

Research and Experimental Practice Program

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

RESEARCH STUDIES

In fiscal year 1985, 17 projects were awarded for a total of \$637,000. Five studies, which were begun in previous years, were completed during the year. Research projects can originate from virtually any source—within OSMRE, a university, another Federal agency, or a private contractor—and are reviewed and evaluated by OSMRE technical personnel in collaboration with Bureau of Mines and United States Geological Survey technical experts. Evaluation by the two other agencies insures coordination of research efforts and prevents duplication of research.

Some projects awarded in fiscal year 1985 were:

- Monitoring Long-Term Surface Impacts on the Hydrologic Systems in Three Small Watersheds in Eastern Ohio
- Water Quality of Final-Cut Surface Mine Lakes: Controlling Factors and Predictive Models
- Feasibility of Excess Spoil on Previously Mined Lands
- Minimization of Coal Refuse Disposal Facility Related Water Deterioration
- Characterization of Leachate from Coal Refuse

Examples of completed projects are:

- Geomorphic Approach to Strip Mine Reclamation
- Improvement of Overburden Analytical Technology
- Development of Data Collection Methods for Probable Hydrologic Consequences

EXPERIMENTAL PRACTICES

Experimental practices are cooperative efforts among mine operators, state regulatory authorities, and OSMRE to develop and investigate innovative measures to accomplish mine operations and reclamation. A practice is proposed which varies from a design or performance standard of the regulations and, if approved, is put into operation by the mine operator. OSMRE conducts oversight of the practice. If the experimental practice proves equivalent to the standards in the regulations, it may be incorporated into the regulations through the use of rulemaking procedures. During fiscal year 1985, four practices were approved for experimental use. Five other experimental practice studies from previous years continued during fiscal year 1985.

Typical experimental practices deal with overburden backfilling and grading, excess spoil disposal sites, sedimentation ponds, and revegetation of slurry ponds.

Abandoned Mine Lands Research Activities

The AML Reclamation Research Program became fully operational in 1985. Six projects, selected from proposals received in 1984, were funded and are now underway.

During fiscal year 1985, the selection process for projects to be funded the following year began with the publication of an invitation for AML research proposals in the **Commerce Business Daily**. Interest in the program is growing steadily and 104 proposals were received by the deadline. The proposals, which originated almost equally from private sources, academia, and other Federal agencies (principally the Bureau of Mines and the U.S. Geological Survey), represented a 60 percent increase over the number received the previous year.

A review panel was selected, consisting of four OSMRE and four state members. The panel reviewed all proposals and met in late summer to complete the selection process. The panel selected 17 proposals for possible funding and recommended that requests be published for proposals on specific needs not covered by the submitted proposals.

Technical negotiations were conducted with the 17 proposers in the Fall of 1985, and by the end of the fiscal year, a program plan was being developed, recommending funding of the 17 proposals as well as four that were submitted in response to the request for proposals on specific needs.

OSMRE also funded, from regular program accounts, several other studies that have AML research links but are not applied research and, therefore, were not funded from the annual research appropriation.

International Research

Special Foreign Currency Program—India

The Office of Surface Mining Reclamation and Enforcement has been allocated \$420,000 in Indian rupees from the Special Foreign Currency Fund to conduct research related to mine planning and reclamation. Specific areas of interest are development of comprehensive environmental management plans, water quality treatment facilities, pilot projects, workshops and information exchange, and environmental baseline monitoring. These projects, when approved by the Government of India, will conclude within three years.

