2013 Pennsylvania Annual Evaluation Report

Pittsburgh Field Division – Harrisburg Office

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
United States Department of The Interior

Annual Evaluation Report

for the

Regulatory and Abandoned Mine Land Reclamation Programs

Administered by the Commonwealth

of

Pennsylvania

for

Evaluation Year 2013

(July 1, 2012 to June 30, 2013)

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On the cover is a portion of large Anthracite multi vein remining operation conducted on BET Associates IV, LLC, permit known as the LCN Mine. The photo shows backfilling and remining activities conducted on Job 88, 99 and 111 in Tamaqua and Coaldale Boroughs, Schuylkill County. A total of 273.9 acres are permitted with a reclamation bond in the amount of $3,715,877.00 posted. Shown are the exposed bottom rocks of both the Primrose and Mammoth (background) coal veins. Much of the highwall shown in the photograph pre-existed SMCRA and with remining will be totally eliminated.

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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. OSM also oversees states' implementation of abandoned mine land reclamation programs through approved State Reclamation Plans. This report contains summary information regarding the Pennsylvania coal mining regulatory and abandoned mine land reclamation programs and the effectiveness of these Pennsylvania programs in meeting the applicable purposes of SMCRA as specified in Section 102 and in implementing regulations. This report covers the 2013 evaluation year, from July 1, 2012, to June 30, 2013. 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 regulatory coal mining 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 2013 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 (EY) 2013 (July 2012 through June 2013), 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's abandoned mine land program restoration is effective in abating health, 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 the review period, OSM conducted a total of 315 permit oversight inspections. One hundred fifty of those inspections were oversight complete inspections (OC) of mine sites, with 120 conducted in the bituminous region and 30 conducted in the anthracite region. These inspections covered about 9 percent of the total number of active and inactive inspectable units in Pennsylvania. Other inspections included follow up inspections to track violation and issue resolution, permit file reviews, citizen complaint inspections and other types.

REG-8 requires that OSM conduct independent inspections on approximately 10 percent of the OC inspections. OSM conducted 18 oversight complete inspections as "independent" inspections, meaning

OSM did not give PADEP advanced notice of the permit to be inspected. However, PADEP inspection staff was notified of the geographical area of the inspection so they could arrange 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, some of the reports OSM issued were regarding required inspection frequency compliance, implementation of the Surface Water Protection Technical Guidance, and Total Dissolved Solids leaving mine sites. OSM summarized the findings and recommendations in the annual report. 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 conducted 36 site visits to approved AML projects during various phases of completion. Included were 10 in the Anthracite Region and 26 in the Bituminous Region. When possible, site visits were coordinated with BAMR to give them the opportunity to accompany OSM during the review. The site visits conducted by OSM included 25 construction phase reviews, six final phase reviews, four pre-project reviews, and one post-completion review. Overall, OSM reviews confirmed 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. In addition to the 36 routine project reviews, the PFD conducted 34 field reviews in support of the 131 AML project authorizations issued during the evaluation period.

III. Overview of the Pennsylvania Coal Mining Industry

The coal geology of Pennsylvania is dominated by the Appalachian Mountains running northeast to southwest, dividing the State into two distinct coal regions. 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 2012, Pennsylvania produced 67,551,683 tons of bituminous and anthracite coal at surface and underground mines and refuse mining sites. This is a 7.3 percent increase from the 63 million tons reported for calendar year 2011. Bituminous coal accounted for 57.9 million tons and anthracite production totaled 9.6 million tons.

Coal refuse mine sites produced 5,776,208 tons of material, 1,771,120 tons of which were reported in the bituminous region and 4,005,088 tons in the anthracite region. This important "remining" often results in the restoration of ecologically damaged sites at a savings for the Abandoned Mine Land (AML) Fund, thus increasing the AML acreage that can be reclaimed with the Fund.

Underground mining accounted for 77percent percent of the total coal mined in the bituminous region and 66 percent of coal mined statewide. Bituminous and anthracite surface mining companies produced 16,782,027 tons of coal, which was about 24percent percent of the coal mined in Pennsylvania in 2012.

