



OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Annual Evaluation Summary Report

for the

Regulatory and AML Programs

Administered by the State

of

MARYLAND

for

Evaluation Year 2003

(October 1, 2002, through June 30, 2003)

August 2003

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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 OSM has approved 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, 2002, through June 30, 2003. 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



For the evaluation year, oversight data and studies indicate that the Maryland Program has been effective 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. A study of the three most recently issued permits indicates that, on average, ninety-one percent of the affected area has been backfilled and planted at any time.¹

On a larger scale, for the period 1997 through 2000, the ratio of affected acres to backfilled acres is 97:100. Ninety-two percent of sites reviewed exhibit no off-site impacts.

In addition to mining and reclamation efforts, the Maryland Department of the Environment (MDE) has continued to involve the public through programs such as the Appalachian Clean Streams Initiative and Watershed Cooperative Agreements.



This year's evaluation has also identified concerns relating to impoundment certification and inspection, and blasting plans, as well as an ongoing concern with Maryland's alternative bonding system, and reclamation of all forfeiture sites. These concerns are addressed in more detail under the "Regulatory Program Issues"

¹ 64 % in 1998 study, 68 % in 1999 study, 87 % in 2000 study, 75% in 2001, 78% in 2002 study.

subsection. OSM will work with MDE to resolve these issues and others addressed in the evaluation year 2004 Performance Agreement between MDE and OSM. This will help ensure the continuation of a strong and viable program in the State of Maryland.

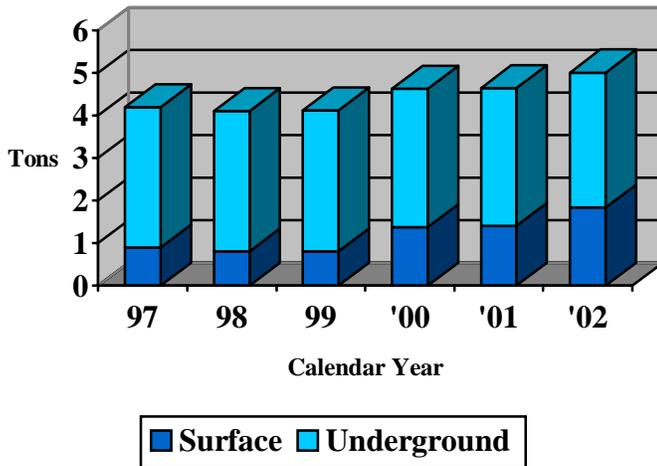
The following sections of this report provide additional detail on program successes and issues identified in the 2002 evaluation year. The following is a list of acronyms used in this report:

ABS	Alternative Bonding System
ACSI	Appalachian Clean Streams Initiative
AMD	Acid Mine Drainage
AML	Abandoned Mine Lands
AMLIS	Abandoned Mine Land Information System
AOC	Approximate Original Contour
APS	Allegheny Power System
BOM	Maryland Bureau of Mines
COMAR	Code of Maryland Regulations
EPA	Environmental Protection Agency
LRC	Maryland Land Reclamation Committee
NOVO	Notice of Violation and Order
MDE	Maryland Department of the Environment
NEPA	National Environmental Policy Act
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

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 nearly 70 percent of the total production in 2001.² During the 1980's, the

Maryland Coal Production - Millions of tons (gross)



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, as shown graphically on the chart at the left, the tonnage mined has been generally increasing over the last five calendar years to a production of five million short tons for evaluation year 2002. The increase is attributable primarily to surface coal

mine production. Since 1999, there has been a one hundred thirty percent increase in surface coal production while underground production has remained nearly constant. The continued increased production in surface mined coal in Maryland is primarily attributed to the continued operation of the AES Electric Cogeneration plant located near Cumberland in Allegany County.

Coal production in Maryland accounted for .41 percent of total U.S. coal production in 2001.³ ranking eighteenth nationally in coal production of the 25 coal producing states, and is expected to remain stable because of a long-term underground contract and a new power plant.

The AES Warrior Run Cogeneration facility came on line near Cumberland in Allegany County in

²Source – Energy Information Administration, U.S. Department of Energy, 2001 Annual Coal Report, Table 2, Coal Production and Number of Mines by State, county, and Mine Type, 2001. The majority of underground coal production in Maryland is generated from one mine employing approximately 250 people.

³Source - Energy Information Administration, U.S. Department of Energy, 2001 Annual Coal Report, Table 6, Coal Production and Number of Mines by State and Coal Rank

1999. It has a net power output capacity of 180 megawatts that is sold to Allegheny Power Systems (APS) under a 30-year power purchase agreement. The plant was constructed to burn only western Maryland coal with a clean coal technology using a circulating fluidized bed boiler. Approximately 600,000 tons of coal are burned each year. Limestone used in the cogeneration process is also mined locally. In addition to electric generation, the plant produces liquid carbon dioxide (CO₂) that is sold



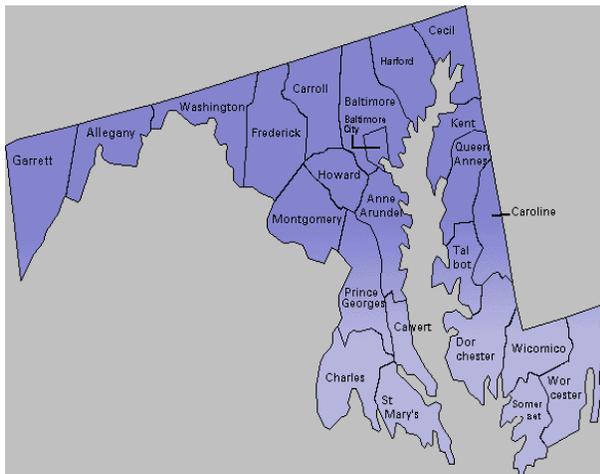
commercially. Statewide, Maryland consumes approximately 13.9 million tons of coal per year⁴ and ranks twenty-seventh nationally in total coal energy consumption.⁵ Consumption has decreased by an average 6.6 percent per year for the period 1996-2000. Maryland employs approximately 470 coal miners (year 2001 statistic), a number which has been decreasing by an average of 1 percent per year from 1996-2000.⁶

⁴ Source – Energy Information Administration, Annual Coal Report. 2001, Table 27, U.S. coal Consumption by Census Division and State.

