1978

ANNUAL REPORT OF THE SECRETARY OF THE INTERIOR

UNDER THE SURFACE MINING CONTROL AND RECLAMATION ACT OF 1977

(Public Law 95-87)

UNITED STATES
DEPARTMENT OF THE INTERIOR
WASHINGTON, D.C. 20240

CECIL D. ANDRUS
Secretary

JAMES A. JOSEPH
Under Secretary

JOAN M. DAVENPORT
Assistant Secretary
Energy and Materials

OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT

WALTER N. HEINE
Director

PAUL REEVES
Deputy Director

RICHARD HALL
Assistant Director
Inspection & Enforcement

W. RAY BOOKER*
Assistant Director
Abandoned Mine Lands

DAVID MANEVAL
Assistant Director
Technical Services & Research

CARL CLOSE
Assistant Director
State & Federal Programs

TONEY HEAD, JR.
Assistant Director
Management & Budget

*Acting

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

Stock Number 024-000-00858-4

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

MAR 23 1979

To the President of the United States:

To the Congress of the United States:

I am pleased to transmit herewith the 1978 Annual Report required by the Surface Mining Control and Reclamation Act of 1977, P.L. 95-87.

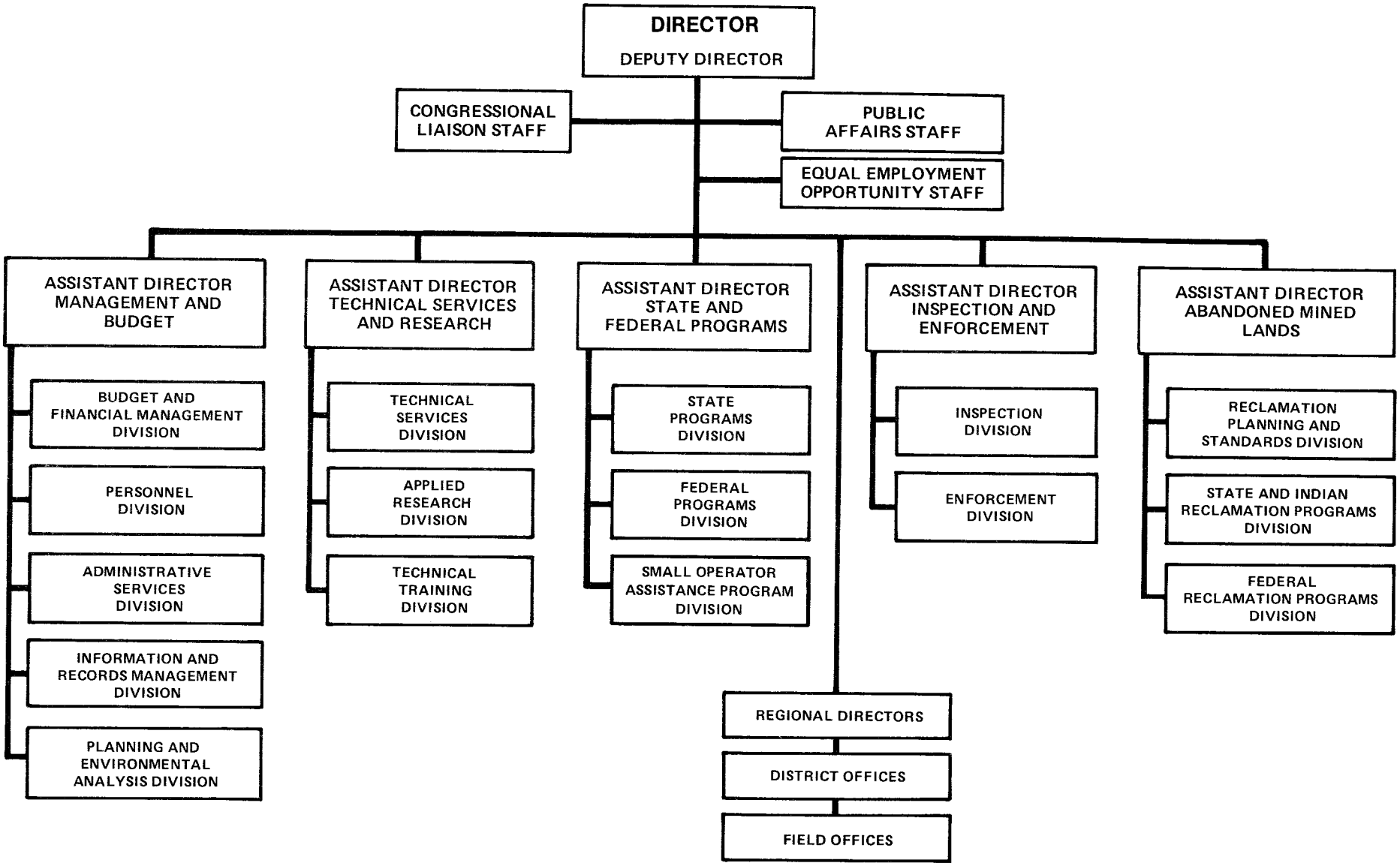
With the concurrence of the Committee on Interior and Insular Affairs of the House of Representatives and the Committee on Energy and Natural Resources of the Senate, the first annual report under the Act was deferred from August 1978 to the end of the calendar year. Accordingly, this report is a record of accomplishment since enactment of the Surface Mining Control and Reclamation Act on August 3, 1977.

During the period reviewed in this report, public participation set the pace of program development. In every instance, we sought more consultation, review, and comment from many quarters rather than less deliberate completion of the task of regulation-writing.

Cecil D. Andrus

CECIL D. ANDRUS
SECRETARY

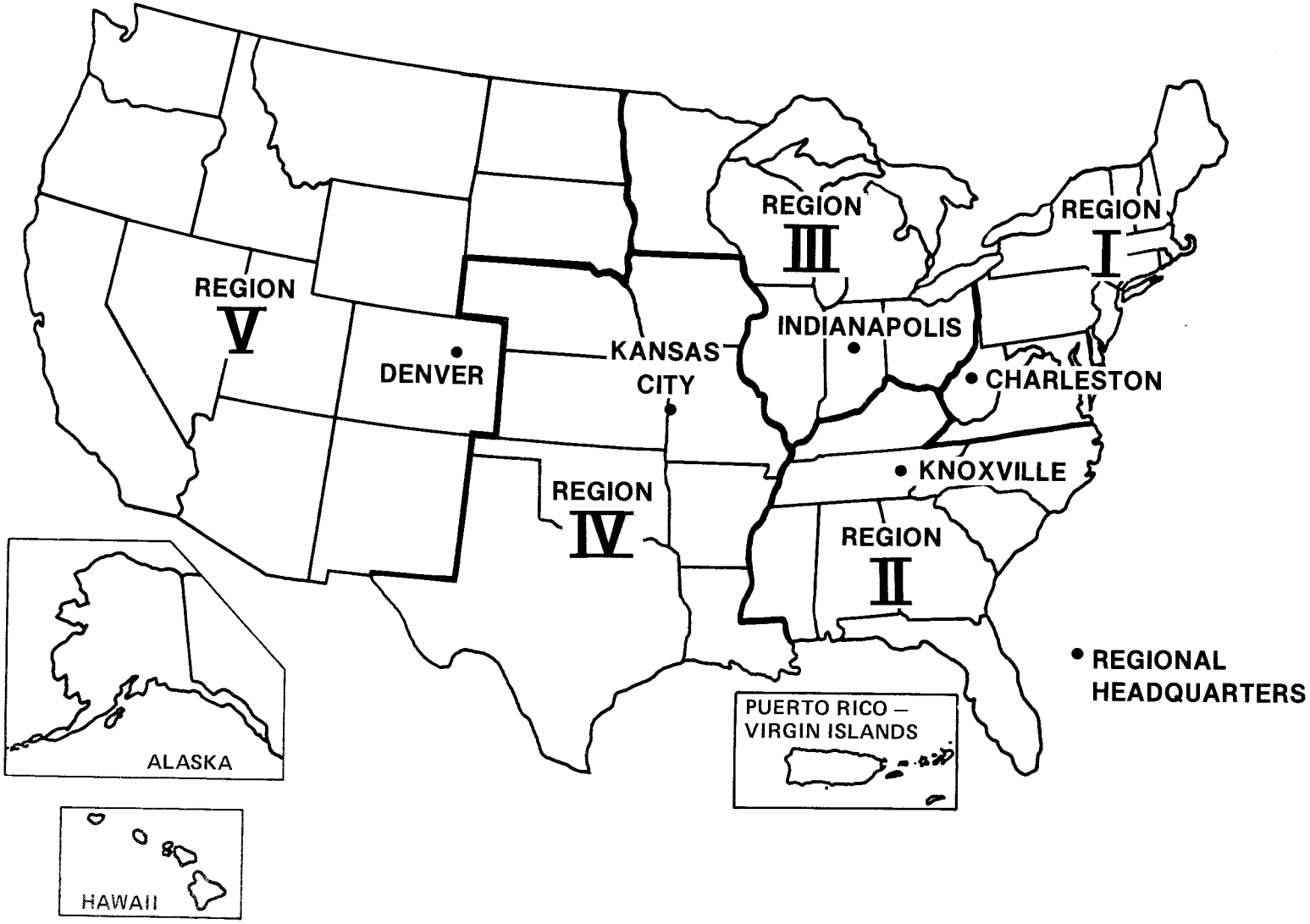
OFFICE OF SURFACE MINING ORGANIZATION CHART



CONTENTS

	Page
The Secretary's Message	i
Executive Summary	v
I. MISSIONS AND ORGANIZATION	1
Statutory Authority	1
Judicial Interpretation	1
Budget Authority	2
Structure and Staffing	2
Financial Interests	3
Employee Protection	4
Administrative Review	4
Office of Hearings and Appeals	4
Caseload in 1978	5
II. ABANDONED MINE LAND RECLAMATION	5
Abandoned Mine Reclamation Fund	6
Program Planning	7
State Reclamation Plans	7
Indian Reclamation Plans	8
Rural Lands Reclamation	8
Program Operations	9
III. REGULATORY PROGRAM DEVELOPMENT	10
The Initial Program	10
Initial Regulations	10
Significant Requirements	11
Judicial Review	12
Initial Program Grants	13
Inspection and Enforcement	14
Financial Interest Regulations	15
The Permanent Program	17
Permanent Regulations	19
Program Proposals	20
Grants to States	20
Significant Features	21
Mining and Reclamation Plans	21
State "Window" Provisions	22
Unsuitability Designations	22
Small Operator Assistance	22
Regulatory Analysis	23
Environmental Impact Statement	24
The Federal Lands Program	25
Cooperative Agreements	28
Indian Lands	29
Noteworthy State Activities	30
IV. EDUCATION, INFORMATION, AND TRAINING	32
Mineral Institutes	32
Applied Research	34
Information and Training	34
Data Centers	35
Blaster Training and Certification	36
Alaskan Surface Coal Mining	36
V. PROGRAM STATISTICS	38

OSM REGIONS


REGION
V
DENVER
KANSAS
CITY
REGION
IV
REGION
III
INDIANAPOLIS
REGION
I
CHARLESTON
KNOXVILLE
REGION
II
ALASKA
HAWAII
PUERTO RICO –
VIRGIN ISLANDS
• REGIONAL
HEADQUARTERS

EXECUTIVE SUMMARY

Public Law 95-87, the Surface Mining Control and Reclamation Act, was signed by President Carter August 3, 1977. The Office of Surface Mining Reclamation and Enforcement (OSM) created by the Act was established by the Secretary of the Interior September 7, 1977. This report covers activities pursuant to the Act from its enactment through December 1978.