Bituminous mine operators reported production at 327 mine sites in 2012. That number includes 42 underground mines, 273 surface mines, and 12 coal refuse sites, down from the 355 active bituminous mining operations reported in 2011.

Anthracite mining produced 9,636,631 tons of coal and coal waste on 121 mine sites. Twelve underground mines at anthracite sites produced 114,387 tons, 5,517,156 tons were produced by 64 surface mines, and 4,005,088 tons of coal refuse were removed at 45 sites.

In 2012, 8,280 people were employed in the coal mining industry in Pennsylvania. This is a 10.8percent increase from 2011, when 7,461 people were employed.

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 appoint 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

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 regulations, 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 548 applications for permitting related actions that required the opportunity for public comment, including 170 NPDES permits. 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 767 annual bond calculations and 298 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/or 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 submits informal and formal complaints on ongoing and completed mining operations, bond release requests, and activities related to inspection, compliance monitoring and enforcement activities. During the evaluation year, DEP received 480 citizen complaints, 451 of which were investigated, and resolved by the close of this evaluation year. Complaints not resolved may have been referred to other DEP bureaus for action or otherwise concluded. Complaints can be about many aspects of mining activities

including stream pollution from erosion and mine drainage, blasting effects on structures or water supplies, damage to public roads, mining off-permit, dust, and other mining issues.

B. Outreach by OSM

General Outreach

OSM continued interacting with citizens, industry, and other State and Federal agencies on oversight and State program initiatives.

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, 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.

OSM 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 website under Appalachian Region, Pennsylvania. The web address is shown in Section I. Introduction.

PFD conducted two public hearings to solicit public comments regarding Pennsylvania's proposed amendment to incorporate its coal ash regulations found in Chapters 287 and 290 into Pennsylvania's approved coal mining regulatory program.

V. Major Accomplishments and Innovations in the Pennsylvania Program

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

PADEP has established and funded 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.

Beginning in 2009 and continuing through 2012, 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. In 2013, the Pennsylvania Legislature authorized up to two million dollars per year to be transferred from the Gross Receipts Tax on sales of electric energy in Pennsylvania into the Reclamation Fee O&M Trust Account. This yearly infusion of funds will limit or may even eliminate the need to re-impose the per acre reclamation fee.

When the ABS projects have been completed, revenues and expenses are tracked 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 2013, the Department issued its annual Primacy ABS Bond forfeiture Status Report. Financial highlights from that report follow.

Expenditures from the Reclamation Fee O & M Trust Account for the first half of the Pennsylvania fiscal year, from July 1, 2012, through December 31, 2012, totaled $618,824.37. This represents DEP staff time ($9,569.05), sample costs ($412.22), grants ($480,259.67), and contracts ($123,506.86). The balance in the Reclamation Fee O & M Trust Account as of December 31, 2012, was $3,755,467.51.

The December 31, 2012, balance in the ABS Legacy Sites Trust Account was $5,679,889.13. This balance represents an increase in value of $13,110.94 during 2012.

The money available from the Released Bond account as of December 31, 2012, was $2,176,811.48.

The balance in the ABS Land Reclamation Closeout account as of December 2012 was $3,101,474.93. The sum of additional commitments (designated, but not spent) in this account at the end of December 2012 was $404,608.14. This leaves $2,696,866.79 for additional land reclamation projects.

PADEP reports there are 13ABS forfeited permits with land reclamation remaining. Reclamation is underway on three of these sites. In the 2012 Evaluation year, there were 16 ABS permits with land reclamation remaining. In July 2008, when PADEP first started tracking land reclamation ABS forfeited permits, it reported 51 ABS forfeited permits needing land reclamation.

Three permits with a total of four discharges were added to the ABS Legacy Site list during the evaluation year.

1. Permit number 18870114, M & M Construction Co., Inc, Latherow, was forfeited in 2012. The single discharge is being treated successfully due to updates and repairs to the treatment facility through an agreement with the surety company.
2. Permit number 26753065, PURCO Coal Co., Watkiss Mine. The discharge was discovered years after the site was reclaimed and bonds released. Because the permit was under the ABS system and there are now obligations for treatment of the discharge and no bonds remain, the site became eligible for the ABS Legacy Site list.

