



OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Annual Evaluation Summary Report

for the

Regulatory Program

Administered by the State

of

MARYLAND

for

Evaluation Year 1999

(October 1, 1998 through September 30, 1999)

January, 2000

TABLE OF CONTENTS

Introduction/Summary	1
Overview of the Maryland Coal Mining Industry	3
Overview of the Public Participation Opportunities	5
Outreach	5
Public Meetings and Hearings	6
Organizational Involvement	6
Regulatory Participation	9
Impacts/Results of Public Participation	9
Major Accomplishments/Issues/Innovations	10
Appalachian Clean Streams Initiative	10
Watershed Cooperative Agreement Program	11
Remining	13
Acid Mine Drainage Prevention	14
Abandoned Mine Land Reclamation	14
Program Amendments	16
Success in Achieving the Purposes of SMCRA	17
Off-Site Impacts	17
Reclamation Success	18
Customer Service	19
OSM Assistance	20
Financial Assistance	20
General Oversight Topic Reviews	21
PHC/CHIA Study	21
Reclamation Liability Review	21
Performance Monitoring Study	22
APPENDIX A	23
Coal Production	T-24
Inspectable Units	T-25
State Permitting Actions	T-26
Off-Site Impacts	T-27
Annual State Mining and Reclamation Results	T-28
State Bond Forfeiture Activity	T-30
Maryland Staffing	T-31
Funds Granted to Maryland by OSM	T-32
APPENDIX B	33
State Comments	34
Disposition of Comments	36

I. Introduction/Summary

Introduction

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior. SMCRA provides authority to OSM to oversee the implementation of and provide Federal funding for State Regulatory programs that have been approved by OSM as meeting the minimum standards specified by SMCRA. This report contains summary information regarding the Maryland Program and the effectiveness of the Maryland Program in meeting the applicable purposes of SMCRA as specified in section 102. This report covers the period of October 1, 1998, to September 30, 1999. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the Pittsburgh Oversight and Inspection Office (OIO).

Summary



Maryland Surface Coal Mining Operation

For the evaluation year, oversight data and studies indicate that the Maryland Program has been effective, efficient, and innovative in meeting the goals of SMCRA. Maryland has conducted a program where active mining sites are, with few exceptions, in compliance with planning, mining, and reclamation standards. Reclamation has been thorough and has proceeded in a contemporaneous fashion, with an average 68% of affected area study sites backfilled and planted at any

point in time.

In addition to these mining and reclamation efforts, the Maryland Department of the Environment (MDE) has been actively pursuing opportunities to involve the public in the Maryland Program. Through World Wide Web Sites, public meetings and hearings, and formation of task forces and watershed groups, the Maryland Program has sought input into the program from public and private sectors. Maryland's AMD task force continues to work in supporting the creation of Watershed groups and assisting in implementation of associated watershed projects. Public participation has increased significantly in Maryland during this evaluation year through the efforts of such groups as Maryland's AMD task force, the creation and implementation of OSM's Watershed Cooperative Agreement Program, the formation of an additional Watershed group, and funding provided under the ACSI program.

Maryland is taking advantage of re-mining incentives such as the Rahall Amendment and is pursuing further re-mining incentives such as amending their program to include the AML enhancement rule.



Reclaimed Maryland Surface Mining Operation

This year's evaluation has identified a number of program areas which should be considered for further improvement. These include timing of bond release inspections, documenting public participation in the permitting process, including more detail and historical information in the PHC/CHIA

process, and approving changes to post mining land use and/or planting species. These areas and others which are addressed in the evaluation year 2000 Performance Agreement between MDE and OSM will be reviewed in the upcoming year to assure the continuation of a strong and viable program in the State of Maryland.

Additional detail is provided in the following sections of this report which address program successes and issues identified in the 1998 evaluation year. The following list of acronyms is used in this report:

ABS	Alternative Bonding System
ACSI	Appalachian Clean Streams Initiative
AMD	Acid Mine Drainage
AML	Abandoned Mine Lands
COMAR	Code of Maryland Regulations
MDE	Maryland Department of the Environment
OIO	Pittsburgh Oversight and Inspection Office
OSM	Office of Surface Mining Reclamation and Enforcement
SMCRA	Surface Mining Control and Reclamation Act of 1977
SOAP	Small Operator Assistance Program

II. Overview of the Maryland Coal Mining Industry



Kempton, Maryland circa 1920 (photo courtesy of Maryland Bureau of Mines)

Coal mining in western Maryland began in the early 1700's, accounting for some of the earliest coal ever to be mined in the eastern United States. By 1820, several mines were operating in the Eckhart, Frostburg, and Vale Summit areas. Between 1900 and 1918, deep mine production peaked between four and five million tons annually with a historical high of 5.5 million tons in 1907. Most of these mines were developed up-dip to drain water away from the mines. As a result of this, water high in acid and iron drained

into streams. Today, acid mine drainage from abandoned coal mines is Western Maryland's most serious water pollution problem.

After World War II, underground mining declined in Maryland. By 1977, surface mining accounted for 91 percent of the total production. Since then, production at underground mines has recovered and surpassed surface production, accounting for 79 percent of the total production in 1997¹. During the 1980's, the amount of coal mined in Maryland fluctuated between three and four million tons, with the greatest production occurring in 1981 (4.5 million tons). Since that time, the tonnage mined has been stable at approximately 3.5 to 4 million tons per year. This production



Hoffman Tunnel Underground Mine Drainage

¹The majority of underground coal production in Maryland is generated from one mine employing approximately 250 people.



Maryland Deep Mine Site

accounted for .4% of total U.S. coal production in 1997² and is expected to remain stable because of a new long-term underground contract and a new power plant which began operation in 1999 and is expected to burn approximately 600,000 tons per year of Maryland coal. Statewide, Maryland consumes approximately 11 million tons of coal per year². Consumption has increased by an average 2.3% per year for the period 1993-1997. Maryland employs approximately 458 miners (1997 statistics), a number which has increased on average by .9%

from 1993-1997³.