Missions and Organization

The law directs OSM to promote reclamation of abandoned mine lands, regulate coal mining practices to assure minimal adverse environmental and public health and safety effects during mining and subsequent reclamation, and provide information and training, among other activities. OSM appropriations were $67.5 million in FY 1978 and $115.4 in FY 1979. The pending budget estimate for FY 1980 is $195.2 million. Additional budgetary information is shown in tables I-1 and I-2 in Section V of this report.

Regular staffing began with appropriation of FY 1978 funds. At the end of CY 1978 OSM had filled 575 of 987 permanent positions and 42 of 108 temporary positions. Three-fourths of the staff was assigned to OSM's 5 regional offices, 14 district offices, and 26 field offices. Federal and State employees involved in administration or enforcement of the Act must not hold financial interests in coal mining. Regulations and procedures for monitoring and enforcing the conflict-of-interest provisions of the Act were developed in 1977 and 1978. Additional personnel information is in table I-3 in Section V of this report.

The Office of Hearings and Appeals, a component of the Department of the Interior (DOI), added 5 administrative law judges and 4 field offices to hear appeals of OSM decisions. Received in 1978 were 94 applications for review of Notices of Violation, which included 3 applications for temporary relief, and 40 petitions for review of proposed assessments of civil penalties. The Hearings Division disposed of 29 of the cases by dismissal and 20 by decision. Seven decisions were appealed to the Board of Surface Mining and Reclamation Appeals, a new three-member body that reviews decisions of the administrative law judges or OSM. In 1978 the Board decided 72 appeals of OSM denials of small operator exemptions. Denials were affirmed in 28 cases and reversed in 20; 24 appeals were dismissed.

Abandoned Mine Land Reclamation

The Abandoned Mine Land Reclamation Fund finances State and Federal reclamation programs, with priority given to alleviation of dangers to public health and safety. The Fund is financed principally through fees collected from active coal mining operations. Regulations governing administration of these funds were promulgated October 25, 1978.

By the end of FY 1978, the Fund had collected over $105 million, of which $36.6 million was appropriated and $5 million obligated. Almost $53 million was allocated to the States where the fees were collected, $2.4 million was allocated for Indian Tribes reclamation programs, and about $14 million was appropriated for the Rural Abandoned Mine Program (RAMP) conducted by the Secretary of Agriculture. Additional information about the Fund is in table II-1 in Section V of this report.

By the end of 1978, OSM had given tentative approval to initiate work on 42 high-priority reclamation projects. In addition, work began on 3 emergency projects. Projects are listed in table II-2 in Section V of this report. States are eligible for technical and financial assistance from the Fund for preparation of their Reclamation Plans. Alabama, Oklahoma, Virginia, and West Virginia requested such assistance in 1978.

Regulatory Program Development

The Act contemplates reliance on State regulation of coal mining, in the main, pursuant to federally mandated standards and with the approval of the Secretary of the Interior. A full Federal regulatory program is to be operated in a State only after that State has failed to develop or maintain an acceptable program of its own. The Act further provided for OSM to promulgate initial regulations to assure an early response to immediate and pressing problems and subsequently to establish a permanent regulatory program.

Proposed regulations for the initial regulatory program were published September 7, 1977. During the next 30 days more than 300 written comments were received, and three days of formal public hearings were held in Washington, DC, Charleston, WV, St. Louis, MO, and Denver, CO. The final initial program regulations were promulgated December 13, 1977. The Act specifies 29 performance standards to be met by surface coal mining and reclamation operations. The initial program regulations apply 9 of these standards.

Prior to the Act, 25 States regulated surface coal mining, but no State's program met the full range of requirements embodied in the Act. Seventeen coal producing States changed their laws and/or regulations to conform with the initial program regulations. Mines with permits issued after February 3, 1978, were required to comply with the initial program regulations. Since May 3, 1978, all coal mining and reclamation operations, except those qualifying for the small-operator exemption in 1978, have been required to comply with the full range of the initial program regulations.

Of the 2,777 inspections OSM conducted in 1978, 851 resulted in one or more Notices of Violation or Cessation Orders. There were 1,290 separate Notices of Violation and 252 Cessation Orders. Each led to an assessment, and 865 of the 1,290 Notices of Violation led to a civil penalty. In 1978 a total of $1,906,871 was assessed, 282 conferences were held, and 34 hearings were held before administrative law judges. Of the $1,906,871 assessed, $167,830 was paid in escrow pending a hearing or paid outright. Of the remainder, $1,345,390 is not yet due and $393,651 is subject to collection activity. Additional information about Federal inspection and enforcement activities is in Table III-2 in Section V of this report.

The Act authorizes grants to States for up to 100 percent of the additional inspection and enforcement costs entailed by the initial program. In FY 1978, 21 States received a total of $6.1 million in initial program grants, as shown in table III-1 in Section V of this report.

Public participation in development of the permanent program began when OSM published an advance notice of proposed rulemaking April 26, 1978. Pre-proposed draft regulations were issued July 3 and 21, 1978. This preliminary issuance, not required by law, was an effort to describe OSM's preliminary views and to elicit widespread comments on them. Over 2,500 copies of this draft were distributed, and public meetings to discuss the drafts were held August 3-11 in Washington, DC, Charleston, WV, Knoxville, TN, Indianapolis, IN, Kansas City, MO, and Denver, CO. OSM received nearly 2,000 pages of comments and heard from 173 witnesses. Significant revisions were made after this extra comment period.

On September 18, 1978, the proposed permanent regulations were published. Again, OSM went much further than the public participation provisions of the statute require. The 70-day comment period yielded more than 15,000 pages of comments from approximately 600 sources, tangible evidence of broad public participation. The final regulations are to be issued in March 1979.

The Act directs that, no later than June 3, 1980, there be established in every State either a State or a Federal permanent regulatory program. The Act also directs that proposed State programs be submitted to OSM by February 3, 1979, but States may defer submittal until August 3, 1979, if program development requires action by the legislature. All States with active or anticipated mining operations were granted the extensions authorized by the Act.

Section 705 of the Act authorizes grants-in-aid to assist States in the development of their permanent regulatory programs. In FY 1978, grants in the aggregate amount of $3 million were awarded to assist 8 States in the development of their permanent regulatory programs. Additional information is presented in table III-3, Section V of this report.

Section 507(c) of the Act offers assistance in meeting certain permit requirements to qualified operators who mine less than 100,000 tons of coal per year. This assistance will be provided to small operators by qualified laboratories under the State permanent regulatory program. Regulations for the Small Operator Assistance Program were promulgated December 13, 1977.

Executive Order 12044 directs each agency to provide for public participation in the development of regulations and to prepare a "regulatory analysis" for regulations with major economic consequences. A 137-page draft regulatory analysis, limited to areas in which the Act gives the Secretary some latitude, was issued September 19, 1978, and a final regulatory analysis will be issued when the permanent program regulations are promulgated.

Under section 702(d) of the Act, adoption of the permanent regulatory program constitutes a "major Federal action" subject to the requirements of the National Environmental Policy Act of 1969. Accordingly, OSM is preparing an environmental impact statement (EIS). A public meeting was held August 2, 1977, to solicit comments and recommendations concerning the scope, content, and format of the EIS. A 321-page draft EIS was issued October 4, 1978. About 7,000 copies of the draft EIS were distributed, and 41 written comments were received. The final EIS will be issued prior to issuance of the final regulatory analysis and the permanent program regulations in March 1979.

Several Federal agencies must participate in the administration of section 523 of the Act, which requires regulation of surface mining and reclamation operations on Federal land, and section 522 of the Act, which requires the Secretary of the Interior to designate Federal lands deemed unsuitable for surface coal mining. A "Division of Responsibilities" document was approved within DOI during 1978, and work proceeded on a Memorandum of Understanding setting forth the procedural details of inter-bureau coordination under the Federal Coal Leasing Program.

Consistent with the Act's emphasis on State regulation of surface mining and reclamation operations, extension of 4 Cooperative Agreements was negotiated in 1978 to provide for the continuation of State regulatory authority on Federal lands as authorized by section 523(c). At the end of the year renegotiated Agreements with the States of Montana, Utah, and Wyoming were about to start the rulemaking process. A Cooperative Agreement with North Dakota was ready for approval by the Governor and the Secretary of the Interior. Colorado and New Mexico expressed interest in negotiating similar State-Federal Cooperative Agreements.

Except for specified performance standards, the OSM regulatory program does not apply to Indian lands until February 1980. Instead, section 710 of the Act provides for a study by the Secretary, in consultation with Indian Tribes, of the question of regulation of surface mining on Indian lands. It is anticipated that the study report will be completed in 1979. In 1978, the regulatory program on Indian lands, including the more stringent environmental performance standards, was administered largely by the Geological Survey and the Bureau of Indian Affairs, as in the past. Regulations were issued December 16, 1977.

Education, Information, and Training

A 9-member Advisory Committee on Mining and Mineral Resources Research recommended criteria for selection of institutions of higher education

applying for support as mining and mineral resources research and professional training institutes. Of 52 institutions that applied, 37 were found qualified by the Committee, and 20 were granted OSM support in FY 1978 and 2 others in FY 1979, each receiving an initial allotment grant of $110,000 and a scholarship grant of $160,000. Additional information is in tables IV-1 and IV-2 in Section V of this report.

The OSM applied research program, in support of the regulatory programs, included projects to improve procedures for monitoring effects of mining on fish and wildlife, develop guidelines for collection of water quality data, determine the feasibility of using aerial photographs to define instability of spoil and coal processing waste, and use Landsat satellite technology to monitor surface coal mining.

Pursuant to the Act, OSM studied the need for and feasibility of a center for cataloging current and proposed research in all fields of mining and mineral resources. As the Act requires, OSM is drafting regulations to establish a nationwide program for training, examining, and certifying persons responsible for blasting work in coal mining. An in-depth study of surface coal mining conditions in Alaska is scheduled for completion in 1980.

OSM Regional, District, and Field Offices (December 31, 1978)

REGIONAL OFFICE - I
Charleston, WV

District	District	District	District
Johnstown, PA	Lebanon, VA	Wilkes-Barre, PA	Beckley, WV
Field	**Field**	**Field**	**Field**
Clearfield, PA	Big Stone Gap, VA	Schuylkill Haven, PA	Morgantown, WV
Clarion, PA	Richlands, VA		Clarksburg, WV
Connellsville, PA			Montgomery, WV
Washington, PA			Summersville, WV
Indiana, PA			Princeton, WV
			Pineville, WV
			Logan, WV
			Frostburg, MD

REGIONAL OFFICE - II
Knoxville, TN

District	District	District	District
Knoxville, TN	Birmingham, AL	Madisonville, KY	London, KY
Field	**Field**	**Field**	**Field**
Crossville, TN	Jasper, AL	None	Pikesville, KY
Norris, TN			Paintsville, KY
			Pineville, KY
			Hazard, KY

REGIONAL OFFICE - III
Indianapolis, IN

District	District	District
Zanesville, OH	Evansville, IN	Springfield, IL
Field	**Field**	**Field**
St. Clairsville, OH	Terre Haute, IN	Benton, IL

REGIONAL OFFICE - IV
Kansas City, MO

District	District
Kansas City, MO	Tulsa, OK
Field	**Field**
None	None

REGIONAL OFFICE - V
Denver, CO

District
Denver, CO
Field
None

I. MISSIONS AND ORGANIZATION

The Surface Mining Control and Reclamation Act of 1977 authorizes a nationwide program to protect the public and the environment against adverse effects of coal mining, establishes minimum national standards for regulating the surface effects of coal mining, provides assistance to the States for development and conduct of regulatory programs, and promotes reclamation of previously mined areas. Under the Act, primary responsibility for regulating surface mining and reclamation operations will rest with the States.