⁵ Source – Energy Information Administration, Table 10, Consumption by Source and Total consumption per Capita, Ranked by State, 1999.

⁶ Source – Energy Information Administration, Table 41, Average Number of Employees/Miners at Underground Mines by State, 1991, 1996-2000.

Today coal mining in Maryland is confined to Garrett and the western portion of Allegany County. The topography in this area comprises gently rolling terrain with occasional steep slopes. Maryland



State law prohibits surface mining on steep slopes. The Conemaugh and Allegheny 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 678 million tons,⁷ which ranks Maryland twenty-third nationally.

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, organizational involvement, and formal regulatory participation.

Outreach

Outreach is the interaction on a routine, periodic basis of OSM with state and local coal associations, businesses, citizens and environmental organizations to actively seek out and determine their areas of concern and suggestions. OSM did not undertake any new initiatives during the evaluation year but continues to involve the public, state, and others in the oversight of the Maryland program. MDE routinely provides opportunities for public participation in both the Title IV and Title V programs. These meetings also involve OSM representation. All hearings and public meetings provide a forum for the public, industry, the university community, and local politicians to voice their opinions on various issues. In addition, OSM provides the public the opportunity to participate in the annual performance agreement and keeps them abreast of program activities via a monthly newsletter.

⁷Source - Energy Information Administration, U.S. Department of Energy, Table 16, Demonstrated Reserve base by Mining Method 2001.

Organizational Involvement

Organizational involvement in restoring Maryland's mined lands continues to grow in both the regulatory and abandoned mine lands program. Maryland continues to broaden its involvement with such groups as watershed associations, National Park Service, Natural Resource Conservation Service, Trout Unlimited, and others. Through increased partnering opportunities with various groups and agencies, Maryland is able to leverage additional funds and take on additional land reclamation projects.

Regulatory Program

The Land Reclamation Committee (LRC) was formed in 1967 through legislation enacted by the State of Maryland. 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 the review of mining and reclamation plans, progress reports, and final reports. It establishes plans and procedures, as well as practical guidelines, for prompt and satisfactory reclamation, conservation, and revegetation of all lands disturbed by coal mining within the State. The Committee meets periodically and OSM representatives attend the meetings along with members of the public, industry consultants, and coal operators.

Abandoned Mine Land Program

Maryland continues to be an active participant with local communities, watershed groups, and State and Federal agencies in accomplishing mutual Abandoned Mine Land Program goals. These goals usually involve the clean-up of acid mine drainage (AMD) problems that impact local streams. The Watershed Cooperative Agreement Program is a part of the Appalachian Clean Streams Initiative (ACSI) and is intended as a means of funding not-for-profit groups, especially small watershed groups that undertake local AMD reclamation projects. Cooperative agreements are signed between OSM and these groups at the time of the grant award. Grants can range from \$5000 to \$100,000 and there is a two-year performance period to complete the particular project. An integral part of the Cooperative Agreement program is the requirement that the proposed project be done by a group of partners and these partners must provide a substantial portion of the total resources needed to complete the project.

Some of the more active partners Maryland works with include:

NRCS

Georges Creek Watershed Association

Yough River Watershed Association

MD DNR

Western MD RC & D

MD Small Streams & Estuaries Program

EPA

Appalachian Environmental Lab

Allegany County Public Works
Garrett County Public Works

These groups have become increasingly important for funding larger scale AMD projects when Maryland's funds are limited due to its minimum program status. Maryland personnel actively participate in speaking at public forums and watershed meetings. They are also active in Earth Day activities and speaking to schoolchildren.

Maryland actively assists OSM interns and AmeriCorps Volunteers who work with local watershed groups.

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 declared unsuitable for mining; requesting inspections of active coal mine operations where there is reason to believe a violation is occurring (citizen complaints); requesting pre-blast surveys if living within one half mile of the permit area; and appealing Departmental decisions through the appeal process.

Impacts/Results of Public Participation

Regulatory

There were twelve public requests for pre-blast surveys during the evaluation year. There were five LRC meetings held during the period. Three of the meetings were regularly scheduled office meetings. One of the meetings was to review reclamation plans for new permits and two were for evaluating revegetation eligible for phase II bond release. There were no public petitions for designating lands unsuitable for mining and reclamation operations in Maryland during the evaluation year, nor were there any citizen complaint Ten Day Notices (TDN's) issued by OSM. No hearings were requested on the issuance of permits or bond releases.

AML

Watershed groups have actively participated in the Maryland program. Through financial support using ACSI funds and in-kind services for design and construction purposes, these groups, with Maryland's cooperation, have been able to complete eight AMD projects since 1999.

Two projects were completed during the past evaluative period. The McDonald Mine Doser Project was a cooperative project with the Western Maryland Resource Conservation and Development Agency and the Georges Creek Watershed Association, among others. The project involved the installation of a limestone doser for the purpose of treating AMD in the form of a gravity discharge from an abandoned deep mine near Barton, Maryland. Space limitations prevented the construction of a large passive type system to treat the AMD before entering Georges Creek.

Another cooperative group project that Maryland actively participated in with financial, engineering and administrative support was the Potomac Hill AMD Abatement Project. This project was also done with the Western Maryland RC&D as the non-profit group. The project involved the collection and treatment of AMD and the reclamation of 5 acres of toxic spoil material associated with the AMD and the installation of a passive treatment system to treat the seeps before entering Georges Creek. Partners in the project included county government, the Maryland Department of Natural Resources, Barton Mining and others.

Another two projects have been approved and are being designed.

IV. Accomplishments/Issues in the Maryland Program.

MDE continues to be successful 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, MDE has been actively involved in several program improvement initiatives and activities. These are discussed below, along with outstanding issues and concerns that are being addressed in a mutual effort to maintain a high level of quality in the Maryland program.

