

2011 Pennsylvania Annual Evaluation Report



Pittsburgh Field Division – Harrisburg Office



**Office of Surface Mining Reclamation & Enforcement
U.S. Department of the Interior**



OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Annual Evaluation Report

for the

Regulatory and Abandoned Mine Land Reclamation Programs

Administered by the Commonwealth

of

Pennsylvania

for

Evaluation Year 2011

(July 1, 2010 to June 30, 2011)

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I. 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 Pennsylvania Program and the effectiveness of the Pennsylvania Program in meeting the applicable purposes of SMCRA as specified in Section 102. This report covers the 2011 evaluation year, from July 1, 2010, to June 30, 2011. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at OSM's Harrisburg Office of the Pittsburgh Field Division (PFD). PFD now provides direct access to Annual Reports, Work Plans, Evaluation Reports and other information through the following web address.

<http://www.arcc.osmre.gov/Divisions/PFD/PA/paoversight.shtm>

The OSM Harrisburg Office develops an annual work plan in conjunction with the Pennsylvania Department of Environmental Protection (PADEP), to review and assess Pennsylvania's administration of its approved Abandoned Mine Reclamation, and Coal Mining Regulatory programs. The work plan also focuses on technical and program assistance activities jointly undertaken by OSM and PADEP staff to improve the effectiveness of Abandoned Mine Lands (AML) and Acid Mine Drainage (AMD) reclamation, and coal mining regulatory programs. A copy of the 2012 work plan is available from the OSM Harrisburg Office, or through the web address shown above.

A list of acronyms used in this report is located in Appendix A.

II. Summary

This Evaluation Year 2011 (July 2010 through June 2011) the Pennsylvania coal regulatory and abandoned mine land programs continued to provide environmental protection for coal field citizens. The OSM oversight data of the Pennsylvania coal program indicates PADEP is administering a program where active mining sites are, with few exceptions, in compliance with planning, mining, and reclamation standards. Reclamation of active mining sites is thorough and proceeds in a contemporaneous fashion. PADEP abandoned mine land program restoration is effective in abating safety and environmental problems on previously mined sites. These Pennsylvania programs continue to effectively achieve or exceed the regulatory and reclamation goals of SMCRA.

During this review period, OSM conducted 442 permit inspections including 216 oversight complete inspections, and 121 state enforcement follow ups. In Evaluation Year 2010, 384 total permit inspections were conducted including 207 oversight complete inspections. This represents a 13% increase in the number of inspections. In accordance with OSM's new inspection policy, 26 oversight complete inspections were conducted as "independent" inspections, meaning PADEP was not provided advanced notice of the permit or site to be

inspected. However, PADEP is provided a two day advanced notice of the geographic area of the impending inspections so arrangements can be made to accompany OSM.

The annual report presents findings and analysis of PADEP's regulatory program arising from OSM's oversight inspection program. Data shows PADEP is administering a regulatory program where active mining sites are, with few exceptions, in compliance with the approved program requirements. Very few off-site impacts were identified and when identified were reported as having mostly minor adverse impacts.

During the Evaluation year, OSM issued final reports regarding bonding, and approximate original contour on permitted sites. OSM also completed studies on replacement of water supplies affected by underground coal mining activities, and public participation in informal meetings for permit applications. Findings and recommendations are summarized in the annual report, and completed reports for individual studies are available upon request and through the internet. The annual report also presents information and analysis regarding PADEP's inspection and enforcement program.

During the evaluation year, OSM terminated its emergency response project activities. In response, PADEP adjusted its project investigation, development, and construction process to accelerate reclamation activities on sites that were addressed by the OSM emergency program in prior years.

OSM conducted 22 abandoned mine reclamation project inspections. Project file and field verification data show abandoned mine reclamation projects result in successful hazard elimination and environmental stabilization and enhancement through highwall and pit backfilling, removal of coal mine facilities, filling mine shafts, and extinguishing mine fires.

OSM also implemented a new Abandoned Mine Land Inventory System (AMLIS) which tracks AML problems and abatement projects.

III. Overview of the Pennsylvania Coal Mining Industry

The coal geology of Pennsylvania is dominated by the Appalachian Mountains running northeast to southwest and dividing the State into two distinct coal regions as described below. Mountains and gently rolling hills characterize the western bituminous region of the State, where the majority of mines are located. Areas within this region containing acidic overburden often require special reclamation efforts. The bituminous coal seams underlay about 12,000 square miles in 28 counties of the State. The coal is found in four fields; the Main Bituminous Field in the southwest counties; the Georges Creek Field in the southern counties; the Broad Top Field in the south-middle counties; and the North-Central Field in the north-central counties of the State.

The anthracite coal region is located in the northeast quarter of Pennsylvania and covers approximately 3,300 square miles. The coal is found in four fields; the Northern Field; the Eastern-Middle Field; the Western-Middle Field; and the Southern Field. The Southern Field has the greatest amount of reserves that can be mined. The more than 20 different coal seams vary in thickness from a few inches to 50 or 60 feet. The anthracite region is characterized by steeply pitching seams, some with dips in excess of 60 degrees. Such seams require highly specialized

mining techniques, and present unique challenges for solving problems such as mine subsidence associated with abandoned anthracite mines.

For more than a century, coal has played a major role in the economic and industrial development of Pennsylvania, particularly the steel making industry, and has historically employed thousands of workers. Although Pennsylvania has experienced a decline in coal production over the past decade, it continues to be a leading coal producing State, due to its estimated bituminous reserves that total 23 billion tons, or 5.3 percent of U.S. reserves, and anthracite reserves that total 7.1 billion tons, or 97 percent of U.S. anthracite reserves.



Anthracite Coal Mine Site

In calendar year 2010, Pennsylvania produced approximately 60,642,773 tons^[1] of bituminous and anthracite coal at surface and underground mines. This production is slightly down from the 61 million tons reported for calendar year 2009. Of the total coal production, bituminous mining accounted for 57.4 million tons, and the remaining 3.2 million tons were mined in the anthracite region.

In addition, coal refuse mine sites were responsible for producing 5,619,671 tons of material, of which 1,705,804 tons were reported in the bituminous region and 3,913,867 tons were reported in the anthracite region. This is important as “remining” often results in the restoration of ecologically damaged sites at a savings for the Abandoned Mine Land (AML) Fund, therefore, increasing the number of AML acreages that can be reclaimed with the Fund.

Underground mining accounted for almost 83% of the total coal mined from surface and underground mines in the bituminous region and 78% of coal mined statewide. The six underground mines in Greene County accounted for 77% of all coal mined from underground operations. Conversely, bituminous and anthracite surface mining companies produced 12.9 million tons of coal, which was 21% of the total surface and underground coal mined in 2010 in

Pennsylvania. The largest surface coal producing county with 2,354,241 tons was Clearfield County, with Somerset County in second place, reporting 2,151,739 tons.

In 2010, 131 bituminous mine operators reported production at 336 mine sites. That number includes 36 underground mines, 284 surface mines, and 16 coal refuse sites and is down from the 343 active mining operations reported in 2009.

Anthracite mining production increased 5% in 2010, with 7,148,381 tons of coal and coal waste produced on 73 mine sites and 46 coal refuse sites. At these sites, 207,299 tons were produced by 10 underground mines, 3,027,215 tons of coal was produced by 63 surface mines, and 3,913,867 tons of coal refuse was removed at 46 sites for use as fuel in electricity generating facilities.

In 2010, 7,238 people were employed in the coal mining industry in Pennsylvania. This is down slightly from 2009, when 7,324 people were employed by the coal mining industry.

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

During this evaluation period, PADEP and OSM continued several ongoing initiatives that provided opportunity for public involvement.

A. Public Involvement in PADEP's Regulatory Process

Citizens Advisory Council

PADEP solicits and/or receives public input on proposed changes to the Pennsylvania mining program from the Citizens Advisory Council (CAC). The Council consists of eighteen appointed citizen volunteers who serve staggered three year terms. The Governor, the Speaker of the House of Representatives and the President Pro Tempore of The Senate appoints these members. No more than half of the appointees are from the same political party. Since its creation in 1971, the CAC has been actively involved in Commonwealth environmental issues. The Council is the only legislatively mandated advisory committee with the comprehensive charge to review all environmental legislation, regulations and policies affecting PADEP.

Mining and Reclamation Advisory Board

The Mining and Reclamation Advisory Board (MRAB) was created in 1984 by Act 181, which amended the Surface Mining Conservation and Reclamation Act (SMCRA), of the Pennsylvania General Assembly. MRAB's purpose is to assist and advise the Secretary of the Pennsylvania Department of Environmental Protection on all matters pertaining to mining and reclamation. The advisory role of the board also covers Title IV of the Federal SMCRA. Title IV is the section of the law that covers abandoned mine land reclamation issues. The MRAB is comprised of the Citizen Advisory Council, the coal industry, county conservation districts, and the Pennsylvania General Assembly. The full board meets four times per year and the subcommittees meet regularly to address a number of coal program areas each year. The meeting minutes, handouts, and MRAB's annual report are available on the MRAB website. To access

the web site, copy the following address into your web browser.
<http://www.dep.state.pa.us/dep/subject/advcoun/minrec/MRABhome.htm>

During the year, the MRAB was provided advice and guidance regarding a variety of mining and abandoned mine land reclamation topics including the following:

- Potential use of treated abandoned mine land discharge water for use in natural gas fracking.
- 2011 proposed Bond Rate Guidelines.
- Status of BAMR's AML reclamation projects.
- NPDES permitting and discussions on TDS issues in permitting.
- Act 54 Report.
- The status of the ABS Legacy Fund, and AMD Treatment Trust Funds and ABS Project Reclamation.
- Potential changes in Total Dissolved Solids requirements and effect on mining industry.
- Proposed increase in permit application fee from current \$250.00.
- OSM's Bonding National Priority Review
- Proposed Coal Ash Disposal regulations.

Environmental Hearing Board

The Environmental Hearing Board (EHB) is an independent quasi-judicial agency that includes a Chairman and four members. Members are administrative law judges with a minimum of five years of relevant legal experience. The EHB has the sole power to hear and decide appeals of PADEP's actions. Litigants have the right to appeal EHB decisions to the Commonwealth Court.

Environmental Quality Board

The Environmental Quality Board (EQB) is a 20 member independent board that reviews and adopts all PADEP Regulations. The Board, which is chaired by the Secretary of PADEP, includes members from 11 state agencies, the CAC and the State Senate and House of Representatives. PADEP, through the EQB, requests comments on all proposed regulations and holds public hearings or public meetings to provide citizens with the opportunity to provide input. The EQB addresses all comments received on proposed rules in the preamble of the final rules that are published in the *Pennsylvania Bulletin* and are available for public review on the PADEP Internet site. As part of the development of the regulations required by statute or by regulatory initiatives, PADEP holds outreach discussions or other public meetings to explain regulatory initiatives, where there is significant public interest.

Independent Regulatory Review Commission (IRRC)

The General Assembly passed the Regulatory Review Act in 1982, which established the Independent Regulatory Review Commission. IRRC was created to review Commonwealth agency regulations, excluding the Game Commission and the Fish and Boat Commission, to ensure that they are in the public interest.

The Commission's mission is to review regulations to make certain that the agency has the statutory authority to enact the regulation and determine whether the regulation is consistent with legislative intent. IRRC then considers economic impact, public health and safety, reasonableness, and clarity. The Commission also acts as a clearinghouse for complaints, comments, and other input from the General Assembly and the public regarding not only proposed and final regulation, but also existing regulations. In addition to staff, five commissioners serve IRRC. Four are appointed by the General Assembly, and the governor appoints one.

Public Comment in Permit Review Process

PADEP received 449 applications for permitting related actions that required the opportunity for public comment. The applicant is required to publish notice of the permit application in the local newspaper. PADEP publishes notices of permit applications and major permit revisions in the *Pennsylvania Bulletin*; notifies local municipal governments of permit applications; and holds public meetings with citizens to discuss pending applications.

Public Comment in the Bond Release Process

PADEP reviewed 703 annual bond calculations and 115 completion report applications during the past year. As part of the required annual bond calculation report, each permittee must notify every property owner of how much of the property owner's land has achieved Stage I, II and III standards during the preceding year. This required notice to the property owner also includes whom in the Department to contact if the property owner disagrees with the adequacy of reclamation.

The permittee must publish each bond release application in a local newspaper once a week for four consecutive weeks. This advertisement must include permittee name, and permit number, precise location and number of acres, total amount of bond and amount of requested release, summarize the reclamation, and state where written comments should be filed. The permittee must also provide proof of notification to surface owners, adjacent property owners, local government bodies, planning agencies and sewage and water treatment facilities. At any time, a citizen may file a complaint with the local PADEP Mining District Office about the adequacy of reclamation or about mining activities. The local PADEP office will contact the complainant within two days and complete the investigation within the next two weeks unless additional time is needed for additional analysis.

Citizen Complaint Resolution

The public may submit both informal and formal complaints on ongoing and completed mining operations, and bond release requests with respect to inspection, compliance monitoring and enforcement activity. During the evaluation year, PADEP received 411 citizen complaints, 364 of which were investigated, and resolved at the close of this evaluation year. Complaints not resolved may have been referred to other PADEP bureaus for action or otherwise concluded. Complaints can be directed to many aspects of the mining activities including stream pollution from erosion and mine drainage, blasting effects on structures and water supplies, damage to public roads, mining off-permit, and dust.

B. Outreach by OSM

General Outreach

OSM continued interacting with citizens, industry and other State and Federal agencies on oversight and State program initiatives. The OSM attended the MRAB meetings to provide input on oversight initiatives and explain new OSM programs.

OSM's Pittsburgh Field Division (PFD) publishes a quarterly electronic newsletter that covers Pennsylvania, Maryland and Ohio. This newsletter has been well received over the years it has been published. The newsletter highlights proposed Federal regulatory changes and policy guidance, court and IBLA (Interior Board of Lands Hearings and Appeals) decisions, the status of state program amendments, findings from OSM oversight studies, interaction with watershed groups and other partners, discussions of AML and AMD reclamation projects constructed, and innovative activities that states are involved in.

The PFD maintains a mailing list of interested Federal and State individuals and agencies, as well as industry staff, private consultants, foundations, non-profit organizations, and individuals interested in coal mining and reclamation and abandoned mine reclamation issues.

REG 8, OSM's Oversight of State Regulatory Programs Directive, provides guidance regarding oversight of approved state programs. This directive requires each field office to develop and conduct an outreach program to solicit comments for the public and interested parties regarding the oversight process, recommendations for additional review topics for the evaluation year and suggestions for improvements of future annual evaluation reports.

In January 2011, REG-8 was revised. Revisions included a schedule for public outreach in developing the yearly Performance Agreement/Evaluation Plan. OSM's web site now solicits public input in a 30 day period from March 1 through March 30, and again from May 1 through May 30. In addition, the performance agreements, oversight studies, and Annual Reports are posted on OSM's web site under Appalachian Region, Pennsylvania.

V. Major Accomplishments and Innovations in the Pennsylvania Program

A. Alternative Bonding System (ABS) Bond Forfeited Permits with Post Mining Discharges

Pennsylvania continues to make progress towards the reclamation of surface mine sites forfeited under the previous alternative bonding system (ABS).

PA has established and funded the new accounts (The Reclamation Fee O&M Trust Account and the ABS Legacy Sites Trust Account as described in 25 Pa. Code 86.17 and 86.187) for constructing and managing the ABS projects. O&M are the operation and maintenance costs of the ABS mine drainage treatment systems. Per acre reclamation fees are set yearly depending on the financial needs of the Department in constructing, operating and maintaining mine drainage treatment systems for ABS sites.

In 2009 and 2010, the per acre reclamation fee was zero largely because not enough ABS treatment facilities had been constructed to justify imposition of the fee. A three million dollar minimum amount is required in the account. When all ABS Legacy projects have been constructed and the ABS Legacy Sites Trust Fund is actuarially sound, the reclamation fee will be permanently terminated.

When the ABS projects have been completed revenues and expenses are tracked in order to gather the necessary information to determine the reclamation fee amount. The revenue is specifically related to the reclamation fee, civil penalties and interest. In January 2010, the Department issued its second annual Primacy ABS Bond forfeiture Status Report. Highlights from that report follow.

Expenditures from the Reclamation Fee O&M Trust Account from January 1, 2010, through December 31, 2010 totaled \$108,230.70. This is up from \$34,952.21 reported for 2009, and reflects increased operation and maintenance costs as more treatment systems come on line. This represents DEP staff time (\$4,357.61), sample costs (\$670.05), a grant to the Clean Streams Foundation for the O&M at the C&K Coal co. sites (\$47,056.42), including the Racic site (\$25,421.83) and a grant to Headwaters Charitable Trust for the Orcutt-Smail site (\$3,458.64), and O&M costs under contracts (\$52,687.98).

The balance in the Reclamation Fee O&M Trust Account as of December 31, 2009 was \$4,045,115.99. The December 31, 2010, balance in the ABS Legacy Sites Trust Account was \$5,370,989.10. This balance represents an increase in value of \$50,985.52 during 2010. This increase was the result of interest and deposit of collected bond. The money available from the Released Bond account as of December 31, 2010 was \$2,471,198.18.

The balance in the ABS Land Reclamation Closeout account as of December 2010 was \$3,278,461.14. The committed balance in this account at the end of December 2010 was \$585,965.03. This leaves \$2,692,496.11 for additional project construction.

Land reclamation needs were resolved on nine ABS forfeited sites in 2010 by re-permitting to a new mine operator for completion of mining and reclamation, or through PADEP issued

reclamation contracts. Several other reclamation projects were initiated in 2010. The December 2010 District Office Summaries for Land Reclamation show 22 ABS forfeited permits with land reclamation remaining. These sites are in a variety of stages of reclamation or re-permitting. In the December 2009 report, 31 land reclamation sites had not been fully resolved. In July 2008, PADEP reported 51 ABS forfeited permits needing land reclamation.

BMR has created a record in the PADEP's data management system (eFACTS) for each ABS bond forfeited Discharge. The records include the quality and quantity data used for the AMDTreat calculations. This new function in the eFACTS database is intended to replace the separate Mine Drainage Inventory.

The transition is beginning from solely using cost estimates based on AMDTreat to using the actual expenses for O & M. In the few cases where preliminary data is available (primarily where DEP is doing the O & M), the actual costs are generally lower than the AMDTreat calculations. However, the AMDTreat calculations will be used for these sites in the overall estimated O & M cost until more data is available. Actual contract/grant costs will also be used to provide a better total cost estimate as the contracts/grants are executed. Staff from the Bureau of District Mining Operations (DMO) conducted operation and maintenance (O&M) activities during 2010 on treatment systems.

The ABS Legacy Sites track 104 discharges emanating from 61 permits. This list includes four partially funded ABS trust agreements which are treating 22 discharges from 12 permits. These trusts are not solvent, and could be in future financial jeopardy if treatment costs exceed growth generated by investment income. However, if that occurs, continued treatment costs would be the responsibility of the Reclamation Fee O&M Trust Account. PADEP continues to meet with each District Office on a quarterly basis to discuss progress in implementing treatment for each ABS Legacy discharge. Highlights of the status of the ABS Legacy discharges include:

- A permit with two discharges was removed from the ABS Legacy site list because it was determined through a PADEP hydro-review and concurred by OSM that the two discharges are pre SMCRA abandoned mine discharges and are not a liability of the ABS.
- A permit with one discharge was added to the ABS Legacy site list as of December, 2010.
- There are 40 discharges that are being treated with the facilities that are operable. A number of the treatment facilities require some repair or rehabilitation work and PADEP has started the process to address those issues.
- Design of the treatment facility has been completed on five discharges.
- Nine discharge sites have O&M contracts with contractors. All other work on the sites with treatment is being conducted by PADEP staff.
- Nine discharge sites have various stages of construction or repair of the treatment facility currently taking place.
- PADEP continues to monitor the ABS Legacy Sites, by conducting quarterly meetings to discuss every discharge which does not have a completed or properly functioning treatment system.

A breakdown of the 104 discharges by treatment category follows:

- Treatment system complete – 40
- Treatment system under construction - 14
- Treatment system under design –20
- Work not started –30

Progress continues to be made in installing treatment systems for the ABS forfeited discharges. Seventy one percent (74) of the discharges are being treated, or have reached the design stage. In 2009, 55% (57) of the discharges were being treated or had reached the design stage. However, it is noted that almost three years after PADEP submitted a program amendment to address the Federal court ruling that continued Pennsylvania’s reclamation responsibility for permits forfeited under the ABS (which was approved by OSM in August 2010), 29% of the discharges have not reached the project design stage.