The Act established an Office of Surface Mining Reclamation and Enforcement within the U.S. Department of the Interior (DOI) to work in coordination with the States, to administer the Federal regulatory authority conferred by the Act, and to conduct other authorized activities. Section 706 of the Act requires the Secretary of the Interior to submit annually to the President and the Congress a report of Federal and State activities pursuant to the Act. This report, the first under the Act, covers the period from enactment of the statute through December 1978.

Statutory Authority

Public Law 95-87, the Surface Mining Control and Reclamation Act of 1977, was signed by President Carter on August 3, 1977. As authorized by the law, 30 U. S. C. 1201 et seq., the Office of Surface Mining Reclamation and Enforcement (OSM) was established by the Secretary of the Interior September 7, 1977.

Public Law 95-343, signed by the President August 11, 1978, increased from $10 million to $25 million the authorized levels of funding in fiscal years 1979 and 1980 for State and Federal enforcement of the Act during the initial period before establishment of the permanent regulatory programs. Public Law 95-343 also increased the authorized levels of funding for OSM assistance to pay for certain hydrologic and geologic determinations required by the Act for permit applications from operators of small coal mines. For fiscal years 1979 and 1980, appropriation of up to $25 million is authorized for this purpose. After 1980, this authorization reverts to $10 million per year as originally provided by the Act.

Judicial Interpretation

Two challenges to the Act on Constitutional grounds were pending at the end of 1978. One, Indiana Coal Association v. United States, was filed August 16, 1978, in U.S. District Court for the Southern District of Indiana. The State of Indiana, the Association, and two coal companies are challenging virtually every substantive provision of the Act. The Department of Justice on behalf of DOI filed a motion to dismiss November 22, 1978. No hearing date on the motion has been set by the

Court. The other, Virginia Surface Mining and Reclamation Association v. Andrus, was filed October 23, 1978, in U.S. District Court for the Western District of Virginia by the Association and independent Virginia operators. At the end of 1978 the Department was preparing to file a motion to dismiss.

Budget Authority

Section 712(d) of the law authorized the Secretary of the Interior to use up to $2 million of available fiscal year 1977 funds for OSM start-up activities. From the DOI appropriations, $1 million was reprogrammed for this purpose. These funds were utilized mainly for systems development contracts and vehicle purchases for the Federal inspection force.

The Supplemental Appropriations Act, 1978, signed by the President March 7, 1978, provided $67.5 million in fiscal year 1978. The Department of Interior and Related Agencies Appropriations Act, 1979, provided $115.4 million in fiscal year 1979. The pending budget estimate for fiscal year 1980 is $195.2 million. Additional budgetary information is presented in tables I-1 and I-2 to be found in Section V of this report, Program Statistics.

Structure and Staffing

The law directs OSM to:

- regulate coal mining practices to assure minimal adverse environmental and public health and safety effects during mining and subsequent reclamation,
- promote reclamation of abandoned mine lands,
- approve State regulatory programs or implement Federal regulatory programs and exercise Federal regulatory authority over Federal lands,
- designate lands unsuitable for coal mining, and
- support research, demonstrations, experiments, and training beneficial to mining, mineral resources, and reclamation.

The initial organization and structure of OSM in response to these requirements is shown on page ii, facing the Contents page. Boundaries of OSM regional areas and location of the 5 regional offices are shown on page iv. The list on page x shows the location of regional, district, and field offices established by the end of 1978.

Because of mandatory deadlines in the pending legislation, DOI began work in April 1977, using a small complement of temporary employees and personnel detailed from other agencies. With the appropriation

of fiscal year 1978 funds, regular staffing began. At the end of calendar year 1978, OSM had filled 575 of 987 permanent positions and 42 of 108 temporary positions. Three-fourths of the staff was assigned to the field. Additional OSM personnel information is in table I-3 in Section V of this report, Program Statistics.

All OSM employees receive a copy of the Director's statement of commitment to the principles of equal employment opportunity, issued July 1978, upon their entrance on duty. OSM's Equal Employment Opportunity Plan emphasizes outreach and recruitment activities to attract applicants from all sources, especially those with close ties to minority and women's organizations. OSM vacancy announcements were broadly disseminated to professional, technical, and scientific organizations; the Reclamation Specialist vacancies were publicized through the Civil Service Commission's Federal Job Information Centers in major metropolitan areas; and this position vacancy was maintained as an open announcement throughout fiscal year 1978 to generate a maximum number of qualified individuals.

Planning and evaluation activities are being emphasized as OSM grows to its full stature as an organization. Staffing and planning was begun during 1978 to develop a comprehensive management information system, methods and benchmarks for monitoring program progress, and the capacity to conduct special management studies, review proposals for organizational change, and analyze resource allocation alternatives.

Financial Interests

Section 201(f) of the Act prohibits Federal employees engaged in its administration or enforcement from holding direct or indirect financial interests in coal mining. Regulations establishing methods by which this provision will be monitored and enforced were published in the Federal Register October 20, 1977. Comparable provisions of the law and regulations governing State employees are discussed in Section III of this report, Regulatory Program Development.

Section 201(f) further requires the Director of OSM to report to Congress in each annual report on the actions taken during the preceding calendar year with respect to the financial interest statements filed by Federal employees pursuant to this section of the law. The Director hereby states that all OSM employees submitted statements of employment and financial interests during the period of this report. As required by 30 CFR 706.11(b), OSM also received from each DOI bureau and office a list of positions involving functions or duties under the Act. Approximately 750 positions were identified. Currently, OSM is reviewing all the submitted financial interest statements for compliance with the conflict-of-interest provisions of the Act. Updated employee statements are due in early February 1979.

Employee Protection

Section 703(a) of the Act protects against discharge or discrimination any employee or representative of employees who has been involved in an administrative or enforcement proceeding under the Act. Regulations governing administration of these provisions were published December 13, 1977. Persons who believe themselves to be aggrieved may apply to the Secretary of the Interior for review, investigation, and decision. During the period covered by this report, no complaints of this kind were brought to the attention of the Secretary.

Administrative Review

The Secretary of the Interior, although delegating much of the implementation of the Act to OSM, remains responsible for providing administrative, adjudicatory review of certain actions by OSM. Several sections of the Act require that the Secretary provide an opportunity for hearings subject to the requirements of the Administrative Procedure Act and a right of appeal to an appellate board.

Office of Hearings and Appeals

The Secretary exercises administrative review responsibilities through the Office of Hearings and Appeals (OHA). OHA consists of the administrative law judges in the Hearings Division and several appeals boards established to review appeals from initial decisions of the administrative law judges or from decisions of DOI program bureaus. The Board of Surface Mining and Reclamation Appeals, a three-member body responsible for reviewing decisions under the Act, was established October 20, 1977.

Headquarters of OHA's Hearings Division is in Arlington, VA, where the chief administrative law judge and one new administrative law judge to handle OSM matters have their offices. For the expeditious handling of cases under the Act, Hearings Division field offices were created and four new administrative law judges stationed in Knoxville, TN, Louisville, KY, Charleston, WV, and Pittsburgh, PA. The administrative law judges in OHA field offices in Sacramento, CA, and Salt Lake City, UT, are expected to conduct most of the hearings under the Act in the Western States.

OHA collaborated with the Office of the Solicitor of DOI and OSM in developing the procedural rules governing hearings and appeals under the Act. Proposed rules were published in the Federal Register April 13, 1978, and were the subject of comments at public hearings in Washington, DC, and Denver, CO. Several written comments were also received. The final procedural rules were published on the first anniversary of the Act, August 3, 1978 (43 F.R. 34376-34400).

Caseload in 1978

The Secretary has delegated to the Board of Surface Mining and Reclamation Appeals the authority to perform appellate and other review functions of the Secretary under the Act, subject to 43 CFR 4.5 (43 F.R. 17941-2; 43 F.R. 37689-90). The first appeals to the Board under the Act were decisions by OSM denying small operator exemptions. The Board decided 72 such appeals in 1978. Denials were affirmed in 28 cases and reversed in 20. Twenty-four appeals were dismissed. Section 502(c) of the Act provides that the exemption for small operators expires January 1, 1979.

Other appeals under the initial regulatory program may involve:

- Petitions for review of proposed assessments of civil penalties issued by OSM pursuant to section 518 of the Act;
- Applications for review of Notices of Violation and Orders of Cessation or modifications, vacations, or terminations of such notices or orders issued pursuant to section 521(a)(2) or section 521(a)(3);
- Proceedings for suspension or revocation of permits issued pursuant to section 521(a)(4);
- Application for review of alleged discriminatory acts filed pursuant to section 703;
- Applications for temporary relief in accordance with section 525(c); and
- Petitions for award of costs and expenses under section 525(e) of the Act.

In 1978 the Hearings Division received 94 applications for review of Notices of Violation, which included 3 applications for temporary relief and 40 petitions for review of proposed assessments of civil penalties. The Hearings Division disposed of 29 of the cases by dismissal and 20 by decision. Seven of these decisions were appealed to the Board.

II. ABANDONED MINE LAND RECLAMATION

Title IV of the Surface Mining Control and Reclamation Act created an Abandoned Mine Reclamation Fund for the reclamation of land and water and for abatement of hazards to the environment and public safety from unrestored or inadequately reclaimed mine lands. Land mined after the effective date of the Act or land where a legal obligation to reclaim remains in force may not be restored with money from the Fund.

The Fund is financed principally through fees collected from active coal mining operations. Some have estimated $25 to $30 billion as the potential cost for reclaiming lands and waters abandoned and adversely affected by poor mining practices over the years. Regulations governing assessment and collection of reclamation fees were published in final form December 13, 1977. Proposed rules for administration of these funds were published April 26, 1978, and promulgated in final form October 25, 1978. Public meetings to receive comments on the proposed regulations were held May 22-June 1 in Washington, DC, St. Louis, MO, and Denver, CO.

Abandoned Mine Reclamation Fund

The Abandoned Mine Reclamation Fund finances State and Federal reclamation programs to rectify adverse effects of previous coal mining, with priority given to projects that alleviate dangers to public health and safety. Land acquisition is authorized if necessary to accomplish these purposes. The fees established by the Act to be paid into the Fund by coal mine operators are 35 cents per ton of coal produced by surface mining, 15 cents per ton for underground mining, and 10 cents per ton of lignite, or 10 percent of the coal's value at the mine and 2 percent of the lignite's value at the mine, whichever is lower. Operators may pay lower fees if their coal is sold below established minimum per ton prices. This occurs very infrequently, however.

Fees were first due January 30, 1978, for the fourth quarter of 1977, and by the end of fiscal year 1978 the Fund had collected over $105 million. Fifty percent, almost $53 million, was allocated to the States or Indian lands where the fees were collected. In the fiscal year, $36.6 million was appropriated and $5 million obligated, leaving an unobligated fiscal year-end balance of $31.6 million. Unappropriated and unobligated Fund balances remain available until appropriated or obligated, and it is anticipated that the unobligated fiscal year-end balance will be obligated in 1979.

In addition to reclamation fees paid by the industry, the Fund may receive donations, charges imposed for use of reclaimed land, and certain monetary recoveries. Except for a minor amount of interest on late fee payments, these sources did not contribute to the Fund during the period of this report.

Expenditures from the Fund are approved in advance through the budgetary and appropriations process of the Executive and Legislative Branches. As prescribed in sections 401(c) and 409 of the Act, the Fund may be used for Federal, State, and Indian Tribe programs to:

- Reclaim and restore land and water resources adversely affected by past coal and other mining.

- Seal or fill abandoned deep mine entries and voids.

- Plant land adversely affected by past mining to prevent land erosion and sedimentation.

- Prevent, abate, treat, and control water pollution created by mine drainage, including restoration of streambeds, and construct and operate water treatment plants.

- Prevent, abate, and control burning coal refuse disposal areas and burning coal in situ.