Regulatory Program Accomplishments

MDE's Title V program has remained effective in the planning, mining, and reclamation of active sites. A study of the three most recently issued permits indicates that, at any time, on average, ninety-one percent of the affected area has been backfilled and planted.⁸

Ninety-three percent of sites reviewed exhibited no off-site impacts during this evaluation year.

MDE continues to work toward refining and improving existing processes and procedures, as well as taking innovative measures in establishing new programs. During this evaluation period, MDE made significant progress toward eliminating a backlog of unresolved topical study issues.

Maryland submitted a program amendment to address an issue identified under the Maryland Permit Findings EY2000 topical study relating to performance bond time extensions and refined their annual permit review procedures to address an issue identified under the Maryland Applicant Violator System Determinations EY2002 topical study.

Maryland improved the public participation opportunities by adding the National Pollutant Discharge Elimination System agency and the Maryland Soil Conservation District to their list of entities that are provided copies of permit applications and opportunity for technical

⁸ 68 % in 1999 study, 87 % in 2000 study, 75% in 2001 study, 78% in 2002 study.

on-site evaluation of a permit application.

Maryland has significantly lowered the gap between documentation of violations cited during joint inspections versus State-only inspections.

Maryland has submitted informal program amendments to clarify required findings related to augering, topsoil, and remining operations.

Maryland has initiated steps to assure that all hydrologic reclamation plans in permit applications more specifically address required criteria.

Maryland has revised Module IV of the permit application to better address haul road design, maintenance, and certification requirements.

Maryland has taken steps to address the backlog of Section 732 required program amendments. Two of the four outstanding Section 732 program amendments in Maryland were resolved during this evaluation period. One of the remaining amendments has been placed on hold by OSM pending re-issuance of a nationwide 732 letter, leaving only one active amendment, which is being reviewed by both Maryland and OSM. OSM accepted Maryland's amendment for prompt replacement of water supplies, planned subsidence controls, and other items relating to the Energy Policy Act and published it in the Federal register on April 29, 2003. OSM accepted Maryland's amendment for impoundment design, construction, certification and inspection to resolve the last issue remaining in the "Various Issues" amendment. This also included definitions, termination of jurisdiction, permitting requirements, bond release requirements, performance standards, and inspection/enforcement procedures dating back to the 1989 definition of termination of jurisdiction. OSM's acceptance was published in the Federal Register on July 17, 2003.

Regulatory Program Issues

During this review period, MDE and OSM identified a number of issues that impact full implementation of the approved MDE program.

A concern was identified regarding the certification and inspection of impoundments. Deficiencies were noted relating to the requirement under COMAR 26.20.21.09 of retaining a report at or near the mine site which certifies that critical construction phases of impoundments have been carried out properly. Also some required "as-built" certifications were not found and some "as-built" certifications and annual inspection reports did not contain all information required by Maryland's program.

Another concern involved blasting plans required in the permit application. Some plans lacked information on the types and amounts of explosives, and descriptions of equipment to be used in monitoring blasts. Of greater concern was the lack of information required for setting the limitations the operator will meet with regard to air blast and ground vibration and failure to adequately discuss design factors used to protect the public. None of the permits reviewed contained information on the limits the operator will meet for air blast. In addition,

none of the permits that required a blast design included the required discussion on the design factors to be used in protecting the public.

Concerns still exist over Maryland's Alternative Bonding System (ABS), which was identified in a 2002 study⁹ as having a more than \$500,000 deficit due to unreclaimed forfeiture sites. A follow-up study is planned for evaluation year 2004 to monitor progress in reducing the deficit. One of the forfeiture sites is also a concern as it is actively contributing off-site acid and high metal water to the Youghiogheny river watershed. Prior reclamation efforts have reduced the volume and concentration of toxics in the water, but additional work is needed. Efforts are ongoing to prioritize and identify funding sources for the further reclamation of this site.

These and other issues are being addressed through ongoing communication and coordination between OSM and Maryland.

AML Program Accomplishments

Maryland has undertaken several large standard AML program projects during this evaluation year and has made good use of the Clean Streams Initiative program that is designed to reclaim land damaged by past mining practices and to alleviate the associated AMD problems. The following represents some of the accomplishments under the Title IV program:

Standard AML Projects –Maryland is one of seven minimum program states that receive \$1.6 million in Title IV funds annually from OSM for standard AML projects.

Maryland is allowed to deposit up to \$1 million of this amount into an interest bearing account each year for addressing AMD problems. Maryland uses approximately \$65,000 annually from this source to purchase limestone for use in seven limestone dosers that treat AMD in the two county area. An eighth doser is to be installed at the Shallmar Reclamation site that will treat AMD that was collected from two sealed abandoned mine entries.

During the review period, construction activity continued to increase from the last several performance periods. The Shallmar Refuse Reclamation and AMD project was completed late in the period. This project was one of the larger projects undertaken by Maryland during primacy. The 26-acre, \$1.2 million project involved the reclamation of a large abandoned refuse disposal site along with several mine openings and outbuildings. The AMD coming from the mine openings was collected and directed to a grouted concrete channel where it will be treated by a lime doser before discharging into the North Branch of the Potomac. Chemical improvements in the water quality coming from the openings have already been noted, although this may be temporary resulting from lime applications on the final grade. The reclamation of the refuse pile and control of surface runoff will eliminate flooding and off site sedimentation problems that have plagued the Shallmar area in the past.

⁹ Maryland Alternative Bonding System Analysis, Evaluation Year 2002

While the Shallmar Project was being completed, another project, the Kitzmiller Coal Waste Stabilization Project was being started. This project involves the reclamation of two abandoned coal refuse piles covering 16 acres. The piles are being removed for the purpose of eliminating a refuse fire and eliminating blockage of a portion of the North Branch of the Potomac. As of July 2003, the job was 70% complete. The 1.4 million dollar project is expected to be completed by October 2003.