   A second discharge was discovered on permit number 26663023, PURCO Coal Co., Spruell Mine, but does not meet the definition of an ABS Legacy site. Even though this discharge will not be tracked via the ABS Legacy Site database, it will be addressed using PADEP SMCRA funds.

3. Permit number 56813054, L & L Mining, Inc., Berkey Strip contains two discharges that are being treated passively. The water analysis shows the raw water discharges are meeting effluent limits and the receiving tributary is not degraded by iron or manganese. More sampling will take place. If the raw water continues to meet effluent limits, a hydrologic review will occur to determine if the discharges can be removed from the ABS Legacy Site list.

The ABS Legacy Sites database tracks 106 discharges emanating from 63 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 financial jeopardy if treatment costs exceed the growth generated by investment income. However, if that occurs, continued treatment costs would be the responsibility of the Reclamation Fee O&M Trust Account.

- There are 65 discharges that are being treated with facilities that are operable – 22 more than reported for EY12. Approximately 16 of these treatment facilities require some repair or rehabilitation work and are in the design phase. PADEP is working to address the maintenance and repair issues through the Reclamation Fee O&M Trust Account.

- Operation and maintenance is conducted by PADEP or private contractors at all the sites with treatment facilities. Grant agreements are in place with The Clean Streams Foundation and Headwaters Charitable Trust for operation and maintenance at several treatment facilities.

- PADEP continues to monitor the progress in addressing ABS Legacy Discharge Sites, by conducting quarterly meetings to discuss the status of sites which do and do not have a completed or properly functioning treatment system. Status of the site is updated quarterly to reflect current site conditions.

A breakdown of the 106 discharges by treatment category follows:

- Treatment system complete – 57
- Treatment system under construction - 6
- Treatment system under design –24
- Work (design) not started –19

PADEP continues to make progress in addressing ABS Legacy Site discharges. Treatment of 57 of the 106 discharges is ongoing. Many sites have the design finalized and are awaiting construction contracts. However, work has not started on 19 discharges (18percent percent of the total). It is noted that almost five years have passed since PADEP submitted a program amendment to address the Federal Court ruling that continued Pennsylvania's reclamation responsibility for permits forfeited under the ABS (the amendment was approved by OSM in August 2010). However, there has been some progress, as four discharges were added, and the number of discharges with no design started increased by only one. Also, the total number of discharges being treated increased by ten - from 47 to 57. Quarterly meetings and routine updates provide an in-depth review and transparency of the discharges and the progress being made to address them. PADEP staff remains committed to ensuring treatment options are addressed at every discharge on the ABS Legacy Site list.

B. Amendments to the Pennsylvania Approved Regulatory Program

During this evaluation year, Pennsylvania submitted one program amendment to incorporate "Coal Program Fee Regulations" into its coal mining program. The amendment identification number is PA-

162-FOR. The amendment includes the definitions of "Major permit revision" and "Permit application fee." The amendment also provides revisions to the language in 25 Pa. Code §§86.3 and 86.17.

There are six State program amendment submissions/packages that are in various phases of the program amendment process. Three amendment packages, PA-156-FOR, PA-157-FOR, and PA158-FOR, address 16 required program amendments identified in 30 CFR 938.16. They are combined in one final rule package to aid in streamlining the approval process.

There are nine required program amendments that require State regulatory program changes. OSM and PADEP remain committed to resolving these required amendments and meet routinely to discuss them. Four of the outstanding required amendments have been submitted to OSM and PADEP management for review and recommendation.

Pennsylvania submitted two program amendment packages in EY 2011, one in EY2012, and one in EY2013 to address deficiencies in its program.

This evaluation year's update includes information on program amendment packages spanning over four years.

1. Evaluation year 2010 remaining submissions:
a. PA-154-FOR Pennsylvania Coal Refuse Disposal Control Act (CRDA).
b. PA-156-FOR addresses sixteen required program amendments – 938.16 (rr), (tt), (uu), (vv), (ww), (xx), (zz), (aaa), (ccc), (iii), (jjj), (nnn), (ppp), and (ttt).