B. Beneficial Use of Coal Combustion By-Products (CCB) on Mine Permits.

The Pennsylvania Solid Waste Management Act of 1980 was amended in December 1986 to allow for the beneficial use of coal ash on mine sites including abandoned and permitted coal mines. PADEP technical guidance dated April 30, 1998 provided for beneficial use of coal ash in four situations: coal ash placement, coal ash alkaline addition, coal ash as a soil additive or soil substitute, and coal ash as low-permeability material. Coal ash to be applied on mine sites under the beneficial use authority, must meet chemical and physical characteristics of the Department’s Certification Guidelines, and placement must conform to regulations and guidelines, and include ground water monitoring as directed by the Department.

PADEP, in an ongoing effort to maintain the state of the science in its program, did a comprehensive study of the beneficial use of coal ash in Pennsylvania. The result was a 369 page report titled “Coal Ash Beneficial Use in Mine Reclamation and Mine Drainage Remediation in Pennsylvania,” which was published in 2004. The National Academy of Sciences (NAS), National Research Council, in 2006 issued a report titled “Managing Coal Combustion Residues in Mines”. The NAS study made a variety of recommendations. Based on these recommendations and PADEP’s self-examination of its program in light of its own studies, PADEP chose to revise its coal ash program to adopt regulations instead of relying on policy statements. PADEP conducted public outreach as a part of its process to draft new regulations. This outreach generated comments from over 1100 responders. PADEP also conducted numerous meetings with stakeholders. The most frequent comment was that policy was not enforceable and that regulations needed to be implemented by PADEP.

On December 11, 2010, PADEP published new regulations in the Pennsylvania Bulletin for the beneficial use of coal ash. The regulations became effective the day of publication. The regulations replace the guidance documents that had been used to administer the program. The Chapter 290 regulations provide comprehensive enforcement of coal ash use at mines. The titles of the sections applicable to coal ash illustrate this. Sections pertinent to coal ash are: 290.101. General requirements for beneficial use; 290.103. Use as a soil substitute or soil additive; 290.104. Beneficial use at coal mining activity sites; 290.105. Beneficial use at abandoned mine

lands; 290.106(a)(7). Other beneficial uses (use in subsidence control, mine fire control and mine sealing); 290.201 Coal ash certification; 290.202. Revocation of certification; 290.203. Exceedance of certification requirements; 290.301. Water quality monitoring; 290.203. Number, location and depth of monitoring points; 290.303. Standards for wells and casing of wells; 290.304. Assessment plan; and 290.305. Abatement plan.

The regulations spell out sample frequency, chemical parameters to be measured for ash, “certification” requirements (chemistry thresholds that must be met), testing methods, chemical parameters for water monitoring, minimum water sampling requirements, and requirements for assessment and remediation should a problem be detected.

C. Amendments to the Pennsylvania Approved Regulatory Program

During this evaluation year, several changes to the Pennsylvania coal mining program were initiated as a result of a cooperative effort by the PADEP and OSM staff. PADEP and OSM discussed the status of outstanding required program amendments, including resolution options, and new and proposed program amendment submissions.

There are seven program amendment packages with four being submitted in this evaluation year that are in various phases of the regulatory process. These amendment packages address 17 required program amendments. Pennsylvania submitted two additional program amendment packages to address deficiencies in its program. There are nine required program amendments remaining that require program changes and OSM and PADEP remain committed to resolving them. This year’s update includes three program amendment packages, PA-154-FOR, PA-155-FOR, and PA-156-FOR, submitted in EY10 that are not finalized.

PA-154-FOR: On February 24, 2010, PADEP submitted a formal program amendment in the form of a statutory amendment to Pennsylvania’s Coal Refuse Disposal Control Act (CRDA), 52 P.S. § 30.51 et seq. Section 4.1(a) of the CRDA was amended by House Bill 1847. The submission requests approval of section 4.1(a) of the CRDA by adding subsection (6) to section 4.1(a). Section 4.1(a)(6) states: An area adjacent to or an expansion of an existing coal refuse disposal site. The proposed rule, PA-154-FOR, was published in the Federal Register, Vol. 75, No. 118, Pages 34962-34964, on Monday, June 21, 2010. This amendment would add areas adjacent to or an expansion of an existing coal refuse disposal site, to the list of “preferred sites” for site selection.

PA-155-FOR: On March 4, 2010, PADEP submitted a required regulatory program amendment to address 30 CFR 938.16 (bbb). The submission is an “As Effective As” argument to address ownership and control requirements for cessation orders. PADEP advocates that its program addresses cessation orders through its violation notice definition. The proposed rule, PA-155-FOR, was published in the Federal Register, Vol. 75, No. 118, Pages 34960-34962, on June 21, 2010.

PA-156-FOR: On March 17, 2010, PADEP submitted a formal program amendment to address various program deficiencies found at 30 CFR 938.16. The amendment also includes revisions to the regulations relating to Remining Financial Guarantees. The fourteen required program amendments addressed in this program amendment are found at 30 CFR §§ 938.16(rr), (tt), (uu),

(vv), (ww), (xx), (zz), (aaa), (ccc), (iii), (jjj), (nnn), (ppp) and (ttt). The proposed rule, PA-156-FOR, was published in the Federal Register, Vol. 75, No. 149, Pages 46877-46880, on August 4, 2010. A reopening of the comment period for the proposed rule was published in the Federal Register, Vol. 76, No. 64, Pages 18467-18472 on April 4, 2011. The reopening of the comment period was necessary to incorporate PA-158-FOR into this program amendment.

PA-157-FOR: On August 6, 2010, PADEP submitted a required regulatory program amendment to address 30 CFR 938.16 (uuu). Pennsylvania submitted a program amendment consisting of three parts to address requirements that authorized representatives have the right to enter operations conducting incidental coal extraction and administrative reviews of the State's determinations are conducted. The three parts submitted are:

- Environmental Hearing Board Act (35 P.S. §§ 7511-7516)
- 25 Pa Code Chapter 1021
- 25 Pa Code Section 77.352

The proposed rule, PA-157-FOR, was published in the Federal Register, Vol. 76, No. 46, Pages 12920-12923 on March 9, 2011.

PA-158-FOR: *This required regulatory program amendment is combined with PA-156-FOR as documented in the Federal Register notice on April 4, 2011.* PADEP submitted the required program amendment on September 14, 2010 to address the finalized Federal regulations relating to ownership and control. The submission follows the March 17, 2010 program amendment (PA-156-FOR) which contained the regulations approved by the Environmental Hearing Board. The program amendment consists of guidance documents which include topics that are part of the approved program and have been revised. They are 562-4100-301 Compliance/Enforcement Procedures, 562-4100-307 Alternate Enforcement, and 562-3000-102 Coal and Industrial Mineral Mining Inspections.

PA-159-FOR: On October 1, 2010, PADEP submitted a required program amendment to address 30 CFR 938.16(h). On August 10, 2010, OSM published in the Federal Register a requirement for Pennsylvania to demonstrate that it guarantees funding to cover the cost of outstanding land reclamation liabilities at the Lehigh Coal and Navigation (LCN) and Coal Contractors, Inc., and all sites originally permitted and bonded under the ABS. The proposed rule, PA-159-FOR, was published in the Federal Register, Vol. 76, No. 25, Pages 6587-6589 on February 7, 2011. Pennsylvania provided additional information on June 13, 2011 regarding the transfer of LCN to BET Associates IV, LLC and the subsequent bonding data to reflect the land reclamation obligations are now fully covered under conventional bonding (full-cost bonding).

PA-160-FOR: On October 1, 2010, PADEP submitted a program amendment to address program deficiencies to render its program no less effective than the Federal regulations as they relate to effluent limitations for post-mining discharges that are amenable to passive treatment technology. Included in the amendment are definitions for "Passive Treatment System" and "Post-mining Pollutational Discharge." The proposed rule, PA-160-FOR, was published in the Federal Register, Vol. 76, No. 56, Pages 16714-16715 on March 25, 2011.

In the 2007 Work Plan, PFD and PADEP committed to a cooperative effort to address the

backlog of required program amendments. At that time there were approximately 40 required amendments. Significant progress has been made and at the end of the 2010 Evaluation Year, PFD and PADEP had completed work on all except nine required amendments. The remaining amendments range from valuation of collateral bonds, to retention of sediment control structures, determining success of establishing trees, pre-blast surveys and restoration of prime farmland.

D. Mine Drainage Treatment Technologies

In October 2006, BAMR issued a Request for Proposals (RFP) (No. OSM PA(AMD-06)) for the demonstration or implementation of new or innovative in-situ or ex-situ treatment or abatement technologies or enhanced metals recovery for acid mine drainage. In June 2007, BAMR entered into Agreements with four applicants under this RFP. The total amount awarded for these projects is over half a million dollars, which comes from the 2006 Environmental Stewardship Fund. The following four proposals have been awarded:

Pennsylvania State University/Burgos, Senko, Bruns - Aeration Terraces for Biological Low pH Iron (Fe₂) Oxidation.

Stream Restoration, Inc/BioMost, Inc. - (ELF) Inter Mine Pool Transfer, Abatement, Treatment or Reuse.

WPCAMR/Iron Oxide Technologies, LLC - Enhanced Iron Removal for Recovery from Aerobic Ponds using Retrofit LASAIRE Aeration.

Broad Top Township/Skelly & Loy, Inc. - Ex-Situ Treatment Technology Evaluation of an Existing Steel Slag Resource in the Six Mile Run Watershed for use as AMD treatment.

These four projects represent a second round of innovative technologies RFP's. Coal mine drainage is the primary source of pollution in Pennsylvania streams, affecting thousands of miles. Any advances in our understanding of the treatment of coal mine drainage would be beneficial in efforts to abate the environmental impacts. As of December 2010, all the contracts have been completed, and final reports are posted on BAMR's website:

http://www.depweb.state.pa.us/portal/server.pt/community/abandoned_mine_reclamation/13961/innovative_technology_grant_final_reports/695029

E. Growing Greener

Growing Greener is the largest single investment of state funds in Pennsylvania's history to address Pennsylvania's critical environmental concerns of the 21st century.

The original Growing Greener legislation was signed into law on December 15, 1999. Called the Environmental Stewardship and Protection Act, funds were allocated for farmland preservation, state park and local recreation projects, waste and drinking water improvements, and watershed restoration programs.

In June 2002, legislation increased the funding for Growing Greener, and extended it until 2012. Though authorized funding levels were established, revenue shortfalls affected actual spending,

and the program was in danger of running out of funds.

In 2004, the Growing Greener II initiative and a bond issue resolution were placed on the statewide voting ballot. In May 2005, Pennsylvania residents approved the resolution with 61% of the vote. This authorized the Commonwealth to borrow up to \$625,000,000 for the maintenance, and protection of the environment, open space and farmland preservation, watershed protection, abandoned mine reclamation, acid mine drainage remediation and other environmental initiatives. This extended the program, and provided continued funding for environmental restoration projects.

Funds are allocated to a variety of government agencies for award to selected projects. BAMR is authorized to allocate a portion of Growing Greener funds for mining related watershed restoration and protection, and for abandoned mine reclamation.

Abandoned coal mine land and water reclamation projects funded by Growing Greener can be designed, contracted and administered through BAMR, or administered through grants to municipalities and watershed groups awarded by PADEP with oversight and technical assistance provided by BAMR and DMO staff. Since 1999, BAMR has received about \$29.7 million from the original Growing Greener program. Under the Growing Greener II program, BAMR has awarded 52 contracts totaling \$93.9 million that includes \$49.4 million from Growing Greener II and \$44.5 million from the OSM AML grants and other sources.

F. Appalachian Regional Reforestation Initiative (ARRI)

The Appalachian Region Reforestation Initiative (ARRI) is a joint effort of Appalachian States, and the OSM Appalachian Regional Office. The initiative also includes partnerships with coal industry representatives, academia, landowners, environmental organizations and various governmental agencies. The goals include planting more high value hardwood trees, increased tree survival and increased tree growth and productivity.

The initiative promotes the Forestry Reclamation Approach (FRA). This involves the planting of higher quality trees, minimum compaction of the reclaimed ground, the use of native as well as non-competitive ground covers and proper tree planting techniques.

OSM is working with PADEP in introducing ARRI to Pennsylvania. Small, demonstration projects have been initiated in all Districts, and in the AML program. While some of the sites are small acreages, it is hoped they will encourage the continued program growth in the mining and reclamation program.

On April 29 and 30, 2011, the Schuylkill Headwaters Association, in collaboration with the Schuylkill County Conservation District, the Office of Surface Mining (OSM), the Pennsylvania Bureau of Forestry, and the Pennsylvania Department of Environmental Protection, sponsored Arbor Day tree planting Celebrations at two coal mining sites in Schuylkill County Pennsylvania.

The planting areas were prepared by the coal mine owners using the FRA. The FRA is a five step process for preparing ground suitable for growing trees, and planting a variety of wildlife and eastern hardwood tree species. These two sites were selected because of the willingness of the

land owners, and the mine operators to use a portion of the permits to demonstrate this superior method for returning mined lands to self sustaining forest lands. The two sites were at the Mountaintop Coal Company and Reading Anthracite Coal Company permits.

Twenty-five volunteers planted about 2,000 trees on the two acre site at Mountaintop, and 50 volunteers planted about 4,000 trees on the four acres at the Reading Anthracite site. The Mountaintop mine site had been previously reclaimed and was “ripped” by a dozer using a 3 foot steel bar.

In ripping a site, the dozer drags a blade through the hard ground, turning up the soil in the same manner that a plow would in a farm field. However, the depth of the ripping is much deeper than in a normal farm field. The trees were planted in the overturned soils. The area at the Reading Anthracite permit was both ripped and pushed up with a dozer. At both sites, the loose non-compacted soil made it easier for the young tree to quickly establish the strong root system so vital to its growth

The 75 volunteer tree planters represented Blue Mountain High School, the Penn State, Schuylkill, Pine Grove Area High School, PA Bureau of Forestry, OSM, PADEP, and the Schuylkill County Conservation District.



Tree Planting at Reading Anthracite Permit

Pennsylvania applies the Appalachian Regional Reforestation Initiative*

The PA-DEP, Bureau of Abandoned Mine Reclamation (BAMR) constructed its first reclamation project using a reclamation method known as the Appalachian Regional Reforestation Initiative (ARRI) to encourage successful reforestation.

The ARRI is a coalition of groups with the main objective of restoring forests on surface mines and promoting the planting of high-value hardwood trees on coal-mined lands in the Appalachian region. The ARRI promotes the use of the Forestry Reclamation Approach (FRA) for this type of reclamation. The FRA enhances tree growth by creating a suitable rooting medium that is no less than 4 feet deep and is comprised of topsoil, weathered

sandstone, or the best material available. Material is loosely graded in order to avoid compaction. Two types of trees are recommended; one for soil stability and wildlife, and one with high commercial value. FRA goals include increasing tree growth and survival rates and expediting forest habitat establishment through natural succession. This information was obtained from OSM's website: <http://arri.osmre.gov>

The BAMR's 15-acre Orviston AML reclamation project site is located in Sproul State Forest, off Kato and Orviston Road, just west of the town of Orviston, in Curtin Township, Centre County.



Spoil pile and highwall prior to reclamation

All earth for fill was provided from the required excavation. Construction Drawings depicted the approximate limits for ARRI cut and fill, as well as a typical cross section for the specified work.

The ARRI finished grade surface (in fill areas) was created from the final 4 feet of earthen materials excavated in the cut areas. The cut material was dumped or pushed in the fill areas into hummocky interlocking non-compacted piles approximately 4 feet high. BAMR's Contractor placed material so that adjacent piles interlocked and were staggered down slope to prevent concentrated stormwater runoff pathways. The Contractor loosened any compacted earthen materials created during the course of work in the ARRI fill area as necessary to complete the work.

The ARRI finished grade surface (in cut areas) was created by ripping long narrow trenches or furrows every 10 feet (parallel to the contour) into the final cut surface finished grade areas. All areas requiring ripping were ripped to a depth of at least 4 feet.



American Chestnut trees planted in the AARI reclamation area

The 3,800 specified trees were furnished by suppliers approved by the DEP. Tree seedlings had 4-inch to 6-inch minimum height requirements depending on the species. Species included Northern Red Oak, White Oak, Red Pine, Eastern White Pine, Sweet Birch, Quaking Aspen, Red Maple, and American Chestnut. Six available top of the line back-cross American Chestnut trees were provided by the OSM's David Hamilton and planted by the Department of Conservation and Natural Resources (DCNR), Bureau of Forestry. The Contractor was required to plant tree seedlings as soon as the ground was workable in the spring after April 15, and terminate no later than May 15. Construction was completed in late May 2011, and a Final Inspection meeting was held at the site on July 11, 2011. The Sproul District 10 Forester, Douglas D'Amore was very pleased with the results and said that he would like to see more of this type of reclamation on DCNR property. **Reprinted with permission.**

G. Other Initiatives and Accomplishments

Unsuitable for Mining Petitions: PADEP is currently reviewing four areas Unsuitable for Mining (UFM) petitions as follows:

Big Run, Graham Township, Clearfield County. The petition, submitted by the Graham Township Supervisors in 1993, requests that a 2,800 acre tract within the Big Run and Willholm Run watersheds be designated as unsuitable for surface mining. The petition alleges that surface mining within the area would adversely affect the watersheds and diminish recreational opportunities in the area. Department staff have nearly completed a technical study of the petition area. The next step is to determine whether or not to support the petition. If the Department supports the petition, rulemaking will be initiated.

Muddy Run, Reade Township, Cambria County. A technical study was completed in response to a petition submitted in 1996 by the Reade Township Municipal Authority to have 3,690 acres designated as unsuitable for surface mining. The petition alleges that surface mining activities could result in degradation of surface and groundwater resources used by the Authority water supply wells which serve 550 customers. The petition was approved by the Environmental Quality Board (EQB) on May 18, 2011. EQB action is the final stage prior to publication in the Pennsylvania Bulletin.

Silver and Big Creek, Blythe Township, Schuylkill County. A petition was received from Blythe Township Municipal Authority in 2006 to designate 336 acres of land unsuitable for mining, but the initial review has not been completed. Processing of the petition is proceeding.

Rasler Run, Springfield Township, Fayette County. A petition from the Mountain Watershed Association was received in 2008 to designate 4,456 acres of land comprising Rasler Run Watershed unsuitable for mining, but the initial review has not been completed. Processing of the petition is proceeding.

Lower Indian Creek Watershed, Fayette County. A petition had been received May 4, 2010, from the Mountain Watershed Association, but the initial review has not been completed. Processing of the petition is proceeding.

Laurel Run Watershed, Springfield Township, Fayette County. A petition had been received April 2011 from the Mountain Watershed Association, but the initial review has not been completed. Processing of the petition is proceeding.

Underground Mine Mapping Projects: PADEP and OSM both fund projects with the

University of Pittsburgh (Pitt) for the preservation of old underground mine maps and with the Indiana University of Pennsylvania (IUP) for the scanning of old underground mine maps. These maps are important for the safe development of future underground mines in order to prevent mining incidents like the 2002 Quecreek Mine accident. The projects are coordinated by the California District Mining Office as part of the Underground Mine Map Initiative to inventory all known maps of underground coal mines in Pennsylvania.

A 2007 agreement with the University of Pittsburgh in provides for the restoration and preservation of historical abandoned underground coal mine maps (donated to Pitt by Consol Energy, Inc.) These maps are then transported to the National Mine Map Repository (NMMR) in Pittsburgh for scanning.

Through December 2010, the University of Pittsburgh (Pitt) has produced the following:

- 376 hardback maps have been dry cleaned, restored and transported to OSM's NMMR for scanning.

In addition to the cleaning:

- 110 maps were humidified and flattened.
- 125 maps were mended.
- Tape was removed from 67 maps.
- 19 maps were partially relined.

In August of 2010, Pitt was awarded another mine mapping grant to continue these efforts. PADEP's Intergovernmental Agreement with Pitt will continue through September 30, 2013.

Indiana University of Pennsylvania (IUP) was awarded a mine mapping grant to scan the large format maps from the Rochester & Pittsburg Coal Company map collection located at IUP; develop a secure and redundant data base of scanned mine map images, and produce a complete database of all known mine maps for Armstrong County. IUP has also scanned over 1,100 maps from the Rochester & Pittsburg Coal Company map collection and over 3500 large format maps from various collections held by PADEP and others.

PADEP's work with IUP has resulted in the California District Office being able to complete the first comprehensive underground mining coverage for Armstrong County. This coverage was added to an internal web site, which is used by PADEP staff to determine the need for mine subsidence insurance. This data was also used to create maps accessible to the public through the Mine Subsidence Insurance web site, www.pamsi.org.