Today coal mining in Maryland is confined to Garrett and the western portion of Allegany county. The topography in this area is comprised of gently rolling terrain with occasional steep slopes. Maryland State law prohibits surface mining on steep slopes. The Conemaugh and Allegany geologic formations contain five major minable fields or basins in the State. These include the Upper Youghiogheny, Lower Youghiogheny, Casselman, Upper Potomac, and Georges Creek. The Georges Creek Basin contains the most recoverable coal reserves in the State, followed by the Upper Potomac and the Casselman. There is no mining in the Upper Youghiogheny field. The demonstrated reserve base of coal in Maryland is approximately 731 million tons³, which ranks Maryland 23rd among the States.

²Source - Energy Information Administration, U.S. Department of Energy

³Source - Energy Information Administration, U.S. Department of Energy.

III. Overview of the Public Participation Opportunities in the Oversight Process and the State Program

There are numerous opportunities for citizens, the industry, and environmental groups to participate in the Maryland Regulatory and Abandoned Mine Lands (AML) programs. Opportunities for public involvement include outreach efforts, informal public meetings, organizational involvement, and formal regulatory participation.

Outreach

The AMD Task Force, an informal advisory committee formed by Maryland in 1997, is comprised of State, Federal, industry, and private sector representatives. The Task Force has been successful in bringing citizens, industry, and State and Federal agencies together to develop solutions to AMD problems which affect over 410 miles of Maryland's waterways. Task Force outreach efforts involved the formation of the Mill Run Watershed Association in 1998 and George's Creek Watershed Association during this evaluative year.

The Maryland Bureau of Mines maintains a web site on the world wide web⁴ which offers information on goals/objectives and accomplishments under the program as well as opportunities for public input via e-mail.

Maryland continues to develop partnerships with industry representatives, EPA, The Corps of Engineers, Trout Unlimited, The Small Streams and Estuaries program, the Canaan Valley Institute, and NRCS in an attempt to combine funding resources for solving AMD problems.

The OSM Pittsburgh Oversight and Inspection Office (OIO) also developed a web site during the 1999 evaluation year⁵. This site is designed to keep the public informed on reclamation and enforcement activities in Maryland by including copies of the Maryland Performance Agreement, the Maryland Annual Report, topical study reports, and a monthly newsletter. The newsletter provides opportunities for public participation and comment on annual work plans, and includes references to federal register notices of interest to the public, descriptions of oversight activities, and listings of AML emergency projects. The newsletter is also mailed to representatives of industry, environmental, and citizen groups.

In addition, as part of a nationwide initiative, OIO developed a brochure for use by the public in reporting coal mining problems in Maryland.

⁴www.mde.state.md.us/wma/minebur/index.html

⁵www.coh.osmre.gov

Public Meetings and Hearings

The public is periodically provided opportunities for informal participation through public meetings, hearings, and mine tours. Several such opportunities were provided during the evaluation period..

In addition to the public hearings provided as part of the permitting and bond release process, MDE held one AML public hearing involving the proposed installation of a waterline for 75-100 homes impacted by acid mine drainage.

The MDE and OSM conducted mine tours during the review period for delegations from South Africa and Thailand. The tours demonstrated various mining and reclamation techniques employed in Maryland's program.



Thailand Delegation

Also during the 1999 evaluative year, MDE sponsored a two day seminar and tour of the North Branch of the Potomac River. The seminar and tour were specifically designed for the public and others to note the work that is being done to both eliminate and treat acid mine drainage in Western Maryland . The seminar also provided a forum for other local, state and federal agencies to become more involved.

Organizational Involvement

Organizational involvement in restoring Maryland's mined lands is taking place at several levels. From high school science projects, to local watershed groups, national organizations, and State and Federal Agencies, efforts are ongoing to take advantage of partnering opportunities and the benefits they provide. Many organizations were active in the Maryland program during this evaluation period.

Through the joint efforts of local citizens, MDE, the Canaan Valley Institute, OSM and others, the Georges Creek Watershed Association was formed during the 1999 evaluative period. The Association is the second watershed association formed in the coal region of Western Maryland. George's Creek is a 19 mile long watershed which empties into the North Branch of the Potomac at Westernport, Md. The watershed has been severely impacted by past surface and underground coal mining operations. Mine drainage from abandoned mine sites serves as the major pollution source in the watershed. The Watershed

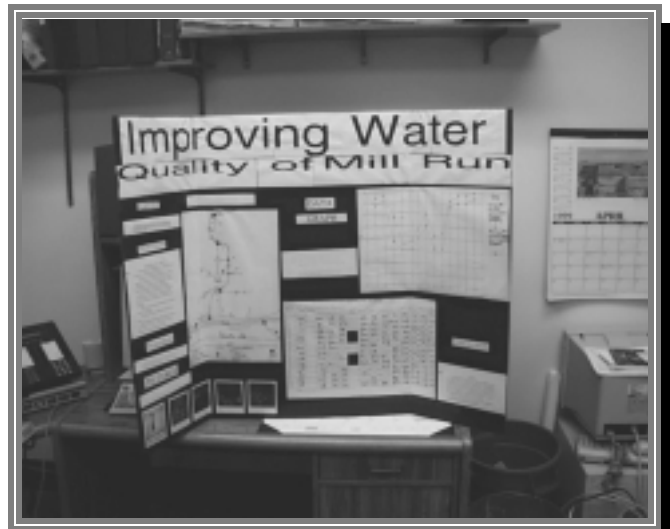


*George's Creek Watershed
Association meeting*

Association formed as a result of local citizen desires to hasten the clean up efforts being undertaken in the watershed. The Association is currently involved in an \$86k ACSI AMD Remediation project⁶ on a small tributary of Georges Creek called Neff Run. The group has partnered with MDE, Trout Unlimited, OSM, and others to help control AMD on the small stream.

The Mill Run Watershed Association, formed last year, was the first public watershed group in the coal region of western Maryland. Mill Run residents have

secured funds and developed partnerships with other groups, including this year's \$290k Mill Run Remediation Project⁷, partnering with the Conservation Fund, Canaan Valley Institute, MDE, and Shepherd College in order to install a diversion well and treat several acid discharges totaling 140 gallons per minute which flow from abandoned deep mine entries and pollute Mill Run. Mill Run contributes approximately 20 % of the acid in Georges Creek, a main tributary to the North Branch of the Potomac River.