The Oak Hill Landslide Project was nearly completed during the period. The project cost was \$300,000 and was done in conjunction with the Natural Resource Conservation Service (NRCS). Six acres of coal refuse were reclaimed and AMD from a mine opening was directed to a passive treatment system. Additional slide remediation measures will be implemented during the fall of 2003 to stabilize a slide that occurred after the final grade was achieved.

The Spruce Hollow Abandoned Mine Reclamation Project was also completed during the evaluation period. The 6-acre project involved the removal of a coal waste embankment that was impounding water. The impounded water and the threat of collapse and downstream flooding and damages to numerous residences have been eliminated through the completion of this project.

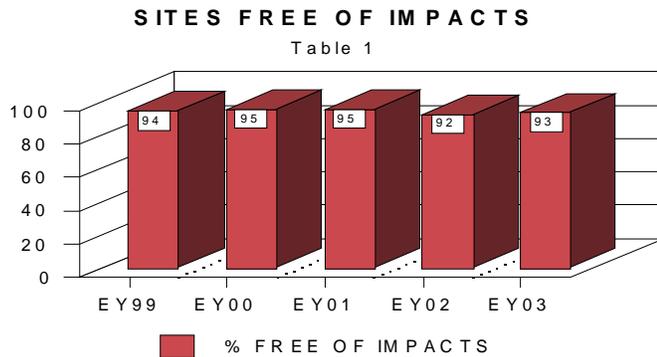
Maryland continues to develop new projects from their AML inventory. Engineering design is done both in-house and contractually. Projects currently being designed are: The Railroad Street Mine Drainage Control Project located in Lonaconing, Maryland; The Carlos Pit Backfilling Project located near Frostburg, Maryland; and The Broken Hart Coal Waste Stabilization Project near Zihlman, Maryland. In addition, the Bear Hill Road AMLR Project construction contract has been awarded and is scheduled to begin by August 30, 2003. Completion is expected by October 15, 2003.

Maryland submitted three NEPA evaluations to OSM for review for Authorizations to Proceed. A request for use of 10% funds for treating AMD in the Georges Creek Hydrologic Unit was also submitted and approved.

Appalachian Clean Streams Initiative Projects - Maryland receives \$163,769 in Appalachian Clean Streams Initiative (ACSI) funds that are used in partnering with other funding sources to clean up AMD problems in Maryland. Two ACSI projects, Potomac Hill AMD Abatement Project, and the McDonald Lime Doser Project, were completed during the evaluation year. These two projects received the majority of their funding from public watershed groups under the watershed cooperative agreement program and are discussed in more detail in the *Impacts and Results of Public Participation* section. Two more projects involving a combination of ACSI and Watershed Cooperative Agreement funds, the Casselman River AMD Abatement Project, and the Crellin Bore Hole Project, are in the design and development stage; construction is planned for the fall of 2003.

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

OSM collects the findings from inspections and other evaluations for a perspective of the number and extent of observed off-site impacts. These findings also include the number of acres that have been mined and reclaimed that meet the bond release requirements for the various phases of reclamation. Individual topic reports that provide additional details on how the following evaluations and measurements were conducted are available in the Pittsburgh Oversight and Inspection Office.

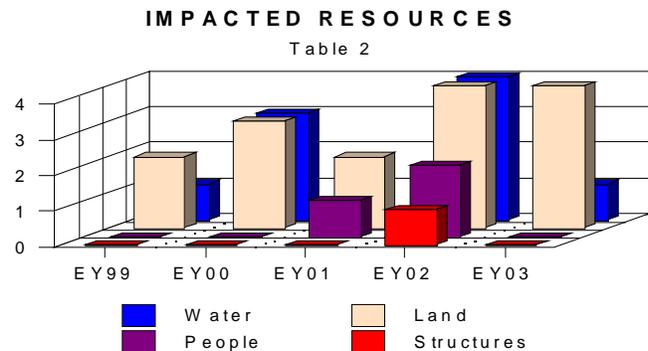


Off-Site Impacts

State Inspections - Of the sixty-one permits inspected by Maryland without OSM accompaniment, fifty-nine exhibited no off-site impacts associated with surface coal mining and reclamation operations. Of the two sites with impacts, one was a citizen complaint associated with permit SC-83-104 where coal fines were deposited off site. The second impact resulted in a NOVO issued to permit SM-92-422 for a discharge from a treatment pond with a Manganese level in excess of the allowable limit. The operator began treatment and the violation was terminated.

Joint Inspections - During the evaluation period, OSM conducted a joint study to verify State data on the number and severity of off-site impacts. OSM selected seventeen sites for the study. Of the seventeen sites, fourteen were randomly selected and reviewed for all aspects of planning, mining, and reclamation. Three of these fourteen were also reviewed for final reclamation prior to bond release. The remaining three sites were on the AMD Inventory due to unanticipated acid discharges and are reviewed semi-annually.

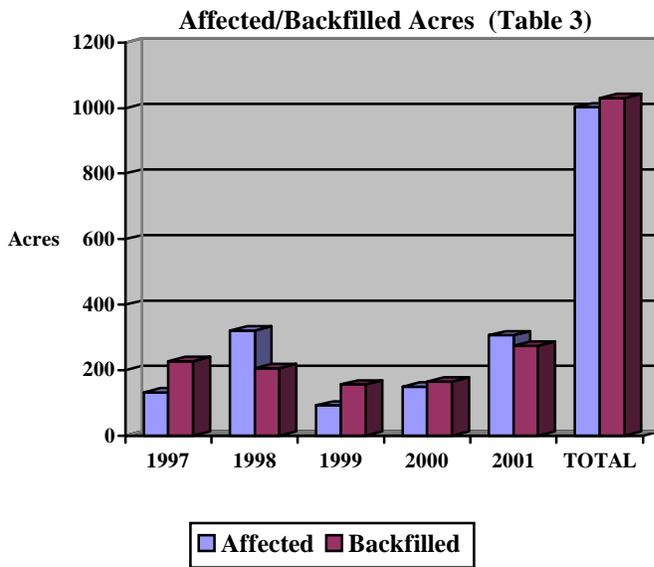
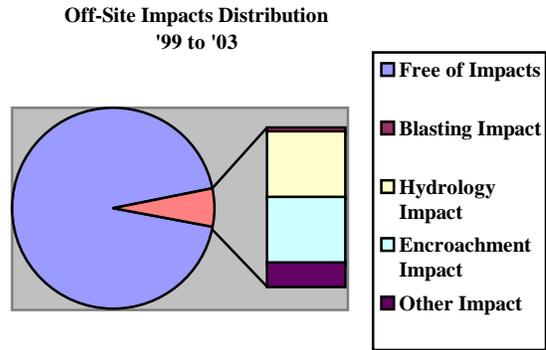
Of the seventeen sites jointly inspected, fourteen (82%) exhibited no off-site impacts. Of the sites with an off-site impact, two had enforcement action deferred to Maryland for issuance of a NOVO. The third was a forfeiture site for which no further enforcement action was warranted.