- Prevent, abate, and control mine subsidences.

- Conduct research, provide technical assistance, and carry out demonstration projects.

- Finance administrative expenses of State and Federal reclamation programs, including fee collection and inventorying abandoned mine lands.

- Finance a program of special assistance to operators of small coal mines (see page 22) up to a maximum of 10 percent of Fund revenue but not more than $10 million per year.

Additional information about the Fund is presented in table II-1 in Section V of this report, Program Statistics. Section 411 of the Act requires annual reports to Congress on operations under the Fund. This is the first annual report pursuant to section 411.

Program Planning

The Act authorizes Federal funding of approved State programs for reclamation of abandoned mines. For this purpose, the statute treats Indian Tribes like State governments. Section 406 of the Act further authorizes a special program for the reclamation of soil and water resources of rural lands affected by mining. This program is administered by the Secretary of Agriculture.

State Reclamation Plans

Each State with unreclaimed coal mine lands is eligible to receive up to 50 percent of the reclamation fees collected in that State to pay for reclamation projects pursuant to an approved State Reclamation Plan. Both public and private lands are eligible for reclamation. To the extent that reclamation increases the value of land purchased for speculation, windfall profits may be recovered by means of liens on the property.

The regulations promulgated October 25, 1978, contain requirements for State plans. A State's reclamation program may not be approved or funded unless the State's permanent regulatory program has been

approved. The Act directs that State permanent regulatory programs be submitted to OSM by February 3, 1979, but authorizes deferral of the submittal to August 3, 1979, if action by a State legislature is required.

Under a Cooperative Agreement with OSM, the Appalachian Regional Commission selected a contractor November 30, 1978, to develop a Model State Reclamation Plan. The Model Plan will serve as a useful tool for the States and Indian Tribes in the preparation and assembly of the abandoned mine land reclamation plans which are required for participation in OSM's program. States and Indian Tribes have been fully advised regarding planning requirements and of their eligibility to receive technical assistance and to enter into Cooperative Agreements with OSM, in accordance with 30 CFR 872.11(b)(5)(vi), for financial planning assistance to assemble and evaluate the information necessary for preparation of their Reclamation Plan. Alabama, Oklahoma, Virginia, and West Virginia requested such assistance during the reporting period.

Indian Reclamation Plans

The provisions of the Act and regulations applicable to State Reclamation Plans are also applicable, with appropriate variations, to Indian Tribes with unreclaimed coal mine lands. However, section 710 of the Act requires a study of surface mining regulation on Indian lands. Reclamation Plans may be submitted for approval pending completion of this study, which is reported in Section III of this report, Regulatory Program Development, but no Plans may be approved in the absence of an approved regulatory program. Like States, the Tribes may apply for technical and financial assistance for preparation of their plans. The Model State Reclamation Plan (see above) should be useful to Indian Tribes developing Reclamation Plans. At the end of the 1978 fiscal year, $2.4 million in the Abandoned Mine Reclamation Fund was allocated for Indian reclamation activities.

Rural Lands Reclamation

Section 406 of the Act authorizes rural land reclamation activities to be conducted by the Secretary of Agriculture. Final regulations to implement this statutory section were promulgated by the Soil Conservation Service (SCS) of the Department of Agriculture October 2, 1978. An environmental impact statement and a regulatory analysis were also prepared for the SCS Rural Abandoned Mine Program (RAMP).

An interim RAMP program manual has been provided to SCS State program leaders for guidance and training. SCS plans to start receiving and processing applications for program assistance about February 1, 1979. Initially, only applications that involve the two highest priorities for reclamation (see below) will be considered for funding.

RAMP is applicable to previously mined land in 29 coal States. Program workload will be determined by the number of farmland owners or users willing to share reclamation costs. Up to one-fifth of the money deposited in the Abandoned Mine Reclamation Fund annually may be transferred to the Secretary of Agriculture for use in RAMP. Appropriations of about $14 million are available for RAMP in fiscal year 1979.

Program Operations

In November 1977, Governors of the coal-producing States were asked to help OSM identify those abandoned or inadequately reclaimed coal mined lands in their States that represent extreme dangers to public health, safety, general welfare, and property. In particular, OSM sought reports of such conditions as unsafe impoundments and wastebanks, subsidence in urban areas, mine or wastebank fires adversely affecting urban areas, and mine drainage discharges that are degrading potable water supplies.

More than 400 project proposals submitted by the States and Federal agencies were reviewed and tentatively ranked as to feasibility, cost, duration, benefits, and overall compliance with the Act. Section 403 specifies the following priorities for expenditures from the Abandoned Mine Reclamation Fund:

1. The protection of public health, safety, general welfare, and property from extreme danger of adverse effects of coal mining practices;

2. The protection of public health, safety, and general welfare from adverse effects of coal mining practices;

3. The restoration of land and water resources and the environment previously degraded by adverse effects of coal mining practices, including measures for the conservation and development of soil, water (excluding channelization), woodland, fish and wildlife, recreation resources, and agricultural productivity;

4. Research and demonstration projects relating to the development of surface coal mining reclamation and water quality control program methods and techniques;

5. The protection, repair, replacement, construction, or enhancement of public facilities such as utilities, roads, recreation and conservation facilities adversely affected by past coal mining practices; and

6. The development of publicly owned land adversely affected by coal mining practices, including land acquired under the Act for recreation and historic purposes, conservation and reclamation purposes, and open space benefits.

By the end of 1978, OSM had given tentative approval to initiate work on 42 high-priority reclamation projects. Public notice was given by OSM that work would be undertaken early in 1979 on 4 of these projects, work on 8 others was initiated during 1978, and it is expected that work on the other 30 projects will get under way during 1979. In addition, under section 410 of the Act, 3 "emergency" projects were completed. All these projects are listed in table II-2 to be found in Section V of this report, Program Statistics.

Reclamation project review and selection is a continuous process. Potential projects may be nominated by interested individuals or public service groups as well as other State or Federal agencies. When a project is proposed in this manner, OSM will consult the State reclamation agency to ascertain State support for the project and with other agencies to avoid duplication of Federal Government effort.

III. REGULATORY PROGRAM DEVELOPMENT

While providing for the reclamation of abandoned mined lands, the Surface Mining Control and Reclamation Act also authorizes Federal regulation of current and future coal mining to assure a balance between protection of the environment and agricultural productivity and the Nation's need for coal as an essential source of energy.

The Act contemplates reliance on State regulation of coal mining, in the main, pursuant to Federal standards and subject to approval of the Secretary of the Interior. A full Federal regulatory program is to be operated in a State only after that State has failed to develop or maintain an acceptable program of its own.

The Act provided for promulgation of the OSM regulatory program in two stages. Initial regulations (section 501(a)) were to be issued within 90 days after enactment, to assure an early response to immediate and pressing problems. Permanent regulatory procedures (section 501(b)) were to be established within one year from the date of enactment. OSM's promulgation and enforcement of these two sets of regulations is reported below.

The Initial Program

Initial Regulations

Proposed regulations for the initial regulatory program were published in the Federal Register September 7, 1977. During the next 30 days more than 300 written comments were received, and three days of formal public hearings were held in Washington, DC, Charleston, WV, St. Louis, MO, and Denver, CO. The final initial program regulations were published December 13, 1977. Under the initial regulations based on the Act, performance standards require coal mine operators to:

- Restore mined land so that it can support its original use or an approved higher or better use.

- Remove topsoil and save it to revegetate and restore mined land to its approximate original contours.

- Control the placement of spoil outside the mining area.

- Monitor surface water, determine hydrologic consequences, and minimize damage to the hydrologic balance during mining and reclamation operations.

- Design, maintain, or remove mine waste embankments in accordance with regulations established with the concurrence of the U.S. Corps of Engineers.

- Conduct blasting operations in a controlled manner.

Special performance standards were included for mining on steep slopes, mountaintop removal operations, mining of prime farmlands, and surface effects of underground coal mining. Special provisions applied to operations in Alaska, anthracite mines in Pennsylvania, and certain bituminous coal mines in Wyoming.

Significant Requirements

Section 515 of the Act specifies 29 performance standards to be met by surface coal mining and reclamation operations. The initial program regulations apply 9 of these standards during the initial phase-in period under the Act. Significant requirements of the initial regulations include:

Postmining land use. All disturbed areas must be restored to conditions capable of supporting the previous land use or a higher one. Change from one land use to another after mining must meet specific criteria.

Backfilling and grading. The permittee is required to transport, backfill, and compact all spoil material to eliminate all high walls, spoil piles, and depressions. Final graded slopes must not exceed the steepness of premining slopes. Mountaintop removal operations are permitted only if the alternative post-mining land use criteria are met.

Excess spoil. Spoil not required to restore the approximate original contour may be disposed of in fills, including valley or head-of-hollow fills. Spoil is to be transported and placed in a controlled manner and compacted as necessary to ensure mass stability. The fill must be inspected for stability by a registered professional engineer or other qualified specialist. Valley or head-of-hollow fills must have a system of durable rock underdrains.

Topsoil handling. All topsoil must be removed and stored or redistributed on final graded slopes before the start of mining or other surface disturbances. Stockpiled topsoil must be marked and placed on stable areas and protected against water or wind erosion and contaminants.

Revegetation. Permanent vegetative cover must be established on all land that has been disturbed. Seeding and planting of disturbed areas must be accomplished within the first normal period for favorable planting conditions after final preparation. Mulch must be used on all regraded and topsoil areas to control erosion and promote germination.

Water systems. Coal mining operations must be planned and conducted to minimize disturbance of the prevailing hydrologic balance. All surface drainage from the disturbed area must be passed through a sedimentation pond or series of ponds. Discharges must meet the effluent limitations established under the Clean Water Act by the Environmental Protection Agency.

Waste material. Coal processing waste material must not be used in the construction of dams without approval of the regulatory authority. Dams constructed of waste must be designed to withstand the probable maximum precipitation event and must be routinely inspected by a registered professional engineer.

Explosives. Blasting must be conducted in a controlled manner and according to a time schedule approved by the regulatory authority. Pre-blast surveys must be conducted if requested by residents or homeowners located within one-half mile of the permit area. Public notice of the blasting schedule must be published and local residents furnished copies. Blast records must be retained at least 3 years and be available for inspection on request of the regulatory authority or the public.

Underground Mining. Underground mining performance standards address essentially the same surface effects as the standards established for surface mining operations, but the permittee must meet different standards for post-mining use of land, explosives, and some signs and markers.

Judicial Review

The initial program regulations were challenged in Federal district court. Twenty-four suits filed by more than 100 coal mine operating companies were consolidated in Surface Mining Regulation Litigation heard by Judge Thomas A. Flannery in the U.S. District Court for the District of Columbia. In his decision August 24, 1978, Judge Flannery rejected the bulk of the industry's challenges to the Act and the initial regulations. The plaintiffs have appealed this ruling to the U.S. Court of Appeals for the District of Columbia Circuit. Issues

on appeal include head-of-hollow fill construction standards, effluent limitations, prime farmlands exemptions, blasting standards, and enforcement of regulations on Indian lands.

On February 27, 1978, the Secretary of the Interior modified the initial regulations promulgated December 13, 1977. Provisions of the regulations containing amended design criteria for sedimentation ponds and head-of-hollow fills were among those challenged in Surface Mining Regulation Litigation. Judge Flannery's decision directed the Secretary to reconsider these provisions of the initial regulations.

Proposed regulations establishing design criteria for sedimentation ponds and head-of-hollow fills were reissued November 14, 1978, and a public hearing held December 14, 1978. The period for receipt of comment on the reissued rules ended December 18, and at the end of the year all public comments were being reviewed in preparation for issuing the final regulations.