*Westmar High School Acid Mine Drainage Abatement
Project for Mill Run*

The American Heritage Rivers program was enacted by Executive order on September 11, 1997. This program was designed to partner community -based efforts with federal support to improve and protect designated rivers. The Friends of the Potomac, a community-based non-profit corporation nominated the Potomac River for inclusion

⁶OSM share \$35k

⁷OSM share \$65k



Acid Mine Drainage into North Branch of Potomac River

in the program. On July 30, 1998 the Potomac River was designated as one of 14 rivers nationwide as an American Heritage River. The Friends of the Potomac, along with the National Park Service as the lead federal agency, and eight other federal agencies, including OSM, are working together to restore and protect the Potomac river. The designation has meant that OSM and other local, state, federal and private partners are placing additional emphasis on improving the Potomac River. MDE continues to be part of this effort through

increased emphasis on eliminating acid mine drainage (AMD) on the North Branch of the Potomac. Other actions by MDE to improve water quality of the Potomac includes the use of lime dosers to treat AMD, implementing a comprehensive investigation of the Geology and Hydrology of the Kempton Mine complex and flow monitoring of the Potomac above the community of Kempton to identify sites for potential stream loss due to subsidence in the Kempton Mine.

Through the OSM Watershed Cooperative Agreement Program, which was started in January 1999, two not-for-profit groups, the Nature Conservancy and The Conservation Fund's Freshwater Institute, received funding to undertake AMD reclamation projects in Maryland. These groups in turn partnered with other government and private agencies which provided a significant portion of the total funding for the projects. During the evaluative year, OSM funded two Appalachian Clean Streams Initiative Projects which address two major sources of acid mine drainage in the State of Maryland..

The Land Reclamation Committee was formed in 1967 through Maryland legislation. The Committee is composed of 13 members representing the mining industry, soil conservation districts, counties, citizens, and State agencies. The Committee studies, recommends, and approves procedures to reclaim, conserve, and replant land affected by coal mining in Maryland. This includes review of mining and reclamation plans, progress reports, and final reports. It establishes plans and procedures, as well as practical guidelines, for prompt and sufficient reclamation, conservation, and revegetation of all lands disturbed by coal mining within the State. The committee meets periodically and OSM attends the meetings. Six Land Reclamation Committee meetings were held during the evaluation year.

Regulatory Participation

Under the Code of Maryland Regulations (COMAR), the public can formally participate in the regulatory program by requesting hearings on the issuance of permits and bond releases, petitioning to have areas designated as unsuitable for mining, requesting inspections of active coal mine operations when there is reason to believe a violation is occurring, requesting pre-blast surveys if living within ½ mile of a permit area, and appealing Departmental decisions through the adjudicatory process.

Impacts/Results of Public Participation

As a result of the involvement of the Conservation Fund group, along with their partners the Canaan Valley Institute, MDE, Mill Run Watershed Association, and Shepherd College, a limestone treatment system is being installed to treat an acid mine drainage discharge into Mill Run. The Mill Run project will treat an AMD discharge totaling 140 gallons per minute from an abandoned deep mine and will improve the quality of water flowing into the North Branch of the Potomac River, and ultimately the Chesapeake Bay. Three miles of stream will be improved. OSM is providing \$65,000 of the \$240,000 project through the Watershed Cooperative Agreement Program.

Another public group, the Nature Conservancy, along with their partners, MDE and Garrett Community College, are installing an alkalinity producing system to capture and treat flow from an AMD seep into Cherry Creek. The treatment will result in better water quality for Deep Creek Lake which flows into the Youghiogheny River, a designated Wild and Scenic River in Maryland, and a major outdoor recreational and economic resource in Western Maryland and Southwestern Pennsylvania. Two



Site of Nature Conservancy Co-op Project

and one half miles of stream will be improved. OSM is providing \$80,000 of the \$182,800 project through the Watershed Cooperative Agreement Program.

IV. Major Accomplishments/Issues/Innovations in the Maryland Program.

Maryland has been successful overall in achieving the purposes of SMCRA. The Maryland program is firmly established, the public's rights and interests are being protected, mining is being conducted effectively, efficiently, and in an environmentally sound manner, and abandoned mine lands are being reclaimed. In addition to these general measures of success, Maryland has been actively involved in several initiatives and program activities. These are discussed below, along with outstanding issues and concerns which are being addressed in a mutual effort to maintain a high level of quality in the Maryland program.

Appalachian Clean Streams Initiative

Maryland continues to be an active participant in the ACSI program..

Funding for ACSI projects in Maryland began in 1997 with the receipt of \$100,000. Additional funds were received in 1998 and 1999 to work on water related acid mine drainage problems. Of the \$ 274,166 received to date, additional funding has been provided from other state, federal and private groups in the amount of \$226,000.

During the 1999 evaluative year Maryland completed the Glotfelty AMD Seep Project in the Cherry Creek area of Garrett County. The use of ACSI funds for this project involved the installation of an Anoxic Limestone Drain (ALD) a Successive Alkalinity Producing System (SAPS), a settling pond and a wetland.



*Created Wetland
Glotfelty ACSI Project*

Four to five additional ACSI funded projects are planned for the 2000 evaluative year. These projects include the Mill Run AMD Remediation project, the Elk Lick III AMD passive treatment project, The Potomac Hill Run AMD project, Coney Cleaners project and the Neff Run AMD Abatement project. Various partners exist for all of the planned ACSI projects. These partners provide either funding or volunteer and in-kind services.

Watershed Cooperative Agreement Program

The Watershed Cooperative Agreement Program, an ACSI-related program, was begun in January of 1999. This program is designed to address the same types of AMD problems as the ACSI but through direct funding of not-for-profit public groups rather than States.

During the evaluative year, OSM funded two Watershed Cooperative Agreement Program Projects which address two major sources of acid mine drainage in the State of Maryland.