Historical Comparison - In addition to the current year evaluation, historic trends over the last five years were evaluated as to the number and types of impacts, resources impacted, and severity of impacts. Results indicate that off-site impacts

in Maryland are generally minor in nature and occur infrequently.

Ninety-three percent of permit sites were found free of off-site impacts for the current evaluation year (Table 1).¹⁰ Historically, this has held fairly constant over the last five years with an average of 94 percent. When impacts do occur, water and land are the most frequently impacted resources (Table 2).¹¹ The severity of impacts has been minor in nature with eight exceptions over the last five years, all of which were categorized as moderate.



Reclamation Success

OSM conducted a study to evaluate the effectiveness of ensuring successful reclamation on lands affected by surface coal mining operations.¹² The study revealed that reclamation is effective and successful under the Maryland State Program. Four reclamation parameters were evaluated: land form/approximate original contour (AOC), land capability, hydrologic reclamation, and contemporaneous reclamation. All sites reviewed complied with all criteria for all four parameters. All bond release inspections were conducted within the appropriate

season. In addition, significant improvements have resulted in the land capability post use through re-mining of abandoned underground mines and spoil piles.

As shown in table 3, the ratio of affected to backfilled acres for the period 1997 through 2001 is 97:100, with backfilled acreage exceeding the affected acreage in four of the five years.¹³

During the evaluation year, Maryland's LRC and BOM jointly approved 46 acres and disapproved 58 acres of phase II reclamation, and BOM approved 5 acres and disapproved 34 acres of phase III reclamation.¹⁴

¹⁰ Includes both joint OSM/MDE and MDE-only inspections and does not include forfeiture sites. Fifty-nine of sixty-four sites were free of off-site impacts.

¹¹ Includes both joint and MDE-only inspections.

¹² Maryland Bond Release Study, Evaluation Year 2003; Available upon request from the Pittsburgh OIO Office.

¹³ Source – Maryland Bureau of Mines annual reports, 1997-2001.

¹⁴ This approval constitutes the go-ahead for the permittee to apply for bond release.

Customer Service

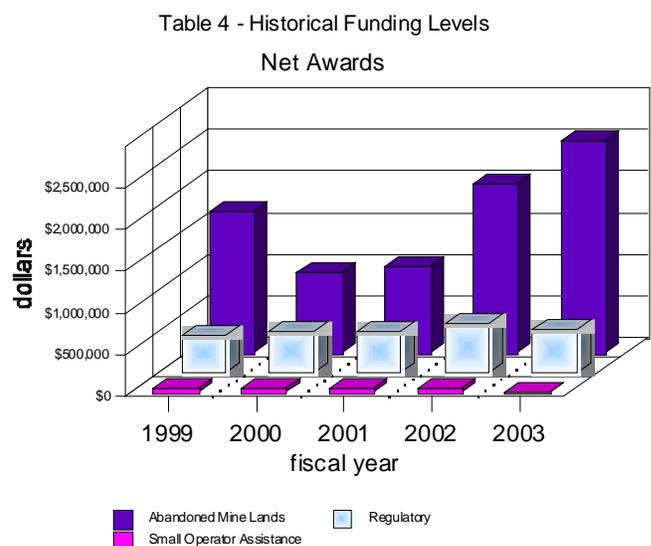
OSM Directive REG-8 stipulates that OSM conduct a yearly oversight evaluation of an area of the State program that involves customer service. To meet this requirement, OSM expanded upon a previous study involving citizen complaints on blasting to include all blasting requirements. The objective of this study was to evaluate customer service by reviewing Maryland's implementation of regulations relating to blasting, in accordance with COMAR 26.20.22. Permit sites in Maryland that include blasting of overburden and are in close proximity to occupied dwellings and public facilities have, in recent years, increased in number and proximity to these structures. Citizen complaints regarding structural damages and noise continue to be the predominant type of citizen complaint that is investigated by regulatory staff at the Maryland Bureau of Mines. OSM conducted a topical study of blasting in evaluation year 2000 but this study was limited to the citizen complaint aspects. The expanded review of blasting procedures, records and COMAR requirements was done for seven permit sites approved for blasting.¹⁵ Eighty-six blasting criteria were evaluated. The study found that, while most blasting was conducted in accordance with required procedures, the blasting plan required in the permit applications under COMAR 26.20.02.13F did not contain all required information, including types and amounts of explosives, descriptions of equipment to be used in monitoring blasts, information with regard to setting limitations for air blast and ground vibration, and discussion of design factors used to protect the public.

VI. OSM Assistance

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

Financial Assistance

As shown in table 9 (Appendix A), OSM awarded \$505,704 in Title V regulatory assistance funding during evaluation year 2003. This is in addition to the \$2,712,330 awarded for the Title IV abandoned mine lands reclamation program. No funding was made during the evaluation year for the Small Operator Assistance Program as \$67k is available for drawdown from prior grants. From program inception to the end of evaluation year 2003, OSM has granted MDE approximately \$40 million net awards. Figure 2 shows comparative grant awards for the three program areas over the last five fiscal years.