APPLIED RESEARCH PROJECTS

	Funding ¹				Estimated Completion Date
	FY 1982	FY 1983	FY 1984	FY 1985	
Assistance in developing OSM/RA/SCS workshop on prime farmland, topsoil and revegetation.	\$ 0	\$ 0	\$ 9,875	\$ 0	Completed
Monitoring overburden backfilling and grading operation at Browncrest No. 3 mine, Pennsylvania Coal Co., Glen Richie, Pa. ²	0	0	5,000	7,250	Continuing
Monitoring excess spoil disposal area at Simco mine, Peabody Coal Co., Ostego, Ohio ²	0	0	5,003	5,000	May 1986
Monitoring backfilling and grading and filling of excess spoil sites at Amos Ridge Coal Co., Wise County, Va. ²	0	0	5,000	5,000	April 1986
Monitoring of excess spoil disposal site at ODNR Permit C-1247, Lawrence, Ohio. ²	0	0	5,000	0	Completed
Guidance manual on subsidence control.	0	0	58,747	0	March 1986
Guidance manual for seismic and sound techniques as applied to surface mining blasting.	0	0	13,000	3,000	February 1986
Geomorphic approach to strip mine reclamation.	0	0	33,590	0	Completed
Improvement of overburden analytical technology.	79,215 ⁴	0	0	0	March 1986
Subsidence damage criteria.	72,624	0	0	6,941	December 1985
Monitoring of alternative to sedimentation pond at Jim Bridger mine, WY. ²	0	7,000	0	0	Continuing
Monitoring revegetation of a slurry pond site at IDNR permit No. 6360, Perry, Ill. ²	0	5,000	0	0	Continuing
Monitoring of a highwall retention practice at Seminole No. 1 mine, Carbon County, WY. ²	0	6,000	0	0	Continuing
Identification, evaluation, and demonstration of sediment control technologies.	0	431,957	0	0	February 1987
Monitoring at mine fire extinguishing practice at Big Horn Mine, MT. ²	0	3,500	0	0	Continuing
Evaluation of fish and wildlife protection and mitigation practice at western coal operations.	130,000	16,500	0	4,500 ³	June 1986
Student monitoring of experimental practice in Bannock, Ohio ²	0	0	0	5,000	September 1986
Feasibility of excess spoil disposal on previously mined lands.	0	0	0	80,887	September 1986
Minimization of coal refuse disposal facility related water quality deterioration.	0	0	0	28,359	September 1986
Total	\$281,839	\$469,957	\$135,215	\$145,937	

¹ Funding for research projects in FY 1982, FY 1983, and FY 1984 shown only for those projects still in progress in FY 1985.

² Experimental practice.

³ Funded by Division of Permit and Environmental Analysis.

⁴ Corrected from past years to indicate obligated funds.

INTERAGENCY RESEARCH PROJECT

Project	Cooperating Organization	FY 1982	Funding FY 1983	FY 1984	FY 1985	Estimated Completion Date
Surface subsidence due to underground mining in the eastern U.S. coal fields.	Virginia Polytechnic Institute	\$ 0	\$ 0	\$ 99,964	\$ 0	October 1986
Support for committee on guidelines for paleontological collecting.	National Academy of Sciences	0	0	25,000	0	September 1986
Hydrologic investigation of reclaimed coal mine areas in eastern Kentucky.	U.S. Geological Survey	0	0	85,000	0	June 1986
Development of wider diversity of plant materials for use in revegetation of strip-mined lands.	U.S. Department of Agriculture	92,000	0	92,000	70,000	April 1986
Effects of controlled overburden placement on mine spoil properties for revegetation.	Virginia Polytechnic Institute	49,120	0	71,507	0	February 1986
Economic/environmental feasibility of lignite mining in Mississippi.	Coahoma Jr. College	0	125,000	0	0	Completed
Aerial photography support.	Tennessee Valley Authority	90,000	0	0	0	Continuing ^s
Strength of consolidation characteristics of coal refuse for design and constructing of disposal facilities.	University of Kentucky	0	0	89,403	0	January 1987
Establishment of cooperative statewide fish and wildlife species information system.	Bureau of Land Management	0	0	120,900	0	Continuing
Support for eighth summer field institute on western energy and minerals opportunities-problems and policy issues.	Colorado School of Mines	0	0	0	15,000	September 1986
Support for committee on ground hazards mitigation research.	National Academy of Sciences	0	10,000	10,000	10,000	Continuing
Optimum moisture requirements for establishment of native species on top-soiled coal mine spoils in Four Corners area of New Mexico.	U.S. Department of Agriculture	120,000	0	0	0	March 1986
Federal high-altitude photography program modification.	U.S. Geological Survey	95,000	0	90,000	0	Continuing
Study of Flattened Musk Turtle.	U.S. Fish and Wildlife Service	0	0	60,000	0	January 1986