In June of this year, two watershed associations partnered with Maryland, OSM and other public and private groups and were awarded \$ 145,000 to undertake two acid mine drainage problems in both Allegany and Garrett counties. The Mill Run project will involve the innovative treatment of an AMD source responsible for contributing 19% of the AMD going into Georges Creek and the North Branch. Another project will help restore the quality of water going into Maryland's largest fresh water lake, Deep Creek Lake, by treating AMD going into Cherry Creek.

The following table summarizes accomplishments under the ACSI in Maryland since its inception in 1997:

MARYLAND ACSI PROJECT STATUS

Project/ State	Status as of:	Miles of Stream * (miles)		Total Estimated Cost	OSM Funding		Planned Partners' Contributions*		OSM/ Partners Cumm. Total to date
		To be Restored	Completed		by FY	Cumm. to date			
Cherry Creek, MD (FY97)	9/30/99	4	3	\$175,000	\$100,000	\$100,000	Environmental Protection Agency	\$75,000	\$175,000
							Natl. Mine Land Rec. Ctr. - Tech. Suppt.	in-kind	
Mill Run, MD (FY98)	9/30/99	3	0	\$119,166	\$25,000 \$18,166	\$43,166	EPA 104(B)(3) grant	\$76,000	\$119,166
							Mill Run Watershed	in-kind	
Potomac Hill Run, MD (FY99)	9/30/99	2	0	\$233,000	\$156,000	\$156,000	Allegheny County Govt	\$75,000	\$233,000
Elk Lick III MD (FY99)	9/30/99	2	0	\$77,000	\$20,000	\$20,000	Maryland Small Creek and Estuaries	\$45,000	\$77,000
							U.S DOE	\$5,000	
							Garrett County	\$5,000	
							Landowner	\$2,000	
Coney AMD MD (FY99)	9/30/99	1	0	\$70,000	\$20,000	\$20,000	Maryland Small Creeks and Estuaries	\$45,000	\$70,000
							Allegheny County	\$5,000	
Mill Run MD Remediation (FY99)	9/30/99	3	0	\$290,000	\$65,000	\$65,000	Conservation Fund	in-kind	\$290,000
							Canaan Valley Institute	\$225,000	
							Fresh Water Institute	in-kind	
							Mill Run Watershed	in-kind	
							MDE, Shepherd College	in-kind	
Everhart Seep MD (FY99)	9/30/99	2.5	0	\$182,000	\$80,000	\$262,000	MDE	\$57,500	\$182,800
							The Nature Conservancy	\$26,700	
							GCC	\$18,600	
TOTALS		17.5	3	\$1,146,166		\$666,166		\$660,800	\$1,146,966

Remining

During the evaluation period the majority of surface mined coal in Maryland was recovered from remining operations that either involved the “day lighting” of underground deep mine workings, abandoned surface operations or a combination of both.

Of the 18 OSM performance evaluations performed during the period, six sites involved remining. On three of the six sites 56 acres of previously mined land was reclaimed. The other three sites included 92 acres which is being remined. Of the 13 backfilling and planting reports filed by operators during the period, 61% of the acreage that was backfilled and planted to current standards had been previously mined by surface and/or underground methods and left in an unrestored condition.

Maryland continues to promote remining operations and during the review period issued three remining permits for a total of 141 acres. These permits involve a combination of remining previously mined surface and underground mine workings. The permits were issued with Rahall modified water quality standards and monitoring requirements.

MDE is actively pursuing the new AML Enhancement Rule, published by OSM on 2/12/99, through the development of an AML program amendment which will change the definition of “government financed construction” to allow less than 50 percent government funding for approved AML projects. The adoption and approval of this rule will further encourage remining of marginal sites as well as eliminate an AML feature such as a highwall or refuse pile.

Two meetings were held during the evaluation period with MDE which involved discussions of various remining issues and the development of the new AML Enhancement Rule.

On March 29, 1999, MDE issued a Reclamation Advisory to all coal operators in Maryland. The Advisory outlined remining benefits and incentives to the coal industry.

The following areas were identified as cost saving and risk reducing incentives for remining in Maryland:

- Bond Credits
- Reduced bond liability period
- Excess spoil disposal on abandoned mine lands
- “Rahall relief” for pre-mining pollutional discharges

Acid Mine Drainage Prevention

During the evaluative year, a joint OSM/MDE inventory review⁹ was done of all post-SMCRA mine sites with AMD discharges. Also reviewed were all unreclaimed forfeiture sites with AMD discharges. The inventory of sites was developed with MDE representatives based on joint knowledge of mine sites within the two county coal producing area of Western Maryland.

Each inspection was done with the following goals:

1. To document site conditions, i.e. status of site reclamation.
2. Ascertain the extent of the water quality problem at the site, along with abatement and treatment measures undertaken, if any, and the potential for bond release at the non forfeiture sites.
3. Field test and laboratory sampling of AMD being generated at the site and documentation of this information.
4. Ascertain what state actions are being taken at each site with regard to bond release or reclamation at each of the sites.
5. Include inspection findings on an OSM Mine Site Evaluation Report and include data in the OSM data base including the OSM initiated **Acid Mine Drainage Inventory Project** for coal producing states in the Appalachian region which has recently started.

Seven sites were identified as a result of the inventory. The sites include two forfeitures, two reclaimed surface mines, one tipple, one reclaimed deep mine and one inactive surface mine.

In the case of the two forfeited sites, corrective actions are being taken by MDE. The two reclaimed surface mines both have bond being held as a result of AMD seeps, one of which requires active treatment and the other a passive treatment system. The tipple facility and the reclaimed deep mine have both been totally released by MDE. A technical evaluation of these releases is currently underway. The inactive surface mine has been determined to be responsible for the change in the quality of a pre-existing spring and the inactive status of the site is under review by MDE.

Abandoned Mine Land Reclamation

During the 1999 evaluative year, Maryland's AML division completed work on four Title IV AML projects. The Little Meadows project in Garrett county involved the backfilling and reclamation of a dangerous highwall and water filled pit. A total of 340,000 c.y. of material were moved to reclaim the site.