¹⁵ Maryland Performance Monitoring, Blasting, and Drainage Control Study

Technical Assistance

Technical assistance was provided for a unique AML project on a Title V permit site. The proposal was to leave a portion of the permit (last cut, sediment pond, and some adjacent area, 1-2 acres) unreclaimed so the AML project could be undertaken, taking advantage of the ability to treat acid flow across the pavement of the last cut. If the operator backfilled this final cut as part of his normal Title V reclamation process, the opportunity to address the acid flow at its source would be lost. Assistance was provided by researching the issues of whether a Title IV project could be undertaken on a Title V permit, changes required to the permit, and when liability had been addressed for the Title V permit allowing release of performance bonds. All of these issues were addressed and the project is in process.

OSM assisted Maryland in reviewing eligibility for two potential AML emergency sites. The Federal Reclamation Program Division confirmed one of the sites, the Galbraith Slide as an emergency and the project is currently being designed.

Assistance was also provided to the Georges Creek Watershed Association by Maryland AML and compliance personnel along with OSM in helping to determine the causes of degradation to a tributary to Jackson Run.

OSM assisted MDE through the loan of six computers and operating systems for use by personnel in the permitting and inspection/enforcement sections of MDE. Maryland was experiencing a freeze on new ADP purchases and the computers were excess to OSM's needs.

OSM has also assisted MDE in the Clean Streams Initiative Program, Abandoned Mine Lands Program, by participation in quarterly meetings and providing periodic financial status reports.

VII. General Oversight Topic Reviews

In addition to the studies to assess off-site impacts, evaluate the effectiveness in achieving successful reclamation, and review of Blasting Regulations, OSM conducted four additional studies during the evaluation period in accordance with the OSM/MDE evaluation year 2003 work plan. This year, at the request of Maryland, OSM combined three studies (Performance Monitoring, Blasting, and Drainage Control) into one report. The results of the studies are discussed separately below. OSM will work with MDE in the next evaluation period to resolve issues raised as a result of these studies.

Performance Monitoring Study

OSM conducted a study during the evaluation period¹⁶ to assess the impact of planning, mining, and reclamation activities on the effectiveness of the Maryland Program in achieving the goals of the SMCRA to control adverse environmental impacts during and after mining. Fourteen complete inspections were conducted jointly with MDE Inspectors to evaluate

¹⁶Maryland Performance Monitoring, Blasting, and Drainage Control studies combined report, Evaluation Year 2003. Copies available from the Pittsburgh OIO Office upon request.

compliance with twenty-two standards involving the Permitting, Mining, and Reclamation phases for achieving the goals of SMCRA. Based on the inspections, Maryland's approved program was found overall to be successful in controlling adverse environmental impacts during and after mining.

Drainage Controls

OSM conducted a study¹⁷ during the evaluation period to evaluate internal procedures and regulatory requirements for the design, certification, installation, and maintenance of drainage controls per COMAR 26.20.02.13 and 26.20.21. While most design, certification, installation, and maintenance standards were being followed, Maryland should take measures to assure that all requirements are met in several areas. Reports should be retained at or near the mine site that certify inspections have been made during specified critical construction phases of impoundments. Maryland should assure the "as-built" certifications contain the specific statements required by regulation. All discussion items required in the annual impoundment inspection report should be included, and Maryland should assure operators provide a demonstration that all required standards will be met prior to approving the retention of permanent impoundments

Annual Reviews and Permit Renewals

During the evaluation year, OSM conducted a study¹⁸ to review Maryland's internal procedures and regulatory requirements for the annual review of permits per COMAR 26.20.07.01, permit renewals per COMAR 26.20.07.03, and annual progress reports per Annotated Code of Maryland §15-508, to assure compliance with the approved Maryland Program. The study provided a means of determining whether all permits are being properly reviewed and reflect changes that have been made in the regulatory program in the intervening period when the permit was issued and when it was due for review or renewal.

Results of the study showed that Maryland's policies and procedures are successful in assuring that Maryland complies with the approved regulatory program for the annual review of permits, permit renewals, and annual progress reports. Some files were missing required documentation, but these appeared to be isolated incidents and not program deficiencies. One finding was made recommending a change to the wording in the annual review form and one finding regarding the certification of progress maps remains unresolved and will be tracked to resolution.

¹⁷ Maryland Performance Monitoring, Blasting, and Drainage Control studies combined report, Evaluation Year 2003. Copies available from the Pittsburgh OIO Office upon request.

¹⁸ Maryland Annual Reviews and Permit Renewals; EY2003. Copies available from the Pittsburgh OIO Office upon request.

Watershed Approach to AMD Abatement

During the evaluation year, OSM conducted a study¹⁹ to review State data on water quality projects conducted in the Cherry Creek Watershed in Maryland, and document results of these efforts.

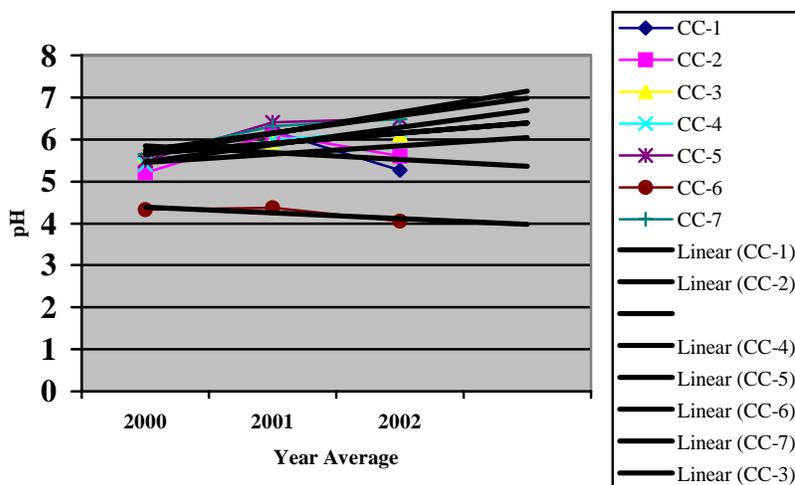
Information was reviewed to document the following:

1. Water quality conditions prior to site reclamation.
2. Past and present AMD abatement activities.
3. Water quality changes that have occurred as a result of AMD projects.