PADEP is working on an amendment to continue funding the Intergovernmental Agreement with IUP through its end date of September 30, 2012. A grant program is expected to be in place sometime in 2012 to continue funding underground mine mapping projects at interested schools and non-profit organizations as funding is available.

Collection and preservation of historic underground coal mine maps is important to PADEP, industry, watershed groups, and individual citizens in permitting new underground coal mines, determining the location of abandoned underground coal mines when evaluating mine discharges, determining the causes for surface subsidence, and setting no mining buffer zones between underground mines.

Third 5 Year Report on the Surface Effects of Underground Mining: This evaluation year, the University of Pittsburgh completed work on the third five year report as mandated by Pennsylvania law known as ACT 54. The period was 2002 through 2008. University researchers compiled most of the information needed for the impact assessment from Department files and databases. Researchers created a geographic information system (GIS) that is used in establishing relationships between study period mining and overlying properties, structures, streams, water supplies and other surface features. In addition to the Department's data, researchers reviewed reports prepared by the Center for Public Integrity as a means of gathering additional information on mining-related impacts and landowners' views regarding those impacts. University biologists visited stream sites where mining related impacts were reported and performed independent biological assessments of many of the sites. In November, 2010, PADEP directed researchers to perform biological assessments of several additional streams.

These reports provide important information and analysis to the Pennsylvania legislature, PADEP, and individual citizens regarding the impacts of underground coal mining activities on Pennsylvania's environmental resources, people and property. Of particular interest are the impacts of full extraction mining on streams and property. The report can be accessed through the following web link. http://www.dep.state.pa.us/dep/deputate/minres/bmr/act54_2008_report/cover.htm

NPDES Permitting for mine sites: The mining program has focused its attention on improving the documentation for NPDES permit reviews. This is necessary due to recent initiatives by EPA and OSM. Efforts will focus on dealing with the conductivity/TDS requirements and reasonable assurance of meeting the state water quality standards. PADEP met with EPA in the Spring of 2011 to discuss the NPDES program.

H. Title IV of SMCRA AML Reclamation

The Pennsylvania Title IV Abandoned Mine Land Program was approved in July 1982. Even before 1982, Pennsylvania had already put forth years of committed effort to reclaim abandoned mine lands throughout the Commonwealth with a special state funded reclamation program known as Operation Scarlift.

In the first decade of the approved program, Pennsylvania primarily addressed priority one and priority two health and safety hazards through traditional reclamation contracts. Starting in the early 1990's the Pennsylvania AML program diversified and incorporated other agencies and organizations into productive partnerships. This provided Pennsylvania with the opportunity to expand the scope of government financed reclamation opportunities and thus reclaim more AML acreage faster and with greater efficiencies.

Pennsylvania's AML program continued to make progress in traditional areas of abandoned mine land reclamation such as dangerous highwall removal, subsidence control, and sealing shafts and portals.

Specific accomplishments include completion of 20 major projects for a total of 317 acres of land reclamation. The total construction cost for these projects is \$9.6 million and included \$5.9 million of non-Title IV matching funds. Reclamation included 15,600 linear feet of dangerous highwalls, numerous deep mine shafts and entries, and two water line extension projects to address impacted drinking water supplies.

During the year, contracts were awarded on 41 new projects at a cost of \$14.8 million, which included \$0.7 million from matching state sources. At the end of the evaluation period the Bureau of Abandoned Mine Reclamation (BAMR) had 43 projects under construction at a total cost exceeding \$26.4 million. Upon completion, these projects will address approximately 1,471 acres of abandoned mine land. Preparing for future reclamation, BAMR has approximately 97 projects in some stage of design and approximately 101 under development.

Anthracite District and Bituminous District (AD/BD) State Workforce Programs

Pennsylvania addressed many smaller AML problems this year with two special state employee work crews; located in the Wilkes-Barre and Cambria offices (Anthracite District & Bituminous District, respectively). These two state work crews conducted maintenance activities and address small AML problems that are not suited for the more complicated and expensive contractual bidding approach used for traditional site reclamation. During the 2011 review period, the crews began responding to the type of AML problems that were previously addressed under OSM's emergency response program.

The seven-member Bituminous District (BD) crew, located in the Cambria Office in Ebensburg, is made up of two Construction Foremen and five Equipment Operators. The BD Crew is often called upon to correct a variety of AML problems with a host of public health and safety concerns including: mine subsidence holes; mine gas problems; abandoned surface mines; acid mine drainage problems; dangerous slides and impoundments; clogged mine drains and other mine drainage pipes; and mine fires. The BD crew also provides assistance for operation and maintenance at DEP's six active mine drainage treatment plants and the 250+ passive mine drainage treatment systems located within the Cambria District. During the past year, the BD Crew completed 95 projects of varying complexity that lasted from one day to several months.

The Anthracite District (AD) Crew, located in the Wilkes-Barre Office, consists of three people; a foreman, an operator and a maintenance repairman. Though small, the AD Crew is available to address a variety of AML related problems. AML problems previously abated by the AD crew range from maintaining (filling-in) recovered vertical shafts that have settled to removing debris or repairing ditches which have become clogged by weather related events. During this review period, the AD Crew completed 17 projects. Additionally, the AD Crew assisted at the Rausch Creek Treatment Plant, maintained a passive treatment system, assisted with the routine maintenance of dams along the Schuylkill River, and assisted with the maintenance of a fish passage around a dam on the Schuylkill River.

Pine Grove Cemetery BD Project – Jefferson County

The Pine Grove Cemetery BD Project is an example of the type of small surface mine reclamation problems that can be addressed by the BD crew. The site is located in Union Township, Jefferson County, and contained a vertical highwall adjacent to well traveled State Route 949.



The site required grading of 21,800 cubic yards of spoil material to eliminate the hazardous highwall. This is about 4 football fields 3 feet deep in material. In total, 3.8 acres were regraded, seeded and mulched. The cost for the project was approximately \$23,000.

Girardville AD Project Schuylkill County

In November 2010, AD crew completed a project to address a clogged stream affecting a portion of a public roadway and the backyards of a residential neighborhood. The acid mine drainage

(AMD), which began seeping out of a rock embankment after mining operations were discontinued, normally flowed through a drainage channel constructed as part of a previous AML reclamation project. The AMD mixed with storm-water runoff and discharged into the Borough's storm-water system. The large volumes of AMD over the last several years deposited iron oxide and other mine related material into the channel creating a clogged stream. The clogged conditions affected the drainage channel and forced the AMD to seep onto a nearby roadway and into residential backyards.

In order to address the problem, the PADEP-BAMR devised a three step plan. First, the AD crew excavated the buildup of AMD sediment and re-established the lower portion of the storm-water channel where the AMD mixed with storm-water runoff. Second, the crew excavated the earth surrounding the outflow and constructed a smaller settling pond and inlet structure into an 18" pipe. Finally, the AD crew installed approximately 150 feet of 18" pipe to divert the AMD around the residential backyards and into the lower portion of the storm-water channel, where it will flow into the Borough's storm-water system.

The Girardville AD project is an excellent example of the how the AD crew can act quickly to address small AML hazards and help to minimize the effects abandoned mines have on local communities.



AMD Clogged Stream Prior To Reclamation



AMD Cleared Stream and Redefined Channel



Redefined Clogged Stream To Prevent Further Flooding

Accelerated Reclamation Projects

During the review period, Pennsylvania adjusted their project investigation, development, and construction process to accelerate reclamation activities on sites that were addressed by the OSM emergency response program in prior years.

In May 2010, OSM notified Pennsylvania that effective the start of fiscal year 2011, it would no longer investigate and conduct emergency reclamation projects under Section 410 of SMCRA. As part of terminating OSM emergency projects, OSM offered training, guidance, and technical

assistance to Pennsylvania. In early October 2010, Pennsylvania advised OSM that it disagreed with the action to terminate OSM's emergency response activities, that it was seeking Congressional action to reverse the decision, but that it would respond to protect Commonwealth citizens in the interim.

Since Section 410 of SMCRA does not extend the authority to declare emergency actions to the states, the BAMR met with the OSM Pittsburgh Field Division and worked out procedural arrangements to accelerate project review and approval actions so that reclamation of certain sites could be expedited.

Since October 1, 2010, BAMR has responded to 67 problems where an accelerated response was deemed necessary and has completed or initiated the necessary repairs on 30 sites. During the review period OSM expedited agency evaluations of the projects needing an accelerated response. Subsidence issues represent the vast majority of expedited actions taken by BAMR to address immediate health and safety threats to persons and property. Other problems addressed include flooding (mine blow-out), dangerous mine openings, an underground mine fire, and hazardous mine gasses. BAMR has established procedures to respond to urgent AML problems. In many cases expedited response by the Anthracite Division (AD) and Bituminous Division (BD) crews is sufficient to perform the reclamation. In some cases, BAMR expedites contracting to address specialized or large projects or to overcome scheduling or time constraints of the AD and BD crews.

The termination of OSM's ability to conduct emergency response projects has a significant impact on Pennsylvania's implementation of their AML program. BAMR reports that they have spent approximately \$1 million during the first 9 months to investigate and/or address the types of AML problems that were historically addressed by OSM's emergency response projects. In addition, Pennsylvania diverted resources, both personnel and equipment, which it would ordinarily have assigned to its routine AML program.

Forward Manor-Kibe Slide Project Allegheny County

The Forward Manor-Kibe Slide Project is an example of the type of expedited AML project that BAMR has been conducting to address sites historically addressed by OSM's emergency response program. BAMR's Cambria Office investigated a landslide at on Penn Vista Street in Elizabeth, Pennsylvania, on Thursday, April 28. It was determined that water from a pre-act mine drift entry caused the ground to saturate, fail, and move against the residence. The local code enforcement officer condemned the structure and restricted the occupants from entering their home.



Approximately three feet (3') of saturated ground slid against the back of the house and collapsed the second floor deck.

The problem was determined to be mining related and BAMR utilized accelerated response procedures and requested the use of state emergency contracting procedures for the project due to the nature and severity of the incident.

A pre-construction meeting was held at 10 a.m. on Friday, April 29, 2011. BAMR representatives selected a local contractor to complete the work. Contractor selection was based upon a determination that the contractor had the proper equipment and expertise to complete the required work. Prices were confirmed and work on the slide started Friday afternoon at 3 p.m. By Tuesday, May 3, approximately 90 percent of the slide material was removed from behind the home. The area was stabilized with no visible damage to the home.



Removal of the slide material with no damage to the main structure and re-establishment of a stable slope was accomplished quickly.

The project removed 85 tri-axle loads of material, installed a mine drainage system (560 linear feet of 6 inch pipe), constructed a retaining wall and was completed at a final cost of \$106,000. The project was completed on May 31, 2011. The condemnation notice was removed and the occupants returned to their residence.



Several weeks after the project is completed; the newly planted vegetation is growing and blending in with the stable landscape.

Examples of Title IV funded reclamation projects completed in EY 2011

Taylor South Main Abandoned Mine Reclamation Project

During the evaluation period, BAMR completed reclamation of over 85 acres of abandoned mine lands in Lackawanna County Pennsylvania related to the Taylor Colliery that ceased operations prior to 1970. This project is located one-quarter mile north of the intersection of Union Street and South Main Street in the middle of Taylor Borough.



Red Ash Piles at the Taylor Breaker Site

The Taylor Breaker (a preparation facility, in which coal is broken down into smaller sizes and separated from the associated rock), was built by the Delaware, Lackawanna and Western Railroad Company in 1916. At the time, it was described as an experiment in revolutionary breaker design and construction. The breaker was the first all reinforced-concrete breaker and was partially razed in 1980. During this project, remnants of the breaker were razed and fill material placed against a wood-tie retaining wall, 20 feet in height, to eliminate safety hazards. When finished, 15 AML features were reclaimed, including an open shaft and a dangerous red-ash (previously burned) pile. In addition, a 1500-foot natural stream channel was constructed to replace a clogged section of Keyser Creek. Over 700,000 cubic yards was excavated and graded to reclaim this area.



Abandoned Debris at the Taylor Breaker

The project cost approximately \$1.5 million and was the centerpiece of a plan by Taylor Borough for redevelopment of the 150-acre Taylor Colliery Site that will be a new town-center which includes residential, commercial and light industrial uses.



Reclaimed site

AML Enhancement Rule Projects

Pennsylvania leads the nation in achieving reclamation under the AML Enhancement Rule promulgated by OSM on February 12, 1999. The AML Enhancement Rule greatly boosts the number of Abandoned Mine Land acres that Pennsylvania can reclaim within its budget by allowing contractors to recover and sell coal as part of the reclamation contract.

The 1999 “AML Enhancement Rule” was an amendment to the Federal Regulations to allow incidental coal removal on Title IV AML reclamation projects in the cases where there is less than 50 percent government financing.

Prior to this rule change, SMCRA Title IV AML reclamation projects that involved incidental coal removal were required to have at least 50 percent of the cost of reclamation provided by a governing agency’s budget. The purpose of this regulatory change was to encourage reclamation of Title IV eligible sites that are unlikely to be reclaimed under an AML grant-funded reclamation project or a Title V surface mining permit.

Many low-rated health/safety and environmental problems would otherwise go unreclaimed because scarce grant funds would be expended on higher-priority projects and re-mining operations would avoid the area because of the potential risks posed by marginal coal reserves and/or long-term liabilities associated with pre-existing pollutional discharges or other environmental concerns.

Removing the minimum 50 percent government funding threshold in projects involving coal removal incidental to an AML reclamation contract, encourages reclamation of additional AML at little cost to the public. According to cumulative information provided by PADEP for previous reports, 340 GFCC project applications have been submitted since the program’s inception.

During the evaluation year, six AML Enhancement Rule projects were completed reclaiming 48.7 acres surface mine acres and 15.5 underground mine affected acres. The completed projects represent approximately \$186,700 in reclamation savings to the AML program. Completed projects reclaimed barren land, eliminated highwalls and addressed water quality problems. PADEP approved 11 complete applications. During the evaluation year, PADEP accepted four new applications. PADEP has a rigorous site review and application process. PADEP includes OSM in the initial pre- application site review and the public in the review of the application. During the period, PADEP did not reject any formal applications. PADEP rejects applications for reasons that may include site eligibility problems, incomplete documentation, and potential water-related problems. Applications are occasionally withdrawn by the applicant or are simply not pursued to contract.

Pennsylvania's AMD Set-Aside Program

As of May 31, 2011, Pennsylvania had a balance of \$15,955,212 in the AMD Set-Aside fund. The total accumulated revenue with interest that has been placed into the fund since inception is \$57.8 million. Within the fund, Pennsylvania has established an operation and maintenance sub-category to allow for the build-up of funds specifically earmarked for the long-term operation and maintenance of AMD treatment systems. To date, including interest, a balance of \$4,527,409 has been reserved for this purpose.

Pennsylvania currently is constructing two large active treatment plants, the Hollywood Mine Drainage Treatment Facility in Clearfield County and the Lancashire No. 15 Treatment Facility in Cambria County. While funding for these plants is coming from a combination of state and federal sources, these plants will require significant expenditures from the AMD Set-Aside balance to operate and maintain. Upon completion of construction and initiation of treatment, up to 20 million gallons per day (MGD) of AMD will be treated and more than 60 miles of impacted streams will be restored or improved by the two plants currently in construction.

The Lancashire #15 AMD Treatment Plant in Cambria County is in the headwaters of the West Branch Susquehanna River. This project, along with the BAMR funded Barnes-Watkins refuse pile removal project, completed in 2008, will restore a fishery to the Upper West Branch and will improve water quality in at least 35 stream miles. The BAMR, in partnership with the Susquehanna River Basin Commission (SRBC), is implementing a plan to relocate the existing Lancashire #15 discharge from the Blacklick Creek (Ohio River basin) watershed to the West Branch Susquehanna River. The project will return up to 10 MGD to the Susquehanna River to address the agricultural consumptive use water demands. The SRBC is providing some funds through appropriation from the state legislature to help offset the long-term operation and maintenance costs.



Lancashire #15 Under Construction – Spring 2011

During the review period, construction was initiated at the Lancashire #15 AMD Treatment Plant. At the time of this report, most site preparation work has been completed, including the final polishing pond, the clarifier, and injection boreholes. Work was beginning on the reactor tanks and the control building.

Construction is expected to be completed during the fall of 2011, with full treatment expected by the end of the year. Construction is primarily funded by Pennsylvania's AMD Set-Aside Program with \$2,000,000 from the Growing Greener II program. Annual O&M costs are expected to be approximately \$400,000.

Construction of the Hollywood AMD Treatment Plant in Clearfield County was initiated in June 2010, and is expected to be completed in July 2012. The plant is located along the Bennett Branch Sinnemahoning Creek, in an area known as PA Wilds. This area was identified as a prime area for increased tourism due to its undeveloped nature, extensive public lands and for being the center of the habitat range for Pennsylvania's growing elk herd.

Bennett Branch is degraded by mine drainage from numerous abandoned deep and surface mine discharges. An extensive evaluation by BAMR staff determined that the sources of AMD pollution were focused in three areas and determined that a combination of AMD treatment and surface reclamation was needed to restore the watershed. A centralized active treatment plant is being constructed to treat the 21 most significant discharges in the Hollywood/Tyler area. The discharges will be routed to the plant via installation of a pipeline.



Hollywood Treatment Plant Under Construction –Fall 2010

Funding for the project is being provided from three sources: Pennsylvania’s Capital Budget, Pennsylvania’s Growing Greener Program, and from Pennsylvania’s AMD Set-Aside Program. Once constructed, the plant will help restore the lower 33 miles of the Bennett Branch Sinnemahoning Creek, which is impaired due to mine drainage impacts. Much of the site work has been completed, including sludge holding ponds and the final polishing pond. Pipelines and pump stations are being installed and the reactor tank and control building construction is starting. The annual operation and maintenance cost is anticipated to be approximately \$400,000, to be funded by the AMD Set-Aside Fund.

In Fayette County, BAMR completed the second (final) phase of the Melcroft Abandoned Mine Drainage Treatment System. The system is located in the village of Melcroft in Saltlick Township and passively remediates the abandoned Melcroft No. 3 coal mine and drainage from the abandoned refuse pile to improve the water quality in Champion Creek and Indian Creek.

The mine drainage enters the system at the collection pond and is then slowly transported to one of the two vertical flow ponds. From there the water goes into the settling pond. After the settling pond the discharge is further treated as it passes through two aerobic wetlands before going through a final treatment phase in a manganese removal bed. It is then discharged into Champion Creek. In addition to treating the mine discharge the Melcroft Treatment System features a half-mile recreational walking path open to the public.

The Melcroft Treatment System was completed in 2011 at a cost of approximately \$839,000. Funding was provided through an OSM Watershed Cooperative Agreement Program grant, and through Pennsylvania’s AMD Set-Aside Program and Appalachian Clean Streams Initiative funds. In addition, funding was provided by the Pennsylvania’s Growing Greener Program.



Melcroft AMD treatment facility and public walking path

In Schuylkill County, BAMR continued to expend AMD Set-Aside funding for the operation and maintenance of the existing Rausch Creek Mine Drainage Treatment Plant. The area within the Rausch Creek Watershed, 35 miles east-northeast of Harrisburg, comprising approximately sixty-three hundred acres, is principally a coal mining area. Both the East Branch and West Branch of Rausch Creek are fed by surface springs and mine discharges from abandoned mine workings. There are some 45 abandoned mines draining into Rausch Creek.

Whenever possible, the entire flow of the Rausch Creek is intercepted and diverted into the treatment plant. The plant is capable of treating a maximum flow of 16 million gallons per day; however, after periods of heavy rainfall the creek's flow has exceeded 150 million gallons per day. When the flow is in excess of the 16 million gallons per day, the excess flow is neutralized with lime slurry and by-passed around the plant. The average analysis of the water treated is 6.3 mg/l iron and 16 mg/l acid. The annual operation and maintenance cost is approximately \$750,000.

The Rausch Creek Treatment Plant and has been in continuous operation since 1974. With the abatement of the pollution of the waters of Rausch Creek, a total of 27 miles of streams from Rausch Creek westward to the Susquehanna River can now be classified as "clean, unpolluted streams." The 27 miles includes 8 miles of Pine Creek and 19 miles of Mahantongo Creek, which are periodically stocked to provide two of the best trout streams in the area.



Rausch Creek Mine Water Treatment Plant

Future plans for the AMD Set-Aside fund in Pennsylvania include the design and construction of two more active treatment facilities where the AMD problem is too large to address with passive facilities.