2. Evaluation year 2011 submissions:
a. PA-157-FOR addresses required program amendment 936.16(uuu).
b. PA-158-FOR addresses nine required program amendments – 938.16 (rr), (tt), (uu), (vv), (ww), (xx), (yy), (zz), and (aaa).
c. PA-159-FOR addresses required program amendment 938.16(h).
d. PA-160-FOR State-submitted program amendment addresses Post mining Discharge Effluent Limits.

PA-158-FOR and PA-156-FOR were combined through the April 4, 2011, *Federal Register* notification and reopening of the comment period. PA-157-FOR is included with PA-156-FOR as a separate line item in the final rule package because PA-157-FOR is interrelated with PA-156-FOR.

3. Evaluation year 2012 submission:
a. PA-161-FOR State-submitted program amendment addresses Coal Ash Regulations.

4. Evaluation year 2013 submission:
a. PA-162-FOR State-submitted program amendment addresses Coal Program Fee Regulations and defines "Major permit revision" and "Permit application fee."

The individual program amendment packages are discussed below:

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. 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.

The proposed rule for PA-154-FOR was published in the *Federal Register*, Vol. 75, No. 118, Pages 34962-34964, on Monday, 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 program amendment also 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.

The proposed rule for 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 was added as a separate line item to the proposed final rule with PA-156-FOR during the final rule process because it is interrelated with PA-156-FOR.

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 that administrative reviews of the State's determinations are conducted. The three parts submitted are:

a) Environmental Hearing Board Act (35 P.S. §§ 7511-7516)

b) 25 Pa Code Chapter 1021

c) 25 Pa Code Section 77.352

The proposed rule for PA-157-FOR was published in the *Federal Register*, Vol. 76, No. 46, Pages 12920-12923 on March 9, 2011. PA-157-FOR was added to the proposed final rule along with PA-156-FOR during the final rule process because it is interrelated with PA-156-FOR.

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 for 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). On October 17, 2011, a *Federal Register* notice was published to reopen the comment period.

In July and November 2012, Pennsylvania provided additional information and an acknowledgement letter to Coal Contractors, Inc., for having adequate bond for its land reclamation obligations. On February 19, 2013, OSM published a proposed rule reopening the comment period in the *Federal Register* (Vol. 78, No. 33) to incorporate the additional information provided by PADEP.

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 Pollutional Discharge."

The proposed rule for PA-160-FOR was published in the *Federal Register*, Vol. 76, No. 56, Pages 16714-16715 on March 25, 2011. This amendment is waiting for the required concurrence from the Environmental Protection Agency (EPA), Region III.

PA-161-FOR: On May 24, 2012, PADEP submitted a program amendment to incorporate Title 25, Chapter 290 Coal Ash Regulations into its approved program. The program amendment consists of the definition of "Coal Ash" from Chapter 287 and the Beneficial Use of Coal Ash regulations as found in Chapter 290, Subchapters A, B, C, and D. OSM requested concurrence from EPA, Region III for this program amendment because it impacts water quality. EPA's concurrence was received on October 12, 2012.

The proposed rule for PA-161-FOR was published in the *Federal Register*, Vol. 77, No. 133, Pages 40836 - 40843 on July 11, 2012. Several requests were made for a public hearing. As a result, a subsequent proposed rule was published in the *Federal Register*, Vol. 77, No. 186, Pages 58975 - 58977 on September 25, 2012, to extend the comment period and publish public hearing dates and locations.

PA-162-FOR: On December 19, 2012, PADEP submitted a "Coal Program Fee Regulations" program amendment. The amendment is submitted to revise the language of 25 Pa. Code §§86.3 and 86.17 and includes definitions for "Major permit revision" and "Permit application fee" in 25 Pa. Code §86.1.

The proposed rule for PA-162-FOR was published in the *Federal Register*, Vol. 78, No. 38, Pages 13002 - 13004 on February 26, 2013.

PFD and PADEP remain committed to a cooperative effort to address the backlog of required program amendments. In 2007, there were approximately 40 required program amendments. Significant progress has been made. At the end of the 2013 Evaluation Year, PFD and PADEP had completed work on all

except nine required amendments. The remaining amendments consist of a varying range of issues including the valuation of collateral bonds, retention of sediment control structures, determining success of establishing trees, pre-blast surveys, and restoration of prime farmland.

