsburgh, Pa. 2 pp. (OSM Eastern Support Center)

U.S. Department of the Interior, 1992. *TECHNOTES Long-term Effects of Surface Coal Mining on Ground-Water Levels and Quality in Two Small Watersheds in Eastern Ohio*, TN92-2. Office of Surface Mining, Pittsburgh, Pa., 2 pp. (OSM Eastern Support Center)

U.S. Department of the Interior, 1992. *TECHNOTES Hydrology Evaluation System Developed*, TN92-3. Office of Surface Mining, Pittsburgh, Pa. 2 pp. (OSM Eastern Support Center)

U.S. Department of the Interior, 1991. *RecTec* Number 9, November 1991. Office of Surface Mining, Washington, D.C., 4 pp. (Division of Technical Services, OSM Headquarters)

U.S. Department of the Interior, 1992. *RecTec* Number 10, January 1992. Office of Surface Mining, Washington, D.C., 4 pp. (Division of Technical Services, OSM Headquarters)

U.S. Department of the Interior, 1992. *RecTec* Number 11, March 1992. Office of Surface Mining, Washington, D.C., 4 pp. (Division of Technical Services, OSM Headquarters)

- U.S. Department of the Interior, 1992. *RecTec* Number 12, May 1992. Office of Surface Mining, Washington, D.C., 4 pp. (Division of Technical Services, OSM Headquarters)
- U.S. Department of the Interior, 1992. *RecTec* Number 13, August 1992. Office of Surface Mining, Washington, D.C., 4 pp. (Division of Technical Services, OSM Headquarters)
- Kokesh, Amy, 1992. Comparative Analysis of Plant and Micro-invertebrate Communities and Toxic Metals at an Abandoned Surface Mine In Grant County, West Virginia. (NTIS accession number PB93-114973)
- Saperstein, L.W., R.J. Sweigard, L.G. Wells, R.I. Barnhisel, and D.L. Simpson, 1991. "Techniques to Reduce Soil Compaction in Reclaimed Soils", Lexington, Kentucky, 127 pp. (Eastern Support Center or NTIS accession number PB92-160324)
- Dinger, J.S., and D.R. Wunsch, 1992. "Determination of Aquifer Characteristics in Spoil Generated by Mountaintop Removal-Valley Fill Coal-Mining Process," Kentucky Geological Survey and the University of Kentucky, Lexington, Kentucky. (Eastern Support Center or NTIS accession number PB93-114965)
- Wunsch, D.R., J.S. Dinger, and P.B. Taylor, 1992. "Design, Construction, and Monitoring of Ground-Water Resources of a Large Mine-Spoil Area: Star Fire Tract, Eastern Kentucky," Kentucky Geological Survey and the University of Kentucky, Lexington, Kentucky, 19 pp. (Eastern Support Center or NTIS accession number PB93-115228)
- Senft, J., and D. Baker, 1991. "Development of Procedures with Appropriate Monitoring Methods in Addition to Baker Soil Test to Provide Efficient/Successful Establishment of Vegetation in Mine Soils," Environmental Resources Research Institute, Pennsylvania State University, University Park, Pennsylvania, 144 pp. (Eastern Support Center or NTIS accession number PB93-111177)
- Taddeo, Frank, 1991. "Role of Dissimilatory Sulfate Reduction in Wetlands Constructed for Acid Coal Mine Drainage Treatment," Villanova University, Villanova, Pennsylvania, 129 pp. (NTIS accession number PB92-108752)
- Sheetz, Barry E., S. Hoyle, J. Morrison, D. Smith, and A. Wayne, 1992. "Improving the Characterization of Sulfur in Overburden and Coals Using State-of-the-Art Technology," Materials Research Laboratory, Pennsylvania State University, University Park, Pennsylvania, 193 pp. (Eastern Support Center or NTIS accession number PB93-120244)
- PRC Incorporated, 1992. "Smartest Software Program and Corresponding User's Manual for the Evaluation of the Probable Impacts of Coal Mining in the Appalachian Coal Basin" (Eastern Support Center)
- Weaver, H.V., 1992. "The Prospect of Surface Coal Mining as a Non-Consumptive Land Use in the Jharia Coalfield of India," in *Proceedings of the Second International Conference on Environmental Issues and Management of Waste in Energy and Mineral Production*, Calgary, Alberta, Canada, September 1-4, 1992, pp. 287-291. (Eastern Support Center)
- Vallejo, L.E., R.A. Welsh Jr., C.W. Lovell, and M.K. Robinson, 1992. "The Influence of Fabric and Composition on the Durability of Appalachian Shales" in *Rock for Erosion Control*, ASTA STP 1177, Charles H. McElroy and David A. Lienhart, Eds., American Society for Testing and Materials, Philadelphia, Pennsylvania. (Eastern Support Center)
- Allen, M., 1992. "A Review of Procedures OSM Uses to Evaluate and Improve State Regulatory Programs Regarding Prime Farmland Reclamation of Mined Soils," in *Proceedings of the National Symposium on Prime Farmland Reclamation*, August 10-14, 1992, St. Louis, Missouri, pp. 169-172. (Eastern Support Center)
- Craft, J.E., 1992. "Classification of Mine Related Subsidence East of the Mississippi River, USA," in *Proceedings of the 11th International Conference on Ground Control in Mining*, Wollongong, Australia, pp. 466-474. (Eastern Support Center)
- Wayne, Amy, 1992. "An Investigation of Possible Variations In The Structural Parameters of Pyrite, Using X-Ray Powder Diffraction and the Reitveld Method of Structure Refinement," Master's Degree Thesis, Pennsylvania State University, College Park, Pennsylvania. (Eastern Support Center)