⁹Copies available upon request from the Pittsburgh Oversight and Inspection Office



Little Meadows Reclamation Project

Phase III of the Ocean Mine Stabilization project was completed in Allegany County. The project was done under a cooperative agreement with the Maryland State Highway Administration and the Maryland Department of the Environment, Bureau of Mines. This was the last phase of the project and involved the filling of mine voids in the Pittsburgh coal seam under State Route 936 near Midland, Maryland.

Final pond removal and site reclamation was completed at the Vindex Mine Reclamation Project. This work completes planned reclamation at the 55 acre site.

A dangerous highwall and water filled pit were reclaimed near Kempton under a sole source contracting arrangement with Buffalo Coal Company. The project was done in conjunction with Buffalo's active surface mining operations which are located adjacent to the site. Total cost for the four projects was \$731,259. In addition, Maryland was involved in some non-Title IV funded state abandoned mine reclamation work during this evaluative year. Utilizing state funding resources, a portion of the George's Creek stream channel was lined to prevent water in the channel from entering the subjacent abandoned deep mine workings. Drainage that enters these workings discharges from the nearby Hoffman Tunnel in the form of acid mine drainage.

Acid mine drainage continues to be Western Maryland's main AML problem. The State is addressing the problem with money provided under Title IV of SMCRA Section 402(g)(7) , 10% set-aside, for treating acid mine drainage on the North Branch of the Potomac. Treatment is provided through the use of 6 lime dosers. These dosers have been responsible for the restoration of 23 miles of the North Branch and the development of a fishery where previously there was none.

Efforts are underway by MDE in researching the best available technology for eliminating the Kempton discharge at the headwaters of the North Branch. This discharge averages 6 million gallons per day and is the largest single source of AMD going into the North Branch. During the evaluative year, MDE sponsored an AMD seminar to bring attention to the AMD problems which impact water in Western Maryland. In October 1999, MDE will sponsor a

larger symposium dealing with acid mine drainage which will further point out the need for assistance in correcting the problem.

Three Title IV NEPA requests for Authorizations to Proceed (ATP) were submitted to OSM during the evaluation period. All three project requests involved some form of water replacement or AMD abatement. The Mill Run AMD Remediation Project involves the construction of a pressurized pulsed limestone dissolution treatment system to treat AMD emanating from a deep mine at ~70 gallons per minute and impacting Mill Run and Georges Creek. The Kyle Hill Water Replacement Project involves the extension of an existing water supply line for a length of 3100 feet from the town of Lonaconing to the community of Kyle Hill to correct acid mine drainage impacts to thirty two residences and an elementary school. The Elk Lick III Acid Mine Drainage Remediation Project involves the installation of a Successive Alkaline Producing System (SAPS), in conjunction with a settling pond and an aerobic wetland, to treat acid mine drainage coming from an abandoned deep mine entry and surface mine.

Program Amendments

During the 1999 Maryland General Assembly, the legislature failed to take any action on an outstanding condition requiring the filing of financial disclosure forms by members of the MDE Land Reclamation Committee (LRC). That portion of the amendment dealing with the LRC members recusing themselves from proceedings that may affect their direct financial interests has been published as a final rule. Maryland continues to be required to amend their approved program to require each member of the Land Reclamation Committee to file a statement of employment and financial interest to be no less effective than the Federal rule.

Another proposed amendment was submitted by Maryland during the evaluative year and has been published as a final rule. The amendment dealt with a revision in Maryland's mining regulations which deletes the right to appeal to the Board of Review, a final decision of the Water Management Director or an award of costs decision. Now, these decisions are subject to judicial review in accordance with the State Government Article 10-222 of the Annotated Code of Maryland. The approved amendment was approved by OSM as revised on February 5, 1999. A public hearing was held by MDE regarding the proposed change on September 14, 1999 and no public comments were received.

During the review period, Maryland submitted an amendment dealing with various aspects of haul road design, certifications, static safety controls etc. The amendment was part of a 732 letter previously issued to the state. The formal submission is approved and currently awaiting final comments.

Maryland is currently preparing an informal submission to OSM in response to a 732 letter covering a variety of issues.

V. **Success in Achieving the Purposes of SMCRA as Measured by the Number of Observed Off-Site Impacts and the Number of Acres Meeting the Performance Standards at the Time of Bond Release.**

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

Off-Site Impacts

During the evaluation period, OSM conducted a study to assess the number and severity of off-site impacts occurring at or near surface mining sites.

OSM selected 27 sites for this study. 26 sites (96%) exhibited no off site impacts. The remaining site had one impact. The impact involved mine water leaving the permit area prior to passing through a sediment pond as the result of a breached diversion ditch.

In addition to the 27 joint OSM/MDE inspections conducted as part of the study, Maryland conducted additional non-joint inspections in which two additional off-site impacts were observed. These impacts were encroachments and both occurred on one permit as a result of the operator being off the permit. The off-site impact was considered minor.

There was also one off-site impact observed on a forfeited site during the AMD inventory review discussed above. This impact is the result of a discharge from a site which is considered to have a moderate degree of impact on hydrology. Reclamation operations are currently underway to correct the discharge

Table 4 summarizes the off-site impacts observed.

No programmatic deficiencies were noted in either allowing impacts to occur, or in mitigating impacts following occurrence.

A topical report¹⁰ is available from the Pittsburgh Oversight and Inspection Office which provides additional details on the evaluation.

¹⁰Maryland Off-Site Impacts Study; November, 1999; Available upon request from the Pittsburgh OIO Office

Reclamation Success

A study was conducted to evaluate the effectiveness of ensuring successful reclamation on lands affected by surface coal mining operations¹¹. Four reclamation parameters were evaluated; land form/approximate original contour (AOC), land capability, hydrologic reclamation, and contemporaneous reclamation. The study revealed that reclamation is generally effective and successful under the Maryland State Program. All nine sites met all criteria for AOC, hydrologic reclamation, and contemporaneous reclamation. However there were two sites for which the planting plan was not consistent with on-site requirements. Both permits were approved for a “pasture” post mining land use. The approved revegetation plan did not include trees for either site nor was there a record in the permit file of a change in post mining use for either site. Inspection by OSM revealed that all of one site and part of the other had been planted to trees. The tree planted areas were somewhat steep. State personnel indicated that it is routine practice to plant trees on slopes greater than 12 degrees. Also, only one of nine bond release inspections were conducted during times and seasons conducive to a thorough evaluation of revegetation success or within the required time frames for filing a complete application for inspection. Finally, significant time lapses occurred between the time sites become eligible for bond release inspection and when applications for inspection are submitted by operators. Much of the time delay is due to the operator not submitting a request for inspection once the site becomes eligible, which is not within the control of The Bureau. The Bureau keeps the operators informed of the eligibility status of sites by notifying operators when a site is eligible for phase II inspection and again when the Land Reclamation Committee has performed a vegetation evaluation. However, the operator must unilaterally submit an application for bond release before the Bureau can inspect and approve phase II reclamation.