C. PADEP Reorganization

On September 20, 2011, the Secretary of the PADEP announced a major reorganization. Among other revisions affecting oil and gas, brownfields clean-up, and pollution prevention, PADEP combined stream restoration activities in a newly created Bureau of Conservation and Restoration (BCR). The new bureau incorporated staff that, prior to the reorganization, was assigned to the AMD Set-Aside Program administered by the BAMR. While the new bureau will implement the provisions of the AMD Set-Aside Program, the BAMR will continue to manage the associated grant activities.

BCR is organized into two divisions: Watershed Restoration Division and Conservation Division. The Watershed Restoration Division contains the AMD Set-Aside Program that was formerly part of the BAMR. The BAMR continues to manage the land reclamation activities related to addressing health, safety, and environmental problems.

Over the past year, BCR management has worked to get management staff in place within the watershed restoration division and to fill vacancies in technical positions. The division is almost fully staffed. At BCR's request, OSM has been working with BCR to provide training and mentoring for the large number of new staff in the program. This has been extremely helpful as BCR has worked to develop a solid foundation for the program.

BCR has developed and is beginning to implement an action plan that will map out efforts through the coming year and provide a foundation for continuing into the future. Major components of the action plan include:

- Evaluation, revision, and finalization of the Set-Aside Program AMD treatment guidelines
- Evaluation of current project priorities and establishment of a list of priority watersheds and projects
- Identification of maintenance, repair, and operational needs for existing and new treatment facilities
- Addressing long-term operations and maintenance needs for existing treatment sites
- Development of a grant process to provide funding to eligible organizations for projects that will help the BCR achieve its mission

Several projects involving the construction of new treatment plants and the rehabilitation of existing active and passive systems are underway and are discussed in another part of this report.

D. 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 61percent percent 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 awarded by PADEP to municipalities and watershed groups with oversight and technical assistance provided by BAMR and DMO staff. Since 1999, BAMR has received about $30.8 million from the original Growing Greener program. Under the Growing Greener II program, BAMR has awarded 54 contracts totaling $102.3 million that includes $50.4 million from Growing Greener II and $51.9 million from the OSM AML grants and other sources.

E. 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 to introduce ARRI to Pennsylvania. 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.

During the year, OSM and PADEP jointly provided ARRI training to staff from PADEP's Bureau of District Mining Operations and Bureau of Abandoned Mine Land Reclamation in locations around the state. Training was also provided to the Pennsylvania Game Commission.

BAMR has compiled a listing of all reclamation projects which have incorporated all or some of the FRA principles. There are 24 projects on this list, with five meeting all of the five FRA steps. All of the sites total 268 acres reclaimed to trees, with 140,488 tree seedlings planted. The five fully FRA compliant sites total 45 acres, with 35,489 tree seedlings planted.

In April 2013, the National Park Service (NPS) sponsored two weekends of tree planting on previously

mined and reclaimed lands at the Flight 93 National Memorial Park near Shanksville, Pennsylvania. The land had been reclaimed to grass land by the mining company, and the NPS wanted to create a more natural look and create a wind break for the memorial site.

OSM, with the assistance of PADEP and the Pennsylvania Department of Conservation of Natural Resources (PADCNR) staff, coordinated the tree-planting events. Phase I, consisting of 20 acres, was ripped (deep tilled) in 2011 and planted in 2012. Phase II, consisting of 23.5 acres, was ripped in September of 2012 and planted in April of 2013. The exact acreage to be prepped and planted on the remainder of the site has yet to be determined, but should be between 300 and 500 acres.

Six-hundred volunteers planted over 17,000 seedlings during the last two weekends in April of 2013. This was an effort to restore the white pine – Northern red oak - red maple forest cover type that dominated the site prior to mining. All species planted were major components or associates of this forest cover type. The natural resource professionals recruited as planting team leaders came from the PADEP, Pennsylvania Bureau of Forestry, United States Forest Service, United States Fish and Wildlife Service, OSM, and other organizations. Most of the seedlings were donated by the Pennsylvania Bureau of Forestry.