One facility is being planned for the Clearfield Creek Watershed in Cambria County and the other is being planned for the Blacklick Creek Watershed in Indiana County. BAMR is in the process of selecting a consultant for the feasibility phase of the Clearfield Creek treatment plant design which is also part of the agricultural mitigation effort in the Susquehanna River Basin. Exploratory drilling is being planned to determine how to connect adjoining mine pools in the Blacklick Creek project so they can be combined and brought to a single location for treatment.

Also during the review period, BAMR reported that work on future Set-Aside hydrologic units including Blacklick Creek, the Little Conemaugh River, Clearfield Creek, Cooks Run and the lower Bennett Branch Sinnemahoning Creek, is nearing completion. As part of this effort, OSM is assisting with an in-depth study of mine pools in the Little Conemaugh River watershed.

Also, the potential for a partnership with the active mining industry to help restore the Cooks Run Watershed is actively being investigated. In all of these watershed evaluations, BAMR is following the AMD Set-Aside Program Guidelines developed in 2009.

Finally, BAMR is continuing to use Geochemist Workbench as a stream modeling tool to predict impacts to watersheds with treatment of existing discharges. This is an important planning tool for BAMR staff.

Pennsylvania AML Inventory Activities

Pennsylvania is a large state with many AML problems. Currently, OSM's Abandoned Mine Lands Information System (e-AMLIS) shows that 37 of the 67 counties have AML problems which need reclamation. The BAMR conducts AML Inventory activities in all three of the agency locations – Harrisburg (main office), Wilkes-Barre, and Ebensburg (Cambria Office).

Information concerning unfunded AML problems is gathered as part of site investigations by field staff. Once a BAMR investigation is complete and it is determined that the site qualifies for entry into the AML Inventory of unfunded problems, BAMR staff completes the data entry into an internal database system developed by the Commonwealth that services the full range of PADEP programs. The internal system (eFACTS) contains cost information, site assessments, and support forms needed to qualify an AML problem for entry into the AML Inventory. Data entry into e-AMLIS is primarily accomplished through a single staff person in the Harrisburg main office. When AML projects are initiated and receive an Authorization to Proceed (ATP) and when they are completed, BAMR updates e-AMLIS to reflect the changes in reclamation status and cost.

OSM continued efforts to update the Legacy AMLIS system into the new e-AMLIS. The new e-AMLIS contains changes brought about by AML Reauthorization under the Tax Relief and Health Care Act of 2006, P. L. No. 109-432, signed into law on December 20, 2006. In addition, the new e-AMLIS reduces the use of paper because all information supporting data entry is uploaded to the system in electronic format.

Pennsylvania assisted OSM efforts to modernize the legacy AMLIS system and launch the e-AMLIS. BAMR staff provided an in-depth review of the developing system, comments on draft system guidance, and provided OSM staff with technical advice on key elements of the developing system.

During the review period, BAMR conducted the full range of AML Inventory update activities required for identifying, developing, and executing AML reclamation projects. BAMR entered over 25 new AML problem areas into the Inventory and regularly revised existing Problem Areas to reflect project construction and completion. BAMR's AML Inventory activities were hampered by the ongoing efforts by OSM to modernize AMLIS. System outages and functionality issues prevented BAMR staff from updating the system on an as needed basis. At the end of this review period, BAMR was entering information into the new e-AMLIS and also attempting to address a data entry backlog created by problems encountered during OSM's modernization process.

OSM disapproved two proposed additions to the AML Inventory during the review period. One proposed addition was disapproved based upon the legislative changes brought about during the 2006 AML Reauthorization. The other disapproval was based upon eligibility concerns regarding the use of AML funding to treat an underground mine pool that was pumped in the 1980's to facilitate coal removal by an active coal mine. OSM is continuing to evaluate how post-1977 mine pool pumping activities affect discharge eligibility for Title IV funding.

VI. Success in Achieving the Purposes of SMCRA

OSM's national regulatory program oversight guidelines known as REG-8 requires an evaluation of off-site impacts, reclamation success, and a component of customer service in its annual oversight work plan with PADEP. Summaries of those evaluations and other significant program evaluations are discussed below.

A. Off-Site Impacts

OSM Directive REG-8, Oversight of State Regulatory Programs, requires an annual evaluation of the success of mining and reclamation as determined by the number and severity of impacts outside of the mining permit boundary. This information is one of OSM's Government Performance Results Act (GPRA) program performance measures. Off-site impact information is presented in Table 5 of this report. The information presented in Table 5 comes from PADEP's data management system, e-FACTS. Off-Site Impacts are grouped as impacts on people, land, water, and structures, and includes blasting, land stability, hydrology, encroachment, and other impacts. Severity is determined as minor, moderate and major.

An off-site impact is defined as anything resulting from a surface coal mining and reclamation activity or operation that causes a negative effect on resources (people, land, water, and structures.) To count as an off-site impact, Pennsylvania must regulate or control the mining or reclamation activity causing an off-site impact. In addition, the impact must be outside the area authorized by the permit for conducting mining and reclamation activities.

The impacts are classified by degree as minor, moderate, and major. A minor impact would not affect the public, only disturb a small area or have negligible effect on the receiving stream. A moderate impact would be any impact not fitting the criteria for minor or major. A major impact would be defined as having a significant impact to the public, affect a large area; have a major impact to the receiving stream, and would include mining without a permit.

Collection of off-site impact data is an integral part of permit monitoring and begins with the state inspector. PADEP inspection staff record off-site impacts as part of the permit inspection process.

Off-site impacts result in compliance orders, which can initiate the assessment of civil penalties. When a compliance order is written for a violation causing off-site impacts, the inspection report includes a civil penalty work sheet that is provided to the compliance officer for assessment of a civil penalty. The inspector's report, determining off-site impacts, is reviewed by the supervisor and verified for correctness. The compliance officer reviews the information provided in the inspection report and the district compliance officer or legal assistant determines the impact and severity of the impact, and enters the data in eFACTS.

During this evaluation year quarterly off-site reports were provided to OSM staff by Bureau of Mining and Reclamation (BMR) staff. The reports were reviewed and comments provided to PADEP on the completeness of data reporting and consistency in the data screens. All comments were considered and changes were made to data reporting and recording to make the information consistent and more complete.

Discussion of impacts

During the 2011 evaluation year PADEP inspectors conducted partial and complete inspections on 1,388 active, and inactive, surface, underground, refuse, and preparation plant permits and reported 201 off-site impacts. There were an additional 44 unreclaimed bond forfeited permits with minor off-site impacts from land related hydrology issues and 36 bond forfeited permits where the lands have been reclaimed, but contain moderate off-site untreated pollutional discharges. An additional 30 bond forfeited permits have ongoing water treatment facilities. These permits are not having off-site impacts and are not included in the calculations.

This report focuses on the off-site impacts from the active and inactive permits. Out of the 201 impacts reported, 52 were determined to be administrative, with no on the ground impacts, and were eliminated from the discussion. There are 149 remaining that meet the criteria of off-site impacts.

There were 107 unique permits included in the off-site impacts. Therefore, 92% of the active/inactive permits were free of off-site impacts. The 2010 annual report showed 94% of the permits were free of off-site impacts. Pennsylvania continues to maintain a high level of permits free of off-site impacts.

The 149 off-site impacts collected this year are identified by PADEP as 15 major, 41 moderate and 93 minor (**See Figure 3.**) They are categorized as follows: 89 hydrology (60% of total), 33 other (22% of total), 12 land stability (8% of total), 7 blasting (5% of total), 8 encroachment (5% of total.)

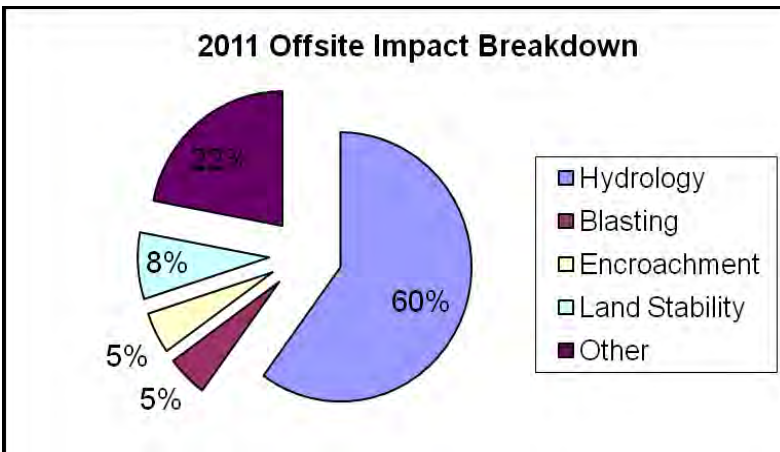


Figure 1. Off-site impacts by category

Discussion of impacts

The majority of the impacts continue to be categorized as hydrology, resulting from the discharge of improperly treated or untreated water that exceeds the numerical effluent limitation specified in the permit and in Pennsylvania Title 25 Chapter 87.102. There were 89 hydrology impacts (60% of the total). Of the 89 hydrology impacts, 4 were major, 15 were moderate, and 70 were minor. The five major hydrology impacts were for the following violations:

- Two for discharging water that does not meet water quality limits
- One for failure to meet performance standards
- One for failure to properly design, construct or maintain erosions and sedimentation controls

The majority of the minor and moderate hydrological off-site impacts were for the following violations: failure to properly design, construct or maintain erosion & sedimentation controls, discharging water that does not meet quality limits, and failure to comply with the terms and conditions of the permit.

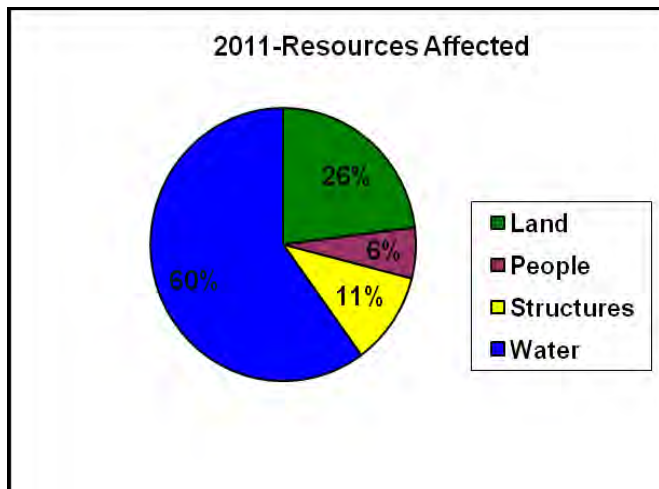


Figure 2: Resources Affected

The second largest category of off-site impacts fell into the other category with 33 impacts (22% of the total). Three of the impacts were major and cited for the following violations:

- Two for conducting mining activities without a permit
- One for failure to comply with the terms and conditions of the permit

The minor and moderate violations in the other category were cited for the following reasons:

- Failure to comply with the terms and conditions of a GP-12 permit
- Failure to employ adequate air pollution controls
- Failure to properly design, construct or maintain erosions & sedimentation controls
- Failure to properly design, construct or maintain transportation facilities
- Failure to employ adequate air pollution controls
- Conducting mining activities in a barrier area without first obtaining a variance

There were 12 land stability impacts (8% of the total) with two major impacts cited for conducting mining activities without a permit and conducting mining activities without a valid mining license. The remainder was categorized as minor for the following violations:

- Failure to properly design and construct erosion and sedimentation controls
- Failure to properly design and construct or maintain treatment facilities
- Failure to revegetate disturbed areas in accordance with the approved plans
- Failure to properly design, construct or maintain impoundments

Encroachment had 8 violations (5%), 2 minor and moderate, and four being major violations. The minor violations were for other coal mining activities and conducting mining activities in a barrier area without first obtaining a variance. The moderate violations for failure to comply with the terms and conditions of the permit and for failure to properly design, construct, or maintain upslope diversion ditches. Major violations were for:

- Two for failure to provide right of entry information
- One for conducting mining activities without a permit
- Failure to comply with the terms and conditions of the permit

The smallest category was blasting with 7 violations (5%) and those consisted of one minor, four moderate and two major violations:

- Failure to properly design, conduct or maintain support facilities
- Failure to conduct blasting to prevent fly rock

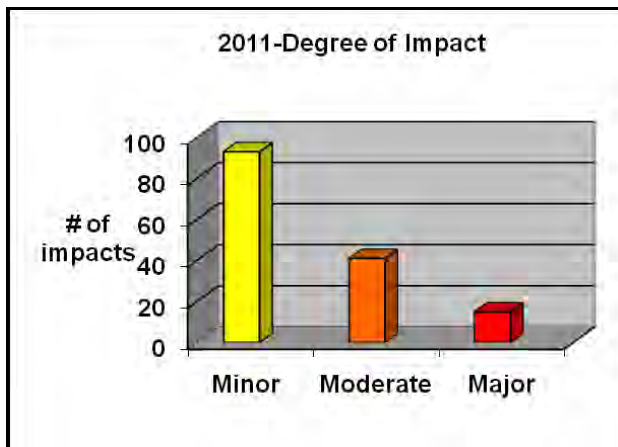


Figure 3: Total number of off-Site Impacts by Degrees of Severity

OSM inspectors conducted 216 oversight complete inspections in the bituminous and anthracite areas. As an independent check of the data collected by PADEP OSM's oversight complete inspections note any observed off-site impacts. OSM observed 32 off-site impacts

which are broken down as follows: 24 hydrology, 7 encroachment, and 1 land stability. Thus, 85% of the permits inspected by OSM over the course of the evaluation period were free of off-site impacts. The percentage of permits which OSM reported free of off-site impacts reported for the 2010 evaluation year was 81%. This 7% difference between PFD and PADEP in reporting off-site impacts will be a subject for discussion in EY 2012.

An analysis of the PADEP data determined that violations of 25 PA Code §86.11, conducting mining activities without a permit was correctly reported as a major off-site impact except in one instance. In that instance, it was reported under hydrology as minor impact which is not consistent with OSM's REG 8. REG 8 requires that mining without a permit be reported as a major off-site impact. OSM and PADEP staff discussed the inconsistencies in reporting these violations. This was the only off-site impact which was not correctly classified by severity.

Another past issue that appears to be resolved is reporting of off-site impacts if a violation of 25 PA Code §87.102 were cited. A violation of §87.102 is discharging water that does not meet effluent standards. In past evaluation years, OSM noted that PADEP inspectors may choose not to report an off-site impact if the non-compliant discharge did not affect the water quality of the receiving stream (already severely degraded). For the 2011 evaluation year, PADEP reported off-site impacts for all citations issued under 25 PA Code §87.102.

In past discussions with PADEP staff, there was agreement that mining without a permit, mining outside the permit boundary, and mining without a license would be classified as a violation with a major off-site impact. All of the citations issued this year for these violations were correctly classified with the exception of one that was reported as minor.

In almost all cases the DMO staff completed the violation comment category in the data base, making it easier to evaluate the exact nature of the impact.

Conclusions:

The number of permits with no off-site impacts has remained consistently high for the last several evaluation years. Hydrology still remains the highest source of off-site impacts with failure to properly design, construct or maintain erosion & sedimentation controls being overall the largest violation. The total number of off-site impacts cited has risen from the 2010 evaluation year, when 130 off-site impacts were recorded for 1,623 active and inactive permits. This could in part be a result of increased understanding, among the inspection and enforcement staff, with the process for identifying and recording off-site impacts, and BMR staff efforts to assure the eFACTS data is properly entered.

All offices have been consistent in reporting off-site impacts when non-compliant water leaves the permit and flows into a degraded stream. Each year, the reporting is more complete and the reporting more consistent and accurate.

OSM will continue to compare off-site impact results from its oversight complete inspections with PADEP results and continue to periodically review eFACTS reports to determine if additional guidance is needed in identifying off-site impacts.

B. Reclamation Success

OSM Directive REG-8, Oversight of State Regulatory Programs, requires a yearly evaluation of the success of reclamation as determined by the acres of bond release. In Pennsylvania, acres reclaimed to Stage I, II, and III standards is used instead of acres with bond release because this provides a more contemporary measure of the reclamation activity. PADEP accumulates acres meeting Stage I, II and III reclamation success through operator reporting on the Annual Bond Review and Coal Completion Reports. This information is entered into eFACTS and compiled every year for Table 6.

For the current evaluation year, PADEP reports 4,385 Stage I acres; 4,560 Stage II acres; and 4193 Stage III acres reclaimed, for a total of 13,138 acres. The stage I, II, and III acres reclaimed and total is substantially reduced from EY 2010 (total acreage reclaimed 31,338) and EY 2009, with a total reclamation acreage of 16,137.

OSM will discuss this data with PADEP to determine if any processing issues have developed in operator reporting, and data entry at the District Offices. It is noted that several staff positions with responsibilities to review, verify, and record information from the Annual Bond Reviews and Coal Completion Reports, were terminated in the last year due to budget problems.

In Evaluation Year 2011, PFD inspection staff reviewed a sample of permits with reports of acres reclaimed during the evaluation year, using the most recently filed Annual Bond Review (ABR) or Coal Completion Report (CCR). The 2011 Reclamation Success Inspection Form was completed for 101 permits where reclaimed acreage was reported. An additional 81 permits were reviewed with a finding that no reclamation activities had been initiated, or there was no change in the reclamation status since the last ABR. Of the 101 permits reviewed, Ninety-six were for bituminous permits and 5 were for anthracite permits.

Forty-seven of the permits reported acreage meeting Stage I requirements (mining completed and area backfilled and planted). Forty of the permits reported acreage meeting Stage II reclamation standards (vegetation established, with 70% coverage). Thirteen of the permits inspected reported Stage III reclamation (vegetation requirements met for 5 years). A total of 2,108 acres of Stage I reclamation was reported by the operators, and OSM verified that 2,556 acres met Stage I requirements. A total of 1,812 acres of Stage II reclamation was reported by the operators, and OSM verified that 1,874 acres met Stage II requirements. A total of 410 acres of Stage III reclamation was reported by the operators, and OSM verified that 956 acres met Stage III requirements.

The fact that OSM observed more acreage meeting Stage I, II, or III reclamation standards, than that reported in the latest ABR or CCR submitted by the operator, is not a great concern because of the timing of OSM's inspection. One would expect mining and reclamation activities to advance between the submittal of the ABR or CCR, and OSM's inspection. However, a concern that needs to be addressed in discussions with PADEP is that on 15 permit inspections by OSM, Stage I reclamation acreage was observed, and the ABR or CCR did not indicate any Stage I reclamation. Similarly, there were 2 permits with Stage II acreage observed and no Stage II acreage in the ABR or CCR, and 3 permits with Stage III acreage observed and no Stage III

acreage in the ABR or CCR.

There are several possible explanations for these discrepancies including that the acreage was previously reported, and no additional reclamation had met Stage I, II, or III standards, or that the operator was waiting for bond release to report the acreage (which would be an incorrect procedure), that the acreage was not being entered timely into eFACTS or other explanations. In EY 2012, OSM will investigate these observations with PADEP.

C. Customer Service

OSM Directive REG-8, Oversight of State Regulatory Programs, requires a yearly evaluation of a component of PADEP's public participation and customer service provisions in the approved regulatory program.

This year, at the request of a citizen group, OSM conducted a review of PADEP's California District Mining Office to evaluate certain aspects of its regulations, policy and procedures regarding investigation and resolution of citizen complaints involving the loss, diminution, and contamination, of water supplies from underground mining activities, and the restoration of those supplies.

OSM found that the California office maintains a comprehensive data base in the Bituminous Underground Mining Information System (BUMIS), which tracks the receipt of water loss complaints including basic information, the status of the cases, case notes, and resolutions. Individual case files are developed and maintained by office staff. OSM found the office has efficient procedures to assign investigations, and track case resolutions and aging cases. They also have effective procedures to periodically meet with the coal companies to review the status of all water loss cases.

OSM found that 30% of the water loss cases listed in the May 2011 report of unresolved cases, remained unresolved after 3 years. The Pennsylvania Code Title 25, Chapter 89 § 89.145a(b), requires affected water supplies to be promptly replaced, and Technical Guidance 562-4000-101 defines prompt replacement as within 3 years of notice. Ten percent of these cases are awaiting a water supply replacement after 3 years. The rest are replacement supplies which are in some stage of monitoring or evaluation for the adequacy of the replacement supply, or where the owner and mine operator are in negotiation for increased operation and maintenance costs.