After an exchange of letters between the State of Texas and DOI, Texas withdrew court challenges to the Constitutionality of the Act and regulations promulgated to control surface mining on prime farmland. The settlement permits the regulatory authority to authorize a permit applicant to remove all soil and overburden in one step, store all such soil and overburden in one stockpile, and commence reclamation by replacing and grading stockpile material, all without regard to soil horizons, upon proper documentation showing equivalent or higher soil yields as on surrounding non-mined soil of the same type.

Initial Program Grants

Prior to the Act, 25 States regulated surface coal mining, primarily by issuing permits to conduct specified mining operations in accordance with stipulated requirements. A number of State programs included on-site inspections, but no State's program met the full range of requirements embodied in the Act. Alabama, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Missouri, Montana, New Mexico, North Dakota, Ohio, Oklahoma, Utah, Virginia, West Virginia, and Wyoming changed their laws and/or regulations to conform with the initial program regulations issued December 13, 1977.

In addition to inspection activities, States are upgrading their regulatory programs to assure compliance with the Act. They are revising mining permits to incorporate the initial performance standards, stipulating the standards in new permits, responding to complaints, increasing their staffs, and purchasing needed equipment.

As before, State permits are required for all surface mining and reclamation operations. Mines with permits issued after February 3, 1978, were required to comply with the initial program regulations. Since May 3, 1978, all coal mining and reclamation operations, except those qualifying in 1978 for the small-operator exemption (production

of less than 100,000 tons of coal in a calendar year), have been required to comply with the full range of the initial program regulations.

The Act authorizes grants to States for up to 100 percent of the additional inspection and enforcement costs entailed by the initial program. In fiscal year 1978, 21 States received a total of $6.1 million in initial program grants, as shown in table III-1 to be found in Section V of this report, Program Statistics.

Inspection and Enforcement

Of 222 inspector positions currently authorized for OSM, 103 were filled at the end of 1978. Another 60-70 inspectors will have reported for duty by the end of February 1979. Seventy-six new OSM inspectors were introduced to the technical and legal aspects of their jobs at two basic training courses held in Madisonville, KY, and Beckley, WV, in April and September 1978. The third and fourth basic courses are scheduled for January and February 1979. Senior OSM inspectors will attend an advanced course in February for in-depth study of technical areas such as soils and revegetation, mine water quality and treatment, sedimentation and roads, remote sensing, legal compliance, and expert testimony.

Federal inspectors work in close coordination with State inspectors. Before inspections began in a State, OSM inspection and enforcement personnel and inspector supervisors met with their counterparts in the State regulatory authority to work out joint goals and methods of coordination.

Because of delays in staffing, the frequency of OSM inspection was low at first. From a low of 200 in May 1978, the frequency rose to 600 in December 1978. By the end of 1978, OSM had conducted 2,777 inspections at 1,871 separate mines. After the inspectors recently hired or already selected are trained, equipped and deployed, the frequency should approach that necessary to achieve the statutory requirement of two per year per mine.

In the initial period, OSM enforcement was in general aimed at only the more serious violations. This policy was adopted to maximize the protection a limited inspection force could give to the public health and safety and to the environment. The policy had the incidental effect of providing a "break-in" or transition period for operators, States and OSM to become familiar with the new law and regulations in the field. This transition period is drawing to a close, and OSM is undertaking to meet the requirements of the law and regulations that it conduct complete inspections and take appropriate enforcement action against any violations observed.

Of the 2,777 inspections OSM conducted in 1978, 851 resulted in issuance of one or more Notices of Violation or Cessation Orders. In

total there were 1,290 separate Notices of Violation and 252 Cessation Orders. Each of these lead to an assessment, and 865 of the 1,290 Notices of Violation lead to a civil penalty.

In 1978 a total of $1,906,871 was assessed, 282 conferences were held, and 34 hearings were held before OHA admininistrative law judges. Of the $1,906,871 assessed, $167,830 was paid in escrow pending a hearing or paid outright. Of the remaining $1,739,041, $1,345,390 is not yet due, and $393,651 is subject to collection activity.

Most of the Cessation Orders covered only part of the mining operations at the site, and most of the violations on which they were based were remediable within one week. The most frequent serious violations involved:

- topsoil handling
- lack of sedimentation ponds or other sedimentation control
- placing spoil on downslope
- blasting
- lack of State permit

Additional information about Federal inspection and enforcement activities is given in table III-2, to be found in Section V of this report, Program Statistics.

Any citizen may request inspection of the surface or area of a mine where a violation of the Act, regulations, or permit conditions may exist or if there is thought to be an imminent danger or harm. If there is a reasonable belief that a violation or an imminent hazard exists, OSM will conduct the investigation and provide a written report to the citizen within 10 days. Citizens whose complaints lead to Federal inspections have the right to accompany OSM inspectors. Nationwide, in 1978 OSM received an average of 20-30 citizen complaints per month.

Financial Interest Regulations

Section 517(g) of the Act states that no employee of any State regulatory authority who performs any duty under the Act may have a direct or indirect financial interest in any underground or surface coal mining operation. A parallel provision applies to Federal employees. The Secretary of the Interior published regulations applicable to State employees on October 20, 1977 (30 CFR Part 705, 42 F. R. 56060). These rules were challenged by the Commonwealth of Virginia. On June 27, 1978, the U.S. District Court for the District of Columbia found that the "disclosure provisions of the regulation at issue provide a reasonable means by which the agency may accomplish Congress' intent." Virginia and all other States have taken steps to comply with the requirements.

The OSM regulations require State regulatory authorities to perform four activities:

1. The regulatory authorities must identify any positions exempt from filing financial interest statements. Exemptions include employees not performing functions under the Act, as well as personnel acting only in an advisory capacity to the regulatory authority.

2. All other employees of a State regulatory authority are required to file a financial interest form designed by OSM to enable State agency officials to determine whether each State employee complies with the conflict-of-interest provisions of section 517(g) of the Act. This form is filed with the head of the State regulatory authority, while the head of the State regulatory authority files the same form with the Director of OSM.

3. If an employee is not in compliance with section 517(g), the head of the State regulatory authority must resolve the conflict. Among the solutions approved by OSM are divestiture of the conflicting interest or reassignment of the employee. The latter includes, if a supervisor is willing, arranging an employee's activities so that no functions or duties are performed with respect to the entity in which there is a conflict of interest, such as a coal company employing a spouse.

4. If the State regulatory authority cannot resolve the conflict, it is reported to the OSM Director to determine what actions are necessary to achieve compliance.

States have not been awarded grant funds for conducting the initial regulatory program (see above) or for developing a permanent regulatory program until they have acted to meet the financial interest requirements. Through the grants and grant audit process, OSM and DOI are monitoring State actions to resolve conflict-of-interest questions. No State has been denied a grant for failure to implement the financial interest requirements.

The definition of "employee" in Part 705 of the Federal regulations includes any person who performs any decisionmaking function for the regulatory authority under the authority of State law and regulations. However, an exemption is made for those members of advisory boards or commissions who are required by State law to represent multiple interests.

Some States have expressed interest in seeing this exemption expanded to cover all boards. OSM has been satisfied with the remedy of requiring board members who have potential conflicts to abstain from voting or making other decisions relating to coal which might constitute performing any function or duty under the Act. At the end of the year, several environmental and citizen groups filed a petition

under section 201(g) of the Act requesting that OSM eliminate the multiple-interest board exemption.

The Permanent Program

Under the permanent regulatory program, monthly inspections of all surface coal mines will be required, covering the full range of standards set forth in section 515 of the Act. In addition to the standards effective during the initial program (see page 11) under the Act the permanent program standards require the following:

Conservation of resources. Coal mining operations must be conducted to maximize utilization of the fuel resource and thus minimize future surface mining.

Surface area stabilization. Surface areas, including spoil piles affected by surface coal mining and reclamation operations, must be stabilized and protected to control erosion and attendant air and water pollution.

Restoration of topsoil. Topsoil or a subsoil better able to support vegetation, which must be stockpiled under the initial program regulations, must be restored to the disturbed area under the permanent program.

Prime farmland. On prime farmland, mine operators must stockpile, protect, and restore soils classified as A horizon, B horizon, or other strata at least equal to B horizon soils. Regraded soils must have a root zone of depth and quality comparable to that of the natural soil.

Permanent water impoundments. Permanent impoundments will be authorized in the mining plan only where specific requirements can be met regarding size, stability, intended use and discharge, water level, safety and access, and impact on the quality and quantity of adjacent water sources.

Augering operations. Augering activities associated with surface mining are to be carried out in a manner which maximizes recovery of reserves. All auger holes are to be sealed to prevent drainage except where the regulatory authority finds that such a practice will create a hazard to the environment or the public health and safety.

Waste disposal. Disposal of wastes in areas other than the mine workings or excavations must be accomplished with stabilization through compaction in layers and in a manner which ensures that the final contour will be compatible with natural surroundings and will be revegetated.

Underground mines. Surface coal mining is not to be undertaken within 500 feet of active or abandoned underground mines except where certain conditions are met and approval is obtained from both the surface mining and health and safety regulatory authorities.

Fire hazards. All debris, acid forming materials, toxic materials, or materials constituting a fire hazard must be treated, buried and compacted, or otherwise disposed of in a manner which prevents contamination of ground or surface water. Contingency plans are to be developed to prevent sustained combustion.

Contemporaneous reclamation. Reclamation work must proceed in an environmentally sound manner and as contemporaneously as practicable with surface coal mining operations. The regulatory authority may authorize a delay in the case of combined surface and underground mining to maximize resource recovery.

Access roads. Construction, maintenance and post-mining condition of access roads must control or prevent erosion, siltation and pollution of water, and damage to fish and wildlife or public or private property. Permittees must refrain from constructing road or other access ways up a stream bed or drainage channel or in such proximity to a channel as to seriously alter the flow of water.

Revegetation. The period of responsibility for revegetation is 5 years after the last year of revegetation work where the average annual precipitation exceeds 26 inches; the period is 10 years for areas with less precipitation. At the end of this period, the regulatory authority must be satisfied that a diverse, effective, and permanent vegetative cover exists, of the same seasonal variety native to the area of land affected, that it is capable of self-regeneration and plant succession, and that it is at least equal in extent of cover to the natural vegetation of the area. This requirement allows some latitude for introduced species and for different time periods in the case of long-term intensive agricultural postmining land use.

Offsite area protection. Permittees must take action to protect offsite areas from slides or damage during surface coal mining and reclamation operations and must not deposit spoil or locate any part of their operation or waste accumulations outside the permit area.

Spoil disposal. Excess spoil must be disposed of in accordance with a variety of standards and procedures covering concurrent compaction, organic material removal from disposal sites, surface and internal drainage systems, contamination of waters, slope stability rock toe buttresses where spoil rests on a downslope, compatibility with surrounding drainage patterns, suitability for intended use, and certification by a qualified registered professional engineer.

Fish and wildlife protection. Disturbances and adverse impacts of mining and reclamation operations on fish, wildlife and related environmental values must be minimized, and operations are to achieve enhancement of such resources where this is practicable.

Slide or erosion barriers. Mining and reclamation operations must provide that an undisturbed natural barrier, beginning at the elevation of the lowest coal seam to be mined and extending from the outslope for such distance as the regulatory authority determines, be retained in place as a barrier to slides and erosion.

Permanent Regulations

Public participation in development of the permanent program began when OSM published an advance notice of proposed rulemaking in the Federal Register April 26, 1978. Pre-proposed draft regulations were issued July 3 and 21, 1978. This preliminary review, not required by law, was an effort to describe OSM's preliminary views and to elicit widespread comments on them. Over 2,500 copies of this draft were distributed, and public meetings to discuss the drafts were held August 3-11 in Washington, DC; Charleston, WV; Knoxville, TN; Indianapolis, IN; Kansas City, MO; and Denver, CO. OSM received nearly 2,000 pages of comments and heard from 173 witnesses. Significant revisions were made as a result of the extra comment period.