Phase III, consisting of 30 acres, will be ripped late this summer and planted next April.

Tree planting at Flight 93

F. Other Initiatives and Accomplishments

Unsuitable for Mining Petitions

PADEP has eight petitions to designate areas Unsuitable for Mining (UFM) under review:

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. PADEP staff has completed a technical study of the petition area, and will initiate the rulemaking process if a positive decision is made regarding designation. A proposed rulemaking is possible later in 2013.

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 surface mining, but the initial review has not been completed. Processing of the petition will proceed according to a priority system.

Rasler Run, Springfield Township, Fayette County. PADEP received a petition from the Mountain Watershed Association in 2008 to designate 4,456 acres of land comprising Rasler Run Watershed unsuitable for surface mining, but the initial review has not been completed. Processing of the petition will proceed according to a priority system.

Lower Indian Creek Watershed, Fayette County. PADEP received a petition on May 4, 2010, from the Mountain Watershed Association, but the initial review has not been completed. Processing of the petition will proceed according to a priority system.

Laurel Run Watershed, Springfield Township, Fayette County. PADEP received a petition was received in April 2011 from the Mountain Watershed Association, but have not completed the initial review. Processing of the petition will proceed according to a priority system.

Upper Laurel Hill Creek, Jefferson, Lincoln, Somerset and Milford Townships, Somerset County. PADEP received a petition in December 2011 from the Mountain Watershed Association, but the initial review has not been completed. Processing of the petition will proceed according to a priority system.

Trout Run Watershed, Rush Township, Centre County. PADEP received a petition from the Pennsylvania American Water Co. and the Moshannon Creek Watershed Coalition on February 12, 2012. They have not completed the initial review. Processing of the petition will proceed according to a priority system.

Back Creek Watershed, Fayette County. PADEP received a petition in May 2012 from the Mountain Watershed Association. They have not completed the initial review. Processing of the petition will proceed according to a priority system.

Underground Mine Mapping Projects

PADEP and OSM have funded projects at the University of Pittsburgh (Pitt) for the preservation of historic underground mine maps and at Indiana University of Pennsylvania (IUP) for the scanning of historic underground mine maps. These maps are important for the safe development of future underground mines to prevent mining incidents like the 2002 Quecreek Mine accident. Historic mine maps can also be important for the development of oil and gas resources and for surface development in areas of the state that were previously mined. 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 cooperative agreement between PADEP and Pitt has provided for the restoration and preservation of historical abandoned underground coal mine maps (donated to Pitt by Consol Energy, Inc.) since 2009 to facilitate scanning and stabilize the maps for long term storage. These maps are then transported to the National Mine Map Repository (NMMR) in Pittsburgh for scanning.

Through the end of 2012, Pitt accomplished the following:

- 736 historic mine maps were surveyed;
- 552 maps were dry cleaned;
- 167 maps were humidified and flattened;
- 247 maps were mended;
- 104 maps had tape removal performed;
- 48 maps were relined; and
- 532 maps were scanned.

PADEP's Cooperative Agreement with Pitt will continue through September 30, 2013. Pitt has been granted a Mine Map Grant which, when finalized, will continue historic mine map preservation for the next three years. The Mine Map Grant Program was started in 2013 with state funding.

IUP was awarded a Mine Map Grant in 2013 which, when finalized, will continue the scanning of large format maps from the Rochester & Pittsburgh Coal Company map collection located at IUP, as well as other maps held by DEP and others. This project began with an Intergovernmental Agreement between DEP and IUP in 2009 along with grants from OSM. IUP has scanned over 1,100 maps from the Rochester & Pittsburgh Coal Company map collection and over 3,500 large format maps from various collections held by PADEP and others.

Statewide digital maps are available to all DEP staff and the public in the Pennsylvania Mine Map Atlas on Penn State's Pennsylvania Spatial Data Access (PASDA) Web GIS system at http://www.minemaps.psu.edu/. PASDA developed the Pennsylvania Mine Map Atlas for PADEP using state funds.