Results of the study showed that Maryland has successfully improved the water quality of the fourteen square mile Cherry Creek Watershed in Garrett County through a combination of sound planning, ability to coordinate diverse funding sources, and adopting unique approaches to address the varying physical and chemical characteristics of AMD sites.

Maryland completed nine AMD abatement projects in the Cherry Creek Watershed of Garrett County since 1986. Cherry Creek, a stream once home to a naturally reproducing brook trout population, was first mined in the 1800's, and had deteriorated by the 1950's to the point that it could not support a healthy biotic aquatic community. In 2001 Maryland completed an intensive study that identified the remaining acid producing sites in the watershed, implemented an AMD remediation project at the largest single remaining source of AMD, and began a long-term biotic assessment of the creek. The projects included a wide variety of approaches, including anoxic limestone drains, successive alkaline producing systems, a patented bioremediation, an "aluminator" system, wetlands, and a limestone doser. The approaches were carefully selected based on the physical and chemical characteristics of the AMD source sites. The study demonstrates that the projects in the Cherry Creek Watershed have, over time, significantly improved water chemistry in Cherry Creek in accordance with the goal of re-establishing a viable fisheries community in the stream and its discharge into Deep Creek Lake, an important recreational water resource in the area.

pH TRENDS UPDATE (2000 to 2002)



¹⁹ Maryland Watershed Approach to AMD Abatement; EY2003. Copies available from the Pittsburgh OIO Office upon request.

Drawdown Analysis and Audit

The OSM Appalachian Regional Coordinating Center Grants Staff conducted Quarterly Drawdown Analyses at the MDE during evaluation year 2003. They were conducted in accordance with the Department of Treasury Fiscal Requirements Manual 6-2080.20, which requires that periodically, but not less than each calendar quarter, the Federal program agency shall review each recipient's use of funds advanced. To satisfy this requirement, we determined that there was no difference between the total amount of funds drawn via the Drawdown Express and disbursements related to the Federal program; and that cash was being withdrawn in accordance with program disbursement needs.

Treasury Circular 1075 (31 CFR 205) requires that cash advances to a recipient organization shall be limited to the minimum amounts needed, and shall be timed to be in accord only with the actual, immediate cash requirements of the recipient organization in carrying out the purpose of the approved program or project. The timing and amount of cash advances shall be as close as is administratively feasible to the actual disbursements by the recipient organization. There were no discrepancies related to this requirement.

MDE's drawdown activities were therefore found to comply with both of these requirements.

There were no audit findings referred to OSM for disposition by MDE during this evaluation year.

APPENDIX A (REG-8 tables)

These tables present data pertinent to mining operations and State and Federal regulatory activities within Maryland. They also summarize funding provided by OSM and MDE staffing. Unless otherwise specified, the reporting period for the data contained in all tables is October 1, 2002, to June 30, 2003. Additional data used by OSM in its evaluation of MDE'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:			
Annual Period			
2000	1.404	3.248	4.652
2001	1.402	3.288	4.690
2002	1.840	3.168	5.008
Total	4.646	9.704	14.350

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. **Provide production information for the latest three full calendar years to include the last full calendar year for which data is available.**

TABLE 2

INSPECTABLE UNITS

As of June 30, 2003

Coal mines and related facilities	Number and status of permits									Insp. Units ^D	Permitted acreage ^A (hundreds of acres)		
	Active or temporarily inactive		Inactive		Abandoned		Totals		IP		PP	Total	
	IP	PP	Phase II bond release		IP	PP	IP	PP					
			IP	PP									
STATE AND PRIVATE LANDS REGULATORY AUTHORITY: STATE													
Surface mines	47		4				0	51			49.39	49.39	
Underground mines	5						0	5			8.16	8.16	
Other facilities	5						0	5			1.09	1.09	
Subtotals	0	57	0	4	0	0	0	61	0	0	58.64	58.64	
FEDERAL LANDS REGULATORY AUTHORITY: STATE													
Surface mines							0	0				0	
Underground mines							0	0				0	
Other facilities							0	0				0	
Subtotals	0	0	0	0	0	0	0	0	0	0	0	0	
ALL LANDS^B													
Surface mines							0	0				0	
Underground mines							0	0				0	
Other facilities							0	0				0	
Totals	0	0	0	0	0	0	0	0	0	0	0	0	
Average number of permits per inspectable unit (excluding exploration sites)									1 _____				
Average number of acres per inspectable unit (excluding exploration sites)									96.13 _____				
Number of exploration permits on State and private lands:									3 _____		On Federal lands ^C :		_____
Number of exploration notices on State and private lands:									3 _____		On Federal lands ^C :		_____
IP: Initial regulatory program sites PP: Permanent regulatory program sites													
^A When a unit is located on more than one type of land, include only the acreage located on the indicated type of land. ^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. ^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. ^D Inspectable Units includes multiple permits that have been grouped together as one unit for inspection frequency purposes by some State programs.													