INTERAGENCY RESEARCH PROJECT

Project	Cooperating Organization	FY 1982	Funding FY 1983	FY 1984	FY 1985	Estimated Completion Date
Development of data-collection methods for probable hydrologic consequences.	U.S. Geological Survey	0	0	20,000	0	Completed
User's manual to the benthic macroinvertebrates of the Warrior coal field.	Geological Survey of Alabama	0	0	30,000	0	August 1986
Relationships between tree growth and water-table fluctuation in a mature oak hickory forest in southern Illinois.	Southern Illinois University	0	0	31,383	0	May 1987
Core support program.	National Academy of Sciences	55,000	55,000	0	0	Continuing ^a
Prime farmland special study: soil vs. crop production as a measure of soil productivity for bond release.	University of Illinois	0	130,033	0	0	March 1986
Sedimentation/hydrology of surface mined lands in the Appalachian Plateau area of Maryland, West Virginia and Pennsylvania.	Tennessee Valley Authority	100,000	75,000	0	0	April 1986
Preparation of ground-water protection manual	U.S. Geological Survey	0	0	0	15,000	September 1986
Monitoring long term surface impacts on the hydrologic systems in three small watersheds in eastern Ohio.	U.S. Geological Survey	0	0	0	116,000	September 1986
Water quality of final cut surface mine lakes: Controlling factors and predictive models.	Argonne National Laboratory	0	0	0	195,000	September 1986
Second workshop on surface subsidence due to underground mining.	West Virginia University	0	0	0	12,000	September 1986
Characterization of leachate from coal refuse.	Western Research Institute	0	0	0	58,314	September 1986
Totals		\$601,120	\$395,033	\$825,157	\$491,314	

^a Current funding by Divisions of AML, FRP, and Regulation and Inspections.

^b Funded by Division of AML.

AML RESEARCH PROJECTS

Title	Proposing Organization	Funding	Completion Date
Characterization of Remote Combustion	U.S. Bureau of Mines	\$237,100	April 1987
Application of Time Domain Reflectometry to Subsidence Monitoring	Illinois Geological Survey and North Western University	\$247,685	April 1988
Use of Foaming Mud Cement to Terminate Underground Coal Fires and to Control Subsidence of Burn Cavities	Wyoming Department of Environmental Quality and the Colorado School of Mines Research Institute	\$250,465	November 1986
Cavity Detection By High Resolution Reflection Seismology	Kansas Geological Survey and the University of Kansas	\$225,512	April 1987
Guidelines for Subsidence Abatement Over Abandoned Mine Lands	West Virginia University	\$249,962	April 1987
The Location, Extinguishing, and Reignition Inhibition of Refuse and Underground Fires, Through High Pressure Waterjet Utilization	Montana Department of State Lands and the University of Missouri-Rolla	\$201,478	June 1986
Research-Related FY 85 Projects			
Survey of Research and Test Plots on Land Surface Mined for Coal	U.S. Bureau of Mines and Southern Illinois University at Carbondale	\$ 82,248	July 1987
A Study of Abandoned Mine Land	National Academy of Sciences	\$250,000	November 1986

Assessments And Collections

During fiscal year 1985, 2,221 citations for 3,604 coal mining violations were received from field inspectors for penalty assessments. OSMRE issued 2,016 notices of proposed assessment for 3,337 violations, in the amount of \$27,851,530. A total of \$154,248 in escrow payments was received for cases under review by the Office of Hearings and Appeals, and \$968,203 in payment of outstanding assessments was received. In addition, 1,207 Final Orders of the Secretary in the amount of \$19,273,405 were mailed to debtors, and 369 cases showing a delinquent debt of \$9,443,950 were referred to the Solicitor's Office for legal action.

Through a reorganization, the Assessments and Collections unit was elevated to the Division level, and now consists of two functional branches. Along with a change in its organizational status, the Division has expanded in size. Employees with experience in debt collection activities were hired from the Internal Revenue Service and other agencies.

The Assessments Branch has eliminated a backlog of 400 outstanding violations. The introduction of a microtracking system has enabled management to monitor violations throughout the assessment process to ensure that regulatory and statutory timeframes are met. In fiscal year 1985, the branch began reviewing cases that are awaiting a hearing with the Office of Hearings and Appeals to determine if requests for a hearing are being filed timely and if the full amount of the penalty has been placed in escrow. If these prerequisites are not satisfied, the branch submits a request to have the application for hearing dismissed.

Requirements under the Debt Collection Act have been fully implemented by the Collection Branch, including charges of nine percent interest, six percent penalty, and administrative fees on all delinquent debts. The collection demand letters have been revised to reflect the Debt Collection Act provisions and tougher collection policies. With the help of contractors, several procedures have been initiated to reduce substantially the backlog of collection cases. The Collection Branch is now using the services of a private collection agency under contract with the General Services Administration. The Department of the Interior is the first government agency to avail itself of this new contract. Financial management and payment processing has improved with implementation of a new procedure requiring that all payments of fees and fines be sent directly to one central location. Functional specifications for a microcomputer tracking system have also been developed to track collection cases, perform inquiries, and generate management reports.