On September 18, 1978, the proposed permanent regulations were published in the Federal Register. Again OSM went much further than the public participation provisions of the Act require, by such actions as:

- publishing a comprehensive Preamble that not only stated the reasons for each proposal but also responded to many public comments received and identified alternatives considered or under consideration;
- allowing 70 days for comment instead of the 30 prescribed by law;
- holding both regional and Washington headquarter staffs available for open meetings with the public, as requested, and
- giving wide distribution to the draft EIS and draft regulatory analysis to help the public understand the options OSM considered.

In the course of 25 days of public hearings in Denver, CO; Charleston, WV; Indianapolis, IN; Kansas City, MO; Knoxville, TN; and Washington, DC, testimony was received from Federal agencies, environmental groups, industry, and interested private citizens. Fifty-seven meetings were arranged with private groups and public agenices on specific aspects of the regulations. Meetings during this comment period were announced in advance and open to any interested parties. The comment period yielded comments from 589 sources, tangible evidence of broad public participation.

When the formal comment period ended November 27, 1978, a task force of OSM officials and experts borrowed from other agencies in such technical disciplines as hydrology, agronomy, and geology began to analyze more than 15,000 pages of comments and 2,500 pages of formal

hearing transcripts and to revise the draft permanent program regulations where appropriate. The final regulations for the permanent regulatory program are to be issued in March 1979.

Program Proposals

The Act directs that, no later than June 3, 1980, there be established in every State either a State or a Federal permanent regulatory program. The Act also states that proposed State programs be submitted to OSM by February 3, 1979, but States may be allowed to defer submittal until August 3, 1979, if program development requires additional legislation. OSM determined that most States need some response by their legislatures, and all States with active or anticipated mining operations were granted the extensions authorized by the Act.

The period established in the Act for review of a State's proposed permanent regulatory program by OSM and approval or disapproval decision by the Secretary is six months from the date of submittal. Ample opportunity is provided during this period for public review and comment. Should the Secretary initially disapprove the proposed permanent regulatory program, the State has 60 days in which to make necessary changes before resubmittal is required. Major milestones in this process are as follows:

Permanent Regulatory Program Regulations Effective	March 1979
Latest State Program Submittal Date	No later than August 3, 1979
Initial Decision of Secretary Approving or Disapproving State Program	6 months from date of submittal (Feb. 3, 1980 for Aug. 3, 1979 submittal.)
Final Decision of Secretary Approving or Disapproving State Programs	60 days from resubmittal (June 3, 1980 for April 3, 1980 resubmittal)
Latest Date for Implementation of State Programs or of a Federal Program in States Lacking Approved State Programs	June 3, 1980
Permanent Program Permit Applications Required for All Coal Mining Operations	2 months after State program is approved or Federal program implemented.

Grants to States

Section 705 of the Act authorizes grants-in-aid to assist States in the development of their permanent regulatory programs. In fiscal

year 1978, grants in the aggregate amount of $3 million were awarded to assist 8 States. Additional information is presented in table III-3 to be found in Section V of this report, Program Statistics.

Program development grants are used to cover State costs for developing new or revised laws, regulations, and procedures, revised inspection systems or training programs, new or revised organizational structures, management information and communication systems, a data base and information system for designating lands unsuitable for mining, and for applying for the initial administrative and enforcement grant.

Many of the coal-producing States chose to finance development of their program entirely with State funds. By doing so, they preserved their entitlement for Federal grants of up to 80 percent of their costs for the first year of their permanent program. The Federal matching percentage specified by the Act is up to 60 percent in the second year of the State's permanent program and up to 50 percent thereafter.

Through the grants, States are actively encouraged to involve the public as fully as possible in the development of their program. In addition to the grants, OSM provided technical assistance to the States during the past year. States in the process of revising laws and regulations consulted with OSM to make sure that all necessary changes were made and that proposed changes did not conflict with the Federal law. Assistance in construing the meaning of various sections of the Federal law and regulations was also provided.

Significant Features

Mining and Reclamation Plans

Sections 507 and 508 of the Act require applicants for surface coal mining and reclamation permits to submit a detailed mining and reclamation plan. Applicants are required to post performance bonds and also pay fees to cover all or part of the cost of reviewing, administering, and enforcing their permits. Development, review, and approval of the mining and reclamation plans are deemed singularly important factors which may indeed be critical to the success of the regulatory program.

This process acquaints the coal mining operator with the specific performance standards that must be met and the work required to meet them. The approved plan is then the basis for subsequent inspection and enforcement activities. Accordingly, much attention was given to including in the permanent regulatory program regulations a process that would assure comprehensive and competent reviews, on a timely basis, of mining and reclamation plans submitted by the industry.

State "Window" Provisions

In response to comments on the pre-proposed draft regulations, the proposed regulations included a State "window" procedure to help States propose alternative ways of satisfying the requirements of OSM's regulations. This procedure will assist States in gaining approval of State program provisions tailored to fit differences in State and regional environmental or agricultural conditions. Many comments on this approach were received during the period for comment on the proposed rules. OSM is considering these comments in developing the final rules.

Unsuitability Designations

Certain coal deposits cannot be extracted, using current technology, without undue land and/or water damage. Section 522 of the Act establishes a procedure for designating areas as unsuitable for all or certain types of coal mining. This provision will enable the State and Federal governments to respond to conflicts that often arise between coal mining and other uses of land.

Subchapter F of the permanent regulations will implement the provisions of section 522. Unsuitability designations can be terminated later if conditions change and a petition is filed. With the Geological Survey and the Missouri River Basin Commission, OSM prepared a technical report for the guidance of State officials, "Designating Areas Unsuitable for Surface Coal Mining: A Preliminary Interpretation of Section 522 of Public Law 95-87."

Small Operator Assistance

Section 507(c) of the Act offers assistance in meeting certain permit requirements to qualified operators who mine less than 100,000 tons of coal per year. The permit application filed by all operators must include a "determination of probable hydrologic consequences" (section 507(b)(11)) and the "statements" of the results of bore or coring analyses (section 507(b)(15)). These technical reports will be provided to small operators by qualified laboratories at OSM expense. States are ultimately to administer the program for OSM as part of their permanent regulatory program. Funding is from the Abandoned Mine Reclamation Fund (section 401(b)(1)) and from OSM's Regulation and Technology appropriation.

Regulations for the Small Operator Assistance Program (SOAP) were promulgated December 13, 1977 (Part 795, 42 F.R. 62710-62712). Activities under way at the end of 1978 included:

- o developing procedures for laboratory certification and allocation of funds;
- o arranging for cooperation of the Geological Survey, Environmental Protection Agency, and the States with respect to provisions of data (section 507(b)(11));

- drafting program manuals for use of small operators, laboratories, and State regulatory authorities; and

- assuring program coordination with activities of the Bureau of Mines, Tennessee Valley Authority, and the U.S. Department of Energy.

Plans were initiated in 1978 for cooperating local educational institutions to offer special evening sessions at which coal mine operators can learn how to collect hydrologic information and develop the "determination of probable consequences" that must be part of the proposed mine plan. In addition, an OSM grant of $95,000 was made to the Water Resources Center of the University of Delaware, through the DOI Office of Water Research and Technology, for development of a handbook of reclamation techniques which preserve and enhance water quality and quantity. The handbook will emphasize mining activities and reclamation techniques generally used east of the 100th meridian and applicable to small mining operations.

Regulatory Analysis

Executive Order 12044 directs each agency to provide for public participation in the development of regulations and to prepare a "regulatory analysis" for regulations with major economic consequences. With the concurrence of the staff of the Council on Wage and Price Stability, the Assistant Secretary for Energy and Minerals determined that a regulatory analysis would be prepared for the permanent, but not the initial, program regulations.

The Executive Order specifies that each regulatory analysis contain a:

- succinct statement of the problem,

- description of major alternative ways of dealing with the problem that were considered by the agency,

- analysis of the economic consequences of each alternative, and

- detailed explanation of the reason for choosing one alternative instead of the others.

A 137-page draft regulatory analysis, limited to major areas in which the Act gives DOI some latitude, was issued September 19, 1978. The regulatory analysis was designed to provide economic cost estimates of the various alternative regulatory approaches considered during development of the permanent regulatory program. This information helped OSM regulation-writing task groups and OSM management balance environmental, technical, and legal constraints with economic considerations.

During the 70 days provided for public comment, the draft regulatory analysis was reviewed by the interagency Regulatory Analysis Review Group, which is under the leadership of the Council of Economic Advisers, with staff support provided by the Council on Wage and Price Stability. The final version of the regulatory analysis is being prepared for public distribution with the permanent program regulations in March 1979.

Environmental Impact Statement

Under section 702(d) of the Act, adoption of the permanent regulatory program constitutes a "major Federal action" subject to the requirements of the National Environmental Policy Act of 1969, 42 U.S.C. 4332. Accordingly, OSM is preparing an environmental impact statement (EIS).

A public meeting was held August 2, 1978, to solicit comments and recommendations concerning the scope, content, and format of the EIS. Written statements on the subject of the meeting were accepted through August 14; two letters of comments were received. A 321-page draft EIS was issued October 4, 1978. Oral and written public comments on the draft EIS were solicited by notices in the Federal Register. The 55-day public comment period ended November 27.

Public hearings to receive oral comments on the draft EIS were held in Washington, DC, Indianapolis, IN, and Denver, CO, on October 31 and November 1-2, 1978. Review copies of the draft EIS were sent to 10 other components of DOI, 19 other Federal departments and agencies, 50 State environmental protection agencies, and all State Clearinghouses listed in OMB Circular A-95. About 7,000 copies of the draft EIS were distributed, and 41 written comments were received.

The draft EIS adopted a nontraditional format that eliminated repetitious discussion and provided a brief description of the most critical aspects of the proposed action at the beginning of the statement. Examples of major beneficial effects of the proposed permanent program assessed in the draft EIS include:

- Restoration of mined land to approximate original contour.
- Protection of soil materials for use in reclaiming mined land, with particular restrictions to protect the soil materials for prime farmlands.
- Restoration of vegetation after mining.
- Enhancement of fish and wildlife resources.
- Protection of cultural resources on non-Federal lands.

- Assurance that lands disturbed by mining will be restored to a condition capable of supporting the pre-mining use of the land or a higher or better land use.

- Designation of lands unsuitable for all or certain types of surface coal mining operations when it is not technically and economically feasible to reclaim the lands or when the lands possess certain resources that should be protected.

The final EIS will be issued prior to issuance of the final regulatory analysis and the permanent program regulations in March 1979.

The Federal Lands Program

By virtue of their statutory responsibilities, several Federal agencies must participate in the administration of section 523 of the Act, which requires regulation of surface mining and reclamation operations on Federal land, and section 522 of the Act, which requires the Secretary of the Interior to designate Federal lands deemed unsuitable for surface coal mining. A "Division of Responsibilities" document was approved within DOI during 1978, and work proceeded on a Memorandum of Understanding setting forth the procedural details of inter-bureau coordination under the Federal Coal Leasing Program. Assignments of responsibilities by major function, as set forth in the Division of Responsibilities document, are summarized below:

Evaluation of Coal Resources. This includes determining the mineral characteristics and values of the land proposed for leasing and recommending logical mining units (where applicable), royalty type and amount, and rent. The Geological Survey will continue exercising these responsibilities.

Petitions for Unsuitable Lands Designation. Persons with an interest which is or may be adversely affected have a right to petition the Secretary of the Interior to have an area of Federal lands designated as unsuitable for all or certain types of coal mining operations or to have such designation terminated.