TABLE 3

STATE PERMITTING ACTIVITY												
As of June 30, 2003												
Type of Application	Surface mines			Underground mines			Other facilities			Totals		
	App.			App.			App.			App.		
	Rec.	Issued	Acres	Rec.	Issued	Acres^A	Rec.	Issued	Acres	Rec.	Issued	Acres
New Permits										0	0	0
Renewals	3									3	0	0
Transfers, sales and assignments of permit rights										0	0	
Small operator assistance	1									1	0	
Exploration permits	2	1								2	1	
Exploration notices ^B		3		1							4	
Revisions (exclusive of incidental boundary revisions)		7		2							9	
Incidental boundary revisions		3	51	2		23					5	74
Totals	6	14	51	0	5	23	0	0	0	6	19	74

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	1				1							
	Hydrology												
	Encroachment	3			3								
	Total	4	0	0	0	3	1	0	0	0	0	0	0
Total number of inspectable units:		<u>61</u>											
Inspectable units free of off-site impacts:		<u>57</u>											
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						1					
	Encroachment												
	Total	1	0	0	0	0	0	0	1	0	0	0	0
Total number of inspectable units:		<u>5</u>											
Inspectable units free of off-site impacts:		<u>4</u>											
Refer to the 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	- Approximate original contour restored - Topsoil or approved alternative replaced	53.00
Phase II	- Surface stability - Establishment of vegetation	65.00
Phase III	- Post-mining land use/productivity restored - Successful permanent vegetation - Groundwater recharge, quality and quantity restored - Surface water quality and quantity restored	81.00
	Bonded Acreage Status^A	Acres
	Total number of acres bonded at end of last review period (September 30, 2002) ^B	5,943.00
	Total number of acres bonded during this evaluation year	74.00
	Number of acres bonded during this evaluation year that are considered re-mining, if available	N/A
	Number of acres where bond was forfeited during this evaluation year (also report this acreage on Table 7)	0.00

^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).

Table 7

STATE BOND FORFEITURE ACTIVITY		
(Permanent Program Permits)		
Bond Forfeiture Reclamation Activity by SRA	Number of Sites	Acres
Sites with bonds forfeited and collected that were unreclaimed as of September 30, 2002 (end of previous evaluation year) ^A	2	161.00
Sites with bonds forfeited and collected during Evaluation Year 2003 (current year)	0	0.00
Sites with bonds forfeited and collected that were re-permitted during Evaluation Year 2003 (current year)	0	0.00
Sites with bonds forfeited and collected that were reclaimed during Evaluation Year 2003 (current year)	0	0.00
Sites with bonds forfeited and collected that were unreclaimed as of June 30, 2003 (end of current year) ^A	2	161.00
Sites with bonds forfeited but uncollected as of June 30, 2003 (end of current year)	0	0.00
Surety/Other Reclamation (In Lieu of Forfeiture)		
Sites being reclaimed by surety/other party as of September 30, 2002 (end of previous evaluation year) ^B	0	0.00
Sites where surety/other party agreed to do reclamation during Evaluation Year 2003 (current year)	0	0.00
Sites being reclaimed by surety/other party that were re-permitted during Evaluation Year 2003 (current year)	0	0.00
Sites with reclamation completed by surety/other party during Evaluation Year 2003 (current year) ^C	0	0.00
Sites being reclaimed by surety/other party as of June 30, 2003 (current evaluation year) ^B	0	0.00
^A Includes data only for those forfeiture sites not fully reclaimed as of this date		
^B Includes all sites where surety or other party has agreed to complete reclamation and site is not fully reclaimed as of this date		
^C This number also is reported in Table 5 as Phase III bond release has been granted on these sites		

TABLE 8

MARYLAND STAFFING	
(Full-time equivalents at the end of evaluation year)	
Function	EY 2003
Regulatory Program	
Permit review	3.44
Inspection	4.54
Other (administrative, fiscal, personnel, etc.)	3.40
Regulatory Program Total	11.38
AML Program Total	4.80
TOTAL	16.18

TABLE 9

FUNDS GRANTED TO MARYLAND BY OSM (Millions of dollars) EY 2003		
Type of Grant	Federal Funds Awarded	Federal Funding as a Percentage of Total Program Costs
Administration and Enforcement	\$505,704.00	50
Small Operator Assistance	\$0.00	
Totals	\$505,704.00	

TABLE 10

STATE OF MARYLAND

INSPECTION ACTIVITY

PERIOD: OCTOBER 1, 2002 - JUNE 30, 2003

Inspectable Unit Status	Number of Inspections Conducted	
	Complete	Partial
Active*	262	432
Inactive*		
Abandoned*		
Total	262	432

Exploration

* Use terms as defined by the approved State program.

State should provide inspection data to OSM annually, at a minimum, and maintain inspection data on a continual basis. OSM offices responsible for Federal and Indian Programs need not complete this table since data will be queried from the I & E Tracking System.

TABLE 11

STATE OF MARYLAND

ENFORCEMENT ACTIVITY

PERIOD: OCTOBER 1, 2002 - JUNE 30, 2003

Type of Enforcement Action	Number of Actions*	Number of Violations*
Notice of Violation	13	14
Failure-to-Abate Cessation Order	0	0
Imminent Harm Cessation Order	0	0

* Do not include those violations that were vacated.

State should provide enforcement data to OSM annually, at a minimum, and maintain data on a continuous basis. OSM offices responsible for Federal and Indian Programs need not complete this table since data will be queried from the I & E Tracking System.

TABLE 12

LANDS UNSUITABLE ACTIVITY			
PERIOD: OCTOBER 1, 2002 - JUNE 30, 2003			
Number of Petitions Received	0		
Number of Petitions Accepted	0		
Number of Petitions Rejected	0		
Number of Decisions Declaring Lands Unsuitable	0	Acreage Declared as Being Unsuitable	0
Number of Decisions Denying Lands Unsuitable	0	Acreage Denied as Being Unsuitable	0

State should provide lands unsuitable data to OSM annually if there is any activity in this program area.

OSM OFFICES RESPONSIBLE FOR FEDERAL AND INDIAN PROGRAM STATES MUST ALSO COMPLETE THIS TABLE.

APPENDIX B

Maryland Comments

MDE provided the following comments to the EY2003 Evaluation Report:

September 25, 2003

Mr. George J. Rieger, Program Manager
Pittsburg Oversight and Inspection Office
Office of Surface Mining
Three Parkway Center
Pittsburg, PA 15220

Dear Mr. Rieger:

Thank you for the opportunity to comment on the Annual Report for 2003. Maryland concurs with your findings.

Thank you for your continued support.

Sincerely,

C. Edmon Larrimore, Program Manager
Mining Program

cc: John Carey
Scott Boylan

Disposition of Comments

No disposition of comments was necessary.