- Senft, J. and D. Baker, 1991. "Reclamation of Very Acid Mine Waste Site in Pennsylvania, U.S.A.," in *Proceedings of the Second International Conference on the Abatement of Acidic Drainage: Volume 1*, Montreal, Canada, pp. 209-218. (Eastern Support Center)
- Hart, S.W., 1992. "Prediction and Amelioration of Acid Mine Drainage," Ph.D. Dissertation, Chemical Engineering Department, West Virginia University, Morgantown, West Virginia. (Eastern Support Center)
- Hart, W., and A. Stiller, 1991. "Application of Phosphate Refuse to Coal Mine Refuse for Amelioration of Acid Mine Drainage," in *Proceedings of the Second International Conference on the Abatement of Acidic Drainage: Volume 2*, Montreal, Canada, pp. 173-190. (Eastern Support Center)
- Hart, W., K. Batarseh, G. Swaney, and A. Stiller, 1991. "A Rigorous Model to Predict the AMD Production Rate of Mine Waste Rock," in *Proceedings of the Second International Conference on the Abatement of Acidic Drainage Volume 2*, Montreal, Canada, pp. 257-270. (Eastern Support Center)
- Batarseh, Kareem, 1992. "Mathematical Modeling on the Role of Thiobacillus Ferroxidans in the Formation of Acid Mine Drainage," Ph.D. Dissertation, Chemical Engineering Department, West Virginia University, Morgantown, West Virginia. (Eastern Support Center)
- Simpson, D.L., R.S. Sweigard, and L.W. Saperstein, 1991. "Development of a Model Study for Deep Tillage with Air and Material Injection," in *Proceedings of the National Meeting of American Society for Surface Mining and Reclamation*, May 14-17, 1991, Durango, Colorado, pp. 655-661. (Eastern Support Center)
- Sweigard, R.S., and L.W. Saperstein, 1992. "Air Injection of Organic Material During Deep Tillage to Prevent Soil Recompaction," in *Proceedings of the National Symposium on Prime Farmland Reclamation*, August 10-14, 1992, St. Louis, Missouri, pp. 87-91. (Eastern Support Center)
- Barnhisel, R.I, J.M. Hower, and L.D. Beard, 1992. "Development of a Soil Productivity Index for Use in Prime Farmland Reclamation," in *Proceedings of the National Symposium on Prime Farmland Reclamation*, August 10-14, 1992, St. Louis, Missouri, pp. 205-212. (Eastern Support Center)
- Simpson, D.L. 1991. "Laboratory Investigation of Recompaction after Deep Tillage with Air Material Injection," M.S. Thesis, University of Kentucky, Lexington, Kentucky. (Eastern Support Center)
- Andrews, J.A., J.C. Torbert, J.E. Johnson, and J.A. Burger, 1991. "Effects of mine spoil properties on young white pine (*Pinus strobus*) height growth," in *Proceedings of the 9th Annual National Meeting of the American Society for Surface Mining and Reclamation*, May 14-17, 1991, Durango, Colorado, pp. 119-129. (Eastern Support Center)
- Burger, J.A., J.E. Johnson, J.A. Andrews, and J.C. Torbert, 1992. "Measuring Mine Soil Productivity for Forests: An OSM/Powell River Project Initiative, 1992 Powell River Project Symposium, pp. 46-61. (Eastern Support Center)