OSM found that in all cases reviewed, efforts were being made by the responsible companies to develop a replacement water supply which meets the regulatory requirements. Pennsylvania's Bituminous Mining Subsidence and Land Conservation Act (BMSLCA) provides an option for the land owner to request that the company purchase the property, or pay the decrease in value if a replacement water supply cannot be provided within 3 years of the reported loss. PADEP can also order a company to post a water supply replacement bond, and pay a yearly operation and maintenance fee, which has been approved by PADEP, to the owner. OSM recommends that PADEP take a more assertive approach to resolve cases in which three years have passed without an adequate replacement supply, and where operation and maintenance agreements for payment of increased costs have stalemated.

PADEP is responsible for conducting hydrological investigations of cases outside the rebuttable presumption area (35° from the point of mining nearest the water supply). OSM found that investigations placed emphasis on the distance to mining. OSM recommends that reports which cite distance to mining as a significant factor in a finding of no effect from mining, include additional explanations to support this finding. Most investigation reports include information regarding the hydrologic and geologic setting of the springs or wells, precipitation records, and plausible alternative explanations for the water loss or contamination. However, OSM found that the reports in general could be strengthened by including additional information regarding the relevance of factors considered, analysis of nearby water supplies, piezometer readings if available, accounts of contacts with the water supply owners, and site visits.

Owner rights to appeal decisions to the Environmental Hearing Board are provided in the final correspondence.

OSM reviewed cases outside of the rebuttable presumption area which PADEP investigated and found the company not responsible, and cases which PADEP investigated and found the company responsible. OSM found no evidence that PADEP was arbitrarily using distance to mining as a reason to deny operator responsibility.

OSM recommended that PADEP's Technical Guidance 562-4000-101 Water Supply Replacement and Compliance, be revised to reflect the approved program and EPACT regulations at Chapter 89.152(a).

Further, OSM recommended that Pennsylvania Code Title 25 Chapter 87 be revised to comply with the Federal regulatory water supply replacement provisions, which equally apply to supplies affected by underground and surface coal mining activities.

OSM recommended that PADEP implement procedures to assure compliance with Chapter 89.152 (a)(1) and (2). Specifically, Chapter 89.152(a)(1) requires the Department to make a determination that a replacement water supply meeting the regulatory requirements cannot be developed prior to authorizing the purchase of the property, or payment of the decrease in value. Chapter 89.152(a)(2) requires the Department to make a determination that an adequate replacement water supply could feasibly be developed, prior to accepting a voluntary agreement which does not require restoration or replacement of the water supply. PADEP advised OSM that these findings were not being made.

OSM recommended that PADEP reconcile technical guidance, which limits permit data and water supply surveys to those within 1,000 feet of the permit boundary, or active mining areas, with the regulations at Chapter 89.145a(a)(1), which does not set a distance limitation.

D. National Priority Review – Bond Adequacy

During the 2010 evaluation year, OSM required its field offices to conduct a national oversight review of the states' procedures for estimating reclamation costs for establishing bonds on coal mining permits. This review required; an analysis of each states' process for calculating and updating bonds; that the OSM Bonding Handbook be utilized to act as a barometer for evaluation of total bond required under state program; and an assessment of recently reclaimed forfeiture

sites to determine adequacy of reclamation in relation to forfeited funds available. A full report was prepared, and distributed in December 2010. It is available for review in the public evaluation file. The Mining Reclamation Advisory Board (MRAB) was briefed on the findings of the study in its April 2011 meeting. The report provides the details of those evaluation techniques and resultant findings of the Pennsylvania full cost bonding program. The following is a summary of the report.

Since 2001, OSM has reviewed the Pennsylvania Department of Environmental Protection (PADEP) full cost bonding program procedures, and PADEP efforts to develop and maintain Bond Rate Guidelines commensurate with reclamation cost associated with Abandoned Mine Reclamation contracts. OSM oversight inspection data of mine sites subsequent to full cost bonding conversion have consistently documented that PADEP inspection and permit review staff routinely update bonds at each mine site to keep pace with changing site conditions. This review found that PADEP is implementing full cost bonding in compliance with the Pennsylvania approved bonding program. Mining plans are being fully evaluated and appropriate bond rates are utilized in the initial bond determination, and sufficient program control measures are in place to assure bonds posted fully address all program requirements. However, when the OSM Handbook was utilized, the resultant bond amounts were greater than the bond prescribed under Pennsylvania program in every permit except one. The range was from -1% less than to 49% greater than the PA bonds. The small sample of sites reviewed under this study may have contributed to this disparity. It should be noted that the OSM handbook approached reclamation cost estimates from an engineering perspective and PADEP utilizes actual mine land reclamation contract costs, which frustrate direct straight line comparisons. PADEP has identified several other factors regarding reclamation cost estimates which they believe have also contributed to differences noted in this report.

Review of the reclaimed forfeiture sites provide mixed results in that land reclamation on the three reclaimed sites did not fully match the approved reclamation plan in the permit due, in part, to lack of funds available to achieve reclamation required in the permit. Minor to significant modifications were made to each of the reclamation plans contained in the forfeited permits in order to complete reclamation with the funds available. In one case additional state funds were needed to complete reclamation. It should be noted that in all cases the reclaimed sites land reclamation was found to be in compliance with approved program requirements, even though permit requirements were not met. PADEP identified untreated post mining discharges in two of the three forfeiture sites, as noted in the permit files and verified by OSM inspection staff. However, neither permit operator was required to post a water treatment bond or establish a trust fund to address those concerns. PADEP advised that identification of the discharges occurred subsequent to bankruptcy declarations, preventing the acquisition of treatment bonds or establishment of treatment trust funds.

The report identifies bonding program issues which are contributing to insufficient funds being available to complete the permit reclamation plan. The particular items identified which may be causing the final bond to be less than needed are; the bond calculations do not include a factor for spoil swell which needs to be redistributed at time of reclamation; the manner in which spoil volume is calculated does not address actual pit size, but rather is limited to the coal foot print; inclusion of a 15% bond increase rule prior to requiring additional bond; and waiver of annual

bond reviews for certain permits. These and possibly other bond calculation items need to be fully assessed and if determined necessary, bond program adjustments need to be made to assure sufficient funds are available to complete permit reclamation requirements on a case by case basis. Other items affecting final reclamation include lack of a prescribed process to have operators post water treatment bonds in timely manner. Finally, the reclamation modifications of forfeited sites is an issue identified in the report which will require additional study before the preliminary findings identified can be fully evaluated and a determination made regarding the efficacy of the approved program.

Based on findings of the study, the following recommendations were made:

- PADEP should aggressively pursue water treatment bonds or trust agreements on operations that develop post mining polluttional discharges.
- PADEP should discontinue bond adjustment waivers when the upward adjustment is less than 15% of the total bond.
- PADEP should discontinue waiving the ABR when a permit has been inactive over the past year.
- PADEP should revise Part C Authorization to Mine every time the ABR changes the operational area or bond amount.
- PADEP should incorporate a “swell factor” in its calculations of volume of material to be moved to backfill the pit and final grade the permit.
- PADEP should use the surface area of the pit, in addition to, or in place of the footprint of the coal, in calculating pit volumes and review its policy of allowing coal and other product minerals to be deducted from volume calculations.
- PADEP should maximize use of financial guarantees for treatment of post mining polluttional discharges.

OSM is committed to working with PADEP to address bond program issues to assure sufficient funds are available to complete reclamation to the permit specifications.

In light of the findings of the study, PFD will increase oversight of bond forfeited permits in Evaluation Year 2012 by conducting a permit file review and inspection of the six forfeited permits identified in this study which have not been resolved, and the three permit forfeitures which were transferred. PFD will also review each future bond forfeited permit as it is declared. These reviews will determine the status of the permit at forfeiture; the amount of bond available, and the adequacy of bond to complete reclamation.

PFD will also inspect each forfeited permit at forfeiture, and when the forfeiture has been resolved either through reclamation, or transfer. A report will be prepared addressing the reasons for forfeiture, actions taken to complete reclamation in accordance with the permit, deviations from the permit reclamation plan, the presence of any post mining discharges and how they will be abated.

F. National Priority Review – Approximate Original Contour

In Evaluation Year 2010, OSM conducted an oversight study on the implementation of approximate original contour (AOC). The Harrisburg Field Office conducted the AOC study on the Pennsylvania program and prepared a report which was issued in December 2010. The national oversight study identified three topics to evaluate the implementation of AOC, 1) AOC interpretation and permitting documentation; 2) processes for on-the-ground AOC verification; and, 3) field verification that backfilling and grading are following the approved plan.

The AOC study in Pennsylvania was limited to bituminous surface mining operations. The study documents how DEP reviews and permits AOC as part of the reclamation plan and how AOC is evaluated during the Stage I inspection. The study's preliminary findings identify reclamation plans are not engineering intensive and the pre-mining topographical map is commonly approved as the reclamation map, even for previously affected areas. OSM is concerned that a pre-mining topographical map submitted as the reclamation map, depicting unreclaimed contours for remaining areas, is not sufficient information to conduct a review the reclamation plan and the planned reclamation topography during permit review. In addition to documenting AOC procedures, OSM selected five permits for AOC analysis. The permit selection process was specifically designed to identify and include different mining scenarios that represent different AOC challenges. OSM performed five qualitative AOC site inspections and used digital elevation data to quantify the changes in topography at three of the five permits. OSM's field inspections concluded all five sites achieved AOC standards. The quantitative analysis revealed that most of the mine sites are reclaimed to within 20 ft of the original land surface. However, the quantitative analysis identified that one hill top was lowered by 160 ft at one of the permits and did not match the approved reclamation plan. The lowered hill top represented 12% of the total permit area. The OSM field inspection did not identify this change using the inspection methods used by State inspections during AOC evaluations. OSM concluded, in preliminary findings, that AOC compliance is not an issue at most sites since contour and box-cut mining methods are the most common mining method used in Pennsylvania. OSM believes the AOC issue found during the study was unique to the ridge mining scenario and caused by the failure to submit a revised reclamation plan as the mining operation changed. Ridge operations on this scale are uncommon in Pennsylvania; however, this study shows a more detailed AOC evaluation may be required for these types of operations.

G. Dana Mining

On December 27, 2010, Pennfuture, submitted a citizen complaint alleging that Acid Mine Drainage Reclamation Inc. (AMDRI), was engaged in coal mining without a permit. Specifically alleged was that AMDRI was constructing two boreholes, a pump station, and over 8,000 feet of pipeline in the Calvin Run watershed. This facility will allow the pumping of CONSOL's Humphrey No. 7 mine, and transporting the mine pool water to AMDRI's Steele Shaft Treatment Facility known as the Shannopin Mine Dewatering Project. Pennfuture alleged that the purpose of this project is to lower the elevation of the Humphrey No. 7 mine to facilitate continued mining at Dana Mining Company's operations in the Sewickley coal seam, which overlies the Humphrey No. 7 Mine.

Pennfuture provided sufficient information to give PFD reason to believe that, should the allegation be true, it would constitute a violation of Pennsylvania's approved program. Therefore, on December 29, 2010, PFD issued a Ten-Day Notice (TDN) to PADEP citing all associated parties, including Dana Mining Company, AMDRI, and Consol, for mining without a permit. Pennfuture requested that PFD issue an imminent environmental harm cessation order (IHCO) (30 CFR 842.11(b)(1)(ii)(C)) for mining without a permit. However, after due consideration of this request PFD concluded that "adequate proof" was not available at the time to justify issuance of an IHCO.

On January 13, 2011, PADEP responded to the TDN. PADEP concluded that the Calvin Run activities constitute underground mining activities and surface mining activities as those terms are defined in 25 Pa. Code § 89.5 and 86.1, and that pumping the Humphrey No. 7 mine pool is connected to active underground mining being conducted by Dana Mining Company. PADEP's response also revealed that on January 12, 2011, PADEP entered into a Consent Order and Agreement (CO&A), with Dana Mining Company. The CO&A stipulates that construction of the Calvin Run facility constitutes a surface mining activity and therefore must be performed pursuant to a mining permit. The CO&A required Dana Mining to submit an application to revise its 4 West Mine Permit (CMAP No. 30031301) on or before January 24, 2011. PADEP advised PFD that the required permit application was received on January 24, 2011. It is currently under review.

The CO&A also stipulated that Dana Mining understood, based upon "discussions" with PADEP, that all needed permits for the Calvin Run site had already been obtained. Based upon this detrimental reliance, and taking into account the financial and job loss that will result from a cessation of operations, PADEP allowed the operation to continue while the permit application was prepared and processed under the terms of the CO&A.

On January 18, 2011, OSM inspected the site and issued an Imminent Harm Cessation Order to halt operations until the necessary permit is obtained. On January 27, 2011, Dana Mining appealed the Cessation Order and filed an Emergency Application for Temporary Relief. On February 3, 2011, a hearing was conducted where temporary relief was granted. This relief authorizes continued surface mining activities without a valid mining permit.

During a February 9, 2011, pre-hearing procedures conference, Dana proposed staying the scheduled dates for approximately four months pending the permit process by PADEP. The OSM did not agree with the proposal. In response, Dana Mining filed formal application for stay to give PADEP time to approve the permit application and potentially moot the matter. The OSM opposed the request and maintained that allowing Dana Mining to continue to operate without a permit is contrary to public interest. On March 23, the Administrative Law Judge granted Dana Mining's request to stay all proceedings in this matter. The hearing is now scheduled for October 12.

VII. OSM Assistance

A. Maintaining the Mine Drainage Inventory

PADEP has completed its initiative of incorporating the statewide Mine Drainage Inventory (MDI) into the Environment, Facility, Application, Compliance Tracking System (eFACTS). The purpose of the inventory is to maintain a record of post mining polluttional discharges on permits, assess the potential treatment technologies to address problem sites, identify the amount of bond available to treat the discharges, and estimate the cost to abate the polluttional discharge.

Having the MDI in eFACTS provides transparency of the MDI and an avenue for the public sector to access discharge information. The inventory is a dynamic tool, which is being updated, as new information is made available. Throughout the evaluation year PFD inspectors as well as State inspectors inspect permitted sites with polluttional discharges, and collect water samples. The water quality and quantity information is then updated in the inventory. Having the MDI in eFACTS eliminates the necessity for OSM and PADEP to maintain two versions of the MDI.

A reconciliation project was initiated in EY 2011 and will continue in EY 2012 to reconcile the OSM and PADEP inventories of primacy permit AMD. There are 261 primacy permits identified in the OSM MDI database with a total of 428 AMD discharges. PADEP lists 273 permits with discharges in eFACTS. Reconciliation of the two MDIs, to identify the 12 permit discrepancy, will result in an MDI that both agencies can rely on for accurate information. OSM will notify PADEP to update the MDI with new discharges, and updated flow and chemistry information, as they become known through OSM and PADEP inspections.

PADEP maintains a separate database with the information attainable through the eFACTS for each of the Primacy Alternate Bonding System Bond Forfeiture (ABS BF) discharge sites also known as the ABS Legacy Site List. There are 61 permits with 104 discharges identified on the ABS Legacy Site List. PADEP conducts quarterly reviews of the discharges on the ABS Legacy Site List in order to update and report on an annual basis the accomplishments regarding treatment of polluttional discharges on the forfeited sites under the now defunct ABS.

A total of ten permits were selected for review in EY2011. Sites were selected with status discrepancies between the OSM and eFACTS databases and the permits identified as having a polluttional discharge have not been reviewed by OSM in over five years. OSM inspection staff conducted the site visits, presented their findings to the PADEP inspector accompanying them on the site visit, and provided and logged the information in the OSM Inspection and Evaluation database.

The ten sites selected for this year's review include five underground mining sites identified as having an Acid Mine Drainage (AMD) discharge, four surface mining sites identified as having an AMD discharge, and one coal preparation facility identified as having an AMD discharge.

Of the ten sites slated for this review, three permits can be removed from the MDI. 1) A surface mining site was found to have the polluttional discharge eliminated during reclamation and therefore was removed from the OSM and PADEP MDI. 2) An

underground mining site discharge is removed from the OSM MDI because the discharge at the entry/portal ceased after the reclamation was completed. 3) The discharges associated with the coal preparation plant can also be removed from the MDI because the discharges meet effluent limits and it is recommended that a NPDES Notice of Termination Form be filed.

Inspections at three sites resulted in finding discharges that are not being adequately treated. 1) A surface mining site that was declared forfeited has seven discharges that have not been treated since the time of the forfeiture in 2003. 2) An inspection resulted in a Ten Day Notice being issued for an unpermitted underground mine discharge entering waters of the Commonwealth, failure to have a NPDES permit covering the discharge, and failure to maintain adequate treatment facilities for the discharge. 3) An active surface mining permit is identified as having four discharges that are bypassing the treatment facilities on the permitted site. Follow-up inspections are recommended until the violations associated with the discharges are abated.

The remaining four sites, one surface and three underground permits have discharges that are being treated and meeting effluent limits.

The Acid Mine Drainage Inventory Study is the only OSM review that focuses on sites with discharges – including underground mine permits and bond forfeited permits. This study provides the opportunity for OSM to inspect the discharge sites, review the adequacy of treatment for the discharges, and ensure the site and discharge are monitored on the PADEP eFACTS.

B. Watershed Cooperative Agreement Program

In 1999, OSM established the Watershed Cooperative Agreement Program (WCAP). The program provides supplemental assistance to non-profit watershed groups and other organizations to construct AMD treatment facilities to help restore local streams to biological health. To date, 86 WCAP grants have been awarded to Pennsylvania non-profit watershed groups for a total of about 7.6 million dollars. Total costs for these projects including all partner cash and in-kind donations of labor and services are about 34.1 million dollars. In total, OSM's contribution to the projects averages about 22 percent. Eighty-one of the projects have been awarded to construct passive treatment systems with most projects involving more than one treatment system. Two projects were for land reclamation to reduce or eliminate a source of mine drainage. Three projects were for active treatment of mine water. Seventy-six projects have been completed.

During the evaluative year, there were 7 new project grants awarded for a total of \$383,778. These awards were made to Trout Unlimited, Blackleggs Creek Watershed Association, the Earth Conservancy, Clearfield Creek Watershed Association, Schrader Creek Watershed Association, and Headwaters Charitable Trust. At the end of the evaluation year, several new applications were under review, or in the award process.

PADEP is frequently involved as a primary partner in these direct assistance grants, either providing funding and or technical assistance, and OSM Harrisburg Office staff coordinates with PADEP to help assure the successful completion of the projects.

Funds provided by OSM complete the remediation budget, and OSM receives a large number of financial assistance requests from Growing Greener program applicants. Other financial partners involved in WCAP projects include the NRCS, Environmental Protection Agency, the Eastern and Western Pennsylvania Coalitions for Abandoned Mine Reclamation, the U.S. Army Corps of Engineers (COE), and numerous foundations, conservancies, watershed groups, industries and coal mining companies, and individuals. Because of the partnership nature of the WCAP, the OSM Harrisburg Office is routinely involved in meetings and site visits with watershed groups, PADEP and other project partners, helping to coordinate the technical and programmatic aspects, and to resolve issues.

The OSM has dedicated a significant amount of staff resources in administering this program, and provides significant technical help to watershed groups seeking the best available technology to remediate their mine drainage problems.

VIII. General Oversight Topic Reviews

Each year the OSM, in consultation with PADEP, develops an oversight work plan, as required by the OSM Directive REG-8, Oversight of State Regulatory Programs. This plan includes various aspects of Pennsylvania's approved coal regulatory and Title IV AML programs that OSM will evaluate for effectiveness, innovation, and compliance. OSM's oversight is not process driven. It focuses on the on-the-ground/end result success of Pennsylvania's program in achieving the purposes of SMCRA. A review team is established for each topic and a team leader is designated. PADEP is invited to appoint team members. At the conclusion of the evaluation, a report is written and provided to PADEP for comment prior to finalization. Copies of the reports are maintained in the public evaluation file located in the OSM Harrisburg Office. Starting with EY 2012, evaluation reports will also be posted on OSM's web site.

Several evaluation studies have been discussed earlier in this report and are not repeated here. A summary and results of each remaining study follows.

A. Oversight Inspections

The oversight inspection review and analysis is conducted to fulfill responsibilities as specified in OSM's Oversight policy REG-8, regarding review of PADEP's permitting and inspection program for surface coal mining operations.

This activity includes reviews of applicable mine permit files and on-site inspections focused on identification of off site impacts resulting from various mining activities. Inspections are documented using OSM's Mine Site Evaluation and addendum forms. Inspection data is entered into a national data base. Specifically, this activity provides monitoring capability for the entire spectrum of State program operations and gives an up-to-date perspective of the on-the-ground successes of Pennsylvania's mining program. In addition, data was collected in support of other studies identified in the 2010 Work Plan.