During OIO’s evaluation for Maryland bond release activities, as indicated in Table 5, approximately 80% was for phase II (40.2%) and phase III (40.1%). 19.7% of bond released was for phase I. This imbalance is expected because, under Maryland’s bonding system, phase I bond does not cover the entire permit area as phases II and III do, but rather covers only the

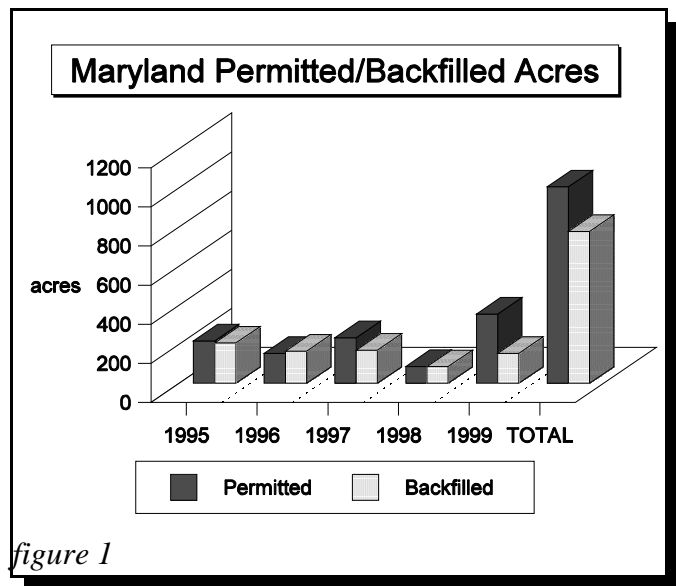


figure 1

¹¹Maryland Bond Release Study, December , 1999; Available upon request from the Pittsburgh OIO Office.

disturbed area, then “floats” to a new area after backfilling and grading on the disturbed area is completed . Thus, phase I bond is released only for the last parcel disturbed, rather than for the entire permit area. As expected, Figure 1 shows that newly permitted acreage has outpaced phase I release backfilled acreage over the last five years.

Customer Service

Customer Service is fundamental in the regulation and oversight of surface coal mining and reclamation programs. Public participation in the permitting process is an important aspect of this service. A review¹² of Maryland’s management of this process was conducted during the evaluation year. The objective of this study was to review administrative and regulatory procedures adopted by MDE which deal with public participation in the permitting process for compliance with Maryland’s approved program and associated federal regulations. The study revealed that Maryland is responsive to public concerns in the permit review process and is in compliance with program requirements with few exceptions. The exceptions were primarily in the area of documentation, though some notification requirements were also not fully carried out. Maryland has begun notifying the National Park Service as a result of the study.

Copies of the study are available by contacting the Pittsburgh Oversight and Inspection Office.

¹²Maryland Public Participation in the Permitting Process Study; August, 1999; Available upon request from the Pittsburgh OIO Office

VI. OSM Assistance

Upon request, OSM provides various types of assistance to Maryland in the form of technical, managerial, financial, and training assistance. The following assistance was provided to Maryland during the evaluation period:

Financial Assistance

As shown in table 9 (Appendix A), OSM provided \$468,150 in Title V regulatory assistance funding during fiscal year 1999. This is in addition to the \$1.7 million provided for the Title IV abandoned mine lands reclamation program and \$35,000 for the Small Operator Assistance Program. From program inception to the end of fiscal year 1999, OSM has granted Maryland approximately \$30.9 million net awards. Of this amount, \$.5 million was for the Small Operator Assistance Program (SOAP), \$6.4 million for regulatory operations, and \$24 million for abandoned mine land reclamation projects.

Figure 2 shows comparative grant awards for the three program areas over the last five fiscal years.

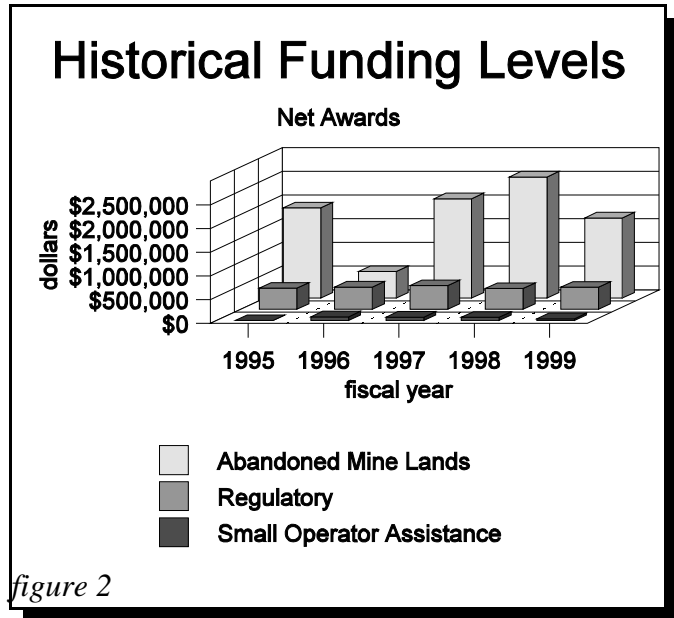


figure 2

VII. General Oversight Topic Reviews

In addition to the studies conducted to assess off-site impacts and evaluate the effectiveness in achieving successful reclamation, four additional studies were performed during the evaluation period per the OSM/MDE evaluation year 1998 work plan:

PHC/CHIA Study

During the evaluation year OSM conducted a study¹³ to evaluate Probable Hydrologic Consequences (PHC) and Cumulative Hydrologic Impact Assessments (CHIA) and to determine the on-the-ground impact to post-mining water quality.