Financial Management

At the close of fiscal year 1985, arrangements were being made with the Mellon Bank in Pittsburgh, Pennsylvania, to establish a lockbox for accepting AML fees of approximately \$113 million per year. Under the new procedure, pre-addressed envelopes for AML check payments will be sent directly to Mellon Bank, rather than to OSMRE, thus making the funds available to the U.S. Government two days sooner. This deposit procedure will result in annual savings of \$71,167 to the Government. In addition, OSMRE annually collects approximately \$113 million via wire transfer arrangements with large coal companies. The combination of these two collection methods is part of the Cash Management Improvement Program under Reform 88, the Presidential initiative to make government collection procedures more efficient.

Managerial Development

As a follow-up to the **Seminar for New Professionals** held in fiscal year 1984, the Personnel Office developed a second seminar for new professionals entitled **Seminar for Mid-Level Professionals**, held in June 1985. This 3-day seminar further enhanced the development of the new professional in the areas of writing, time management, stress management, briefing techniques, and other related skills.

In addition, the Personnel Office developed and presented to 60 mid-level managers and professionals two sessions on **Managing For Results**. The seminars were a follow-up to training presented to higher level managers in previous years and focused on human-relations skills to enhance productivity.

Monitoring Potential Conflicts of Interest

OSMRE continued to monitor the state and Federal ethics programs and to provide grant recipients with a better understanding of the Act and corresponding statutes and regulations. Several divestiture orders were issued in fiscal year 1985, resulting in resolution of those conflicts. OSMRE continues to make every effort to heighten the awareness of grant recipients regarding the conflict of interest program.

Activity	Appropriations in thousands of dollars ¹			
	FY 1984	FY 1985	FY 1986 ²	FY 1987 ³
REGULATION AND TECHNOLOGY				
State regulatory program grants	\$ 38,100	\$ 36,734	\$ 35,387	\$ 45,110
Federal regulatory programs	26,327	36,619	38,801	42,582
Program Operations and Inspection	(13,776)	(23,729)	(26,417)	(26,821)
Technical Services and Research	(12,551)	(12,890)	(12,384)	(15,761)
General administration	6,268	6,994	7,314	13,188
Total Regulation and Technology	\$ 70,695	\$ 80,347	\$ 81,502	\$100,880
ABANDONED MINE LAND FUND				
State reclamation program grants	\$235,900	\$257,740	\$149,441	\$150,600
Federal reclamation programs	31,253	34,825	40,619	34,489
Fund management	(6,298)	(6,599)	(6,562)	(7,539)
Federal reclamation projects	(14,373)	(18,426)	(25,038)	(26,150)
Rural Abandoned Mine Program	(10,582)	(9,800)	(9,019)	(800)
Small Operator Assistance Program	0	0	2,949	0
General administration	4,075	4,376	4,268	5,431
Total, AML Fund	\$271,228	\$296,941	\$197,277	\$190,520
Total, Office of Surface Mining Reclamation and Enforcement	\$341,923	\$377,288	\$278,779	\$291,400

¹ President's budget (proposal to Congress)

² Totals reflect Public Law 99-177 sequestrations.

³ Estimate

STAFFING (September 30, 1985)

Office	Authorized positions
PERMANENT FULL-TIME POSITIONS	
Washington, D.C.	345
Technical Center	
East (Pittsburgh, Pa.)	120
West (Denver, Colo.)	77
Field Offices:	
Albuquerque, N.Mex	17
Big Stone Gap, Va	18
Birmingham, Ala	19
Casper, Wyo	16
Charleston, W.Va	14
Columbus, Ohio	18
Harrisburg, Pa	9
Indianapolis, Ind	13
Kansas City, Mo	9
Knoxville, Tenn	22
Lexington, Ky	13
Springfield, Ill	13
Tulsa, Okla	12
Area Offices:	
Beckley, W.Va	10
Johnstown, Pa	14
Lebanon, Va	5
London, Ky	9
Madisonville, Ky	7
Morgantown, W.Va	12
Pikeville, Ky	12
Wilkes-Barre, Pa	6
Total	822
EMPLOYMENT CEILINGS	
Permanent full-time	822
Permanent part-time	39
Temporary	180
Total	1041