OSM conducted a total of 442 inspections during the evaluation year. Of those inspections, 216 were oversight complete inspections (OC) of mine sites, with 179 conducted in the bituminous region and 37 conducted in the anthracite region. These inspections covered 16% of the total number of active and inactive inspectable units (see Table 2) in Pennsylvania.

As a point of comparison, in EY 2010, 12% of the inspectable units were inspected by OSM inspectors. The other 226 inspections were in support of other oversight work plan evaluations, file document reviews, bond forfeiture actions, AML Enhancement Rule project proposals, responses to citizen complaints, Ten-Day Notices (TDN), and state enforcement action follow-ups. There were 121 state enforcement action follow up inspections conducted. These inspections are conducted to track compliance with notices of violation issued by PADEP inspectors as a result of OSM's oversight inspections, or TDNs.

By comparison, in Evaluation Year EY 2010, OSM inspectors conducted a total of 384 inspections, with 207 oversight complete inspections.

The EY 2011 inspection totals represent a 13% increase in the number of inspections conducted by OSM. At the end of the Evaluation year there were three authorized OSM inspectors assigned to Pennsylvania. During the year two authorized inspectors left OSM, and those positions remained vacant at the end of the year.

OSM conducts both joint inspections with PADEP, and independent inspections. The Field Offices conduct at least 10% of oversight inspections as independent inspections. PADEP is provided with a two day notice, to arrange for participation, but is not advised of the permit to be inspected.

For scheduled joint OSM/PADEP inspections, the OSM inspector contacts the PADEP inspector assigned to the permit several days, to a week ahead of the inspection and offers to conduct the inspection jointly. Violations noted during joint inspections, which are not corrected during the inspection, are deferred to PADEP for action and OSM follows up to assure compliance.

Disagreements are addressed through the Ten-Day Notice (TDN) process. Of the 216 oversight complete inspections, 26, or 12% were independent. There were an additional 8 oversight partial inspections conducted as independent inspections. Violations noted during independent inspections, in which PADEP participates, are deferred to PADEP for action if not corrected by the operator while the inspection is underway. If PADEP is not participating, a TDN is issued.

The 216 oversight complete inspections revealed 106 permits had at least one violation which represents 49% of the sites inspected. In EY 2010, 45% of the permits inspected had at least one violation. A total of 261 violations were identified during OC inspections this year and referred to PADEP for resolution. This includes 37 violations deferred during the independent inspections.

Thus the violation rate per permit inspected by OSM remained essentially unchanged in EY2011 at 1.2, up slightly from EY 2010 (1.1). This evaluation year, multiple violations were observed on 72 permits, with the highest number of violations cited at 8 on three permits, and 2 violations cited on 33 permits. In the Bituminous Region, 57.5% of the permits inspected were violation

free, and in the Anthracite Region, 18.9% of the permits inspected were violation free.

Of the 261 violations cited, 236 were deferred to PADEP for enforcement action (NOV or CO, or by TDN issued by OSM). Twenty-five violations were abated while the inspection was underway.

This year, 32 of the 261 violations (12%) observed were considered to have resulted in off-site impacts, using a one to one ratio of off-site impacts to permits. This is a decrease from EY 2010, when 18% of the permits inspected had off-site impacts. The off-site impacts included 24 violations related to “hydrologic impacts;” 7 violations related to “encroachment;” and 1 violation related to “land stability.

Pond and Haul Road Certifications

During the past three evaluation years, specific emphasis has been placed on submission of annual impoundment certifications and haul road certifications. This monitoring was prompted by PADEP program deficiencies identified by OSM during the 2007 evaluation period. Analysis of 2011 evaluation year data revealed an increase in the number of violations resulting from the permittee’s failure to submit annual impoundment and haulroad certifications. For example:

Impoundments

- In EY 2010 the number of violations deferred by OSM for failure to submit annual impoundment certifications was 12. This was 5.4 % of the total violations cited by PADEP during OSM inspections
- In EY 2011, 23 violations were deferred for failure to submit annual impoundment certifications. This is 8.8% of the total violations issued.

Haulroads

- In 2010 the number of violations deferred for failure to submit haulroad certifications was four. This was 1.8% of the total violations issued by PADEP during OSM inspections.
- In this evaluation period, 2011, 12 violations were deferred for failure to timely submit a haulroad certification. This is 4.5% of the total violations issued.

OSM will continue to consult with PADEP to help improve compliance with these required certifications.

During the 2009 evaluation year OSM initiated a study to acquire data regarding violations noted during OSM oversight inspections compared to complete and/or partial inspections conducted by PADEP on the same permits without OSM present, during the six month period prior to the OSM inspection. This study was extended in 2011 and the results are summarized in the following table.

PADEP District Mining Office	OSM inspections per DMO	OSM violations noted during joint inspection with DEP	DEP violations noted during inspection*without OSM presence
Cambria	48	32	11
Greensburg	53	71	14
Moshannon	42	43	11
Knox	36	39	7
Pottsville	37	76	0
Total	216	261	43

*Note: PADEP violation data included the total for inspections conducted in the past 6 months prior to OSM inspection.

In the chart above, column two shows the total number of permits inspected by OSM and the distribution by District Office. Column three shows the total number and distribution of violations observed on the 216 permits inspected by OSM. Column four shows the total number of violations cited by PADEP on the same permits, in the previous six months.

The data illustrates the large difference in violation citation rates between OSM and PADEP. Further evidence of this difference is found in the total ratio of violations cited by PADEP per inspection. With 13,202 partial and complete inspections conducted in EY 2011 and 582 violations issued, PADEP inspectors cited .04 violations per inspection. OSM observed and deferred violations at a rate of 1.2 violations per inspection, which is up slightly from EY2010 (1.1).

In order to further assess the violations cited by DEP and the impact of OSM accompaniment on the issuing of violations, four categories were developed:

Category 1 comprises violations observed by OSM when no violations were cited by DEP in the prior six months.

- There were 99 permits in this category in 2011.

Category 2 comprises situations where violations were neither observed by OSM nor cited by DEP in the previous six months.

- There were 100 permits in this category in 2011.

Category 3 is comprised of violations cited by DEP in the six months prior to an OSM inspection, but no violations were observed by OSM.

- In 2011, there were 12 permits in this category.

Category 4 consists of situations where violations were observed by OSM which were previously cited by DEP in the six months preceding an OSM inspection.

- In 2011, there were 14 sites in this category.

In review of this data, it is reconfirmed that when OSM participates in an inspection, significantly more violations are cited by DEP compared to when DEP completes an inspection independently.

Another trend, first tracked during EY 2010 is PADEP's actions on violations noted and deferred by OSM. In EY 2009, PADEP took immediate action on all 122 violations deferred through OSM inspections. In EY 2010, 174 violations were noted in OSM inspections conducted on Bituminous mine permits, and 48 violations were noted on Anthracite permits. PADEP agreed to take action on all Anthracite violations, and 147 of the Bituminous violations and they were deferred to PADEP. However, PADEP did not take immediate action on 27 Bituminous permit violations, resulting in TDNs being issued.

In EY 2011, 261 violations were cited and deferred to PADEP for action. PADEP agreed to take action on all 76 violations deferred on Anthracite permits, and 128 of the 185 violations noted on Bituminous permits. PADEP did not take immediate action on the remaining 57 Bituminous permit violations, resulting in the issuance of multiple TDNs, as summarized below in this section.

A total of thirty TDN's were issued to DEP during the 2011 evaluation period. Eight of the TDN's are the result of Citizen's Complaints. Fifteen of the TDN's were issued based on oversight inspections, 5 TDNs were issued based on Follow-up and/or Document Reviews, and 2 TDNs were issued based on Mine Drainage Inventory inspections.

The 22 TDN's resulting from a Federal oversight inspection contained 78 violations. PADEP's responses and OSM's determinations are summarized below.

- . 20 Good Cause that the violation did not exist (26%).
- . 40 Appropriate Action to cause the violation to be corrected (51%).
- . 5 Inappropriate response resulting in an informal review request. See discussion below.
- . 11 Under review by OSM at the end of the EY.
- . 2 Additional time given for technical investigation.

PADEP's response on 5 violations was determined to be "inappropriate", resulting in PADEP requesting an informal review from the Regional Director. Three of those were converted to

appropriate action to cause the violation to be corrected after PADEP issued enforcement actions. One violation is still under informal review, and one resulted in an order from the Regional Director for PFD to conduct a Federal inspection. That inspection had not been conducted at the end of the evaluation period.

The eight Citizen Complaint TDNs contained 21 alleged violations. PADEP's responses and OSM's determinations are summarized below.

- . 10 Good cause that the violation did not exist. (48%)
- . 4 Appropriate action to cause the violation to be corrected. (19%)
- . 4 PADEP's response was under review.
- . 2 Inappropriate responses, resulting in a request for informal review. See discussion below.

PADEP's response on two violations was determined to be "inappropriate", and after the Regional Director upheld PFD's determination upon completion of an informal review, a Federal inspection was conducted. The result of OSM's inspection of the water loss complaint was that the underground mining company was not responsible for the contamination. OSM conducted a Federal inspection on one alleged violation and issued an Imminent Harm Cessation Order.

A brief description of each TDN along with the current status of each TDN is included in Appendix B.

In EY 2010 OSM began observing PADEP's adherence to the approved program in decisions regarding the issuance of Notices of Violations, and Compliance Orders. During its oversight inspections, OSM noted several instances where the technical guidance, TGD *Compliance/Enforcement Procedures*, Document Number: 562-4100-301, March 5, 2005, did not appear to be followed in decisions regarding the issuance of enforcement actions and the type of actions used. In particular, PFD noted instances where Compliance Orders (CO) were indicated, and Notices of Violations (NOV) were issued. Compliance and Enforcement technical guidance is part of the approved program.

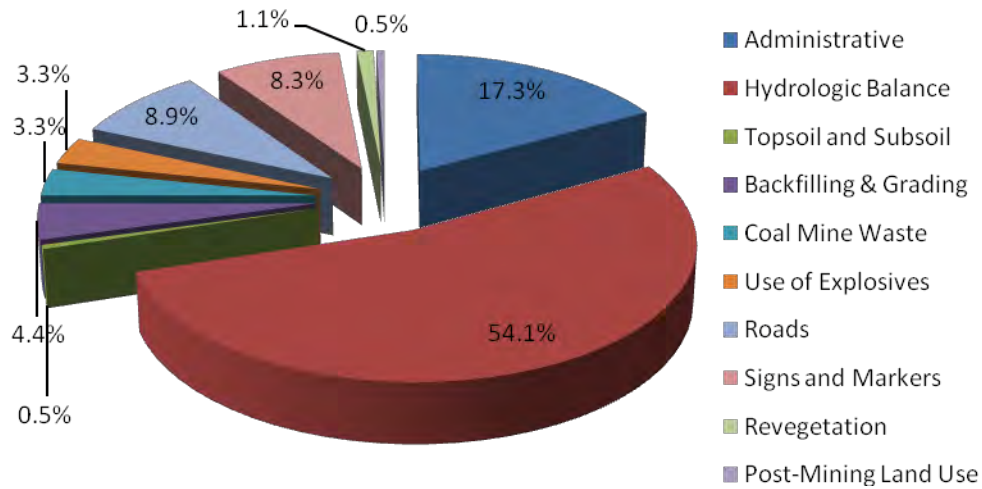
In following up on this issue during EY2011, during reviews of the last 6 months of PADEP's compliance histories for the permit prior to OSM's inspection, OSM found several instances where PADEP would "note" a violation in an inspection report, but would take no enforcement action. The majority of situations in which violations were noted but not cited by DEP and the violations were still present when OSM later performed an inspection, resulting in either deferral or issuance of a TDN. Examples of items "noted" but not recorded as violations include:

- Treatment facilities remain although the site has been granted Stage II bond release.
- Failure to attach seismograph records to blasting reports within the prescribed period.
- Failure of Operator to stabilize topsoil.
- Failure to properly place energy dissipaters.
- Failure to maintain erosion and sedimentation controls.

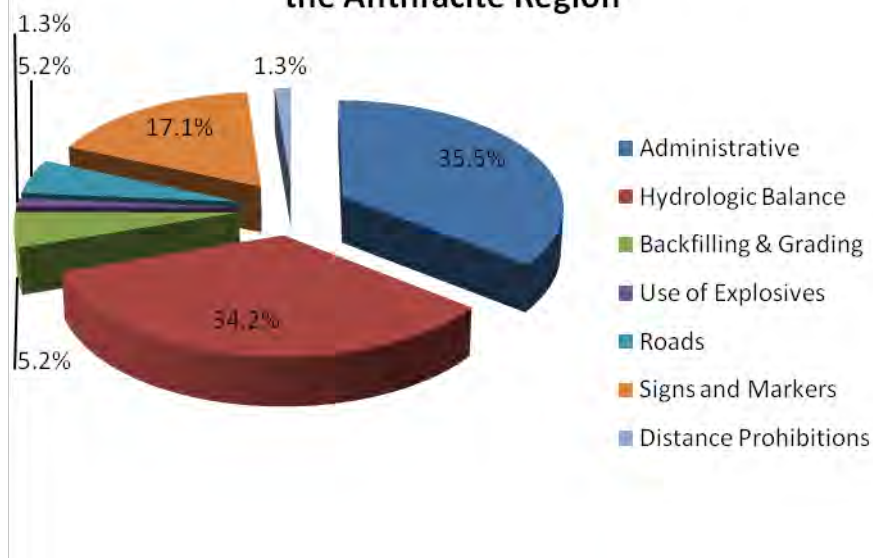
OSM will consult with PADEP during EY 2012 regarding this issue.

The following two graphs illustrate the distribution of violations noted during OSM’s Oversight Complete inspections.

Violations Identified on OC Inspections in the Bituminous Region



Violations Identified on OC Inspections in the Anthracite Region



Analysis of the data shown above supports two major conclusions. Hydrologic impacts, within the Bituminous and Anthracite regions, continue to be prevalent environmental concerns. The percentage of the total violations that are hydrology related has slightly decreased in the

Bituminous Region from 58% in EY2010, to 54% in EY2011, but has increased in the Anthracite Region from 27% in EY2010 to 34% in EY2011. Administrative violations remain the same at 17% in the Bituminous Region, and decreased from 42% to 35.5% in the Anthracite Region. The specific types of administrative violations in the anthracite region include: violations for mining without a permit; mining outside a bonded area; and other violations.

A continuing trend is noted in the decreasing number of permit inspections. The number of inspections decreased from 18,181 in EY 2007 to 15,513 in EY 2010 and further decreased to 13,207 in EY 2011. In EY2010, the number of inspectable units (active, inactive and abandoned permits) was 1,684, the lowest in three years. However, in EY 2011 the number of inspectable units increased to 1,731. PADEP is required to inspect active permits every month (12 per year), in a combination of partial and complete, with a complete inspection at least every quarter. Abandoned permits are subject to the same inspection frequency unless an alternative inspection frequency is established in accordance with 30 CFR § 840.11. PADEP has not officially established alternative inspection frequencies for any abandoned permits. Therefore, the total number of complete inspections which should have been conducted for 1,372 active, inactive and abandoned permits was 6,924 for the year. The total number of complete inspections reported in Table 10 was 5,229, or 76% of the required number.

PADEP is required to conduct partial inspections of active permits at least 8 times per year (no less frequent than once every month in combination with complete inspections). Thus, 7,440 partial inspections should have been conducted on the 930 active permits reported. PADEP reports in Table 10 that 6610 partial inspections were conducted on active permits, or 89% of the required number. Partial inspection frequency on inactive and abandoned permits is at PADEP's discretion. In EY 2011, PADEP reported conducting 1,368 partial inspections on 801 inactive and abandoned sites for an average of 1.7 inspections per site per year. PADEP reports that budgetary restrictions and the resulting inability to fill vacancies resulted in inspection frequency prioritization and stratification. A comparison of Table 7 (State Staffing) from EY 2009 and EY 2010 shows an overall reduction in regulatory program staff from 235 FTEs to 212 FTEs, or 10%, with a 6.5 position reduction in permit review staff, and a 3.75 position reduction in inspection staff. These staffing numbers did not change in EY 2011.

The table below illustrates PADEP's deficiency in meeting the mandated inspection frequency. It also demonstrates that PADEP is dedicating its staff resources to conducting active, complete inspections. Visits to abandoned sites include monitoring water treatment facilities and collecting samples. Although options are limited to improve compliance, due to Pennsylvania hiring restrictions, PFD will discuss the issue with PADEP during EY2012.

PADEP Inspection Analysis

<i>Permits</i>	<i>Inspections</i>	Complete			Partial		
		Min.req.	% comp.	Insp. Staff	Min.req.	% comp.	
2011	2011						
930	Active	3,377	3,720	91%	6,610	7,440	89%

458	Inactive	815	1832	66%			523	discretion	1.1/year
343	Abandoned	1037	1372	75%			845	discretion	2.5/year
1,731	Total	5,229	6,924	76%	78.5		7,978	unknown	
2010	2010								
1,279	Active	4,423	5,116	86%			8,253	10,232	81%
344	Inactive	1,032	1,376	75%			1,606	discretion	5/year
61	Aband.	105	244	43%			94	discretion	1.5/year
1,684	Total	5,560	6,736	81%	78.50		9,953	unknown	

Minimum inspection frequency is one complete per quarter for all active and inactive permits, and eight partial per year for active permits. That totals 12 per year for active permits. Partial inspections for inactive permits are discretionary. Abandoned permits have the same required frequency.

OSM notes the following trends in yearly violation citations, which may track with the declining number of inspections. In EY 2008, PADEP reported that 744 violations were issued. In 2009 PADEP reported 612 violations. In 2010, PADEP reported that 313 violations were issued, a 42% reduction from 2007/2010. However, in EY 2011, cited violations increased to 582 (a 54% increase from 2010), even with declining number of inspections. This may indicate renewed attention to the enforcement program. PFD will continue to monitor trends in the number of inspections versus violation citation. OSM also notes that the rate of violations cited per inspection has varied from .04% in 2009 to .02% in 2010, and back to .04 in 2011. OSM found an average of 1.2 violations per inspection in EY 2011. OSM will continue to investigate this issue during the 2012 Evaluation Year.

B. Abandoned Mine Lands Project Reviews

OSM conducts site reviews of AML projects to understand how PADEP controls the reclamation process and to determine whether the program is meeting stated goals and objectives. During the evaluation year, the Harrisburg office conducted 22 site visits to approved AML projects during various phases of completion. When possible, site visits were coordinated with BAMR which is offered the opportunity to accompany OSM during the review. OSM gathered information on site status, BAMR monitoring, overall project success, and the existence of actual or potential problems. The site visits conducted by OSM included 20 construction phase reviews and 2 post-completion phase reviews. Overall, OSM construction, final, and post-final reviews confirm that BAMR successfully manages the AML project reclamation process. BAMR develops effective designs and monitors contractor performance to ensure that the projects meet the goals and objectives of the AML program.

C. Use of Conventional Bonds and Treatment Trust Funds for long term treatment

PADEP continues to negotiate and implement Trust Funds and Conventional Bonds for the perpetual treatment of all Pennsylvania permits with post mining discharges. PADEP uses

AMDTreat, and/or actual water treatment cost data the coal company or a third party provides, as instruments to aid in the establishment of the bond or treatment trust funds amount. Other factors such as the trust's life span, market rate, and administration costs are also taken into consideration for establishing trust fund accounts. This evaluation year continues to be a transitional period for PADEP to import all discharge treatment information into the Department's eFACTS (Environment, Facility, Application, Compliance Tracking System) database. eFACTS is a department-wide database that provides a holistic view of the clients and sites that DEP regulates. Once completed, this database will include information on payments and payment schedules, disbursements and reports.

There are features in the eFACTS database regarding discharge tracking and providing information for officials and the public. New descriptions have been added to the eFACTS database to track trusts in a more efficient manner. The partially funded trusts are now divided into two categories – “Partially Funded Current Payment Schedule” and “Partially Funded No Additional Payment.” Fully funded trusts also have two categories – “Fully Funded Adequately Funded” and Fully Funded Inadequately Funded.” There are six trusts that fall in this category. Conventionally bonded permits with discharge treatment systems are no longer associated with a trust name but are titled “Linked to Bond.” This process to track conventionally bonded treatment systems eliminates confusion and disassociates conventionally bonded discharges from discharges with financial obligations covered by trust agreements. There are similarities to the previous database reporting style. A report can be generated in the same format as with the previous database. The report is detailed by the District Office, Trust Agreement Status and Financial Status. Agreement Status titles are: Linked to Bond, Not Started, Data Collection, Initial Calculations Completed, Negotiations Ongoing, Agreement Reached, Trust Finalized, and Trust in Default. Financial Status titles are: Not Started, Bond Requested, Partially Funded Current Payment Schedule, Partially Funded No Additional Payment, Fully Funded Adequately Funded, and Fully Funded Inadequately Funded. Offices identified in the current report are Cambria, Greensburg, Knox, Moshannon, and Pottsville. Included in the eFACTS database are pre-primacy and non-coal permits along with primacy coal mining permits. With the treatment trust database in the eFACTS format, it is now possible to generate specific criteria reports. For example, OSM oversees primacy coal mining permits. It is now possible to generate a report that excludes non-coal and pre-primacy permits.