8. OSM DIRECTORY*

OSM Headquarters

1951 Constitution Ave., NW
Washington, DC 20240
(202) 208-2553

Albuquerque Field Office

505 Marquette Ave., NW, Suite 1200
Albuquerque, NM 87102
(505) 766-1486

AVS Field Investigation Branch

1300 New Circle Road, NE, Suite 100
Lexington, KY 40505-4215
(606) 233-2792

Ashland Area Office

Federal Bldg., Rm 120
1405 Greenup Avenue, Box 5
Ashland, KY 41101
(606) 324-2828

Beckley Area Office

323 Harper Park Dr., Suite E
Beckley, WV 25801
(304) 255-5265

Big Stone Gap Field Office

P.O. Drawer 1216
Big Stone Gap, VA 24219
(703) 523-4303

Birmingham Field Office

135 Gemini Circle, Suite 215
Homewood, AL 35209
(205) 290-7282

Casper Field Office

100 East B St., Rm. 2128
Casper, WY 82601-1918
(307) 261-5776

Charleston Field Office

603 Morris Street
Charleston, WV 25301
(304) 347-7158

Chattanooga Area Office

900 Georgia Ave., Rm. 30
Chattanooga, TN 37402
(615) 752-5175

Columbus Field Office

2242 South Hamilton Rd., Rm. 202
Columbus, OH 43232
(614) 866-0578

Division of Financial Management

Bldg. 20, Rm. B2125
Denver Federal Center
P.O. Box 25065
Denver, CO 80202
(303) 236-0340

Eastern Support Center

Ten Parkway Center
Pittsburgh, PA 15220
(412) 937-2828

Harrisburg Field Office

Harrisburg Trans. Center
3rd Floor, Suite 3C
4th and Market Streets
Harrisburg, PA 17101
(717) 782-4036

Indianapolis Field Office

575 North Penn St., Rm. 301
Indianapolis, IN 46204
(317) 226-6700

Johnstown Area Office

Penn Traffic Bldg.
319 Washington St., Rm. 360
Johnstown, PA 15901
(814) 533-4223

Kansas City Field Office

934 Wyandotte St., Rm. 500
Kansas City, MO 64105
(816) 374-6405

Knoxville Field Office

530 Gay St., Suite 500
Knoxville, TN 37902
(615) 545-4103

Lexington Field Office

2675 Regency Road
Lexington, KY 40503
(606) 233-2896

London Area Office

P.O. Box 1048
London, KY 40743
(606) 878-6440

Madisonville Area Office

100 YMCA Drive
Madisonville, KY 42431
(502) 825-4500

Morgantown Area Office

Room 229, Federal Bldg.
75 High Street
P.O. Box 886
Morgantown, WV 26505
(304) 291-4004

Norris Area Office

P.O. Box 179
Norris, TN 37828
(615) 632-1730

Olympia Area Office

711 South Capitol Way, Suite 703
Olympia, WA 98501
(206) 753-9538

Prestonsburg Area Office

P.O. Box 306
West Prestonsburg, KY 41668
(606) 886-1391

Springfield Field Office

511 West Capitol Street, Suite 202
Springfield, IL 62704
(217) 492-4495

Tulsa Field Office

5100 E. Skelly Dr., Suite 550
Tulsa, OK 74135-6548
(918) 581-6430

Western Support Center

1050 15th Street, 2nd Floor
Denver, CO 80202
(303) 844-2459

Wilkes-Barre Area Office

20 N. Penn Ave., Room 3323
Wilkes-Barre, PA 18701
(717) 826-6333

* As of September 30, 1992.