OSM is to receive all petitions and refer them to field offices of the Federal surface management agency and other appropriate State and local agencies. The surface managing agency will make a substantive review and develop a tentative recommendation. OSM will conduct the public hearing.

The surface managing agency will make final recommendations to OSM. If OSM does not concur, the decision will be referred to headquarters for resolution. OSM is to assure consistency with State systems to designate lands and be generally responsible for coordination and preparation of decision documents. The petition process for designating

Federal lands unsuitable for surface coal mining that OSM will administer will be included in the final permanent regulations.

Coal Lands Review. Section 522(b) of the Act charges the Secretary with reviewing Federal lands to determine if any areas are unsuitable for all or certain types of surface coal mining operations and to condition any mineral leasing consistent with the designation. Sections 201 and 202 of the Federal Lands Policy and Management Act direct the Secretary to inventory resources of the public lands, designate areas of critical environmental concern, and prepare land use plans for appropriate uses of public lands.

The Bureau of Land Management is to have these responsibilities with substantial consultation with OSM, the Geological Survey, and other surface managing agencies as appropriate. OSM is to have concurrence in establishing rules and criteria for Federal coal lands review. The Bureau of Land Management is to apply the criteria for the determination of suitability.

Preliminary unsuitability criteria were defined and field tested. Near the close of the year, the Secretary reached a decision on the criteria, and Federal land management planning activities were starting to incorporate the unsuitability determinations. The unsuitability criteria are also being employed in leasing decisions and in the mining plan review and approval process (below).

Lands Unsuitable for Non-Coal Mining. Persons with an interest which is or may be adversely affected have a right to petition the Secretary of Interior to have an area of certain Federal lands designated as unsuitable for non-coal mining operations. In addition, the Secretary may initiate a review process on his own motion or initiate such a review at the request of a Governor. The Secretary may withdraw designated areas from mineral entry or leasing, according to the nature of the designation. The Bureau of Land Management is to have responsibility in consultation with OSM, Geological Survey and other agencies as appropriate.

Preparation of Leasing EIS. Section 102(c) of the National Environmental Protection Act requires agencies taking major Federal actions significantly affecting the environment to prepare environmental impact statements (EIS) on those actions. The Bureau of Land Management is to have responsibility as the lead agency, with special exceptions where another agency is designated as lead agency, in substantial consultation with OSM, the Geological Survey, other appropriate agencies, and State and local interests. (A draft EIS for the Federal Coal Management Program was issued December 15, 1978.)

Special Lease Terms and Conditions. This function includes preparing special stipulations regarding environmental performance standards and other protective provisions. The Bureau of Land Managment is to be the official representative of the Secretary dealing with lease applicants, with OSM and Geological Survey concurrence.

Surface Owner Consent. Section 714 of the Act prohibits leasing Federal coal without the consent of private surface owners where the mineral estate is owned by the Federal Government. Consultation with surface owners concerning lease tract proposals is required. The Bureau of Land Management is to have responsibility as this is a lease tract selection function.

Use of Federally Owned Surface. Upon request of the Bureau of Land Management or other surface management agency, a mineral report is prepared taking into account whether the intended use would interfere with mining, cause damage to coal or other minerals, make coal or other minerals inaccessible for future extraction, or conflict with proper reclamation of the lands.

The Bureau of Land Management is to continue to receive applications. Prior to receipt of the coal mining plan, it is solely a Geological Survey responsibility to report on surface use application. After receipt of a coal mining plan, the Geological Survey retains responsibility with OSM concurrence.

Delineation of "Area of Operations" (AO). A map is prepared showing the area within a lease where mining, reclamation, and related activities are to take place. The purpose of delineating the "AO" is to make agency jurisdiction clear. The Geological Survey is to retain the authority to delineate AO's until a mining plan is received. After a mining plan is received, the AO must be adjusted. Since OSM will receive mining plans, OSM is then to delineate the AO in consultation with the Bureau of Land Management and the Geological Survey. OSM will monitor off-site effects of mining operations outside the AO. OSM will obtain concurrence from the Geological Survey in connection with the Survey's royalty, production, and diligent development responsibilities.

Review and Approval of Mining Plans. An environmental analysis or an EIS must be prepared for a proposed mining plan or a major modification thereof. By law, one agency is designated as the lead agency for preparation of these documents, in consultation with the surface managing agency, and for coordination of review by other agencies.

OSM is to assume responsibility for recommending approval of mining plans, modifications, and environmental reviews to the Assistant Secretary, Energy and Minerals, with written concurrence of the Geological Survey on production and resource recovery requirements. OSM is to be responsible for contacts with the mining companies regarding mining plans and post-mining land use, with coordination by the Geological Survey with OSM on Geological Survey responsibilities related to development, production, and resource recovery requirements.

The Bureau of Land Management retains authority to recommend and approve special requirements relating to protection of natural resources and post-mining land use and to participate in preparation of the environmental analysis or EIS.

Non-Lessee Activity on Leased Land. The Bureau of Land Management is solely responsible for the control of activities on leased land prior to mining by persons other than the lessee. Section 301(b) of the Federal Lands Policy and Management Act mandates Bureau jurisdiction over such activities. The Geological Survey is responsible for supervision of exploration license activities and multiple mineral development activities. Other surface managing agencies such as the Forest Service are also responsible for managing surface resources. The Bureau of Land Management is to retain its responsibility.

Dealing With Lessees and/or Operators. As the Secretary's representative and point of contact with lessees and operators concerning operations and compliance with lease terms, regulations, and approved mining plans, the Geological Survey is to retain production functions; OSM is to assume environmental and related enforcement functions; and the Bureau of Land Management to retain non-mining functions outside the AO, including rights-of-way and ancillary activities related to mining. Geological Survey and Bureau of Land Management inspections will be coordinated with OSM inspections, except Bureau of Land Management inspections outside the AO. The Geological Survey will make royalty audits and other non-field inspections independently of OSM.

Emergency Environmental Situations. OSM is to have primary authority; the Bureau of Land Management and Geological Survey are to have such authority when OSM inspectors are unable to take action before significant harm or damage will occur. The Geological Survey and Bureau of Management will retain their present procedures for emergencies involving loss, waste, or damage to coal and other mineral resources and other Mineral Leasing Act functions.

Abandonment Procedures. OSM is to have primary authority to approve abandonment procedures and approve abandonment of operations, with Bureau of Land Management concurrence with respect to approval of compliance with special requirements relating to protection of natural resources and post-mining land use of affected lands, and with Geological Survey concurrence with respect to compliance with production and coal resource recovery requirements. The abandonment inspection will be a joint inspection by the three agencies.

Release of Performance Bond. The Bureau of Land Management will continue to exercise bond release authority with OSM and Geological Survey concurrence during the initial regulatory program. This will be renegotiated as the permanent program is being developed.

Cooperative Agreements

Consistent with the Act's emphasis on State regulation of surface mining and reclamation operations, extension of 4 Cooperative Agreements was negotiated in 1978 to provide for the continuation of State regulatory authority on Federal lands as authorized by section 523(c). At the end of the year renegotiated Agreements with the States of

Montana, Utah, and Wyoming were about to start the rulemaking process. A Cooperative Agreement with North Dakota was ready for approval by the Governor and the Secretary of the Interior. Colorado and New Mexico expressed interest in negotiating similar State-Federal Cooperative Agreements.

It is expected that State activities under the Agreements will at first be concerned primarily with routine inspection and enforcement. As their capabilities are developed, the States will become increasingly involved in enforcement work and in the Federal mine plan review and approval process. Although the Secretary's responsibility for approval of mining plans for Federal lands may not be delegated, the preliminary technical review and analysis work on which approval is based need not be performed by Federal personnel.

Indian Lands

Except for specified performance standards, the OSM regulatory program does not apply to Indian lands until February 1980. Instead, section 710 of the Act provides for a study by the Secretary, in consultation with Indian Tribes, of the question of regulation of surface mining on Indian lands that will achieve the purposes of the Act and recognize the special jurisdictional status of these lands. Following the study, the Secretary is to report the findings to the Congress and submit drafts of proposed legislation that would allow Indian Tribes to assume full regulatory authority over surface mining of coal on Indian lands.

The study was initiated in September 1978. Appropriate portions of the study are being conducted under a $700,000 contract with the Council of Energy Resources Tribes. In addition to developing report information, the contract will facilitate consultation by the Tribes. Portions of the study dealing with jurisdictional status of Indian lands outside the boundaries of Indian reservations are being conducted by the DOI Office of the Solicitor. It is anticipated that the study report will be completed in 1979.

In 1978, the regulatory program on Indian lands, including the more stringent environmental performance standards, was administered largely by the Geological Survey and the Bureau of Indian Affairs, as in the past. Regulations were issued December 16, 1977 (25 CFR 177B) incorporating the new regulation standards, providing for inspection and enforcement activities, and establishing the assessment of civil penalties for violations. Efforts are now underway to define and clarify DOI agency roles to assure appropriate and timely response to mining plans submitted for approval and to inspection and enforcement issues.

The Tribes possess considerable authority to enact and conduct effective control and reclamation programs on Indian lands. Their

capability in terms of organization and staffing is less than optimal, however. Funding assistance similar to that available to the States under the Act would enable Tribes to start building the needed capability. The study and subsequent legislative proposals are to define rules and establish appropriate administrative procedures.

Noteworthy State Activities

Region I

Maryland. Energy and Coastal Zone Administration designated the State regulatory authority and the State reclamation agency.

Pennsylvania. Department of Environmental Resources designated the State regulatory authority and the State reclamation agency.

Virginia. Department of Conservation and Economic Development designated the State regulatory authority and the State reclamation agency.

West Virginia. Department of Natural Resources designated the State regulatory authority and the State reclamation agency.

Region II

Alabama. Surface Mining Reclamation Commission designated the State regulatory authority, and the Department of Industrial Relations designated the State reclamation agency.

Georgia. Department of Natural Resources designated the State regulatory authority and the State reclamation agency.

Kentucky. Department for Natural Resources and Environmental Protection designated the State regulatory authority and the State reclamation agency.

Mississippi. No coal mining to date, but lignite mining expected by 1981. Geological Economic and Topological Survey designated the State regulatory authority and the State reclamation agency. Preparing to enact necessary State legislation.

Tennessee. Department of Conservation designated the State regulatory agency and State reclamation agency.

Region III

Illinois. Department of Mines and Minerals designated the State regulatory authority, and the Abandoned Mined Land Reclamation Council designated the State reclamation agency. Using State funds for program development.

Indiana. Department of Natural Resources designated the State regulatory authority and State reclamation agency.

Michigan. No active coal mines currently, but industry interested in developing proven reserves near Lansing. Department of Natural Resources designated the State regulatory authority and State reclamation agency. Permanent regulatory program being developed in anticipation of resumption of coal mining.

Minnesota. No known coal deposits. Considering joint petition asking the Council on Environmental Quality to recommend amendment of the Act to cover non-coal minerals, especially sand and gravel, iron, copper, lead, and zinc.

Ohio. Department of Natural Resources designated the State regulatory authority and State reclamation agency. Using State funds for program development.

Wisconsin. No known coal deposits. Joining Michigan and Minnesota in petition to the Council on Environmental Quality.

Region IV

Arkansas. Department of Pollution Control and Ecology designated the State regulatory authority and State reclamation agency. Preparing to enact necessary State legislation. In addition to present bituminous coal production, large-scale lignite mining is anticipated in the future.

Iowa. Department of Soil Conservation designated the State regulatory authority and State reclamation agency. Preparing to enact necessary State legislation.

Kansas. State Corporation Commission designated the State regulatory authority and State reclamation agency. Preparing to enact necessary State legislation.

Louisiana. No surface coal mining currently, but anticipates large-scale lignite mining in a few years. Enacted State legislation for permanent regulatory program. Office of Conservation designated the State regulatory authority.