The discharges and treatment information is currently incomplete because of the transitioning process to eFACTS. It is assumed there is at least the same number of treatment trust agreements in various stages as in 2009, but the current information in eFACTS is less than the information reported previously. In 2009, the treatment trust database contained 107 agreements associated with primacy coal mining related pollutional discharges and could be broken down as follows: 107 primacy pollutional discharge agreements encompass 184 permits and address 317 discharges. Agreements were in various stages of financial execution.

As of June, 2011, the eFACTS lists 43 executed treatment trust agreements, encompassing 95 permits, and addressing 163 discharges.

For this evaluation year, the following table identifies the inspecting district offices, the number of trusts each office is associated with, and the various stages permits are in regarding financial

obligation of pollutional discharges. For example, the Pottsville District Office has two executed trusts encompassing two fully funded permits, one permit is inadequately funded, and one permit is covered by a bond.

	Cambria	Moshannon	Greensburg	Knox	Pottsville	California
No. of executed trusts	18	9	9	5	2	
Trust/Fully Funded (permits)	10	24	4	4	2	
Trust/ Part. Funded (permits)	24	3	7	2		
Trust/ Inadequately Funded (permits)	2	1	5	6	1	
Bond (permits)	19	5	14	8	1	
Permits not linked to a bond or trust	28		5			

There are at least 27 trusts that need to be added to the eFACTS database as well as all the conventionally bonded and partially funded trust information for the California District Office. OSM was informed that the California District Office will update water treatment information into eFACTS as permits are renewed. If this process of entering information into eFACTS as permits are renewed is accepted, it is feasible that it will take up to five years to have a complete database with all pertinent water treatment information included. It is hoped that this method of entering discharge treatment information is reviewed and modified so a complete database can be in place in eFACTS as soon as possible.

PADEP continues to improve its discharge tracking and treatment process. Through the cooperation of the district offices and the dedication of the PADEP staff a fluid tracking system will be in place. The new eFACTS tracking database will provide an easier avenue for officials and the public to keep abreast of the discharge tracking and treatment trust information in Pennsylvania.

D. Status of LC&N Permit

LC&N was in bankruptcy operating under a Consent Order and Agreement (CO&A) initially executed in September 2002, and amended on April 26, 2006 and June 2, 2008. This is a 7,500 acre permit near Tamaqua, Schuylkill County PA. The permit is an Alternative Bonding System (ABS) permit that has not converted to full cost bonding. Forfeiture of this permit could have a significant impact on the financial ability of PADEP to complete its land and water reclamation obligations remaining under the former ABS program.

The primary features of the permit are two large un-reclaimed pits (Springdale and 99/111) and a discharge (Route 309) with a flow rate between 3 and 4 thousand gpm, which is currently being treated with a pebble quick lime system. The CO&A established backfilling and payment schedules for the two pits and the AMD treatment system trust fund. The land reclamation bond deficit calculated under the 2010 rates is \$3,476,000.

On April 2, 2010, the Bankruptcy Court approved a motion authorizing the sale of the assets, claims, contracts and leases of LCN and set the date of May 24, 2010 as the of an auction sale. On May 7, 2010, PADEP suspended the LC&N permit effective on May 24, 2010. BET Lehigh Real Estate (LRE) LLC and BET Associates LLC were the successful bidders for the LC&N's assets.

PADEP entered into a Consent Order and Agreement with BET LRE LLC and BET Associates IV LLC on May 27, 2010 which obligates BET to transfer the LC&N permit and assume responsibility for all backfilling obligations. BET is also obligated to fund the treatment of the Route 309 discharge immediately and until a Post Closing CO&A is signed approving the relocation and or treatment of the discharge. PADEP reported that on May 13, 2011, the permit was transferred from LC&N to BET. This transaction resulted in the posting of a full cost bond in the amount of \$10,523,000 to cover the land reclamation obligation in the case of forfeiture. As a part of the agreement, PADEP will re-issue to BET the 2.1 million in conversion assistance initially provided to LC&N. This action alleviates the concern that forfeiture of the permit would have a substantial impact on PADEP's financial ability to reclaim the site.

BET is currently treating the Route 309 discharge, and expending about \$500,000/year. It is estimated that approximately \$11 million would be needed in a trust fund to maintain the current treatment system. At the time of sale of LC&N, there was approximately \$1,000,000 in an escrow account for treatment. BET is required to develop and submit a plan for long term treatment of the discharge and funding the treatment trust. OSM is concerned that there is substantial unfunded treatment liability for this ABS discharge, which would substantially impact the Reclamation Fee O&M Trust Account, if the permit is forfeited.

E. MSHA Class Impoundments

Large Mine Health and Safety Administration (MSHA) Class impoundments that are improperly built or maintained can present a high risk to public safety and the environment. OSM has completed various oversight, technical assistance and coordination projects across the Appalachian Region with the States and MSHA over the last several years on impoundments that are under SMCRA jurisdiction. The Appalachian Region had an objective in Evaluation Year

2011 to conduct reviews of a select number of impoundments in each state. In accordance with this objective, the Pittsburgh Field Division, Harrisburg Office visited four impoundments in Pennsylvania. This was not a comprehensive review of PADEP's permitting, and monitoring program for MSHA class impoundments. Further, the number of impoundments reviewed and the method of selection does provide a basis for program wide conclusions.

PFD found that there were no serious slope stability, water seepage, water treatment, or other environmental or structural issues noted on the four facilities inspected. The impoundments were constructed in accordance with the permit requirements.

F. Public Participation in informal conferences

During a meeting in 2010 with individual citizens and organized citizen groups, concerns were expressed to PFD regarding how participation in the informal conferences for coal mine permitting has diminished since the Pennsylvania Department of Environmental Protection (PADEP) changed its approach to the informal conference. In or around 2004 the format and the time for most informal conferences changed from a public hearing style meeting held in the evening to an open format held during core work hours. PADEP contends fiscal restraints and union requirements limit its ability to have meetings in the evening. Citizens groups are concerned that an entire demographic may not have the opportunity to participate in informal conferences because they are excluded merely because they work during the day. Other concerns of the citizen groups are that the informal conference is not as formal as a public hearing, and administratively correct permit applications have technical discrepancies.

As a result of these concerns, OSM committed to the citizens that an informal meeting study would be conducted in EY 2011.

The study entailed reviewing documentation for nineteen informal conferences, interviewing PADEP District Mining Managers and permitting staff, and interviewing citizen groups. Every PADEP district office conducted at least one informal conference during the evaluation period in compliance with § 86.34 Informal conferences, but there is a varied amount in the number of informal conferences held throughout the state. There are six PADEP district offices throughout Pennsylvania. The Moshannon, Knox, Cambria, and Pottsville district offices each held one informal conference during the evaluation time frame. Five informal conferences were reviewed at the Greensburg District Office and ten informal conferences were reviewed at the California District Office. Seventeen of the nineteen informal conferences reviewed during the evaluation period were held during core work hours with an average of 16 participants at each conference except for one informal conference, not part of the average, which had 74 participants. The two evening conferences had an average of 38 participants. Statistically, twice as many people attend evening conferences than daytime conferences. Comments and concerns received by PADEP in writing or at the informal conference are investigated. Every PADEP District Office develops a comment and response document from the comments and concerns raised at the informal conference.

PFD found that PADEP is in compliance with SMCRA, 30 CFR, and Pennsylvania regulations regarding public participation and informal conferences. It is recommended that PADEP and

OSM continue a working relationship with the citizens groups and through a communicative effort citizen concerns can be addressed in a productive manner. As is, only one in eight informal conferences are held in the evening. It is recommended that PADEP review its current informal conference procedures and try to develop a method in which all demographics have the opportunity to participate in the informal conference process.

APPENDIX A

Acronyms used in this Report

ABS	Alternative Bonding System
AMD	Acid Mine Drainage (Relates to all mining related pollutional discharges)
AML	Abandoned Mine Lands
AMLIS	Abandoned Mine Land Inventory System
BAMR	Bureau of Abandoned Mine Reclamation
BMR	Bureau of Mining and Reclamation
CAC	Citizens Advisory Council
CBS	Conventional Bonding System
CO&A	Consent Order and Agreement
COE	U.S. Army Corps of Engineers
DMO	Bureau of District Mining Operations
eFACTS	Environment Facility Application Compliance Tracking System
EHB	Environmental Hearing Board
EPA	Environmental Protection Agency
EQB	Environmental Quality Board
GFCC	Government Financed Construction Contract
GPRA	Government Performance Results Act
HUP	Hydrologic Unit Plan
MRAB	Mining and Reclamation Advisory Board
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
OSM	Office of Surface Mining Reclamation and Enforcement
PADEP	Pennsylvania Department of Environmental Protection
PASMCRA	Pennsylvania Surface Mining Conservation and Reclamation Act
PFD	Pittsburgh Field Division
SMCRA	Surface Mining Control and Reclamation Act of 1977
TMDL	Total Maximum Daily Load
USFWS	United States Fish and Wildlife Service
WCAP	Watershed Cooperative Assistance Program

APPENDIX B

EY 2011 Ten-Day Notices

TDN, X10-121-011-008(2); Hepburnia Coal Company. The TDN was issued based on an OSM oversight inspection for failure to comply with a compliance order. The CO was related to the operator's failure to implement, within the allowable abatement time, one of the two alternatives outlined in his permit to abate two discharges flowing offsite that exceeded effluent limitations. OSM granted an extension to the State to respond to this TDN until 9/15/2011.

TDN, X10-121-011-009(7); Big Mack Leasing Company, Inc. The TDN was issued based on an OSM oversight inspection for operators failure to renew the surface mining/NPDES permit, to identify his operation with a mine sign, to monitor the surface waters in the vicinity of the mine, for extracting coal without a valid permit and/or mining license, failure to have all permanent treatment facilities annually certified, failure to provide interim treatment of one post mining discharge and one degraded sub-f point, and failure to comply with the terms and conditions of a Consent Order and Agreement. OSM determined appropriate action on all violations.

TDN, X10-121-011-010(5); Duquesne Light Company. The TDN was issued based on an OSM oversight inspection for the operator's failure to provide proof of liability insurance, to maintain a valid permit, to post required bond as requested by the regulatory authority, and to certify permanent treatment facilities and haul road. OSM determined good cause for 4 violations, and appropriate action for bonding because the State took action to cause the violation to be corrected. A Treatment Trust Fund Consent Order and Agreement was also executed.

TDN, X10-121-011-011(7); Shenango Inc. The TDN was issued based on an OSM independent oversight inspection for the operator's failure to maintain/certify his haul road, to maintain/certify permanent treatment facilities, to submit proof of liability insurance, to identify operation with mine sign, for discharging water from the permit area that exceeds effluent limitations, and the State's release of bonds against the provisions of their approved program. OSM determined good cause for 5 violations, 1 appropriate action and 1 inappropriate action for exceeding effluent limits. The state requested an informal hearing.

TDN, X10-121-011-012(3); Fayette Coal and Coke Inc. The TDN was issued based on an OSM independent oversight inspection for operator's failure to obtain a valid permit authorizing coal refuse disposal and coal preparation activities, failure to have all impoundments annually certified, and for continuing to discharge water into an abandoned deep mine complex without the necessary approvals, design protocols, deep mine injection permit. OSM determined 1 good cause and 2 appropriate actions on the violations.

TDN, X10-121-011-013(4); Penn Coal Land Inc. The TDN was issued based on an OSM oversight inspection for operator's failure to maintain proper bond sufficient to cover all treatment obligations, failure to restore or replace water supplies within the permit area, failure to design/construct treatment facilities for three degraded springs that discharge from the permit area and failure to minimize disturbances to the prevailing hydrologic balance in the permit area and adjacent areas to prevent material damage to the hydrologic balance outside the permit area.

OSM determined good cause on 2 violations and appropriate action on 2 violations. A new abatement plan was submitted by the operator.

TDN, X10-121-011-014(1); Fayette Coal and Coke Inc. The TDN issued based on OSM document review based on operator's failure to demonstrate to the Department that the discharge to an underground mine complex would be in conformance with (1) through (6) of PA Code Chapter 89.60. OSM determined good cause on the violation.

TDN, X11-121-011-001(2); Cooney Brothers Coal Company. The TDN issued based on an OSM oversight inspection for the operator's failure to conduct his mining activities in a manner which would minimize disturbances to the prevailing hydrologic balance, failure to prevent material damage to the hydrologic balance outside the permit area and failure to maintain bonds in an amount and with sufficient guarantee as required by Chapter 86 for Subchapter F discharges. OSM determined good cause on the 2 violations.

TDN, X10-120-149-001(1); CSY Inc. The TDN was issued based on an OSM oversight inspection. One violation was noted for allowing the deposition of offsite material from a source not authorized in the permit. OSM determined DEP took appropriate action to cause the violation to be corrected.

TDN, X11-120-149-001(2); Porter Associates Inc. The TDN was issued on the basis of a citizen complaint for two alleged violations regarding exceeding reclamation grades and the volume of ash approved in the permit for placement. OSM is presently reviewing DEP's response to the TDN.

TDN, X10-121-411-006(1); AMD Reclamation Inc. (Dana Mining). The TDN was issued on the basis of a citizen complaint for one alleged violation regarding conducting mining activities without a permit. OSM conducted a federal inspection and issued a cessation order. Dana Mining subsequently applied for temporarily relief from the cessation order, which was granted by a federal district judge. As of June 30, 2011, the DEP has not issued a permit for the activities associated with the TDN.

TDN, X10-121-411-004(4); Rayne Energy. The TDN was issued based on an oversight inspection for the operator's failure to comply with §86.11(a), no person may operate a mine or allow a discharge from a mine into the water of the Commonwealth unless the person has obtained a permit from the Department, failure to obtain an NPDES permit for the outfall of the treatment system, failure to properly maintain the treatment system, and failure to comply with §89.102(12), which states that mining operations are not permitted within 100 feet of a perennial or intermittent stream. OSM determined the response was appropriate action to cause the 4 violations to be corrected. The permittee has submitted a permit application to DEP. In June 2011, DEP issued a civil penalty of \$3,000. As of June 30, 2011, discussions were continuing with the permitted regarding compliance actions.

TDN, X11-121-411-001(1); Amfire Mining Company. The TDN was issued based on on oversight inspection for failure to maintain the entrance/exit road to the facility, along with the sumps and road condition need repair/maintenance work. In the DEP response to the TDN, a NOV was issued to the operator; therefore, OSM determined it was an appropriate response. A

follow-up inspection confirmed that the maintenance work had been completed.

TDN, X10-121-411-003(3); Allegheny Mineral Corp. The TDN was issued on the basis of three violations found during an OSM independent oversight inspection. The three violations consisted of failure to submit annual sedimentation pond certification, NPDES monitoring reports, and blasting schedule proof of publication and notification letters. Based on the DEP response to the TDN, all three violations were abated by the operator. OSM concluded that the response was appropriate action.

TDN, X11-121-019-002(3); Charles L. Swenglish and Sons. The TDN was issued based on an OSM oversight inspection. DEP agreed to issue two NOVs and one CO for the following violations: Failing to submit annual impoundment certifications; failure to maintain 100 feet buffer from a perennial or intermittent stream or seeking a variance to affect this area and failing to prevent water exceeding effluent limits from entering a waterway, then rescinded the decision; resulting in the issuance of a TDN. OSM is currently reviewing DEP's response to the 3 violations.

TDN, X10-121-019-007(4); Matt Canestrone Contracting, Inc. LaBelle Coal Refuse Site. The TDN was issued in response to a Citizens Complaint. The citizen group alleged: the permit does not contain the necessary information to demonstrate how each proposed sediment control measure for the coal refuse disposal operation will meet the requirements for ensuring hydrologic balance; Operator failed to plan and conduct coal refuse disposal activities in a manner to minimize disturbances to the prevailing hydrologic balance of the permit, adjacent area and areas outside of the permit areas; Operator is not conforming to the requirements of monitoring the sources of ash placed on the permit; and Operator has allegedly not conformed to the public notice requirements. Upon receiving DEP's response to this TDN, OSM deemed the response appropriate with PADEP demonstrating good cause that the violation did not exist.

TDN, X11-121-019-003(2); Original Fuels, Inc. The TDN was issued based on an OSM oversight inspection. Violations were: failure to properly re-grade and re-vegetate an impoundment and failure to meet standards for successful re-vegetation. OSM is currently reviewing DEP's response.

TDN, X11-121-019-005(3); Reichard Contracting. The TDN was issued based on an OSM oversight inspection. The following 3 violations were noted: failure to maintain an impoundment as constructed; failure to maintain appropriate discharge structures; and failure to maintain erosion and sedimentation controls as permitted. OSM is currently reviewing DEP's response.

TDN, X11-121-019-001(8); Penn Development Services. The TDN was issued based on an OSM oversight inspection. The following violations were noted: failure to maintain an appropriate permit sign at the junction of the haul road and public road; failure to maintain appropriate sediment control measures; failure to properly design, construct and maintain a treatment facility; failure to properly maintain an impoundment as designed and constructed; failing to prevent the accumulation of pit water; failure to maintain proper bond; failing to timely and appropriately re-vegetate; and failure to meet effluent standards. DEP issued a response and OSM found four of the responses appropriate and four inappropriate. An informal review of this decision was issued

by the OSM Appalachian Regional Director on July 8, 2011. The RD determined PADEP had taken appropriate action to address 3 violations, based on violations issued after PFD's finding. One inappropriate determination was upheld and PFD was ordered to conduct a Federal inspection.

TDN, X10-121-019-006(1); Philip Reese Coal. The TDN was issued based on an OSM Follow-up inspection. Collection ditch was not appropriately extended to the sediment pond. DEP's response was deemed inappropriate. DEP sought an informal review. After OSM and DEP visited the site, DEP agreed to oversee the operator's correction of violation and DEP's request for informal review was rescinded.

TDN, X10-121-019-004(3); Amerikohl Mining. The TDN was issued based on an OSM Follow-up inspection. Violations included failure to maintain erosion and sedimentation controls, failure to maintain haul road and failure to contemporaneously reclaim area. DEP corrected violations and an appropriate response was issued.

TDN, X10-121-019-003(4); Gary Gioia. The TDN was issued based on an OSM oversight inspection. The following violations were noted: failure to maintain a clearly visible sign at the junction of the haul road and public road that details the name of the operator, business address and telephone number of the operator as well as the permit number of the operation; failure to construct a collection ditch in a manner sufficient to appropriately contain sediment and prevent erosion; failure to intercept and divert away from the disturbed area by means of diversion the surface water and shallow groundwater from undisturbed areas and failure to seek a temporary cessation because the operation has been idle for more than 30 days. All violations have been corrected and the site is no longer idle; DEP's response is deemed appropriate.

TDN, X10-121-019-005(8); RES Coal. The TDN was issued based on an OSM oversight inspection. The following violations were noted: failure to properly retain blasting records for Munson No. 1 and make the correct records "available for inspection by the Department...on request"; failure to ensure the placement at all entrances to the permit area from public roads or highways of blasting signs which details Warning and all clear signals which "clearly explain the marking of blasting areas and charged holes within the pattern,; failure to ensure a "person responsible for blasting operations at a blasting site," is "familiar with the blasting plan" in a sufficient enough manner to know which one of adjacent permits blasting was to occur; allowing accumulated pit water to leave the permit without being pumped to one of the approved treatment facilities for the Munson No. 1 permit; failure to submit annual impoundment certifications ; failure to demonstrate the authorization for permanency of impoundments of three sedimentation ponds prior to Stage III bond release; failure to clearly mark the monitoring point and to have it located as detailed in the permit and failure to provide a haulroad certification. After a site visit with OSM and PADEP, 4 violations were corrected, constituting appropriate action, and PADEP demonstrated good cause on 4 violations.