The results of the study were that the Maryland program generally ensures the PHC/CHIA process is properly followed. Necessary hydrologic and geologic information is gathered to support the Probable Hydrologic Consequences determination and the Cumulative Hydrologic Impact Assessment is supported by the data. However, there are some areas which could be further improved. In some instances, background data such as discharge rates, geologic analyses, recharge capacity was not present. The use of checklists would aid in assuring the presence of all required background data. The PHC/CHIA documents would also benefit by more specifically addressing in the narrative the data used in making the determinations and assessments. In addition, including and referencing specific data from other operations in the impact area and their impacts on the hydrology would benefit the CHIA.

Copies of the study are available from the Pittsburgh Oversight and Inspection Office.

Reclamation Liability Review

On December 16, 1998 Winner Brothers Coal Company filed a Plan for Reorganization under chapter 11 bankruptcy procedures. This company's holdings represent 23% of the total number of permits in Maryland. In order to determine the impact, if any, on the existing bond pool if the State was required to perform reclamation work at the sites, OSM began a study during the evaluation period. The study is focusing on the bonding and reclamation status of 15 permits operated by Winner Brothers. A team of Maryland and OSM employees was formed to conduct the study. The team has thus far gathered data on the permit status, reclamation liability status, historic production, and violation history of the 11 sites and is in the process of preparing various scenarios (worst case, best case, likely

¹³Maryland Probable Hydrologic consequences and Cumulative Hydrologic Impact Study, November, 1999. Copies available upon request from the OSM Pittsburgh Office.

case) for the impact to the bond pool if any or all of these sites were to be forfeited. During the period of the study, active reclamation has been ongoing at the sites. In addition, two of the permits have been transferred to a new company, United Energy, via an August 6, Asset Purchase Agreement. Liability for 11 of the remaining 13 permits has also been assumed by United Energy. Liability for these 13 permits was estimated at approximately \$869k with bond being held at \$1,074,300.

Upon completion of the report, copies will be made available through the Pittsburgh Oversight and Inspection Office.

Performance Monitoring Study

In order to assess the impact of planning, mining, and reclamation activities on the effectiveness of the Maryland Program in meeting the goals of the Surface Mining Control and Reclamation Act, OSM conducted a study during the evaluation period¹⁴. Twenty permitting, mining, and reclamation standards on eighteen permit sites were evaluated for compliance with MDE program requirements. All sites were in compliance with all standards with the following exceptions:

One site exhibited inadequate drainage control by having a breached diversion ditch which resulted in minor off-site sedimentation. The breach was cited by Maryland and repaired during the time of the inspection. Another site had not restored the hydrologic quality of the water as it had developed a seep high in manganese and iron which required ongoing treatment. A third site did not have current water monitoring records. This violation was also cited by Maryland.

Historically Maryland has exhibited an approximate 99% compliance rate with the standards evaluated by OSM. Overall, it was determined that the Maryland program is meeting the goals of SMCRA effectively and efficiently.

¹⁴Maryland Performance Monitoring Study, November, 1999. Copies available upon request from the OSM Pittsburgh Office.

APPENDIX A

These tables present data pertinent to mining operations and State and Federal regulatory activities within Maryland. They also summarize funding provided by OSM, and Maryland staffing. Unless otherwise specified, the reporting period for the data contained in all tables is October 1, 1998 to September 30, 1999. Additional data used by OSM in its evaluation of Maryland's performance is available for review in the evaluation files maintained by the Pittsburgh OIO Office.

TABLE 1

Coal Production (Millions of short tons)			
Period	Surface mines	Underground mines	Total
Coal production ^A for entire State:			
1997	0.9	3.3	4.2
1998	0.8	3.3	4.1
1999	0.7	3.2	3.9

^A Coal production as reported in this table is the gross tonnage which includes coal that is sold, used or transferred as reported to OSM by each mining company on form OSM-1 line 8(a). Gross tonnage does not provide for a moisture reduction. OSM verifies tonnage reported through routine auditing of mining companies. This production may vary from that reported by States or other sources due to varying methods of determining and reporting coal production.

TABLE 2

Inspectable Units (As of September 30, 1999)												
Coal mines and related facilities	Number and status of permits								Permitted acreage ^A (hundreds of acres)			
	Active or temporarily inactive		Inactive		Abandoned		Totals					
			Phase II bond release									
	IP	PP	IP	PP	IP	PP	IP	PP	Insp. Unit ^D	IP	PP	Total
STATE and PRIVATE LANDS REGULATORY AUTHORITY: STATE												
Surface mines	0	42	0	11	0	0	0	53	0	0	55	55
Underground mines	0	3	0	1	0	0	0	4	0	0	8	8
Other facilities	0	6	0	1	0	0	0	7	0	0	1	1
Subtotals	0	51	0	13	0	0	0	64	0	0	64	64
FEDERAL LANDS REGULATORY AUTHORITY: STATE												
Surface mines	0	0	0	0	0	0	0	0	0	0	0	0
Underground mines	0	0	0	0	0	0	0	0	0	0	0	0
Other facilities	0	0	0	0	0	0	0	0	0	0	0	0
Subtotals	0	0	0	0	0	0	0	0	0	0	0	0
ALL LANDS^B												
Surface mines	0	42	0	11	0	0	0	53	0	0	55	55
Underground mines	0	3	0	1	0	0	0	4	0	0	8	8
Other facilities	0	6	0	1	0	0	0	7	0	0	1	1
Totals	0	51	0	13	0	0	0	64	0	0	64	64
Average number of permits per inspectable unit (excluding exploration sites) <u>1</u>												
Average number of acres per inspectable unit (excluding exploration sites) <u>100.0</u>												
Number of exploration permits on State and private lands: <u>2</u> On Federal lands: <u>0</u> ^C												
Number of exploration notices on State and private lands: <u>6</u> On Federal lands: <u>0</u> ^C												
<p>IP: Initial regulatory program sites.</p> <p>PP: Permanent regulatory program sites.</p> <p>^A When a unit is located on more than one type of land, includes only the acreage located on the indicated type of land.</p> <p>^B Numbers of units may not equal the sum of the three preceding categories because a single inspectable unit may include lands in more than one of the preceding categories.</p> <p>^C Includes only exploration activities regulated by the State pursuant to a cooperative agreement with OSM or by OSM pursuant to a Federal lands program. Excludes exploration regulated by the Bureau of Land Management.</p> <p>^D Inspectable Units includes multiple permits that have been grouped together as one unit for inspection frequency purposes by some State programs.</p>												