Missouri. Department of Natural Resources designated the State regulatory authority and State reclamation agency. Preparing to enact necessary State legislation.

Oklahoma. Department of Mines designated the State regulatory authority, and the Conservation Commission designated the State reclamation agency. Preparing to enact necessary State legislation.

Texas. Railroad Commission designated the State regulatory authority and State reclamation agency. Preparing to enact necessary State legislation. Extensive growth in lignite production anticipated.

Region V

Alaska. Department of Natural Resources designated the State regulatory authority and State reclamation agency.

Arizona. Land Department designated the State regulatory authority and State reclamation agency. All current production is on Indian lands.

Colorado. Department of Natural Resources designated the State regulatory authority and State reclamation agency. Preparing to enact necessary State legislation. Negotiating Cooperative Agreement with DOI covering Federal lands, under the Mineral Leasing Act.

Montana. Department of State Lands designated the State regulatory authority and State reclamation agency. Signed revised Cooperative Agreement with DOI covering Federal lands.

New Mexico. Bureau of Mines and Mineral Resources designated the State regulatory authority and the State reclamation agency. Preparing to enact necessary State legislation. Cooperative Agreement with DOI covering Federal lands terminated.

North Dakota. Public Service Commission designated the State regulatory authority and State reclamation agency. Preparing to enact necessary State legislation. Cooperative Agreement negotiated with DOI covering Federal lands.

Utah. Department of Natural Resources designated the State regulatory authority and State reclamation agency. Preparing to enact necessary State legislation. Signed Cooperative Agreement with DOI covering Federal lands.

Washington. Department of Natural Resources designated the State regulatory authority and State reclamation agency.

Wyoming. Department of Environmental Quality designated the State regulatory authority and State reclamation agency. Signed Cooperative Agreement with DOI covering Federal lands.

IV. EDUCATION, INFORMATION, AND TRAINING

The Surface Mining Control and Reclamation Act authorizes support for certain programs of higher education, data collection and dissemination, and technical training and certification, as well as special studies to advance the state-of-the-art and promote sound public policy development. These activities are reported below.

Mineral Institutes

Section 301 of the Act authorizes appropriations "to assist the States in carrying on the work of a competent and qualified mining and mineral

resources research institute, or center..." The law envisages one institution of this kind in every State to "conduct competent research, investigations, demonstrations, and experiments of either a basic or practical nature, or both, in relation to mining and mineral resources and to provide for the training of mineral engineers and scientists..."

Proposed rules for this program were published June 5, 1978 (43 F.R. 24326). Final program rules were published August 28, 1978 (43 F.R. 38556). The Advisory Committee on Mining and Mineral Resources Research authorized under section 309 of the Act was appointed August 7, 1978. The statutory role of the Advisory Committee is to "consult with, and make recommendations to, the Secretary of the Interior on all matters involving or relating to mining and mineral resources research..."

Initial membership of the Advisory Committee appointed by the Secretary of the Interior includes the following:

Dr. Elburt F. Osborn, Chairman, representing the National Academy of Engineering
Dr. James R. Balsley, representing the Geological Survey
Dr. Robin Brett, representing the National Science Foundation
Mr. Donald Calloway, representing coal mine workers
Dr. Peter Flawn, representing the National Academy of Sciences
Mr. Richard Holsten, representing industry
Ms. Carolyn Johnson, representing environmental interests
Dr. John Morgan, representing the Bureau of Mines
Dr. Fun-den Wang, representing higher education

The Advisory Committee met on August 11, August 28, September 18, and October 5, 1978. The initial meetings were held to review and evaluate the qualifications of institutions of higher education that had applied for designation as mining and mineral resources research institutes. Of 52 institutions that applied, 37 were found qualified by the Committee. The Advisory Committee also recommended a set of criteria to be used in the OSM selection process.

Owing to a limitation in the funding measure, it was possible to designate only 20 institutions in fiscal year 1978 and to add but 2 others in fiscal year 1979. Each of the 22 institutions designated in calendar year 1978 received an initial allotment grant of $110,000 and a scholarship grant of $160,000 for undergraduate and graduate student support. Scholarship and fellowship awards are to made by the institutes before September 30, 1981. Additional information is presented in tables IV-1 and IV-2 to be found in Section V of this report, Program Statistics.

Section 304(c) of the Act requires the Secretary of the Interior to report to Congress annually on the funding and work of the institutes. The information in this report fulfills the requirement of section 304(c) for 1978.

Applied Research

There are about 6,000 operating surface mines in the U.S. Approximately 75,000 to 100,000 acres are disturbed by surface coal mining annually. Resource managers, regulatory administrators, owners and operators of mining properties, and all others with mining responsibilities need answers to their everyday problems arising in the course of compliance with the Act. Acknowledging these needs, OSM developed an applied research program for provision of technical information and services through the Federal and State regulatory programs. In 1978, the program included the following projects:

Monitoring Procedures. Development of technical information and guidelines for appropriate procedures for monitoring effects of mining on fish, wildlife, their habitat, and the environment. DOI, Fish and Wildlife Services, $96,000.

Land Surveyors. Identification of possible adverse employment effects of the Act and development of remedies that will allow surveyors an opportunity to provide the optimal range of professional services allowable under the Act. "Impact of the Surface Mining Control and Reclamation Act of 1977 on Professional Land Surveyors," completed December 1978, is now available. Oak Ridge Associated Universities, Oak Ridge National Laboratory, $60,000.

Terrain Analysis. Review, evaluation, development, and testing of topographic terrain analysis techniques applicable to surface mining reclamation operations. Oak Ridge National Laboratory, $95,000.

Coal Mine Effluents. Development of guidelines for collection of water quality data from the final regrading of mined lands through the release of performance bonds, including seedbed preparation and establishment of vegetation. Criteria to be defined include those for selection of sampling sites, collection and analysis of appropriate water samples, and compilation of data to support development of effluent guidelines appropriate for surface coal mine discharge. Environmental Protection Agency, H.R.B. Singer, $500,000.

Bank Stability. To determine the feasibility of using aerial photographs to define instability of spoil and coal processing waste and to evaluate the structural integrity of these materials. DOI, Geological Survey, $15,000.

Information and Training

Various provisions of the Act authorize or mandate the collection and dissemination of scientific and technical information by OSM and the training and certification of individuals engaged in surface coal mining. These activities are reported below.

Data Centers

Section 307 of the Act directs the Secretary of the Interior to "establish a center for cataloging current and projected scientific research in all fields of mining and mineral resources." Section 201(c)(8) of the Act directs the Secretary of the Interior to "develop and maintain an Information and Data Center on Surface Coal Mining, Reclamation, and Surface Impacts of Underground Mining, which shall make such data available to the public and Federal, regional, State, and local agencies..."

Pursuant to section 307, OSM completed a six-week study late in 1978. Potential users and/or sources of mining related research information were interviewed at the Bureau of Mines and other Federal agencies, colleges and universities, and industry-related organizations. A matrix was devised to show the possible interrelationships of information exchange among these bodies and the public and what changes in frequency or format would be required to effect or improve transfers of technical information.

In addition to this study, development of the regulatory programs included the following information projects in fiscal year 1978:

Mine Permit Data. Compilation and comparison of data from State files of mine permit applications in Illinois, Indiana, and Ohio to determine feasibility of a computerized system for evaluating local and regional assessments and projections of environmental impact. Department of Energy, Argonne National Laboratory, $96,000.

Satellite Technology. Development of strategies, techniques, and procedures for monitoring surface coal mines using Landsat satellite technology to evaluate progress of mining, acreage disturbed, and establishment of vegetative cover. DOI, Bureau of Mines; University of New Mexico, $50,000.

Vegetative Cover. Expansion of existing computerized information system to monitor reports of technology for reestablishing or enhancing vegetative cover in areas affected by coal mining. DOI, Fish and Wildlife Service, $87,000.

Environmental Abstracts. Collecting, abstracting, and indexing current literature on coal and the environment. Environmental Protection Agency, Bituminous Coal Research, Inc., $10,000.

Abandoned Mines. Identification and review of current resource inventory technology, in both the private and public sectors, applicable to development by OSM of an inventory of abandoned mines, including satellite, aerial photographic, and other techniques. Oak Ridge National Laboratory, $97,500, from the Abandoned Mine Reclamation Fund.

Blaster Training and Certification

Section 719 of the Act requires the Secretary of the Interior or the State regulatory authority to regulate the training, examination, and certification of those engaging in or responsible for the use of explosives in coal mining. Regulations are being drafted to establish a nationwide training, examination, and certification program for blasters. Through appropriate validation studies, OSM will establish testing and experience requirements for persons who conduct blasting. Appropriate training materials will also be developed.

OSM intends to contract for national studies to identify the essential job tasks of blast design, preparation, and execution that must be performed to meet OSM blasting specifications and to identify the skills, knowledges, and abilities a person must demonstrate, through examination and experience, to assure competence in performing those tasks. In accordance with the Uniform Guidelines for Employee Selection Procedures, published by the Equal Employment Opportunity Commission August 25, 1978, 43 F.R. 38290, these studies will be performed by a qualified psychologist using professionally acceptable methods to demonstrate that OSM selection procedures (examination and experience requirements) validly predict or measure performance for a particular job.

Such studies will ensure that all essential elements (and no nonessential elements) of competence are included in the content of examinations and training courses for blasters. Valid, reliable training courses and examinations should be ready for use by all regulatory authorities by the close of 1979.

In addition to these activities, OSM supported the following training projects in 1978:

Unsuitable Lands. Training an interdisciplinary group of science and planning/design graduate students in the technical and administrative aspects of the State-Federal program in preparation for the identification and management of lands unsuitable for surface coal mining. Harvard University through the Tennessee Valley Authority, $63,391.

Audiovisual Package. Development of about 23 audiovisual units, each 15-20 minutes in duration, and 320 pages of instructional field guides on mining, pollution control, and reclamation techniques and practices for the training of mining and regulatory personnel, post-secondary school students, and others. Environmental Protection Agency, Interstate Mining Compact Commission, $678,601.

Alaskan Surface Coal Mining

Section 708 of the Act directed the Secretary of the Interior to contract with the National Academy of Sciences-National Academy of Engineering for

an in-depth study of surface coal mining conditions in Alaska. OSM provided $250,000 for this study, which will yield information on the physical, hydrologic, and climatic conditions in Alaska that may require additional statutory or regulatory safeguards to protect the environment to an extent equivalent to the protection afforded under the Act in other States.

A 15-member, interdisciplinary Committee on Alaska Coal Mining and Reclamation (COACMAR) has been organized. Dr. Earl H. Beistline, Dean, University of Alaska, Fairbanks, is Chairman. Other members are:

Dr. Clayton G. Ball, Evanston, IL
Dr. Jerry Brown, Hanover, NH
Dr. Perry R. Hagenstein, Wayland, MA
Mr. Charles F. Herbert, Anchorage, AK
Ms. Celia Hunter, Fairbanks, AK
Dr. Arthur H. Lachenbruch, Menlo Park, CA
Dr. William S. Laughlin, Storrs, CT
Mr. Harold Malde, Denver, CO
Dr. Jay Dee McKendrick, Fairbanks, AK
Dr. A. Thomas Ovenshine, Menlo Park, CA
Dr. Francis J. Pettijohn, Baltimore, MD
Dr. George W. Rogers, Juneau, AK
Dr. Ross G. Schaff, Anchorage, AK
Dr. Lidia L. Selkregg, Anchorage, AK

An organizational planning meeting is scheduled for February 1979 to define issues and develop a workplan and structure for the Committee's report, which is scheduled to be submitted to OSM in March 1980. A report of this study--with draft legislation, if appropriate--will be sent to the President and Congress in June 1980.