TDN, X10-121-019-008(3); Champion Processing, Beech Hollow Refuse Disposal. The TDN was issued based on a Citizens Complaint. The following violations were alleged by the Environmental Integrity Project: failure to maintain treatment facilities on site in a manner that ensures the all discharges from disturbed areas are treated in a manner to ensure compliance with the water quality standards, effluent limitations and best management practices ; Operator has

allowed a discharge of water from an area disturbed by coal refuse disposal activities that exceeded the effluent limitations relative to manganese, aluminum and acidity; and Operator failed to plan and conduct coal refuse disposal activities in a manner to minimize disturbances to the prevailing hydrologic balance of the permit, adjacent area and areas outside of the permit areas. DEP responded to this TDN and OSM found DEP's response demonstrated good cause why the alleged violations were not corrected. Informal Review was requested by the Citizen. The Appalachian Regional Director is currently reviewing this TDN.

TDN, X10-121-273-002(2); Cyprus Emerald. The TDN was issued based on a citizen complaint of well water contamination due to underground mining. PADEP's response was determined to be inappropriate because it did not adequately support its decision. An informal review was requested, and, upon the Regional Director sustaining PFD's determination, a Federal inspection was conducted. This inspection included a technical assessment by OSM. OSM found that the water contamination was not attributable to underground mining. The complainant requested an informal review, and the Regional Director sustained PFD's determination.

TDN 10-121-411-005(2); Rosebud Mining Solar #7 Permit No. 56841310. The TDN was issued based on a Federal oversight inspection, which determined the underground mine discharge treatment facility was under bonded. In response, PADEP executed a fully funded Treatment Trust agreement. The response was determined to be appropriate because PADEP took action to cause the 2 violations to be corrected.

TDN 11-121-019-004(3); Shamrock Minerals Corp. Permit No. 37891601. The TDN was issued based on a Federal oversight inspection, which identified three violations regarding the sediment pond and collection ditches. At the end of the evaluation year, discussions were continuing with PADEP regarding the circumstances of the TDN, and no response had been received from PADEP.

TDN 11-121-273-001(4); Black Dog Mining Inc. Permit No. 05773002. The TDN was issued based receipt of a citizen complaint which alleged several violations regarding proper maintenance of the mine site during mining. PADEP's response was determined to be appropriate because actions were taken to correct the violations.

TDN 11-121-273-002(3); Rosebud Mine 78 Permit No. 56841328. The TDN was issued based on receipt of a citizen complaint which alleged fugitive dust problems associated with an underground mine preparation plant. At the end of the evaluation period, PADEP's response was under evaluation.

TDN 10-121-273-003(2); Gary Gioia Coal Company Permit No. 65890104. The TDN was issued based on a citizen complaint that post mining land use had not been achieved. PADEP's response demonstrated good cause in that there was currently no violation of the approved program.

APPENDIX C

PADEP comments on Draft Report received

Ten-Day Notices

The report indicates that 20 of 78 violations related to the 22 TDNs resulting from Federal oversight inspections were in the “good cause” category. PADEP notes that these violations should not have been included in a TDN to begin with.

APPENDIX D

Tabular Summaries of Data Pertaining to Mining, Reclamation and Program Administration

These tables present data pertinent to mining operations and State and Federal regulatory activities within Pennsylvania. They also summarize funding provided by OSM and Pennsylvania staffing. Unless otherwise specified, the reporting period for the data contained in all tables is the same as the evaluation year. Additional data used by OSM in its evaluation of Pennsylvania's performance is available for review in the evaluation files maintained by the Harrisburg OSM Office.

When OSM's Directive REG-8, Oversight of State Programs, was revised in December 2006, the reporting period for coal production on Table 1 was changed from a calendar year basis to an evaluation year basis. The change was effective for the 2007 evaluation year. However, with Change Notice REG-8-1, effective July 1, 2008, the calendar year reporting period in Table 1 for coal produced for sale, transfer or use was reestablished and is effective for the 2008 evaluation year. In addition, for the 2008 evaluation report, coal production for the two prior years reported on Table 1 was recalculated on a calendar year basis so that all three years of production reported in the table are directly comparable. This difference in reporting periods should be noted when attempting to compare coal production figures from annual evaluation reports originating both before and after the December 2006 revision to the reporting period.

TABLE 1

COAL PRODUCED FOR SALE , TRANSFER, OR USE¹
(Millions of short tons)

Calendar Year	Surface Mines	Underground Mines	Total
2010	10.754	47.922	58.676

¹Coal production is the gross tonnage (short tons) and includes coal produced during the calendar year (CY) for sale, transfer or use. The coal produced in each CY quarter is reported by each mining company to OSM during the following quarter on line 8(a) of form OSM-1, "Coal Reclamation Fee Report." 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 other sources due to varying methods of determining and reporting coal production.

TABLE 2

PERMANENT PROGRAM PERMITS, INITIAL PROGRAM SITES, INSPECTABLE UNITS, AND EXPLORATION

Mines and Other Facilities	Numbers of Permanent Program Permits and Initial Program Sites						Area in 1's of acres						
	Permanent Program Permits			Initial Program Sites			Permanent Program Permits (Permit Area)		Initial Program Sites		Total Area		
	Active	Inactive	Aban-doned	Total	Active	Inactive	Aban-doned	Total	Insp. Units ¹	Federal Lands		State/Tribal and Private Lands	
Surface Mines	738	396	264	1,398	0	0	0	0	1,398	0.0	17,642.0	0.0	17,642.0
Underground Mines	93	49	42	184	0	0	0	0	184	0.0	685.0	0.0	685.0
Other Facilities	99	13	37	149	0	0	0	0	149	0.0	914.0	0.0	914.0
Total	930	458	343	1,731	0	0	0	0	1,731	0.0	19,241.0	0.0	19,241.0

Permanent Program Permits and Initial Program Sites:	Total Number:	1731	Average Acres per Site:	11.12
Average Number of Permanent Program Permits and Initial Program Sites per Inspectable Unit (IU):	Total Number:	1.00	Average Acres per IU:	11.12
Permanent Program Permits in Temporary Cessation:	Total Number:	10	Number More than 3 Years:	0

EXPLORATION SITES

Number of Exploration Sites with Permits:	Total number of permit sites:	0	Sites with Federal lands ² :	0
Number of Exploration Sites with Notices:	Total number of notice sites:	368	Sites with Federal lands ³ :	0

¹An Inspectable Unit may include multiple small and neighboring Permanent Program Permits or Initial Program Sites that have been grouped together as one Inspectable Unit, or conversely, an Inspectable Unit may be one of multiple Inspectable Units within a Permanent Program Permit.

²When a Permanent Program Permit or Initial Program Site contains both Federal and State and Private lands, the acreage for each type of land is in the applicable column.

³The number of Exploration Sites with Federal lands includes sites with exploration permits or notices any part of which is regulated by the state under a cooperative agreement or by OSM pursuant to the Federal Lands Program, but excludes exploration sites that are regulated by the Bureau of Land Management

TABLE 3

PERMITS ALLOWING SPECIAL CATEGORIES OF MINING

Special Category of Mining	30 CFR Citation Defining Permits Allowing Special Mining Practices	Numbers of Permits	
		Issued During EY	Total Active and Inactive Permits
Experimental Practice	785.13(d)	0	0
Mountaintop Removal Mining	785.14(c)(5)	0	0
Steep Slope Mining	785.15(c)	0	0
AOC Variances for Steep Slope Mining	785.16(b)(2)	0	0
Prime Farmlands Historically Used for Cropland	785.17(e)	0	0
Contemporaneous Reclamation Variances	785.18(c)(9)	0	0
Mining on or Adjacent to Alluvial Valley Floors	785.19(e)(2)	0	0
Auger Mining	785.20(c)	33	33
Coal Preparation Plants Not Located at a Mine Site	785.21(c)	1	68
In-Situ Processing	785.22(c)	0	1
Remining	773.15(m) and 785.25	21	21
Activities in or Within 100 Feet of a Perennial or Intermittent Stream	780.28(d) and/or (e) 784.28(d) and/or (e)	0	0

TABLE 4

PERMITTING ACTIVITY

Type of Application	Surface Mines			Underground Mines			Other Facilities			Totals		
	App. Rec.	Issued/ Appvd	Acres	App. Rec.	Issued/ Appvd	Acres ¹	App. Rec.	Issued/ Appvd	Acres	App. Rec.	Issued/ Appvd	Acres
New Permits	58	61	5,582	4	2	84	4	1	57	66	64	5,723
Renewals	217	188		14	9		25	6		256	203	
Transfers, sales, and assignments of permit rights	43	34		3	0		3	2		49	36	
Small operator assistance	0	0		0	0		0	0		0	0	
Exploration permits												
Exploration notices ²												
Revisions that do not add acreage to the permit area		233			69			34			336	
Revisions that add acreage to the permit area but are not incidental boundary revisions	0	0	0	0	0	0	0	0	0	0	0	0
Incidental boundary revisions	0	0	0	0	0	0	0	0	0	0	0	0
Totals	318	516	5,582	21	80	84	32	43	57	371	639	5,723

Permits terminated for failure to initiate operations:

Number: 0 Acres: 0.0

Acres of Phase III bond releases (Areas no longer considered to be disturbed):

Acres: 4,193.0

Permits in temporary cessation

Terminations: 0

Midterm permit reviews completed that are not reported as revisions

Notices received: 13

Number: 0

¹Includes only the number of acres of proposed surface disturbance

²State approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

TABLE 5
OFF-SITE IMPACTS
EXCLUDING BOND FORFEITURE SITES

RESOURCES AFFECTED	People			Land			Water			Structures		
	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
DEGREE OF IMPACT												
NUMBER OF IMPACT EVENTS												
Blasting	0	0	0	0	0	0	0	0	0	1	2	4
Land Stability	0	0	0	0	0	0	0	0	0	9	1	2
Hydrology	0	0	0	0	0	0	0	0	0	0	0	0
Encroachment	0	0	0	0	0	0	0	0	0	0	0	0
Other	1	5	0	7	7	3	0	0	0	3	7	0
Total	1	5	0	7	7	3	0	0	0	13	10	6

Total Number of Inspectable Units²: 1668

Inspectable Units with one or more off-site impacts: 107

Inspectable Units free of off-site impacts: 1561

% of Inspectable Units free of off-site impacts¹: 94

OFF-SITE IMPACTS AT BOND FORFEITURE SITES

RESOURCES AFFECTED	People			Land			Water			Structures		
	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
DEGREE OF IMPACT												
NUMBER OF IMPACT EVENTS												
Blasting	0	0	0	0	0	0	0	0	0	0	0	0
Land Stability	0	0	0	0	0	0	0	0	0	0	0	0
Hydrology	80	0	0	0	0	0	80	0	0	0	0	0
Encroachment	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Total	80	0	0	0	0	0	80	0	0	0	0	0

Total Number of Inspectable Units²: 65

Inspectable Units with one or more off-site impacts: 36

Inspectable Units free of off-site impacts: 29

% of Inspectable Units free of off-site impacts¹: 45

TABLE 5
(Continued)
TOTAL OFF-SITE IMPACTS
INCLUDING BOND FORFEITURE SITES

RESOURCES AFFECTED	People			Land			Water			Structures		
	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
DEGREE OF IMPACT												
TYPE OF IMPACT EVENT												
	NUMBER OF EVENTS											
Blasting	7	0	0	0	0	0	0	0	0	1	2	4
Land Stability	12	0	0	0	0	0	0	0	0	9	1	2
Hydrology	169	0	0	0	0	0	80	0	0	0	0	0
Encroachment	8	0	0	0	0	0	0	0	0	0	0	0
Other	33	1	5	7	7	3	0	0	0	3	7	0
Total	229	1	5	7	7	3	80	0	0	13	10	6

Total Number of Inspectable Units²: 1733
 Inspectable Units with one or more off-site impacts: 143
 Inspectable Units free of off-site impacts: 1590

% of Inspectable Units free of off-site impacts: 92

¹ % of Inspectable Units free of off-site impacts is based on the number of Inspectable Units at the end of the Evaluation Year. The number of Inspectable Units may vary during the Evaluation Year.

² Total number of Inspectable Units is (1) the number of Inspectable Units at the end of the Evaluation Year and (2) the number of permanent program permits terminated under Phase III bond release during the Evaluation Year and (3) the number of Initial Program Sites with jurisdiction terminated during the Evaluation Year and (4) the number of bond forfeiture sites that were reclaimed during the Evaluation Year.

TABLE 6
SURFACE COAL MINING AND RECLAMATION ACTIVITY
Areas of Phase I, II, and III Bond Releases During the Evaluation Year (EY)

Phase I Releases	Phase II Releases			Phase III Releases			Total Acres Released During the EY
	Total Acres Released in Approved Phase II Releases	Acres not previously released under Phase I	Total Acres Released in Approved Phase III Releases	Acres not previously released under Phase II	Acres not previously released under Phase I or II	Phase I	
4,385		0			0	Phase I	4,385
	4,560			0		Phase II	4,560
			4,193			Phase III	4,193

Cumulative Total Acres Released under All Bond Release Phases at the End of the Evaluation Year

13,138

Number of Permanent Program Permits Terminated under Phase III Bond Release and Initial Program Sites with Jurisdiction Terminated During the Evaluation Year

0

Areas of Permits Bonded for Disturbance by Surface Coal Mining and Reclamation Operations

	Total Acres at Start of EY	Total Acres at End of EY	Change in Acres During EY
New Area and Cumulative Area Bonded for Disturbance	333,431	322,544	(6,694)
Area Bonded for Disturbance without Phase I Bond Release	0	247,259	247,259
Area Bonded for Disturbance for which Phase I Bond Release Has Been Approved	0	45,650	45,650
Area Bonded for Disturbance for which Phase II Bond Release Has Been Approved	0	33,829	33,829
Total Area Bonded for Disturbance	0	326,738	326,738
Area Bonded for Remaining	0	0	0

Areas of Permits Disturbed by Surface Coal Mining and Reclamation Operations

Disturbed Area	0	262,407	262,407
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TABLE 7

**BOND FORFEITURE ACTIVITY
(Permanent Program Permits)**

Bond Forfeiture and Reclamation Activity	Number of Sites	Dollars	Acres
Sites with bonds forfeited and collected that were un-reclaimed at the start of the current Evaluation Year (i.e, end of previous Evaluation Year) ¹	61		1,080
Sites with bonds forfeited and collected during the current Evaluation Year	1	12,570	18
Sites with bonds forfeited and collected that were re-permitted during the current Evaluation Year	2		47
Sites with bonds forfeited and collected that were reclaimed during the current Evaluation Year	2		169
Sites with bonds forfeited and collected that were un-reclaimed at the end of the current Evaluation Year ¹	58		882
Sites with bonds forfeited but un-collected at the end of the current Evaluation Year	2		188
Forfeiture Sites with Long-Term Water Pollution			
Bonds forfeited, lands reclaimed, but water pollution is still occurring	36		
Bonds forfeited, lands reclaimed, and water treatment is ongoing	30		
Surety/Other Reclamation Activity In Lieu of Forfeiture			
Sites being reclaimed by surety/other party at the start of the current Evaluation Year (i.e., the end of previous Evaluation Year) ²	4		178
Sites where surety/other party agreed during the current Evaluation Year to do reclamation	3		114
Sites being reclaimed by surety/other party that were re-permitted during the current Evaluation Year	0		0
Sites with reclamation completed by surety/other party during the current Evaluation Year ³	2		169
Sites being reclaimed by surety/other party at the end of the current Evaluation Year ²	5		123

¹ Includes data only for those forfeiture sites not fully reclaimed.

² Includes all sites where surety or other party has agreed to complete reclamation and the site is not fully reclaimed.

³ These sites are also reported in Table 6, Surface Coal Mining and Reclamation Activity, because Phase III bond release would be granted on these sites.

TABLE 8

REGULATORY AND AML PROGRAMS STAFFING

Function	Number of FTEs
Regulatory Program	
Permit Review and Maintenance	40.00
Inspection	79.00
Other (supervisory, clerical, administrative, fiscal, personnel, etc.)	93.00
Regulatory Program Total	212.00
AML Program Total	137.00
TOTAL	349.00

TABLE 9

FUNDS GRANTED TO STATE OR TRIBE BY OSM
(Actual Dollars Rounded to the Nearest Dollar)

Type of Funding	Federal Funds Awarded	Total Program Cost	Federal Funds Awarded as a Percentage of Total Program Costs
Regulatory Funding			
Administration and Enforcement Grant	11,883,350		
Other Regulatory Funding, if applicable	87,915		
Subtotal (Regulatory Funding)	11,971,265	23,854,615	50
Small Operator Assistance Program Grant Funding	0	0	
Abandoned Mine Land Reclamation Funding	47,627,365	0	
Watershed Cooperative Agreement Program	403,778	2,404,899	17
TOTAL	60,002,408		

TABLE 10

STATE OR TRIBAL INSPECTION ACTIVITY

Permits and Sites		Complete Inspections				Partial Inspections		
Activity Status	Number of Permits and Sites	Inspections Required Annually	Approximate Number of Required Inspections ¹	Number of Complete Inspections Conducted	Inspections Required Annually	Approximate Number of Required Inspections ¹	Number of Partial Inspections Conducted	
Approximate Number of Required Inspections of Permanent Program Permits								
Active	930	4	3,720		8	7,440		
Inactive	458	4	1,832		0	0		
Abandoned	343	4	1,372		0	0		
Approximate Number of Required Inspections of Initial Program Sites								
Active	0	0	0		0	0		
Inactive	0	0	0		0	0		
Abandoned	0	0	0		0	0		
Inspections Conducted and Approximate Number Required on All Permanent Program Permits and Initial Program Sites								
Total Active	930		3,720	3,377		7,440	6,610	
Total Inactive	458		1,832	815		0	523	
Total Abandoned	343		1,372	1,037		0	845	
Total	1,731		6,924	5,229		7,440	7,978	
Exploration Sites with Permits and with Notices								
All Exploration	368			44			20	

¹ The number of required inspections are approximations because part way through the Evaluation Year sites may change "activity status" or become eliminated because final Phase III bond release was approved or the regulatory authority terminated its jurisdiction under the Initial Program. Likewise, as new permits are issued throughout the Evaluation Year, the number of Permanent Program Permits would increase, but only some of the "Inspections Required per Site Annually" would be required for those sites permitted part way through the year. Additionally, some sites may be consolidated into one inspectable unit, thus one inspection may cover multiple sites.

TABLE 11

STATE OR TRIBAL ENFORCEMENT ACTIVITY

Type of Enforcement Action	Number of Actions ¹	Number of Violations ¹
Notice of Violation	538	582
Failure-to-Abate Cessation Order	16	32
Imminent Harm Cessation Order	27	31

¹ Does not include actions and violations that were vacated.

TABLE 12

LANDS UNSUITABLE ACTIVITY

Activity	Number	Acres
Petitions Received	1	
Petitions Rejected	0	
Petitions Accepted	0	
Decisions Denying Petition	0	
Decisions Declaring Lands Unsuitable	0	0
Decisions Terminating Unsuitable Designations	0	0

TABLE 13

OSM OVERSIGHT ACTIVITY

Oversight Inspections and Site Visits

	Complete		Partial		Total
	Joint	Non-Joint	Joint	Non-Joint	
Oversight Inspections	200	19	101	48	368
	Technical Assistance		Other		Total
Site Visits	10		61		71

Violations Observed by OSM and Citizen Requests for Inspection¹

Type of Action	Total number of each action
How many violations were observed by OSM on oversight inspections?	321
Of the violations observed, how many did OSM defer to State action during inspections?	214
Of the violations observed, how many did OSM refer to the State through Ten-Day Notices? ²	78
How many Ten-Day Notices did OSM Issue for observed violations? ³	22
How many Ten-Day Notices did OSM issue to refer citizen requests for inspection?	8
How many Notices of Violation did OSM issue?	0
How many Failure-to-Abate Cessation Orders did OSM issue?	0
How many Imminent Harm Cessation Orders did OSM issue?	1

OSM Action for Delinquent Reporting or Non-Payment of Federal AML Reclamation Fees

How many Ten-Day Notices for delinquent reporting or non-payment of Federal AML reclamation fees did OSM issue?	0
How many Notices of Violation for delinquent reporting or non-payment of Federal AML reclamation fees did OSM issue?	0
How many Federal Failure-to-Abate Cessation Orders for delinquent reporting or non-payment of Federal AML reclamation fees did OSM issue?	0

¹ This section does not include actions for delinquent reporting or non-payment of Federal AML fees that are reported in the last section of the table.

² Number of violations contained in Ten-Day Notices not including those issued to refer citizen requests for inspection.

³ Number of Ten-Day Notices issued not including those to refer citizen requests for inspection.