TABLE 3

State Permitting Actions
As of 9/30/99

Type of application	Surface mines			Underground mines			Other facilities			Totals		
	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres ^A	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres
New permits	3	4	315	0	0	0	0	0	0	3	4	315
Renewals	20	20	1958	2	2	716	0	4	113	22	26	2,787
Transfers, sales and assignments of permit rights	1	0		2	0		0	0		3	0	
Small operator assistance	1	2		0	0		0	0		1	2	
Exploration permits	2	2		0	0		0	0		2	2	
Exploration notices ^B		6			0			0			6	
Revisions (exclusive of incidental boundary revisions)		7			7			0			14	
Incidental boundary revisions		4	25		2	14		0	0		6	39
Totals	27	45	2,298	4	11	730	0	4	113	31	60	3,141

OPTIONAL - Number of midterm permit reviews completed that are not reported as revisions _____

^A Includes only the number of acres of proposed surface disturbance.

^B State approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

TABLE 4

Off-Site Impacts														
RESOURCES AFFECTED			People			Land			Water			Structures		
DEGREE OF IMPACT			minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major
TYPE OF IMPACT AND TOTAL NUMBER OF EACH TYPE	Blasting													
	Land Stability													
	Hydrology								1					
	Encroachment				2									
	Other													
	Total	0	0	0	0	2	0	0	1	0	0	0	0	0
Off-Site Impacts on Bond Forfeiture Sites														
RESOURCES AFFECTED			People			Land			Water			Structures		
DEGREE OF IMPACT			minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major
TYPE OF IMPACT AND TOTAL NUMBER OF EACH TYPE	Blasting													
	Land Stability													
	Hydrology								1					
	Encroachment													
	Other													
	Total	0	0	0	0	0	0	0	0	1	0	0	0	0

The objective of this Table is to report all off-site impacts identified in a State regardless of the source of the information. Report the degree of impact under each resource that was affected by each type of impact. Refer to guidelines in Directive REG-8 for determining degree of impact. More than one resource may be affected by each type of impact. Therefore, the total number of impacts will likely be less than the total number of resources affected; i.e., the numbers under the resources columns will not necessarily add horizontally to equal the total number for each type of impact. As provided by the Table, report impacts identified on bond forfeiture sites separately from impacts identified on other sites. If bond forfeitures sites were not evaluated during the period, clearly note the table to indicate that fact. Impacts related to mine subsidence or other areas where impacts are not prohibited are not included in this table. **Refer to report narrative for complete explanation and evaluation of the information provided by this table.**

TABLE 5

Annual State Mining and Reclamation Results		
Bond release phase	Applicable performance standard	Acreage released during this evaluation period
Phase I	<ul style="list-style-type: none"> ● Approximate original contour restored ● Topsoil or approved alternative replaced 	152
Phase II	<ul style="list-style-type: none"> ● Surface stability ● Establishment of vegetation 	310
Phase III	<ul style="list-style-type: none"> ● Post-mining land use/productivity restored ● Successful permanent vegetation ● Groundwater recharge, quality and quantity restored ● Surface water quality and quantity restored 	309
	Bonded Acreage Status^A	Acres
	Total number of bonded acres at end of last review period ^B	6253
	Total number of acres bonded during this evaluation year	318
	Number of acres bonded during this evaluation year that are considered re-mining, if available	124
	Number of acres where bond was forfeited during this evaluation year (also report this acreage on Table 7)	0
^A	Bonded acreage is considered to approximate and represent the number of acres disturbed by surface coal mining and reclamation operations.	
^B	Bonded acres in this category are those that have not received a Phase III or other final bond release (State maintains jurisdiction).	

OPTIONAL TABLES 6
(Not Applicable)

TABLE 7

State Bond Forfeiture Activity (Permanent Program Permits)			
	Number of Sites	Dollars	Disturbed Acres
Bonds forfeited as of 9/30/98 ^A	4	\$383,460	186
Bonds forfeited during EY99	0	\$0	0
Forfeited bonds collected as 9/30/98 ^A	3	\$383,460	186
Forfeited bonds collected during EY99	1	\$249,300	160
Forfeiture sites reclaimed during EY99	0	\$0	0
Forfeiture sites repermited during EY99	0		0
Forfeiture sites unreclaimed as of 9/30/99	4		354
Excess reclamation costs recovered from permittee	0	\$0	
Excess forfeiture proceeds returned to permittee	0	\$0	
^A Includes data only for those forfeiture sites not fully reclaimed as of this date. ^B Cost of reclamation, excluding general administrative expenses.			

TABLE 8

Maryland Staffing (Full-time equivalents at end of evaluation year)	
Function	EY 99
Regulatory program ¹⁵	
Permit review	3.1
Inspection ¹⁶	5.8
Other (administrative, fiscal, personnel, etc.)	4.6
TOTAL	13.5

¹⁵From FY99 A&E Grant application

¹⁶Includes inspection/enforcement function

TABLE 9

Funds Granted to Maryland by OSM (Millions of dollars) EY99		
Type of grant	Federal funds awarded	Federal funding as a percentage of total program costs
Administration and Enforcement	\$468,150	50
Small Operator Assistance	\$35,000	100
Totals	\$503,150	

APPENDIX B

State Comments

The Maryland Bureau of Mines had no formal comments to the EY99 Evaluation Report.

Disposition of Comments

The Maryland Bureau of Mines had no formal comments subject to disposition.