Collection and preservation of historic underground coal mine maps is important to PADEP, industry, watershed groups, and individual citizens. These maps are used 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.

Fourth Five-Year Report on the Surface Effects of Underground Mining

PADEP has contracted with the University of Pittsburgh for the fourth five-year report as mandated by the Pennsylvania law known as Act 54 of 1994, which amended the Bituminous Mine Subsidence and Land Conservation Act (BMSLCA) of 1966.

The Act 54 Five-Year Report provides 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 reports may be accessed at: http://www.portal.state.pa.us/portal/server.pt/community/act_54/20876

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 focus on dealing with the conductivity/TDS requirements and reasonable assurance of meeting the state water quality standards.

In June 2013, the Bureau of District Mining Operations issued a Standard Operating Procedure for enforcing NPDES Permit Requirements on Mine Permits. This procedure includes reviewing Discharge Monitoring Reports submitted by the operators, identifying effluent violations, and issuing appropriate enforcement actions. This represents a significant advance in the Bureau's oversight and enforcement program. Previously, effluent exceedance violations would only be issued based on samples collected by the Bureau's Surface Mining Conservation Inspector.

G. Title IV of SMCRA AML Reclamation

The Pennsylvania Title IV Abandoned Mine Land Program was approved in July 1982. The program is administered by the Bureau of Abandoned Mine Reclamation (BAMR) in three offices. There are project development, design, contract administration, accelerated response, and small project construction groups in Wilkes-Barre and Ebensburg. There is also a project design group and overall program administration in Harrisburg. In 2012, BAMR reported 151 full-time equivalent positions being paid through the Title IV AML grant. The Title IV grant award in 2013 was 61.7 million dollars.

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 26 major projects for a total of 237 acres of land reclamation. The total construction cost for these projects is 4.4 million dollars. Reclamation included 16,660 linear feet of dangerous highwalls, numerous deep mine shafts and entries, one water line extension project to address impacted drinking water supplies, mine subsidence, and mine fire control projects.

During the year, contracts were awarded on 39 new projects at a cost of 29.9 million dollars. At the end of the evaluation period, the Bureau of Abandoned Mine Reclamation (BAMR) had 43 projects under construction at a total cost exceeding 46.4 million dollars. Upon completion, these projects will address approximately 1,280 acres of abandoned mine land. Preparing for future reclamation, BAMR has approximately 91 projects in some stage of design and approximately 99 under development.

During the evaluation year, PFD issued 131 Authorizations to Proceed (ATP), upon review of environmental and AMLIS information submitted by BAMR, and completion of documentation required by the National Environmental Policy Act (NEPA). PFD visited 34 of the sites to review the information provided.

Examples of AML Projects completed by PADEP in EY 2013

BBS Coal Company Abandoned Mine Reclamation Project Montgomery Township, Indiana County, Pennsylvania

Completed in July 2012, the "BBS 1 Mine" site was a Priority 2 project that reclaimed approximately 57 acres of abandoned mine land using approximately 1.2 million cubic yards of on-site spoil material. Approximately 4,500 linear feet of dangerous highwall up to 160 feet high, along with steep spoil embankments will be re-graded to eliminate a public health and safety hazard. The reclaimed area will have milder slopes that blend in with the adjacent topography. Approximately 2,240 linear feet of gas line was relocated to facilitate the backfilling operations and a gas well access road was constructed to access the new gas line and nearby gas wells. The site was re-vegetated with a grass and legume seed mixture suitable for abandoned mine sites. Photos below.

Pre-reclamation

During reclamation

Post-reclamation

Crown/Tylersburg Abandoned Mine Reclamation Project – Farmington Township, Clarion County

This project was completed on May 13, 2013 for a cost of $321,626. The project reclaimed 23.5 acres containing dangerous highwalls, water filed pits with degraded water quality, and associated spoil areas. Eighteen acres were reclaimed using the FFRA of the ARRI program. That acreage was planted with 5,250 tree seedlings native to the region. Photos below.

Prior to reclamation

After reclamation - Area planted with trees.

North Belle Vernon, Westmoreland County – Subsidence Control Project

This accelerated response project consisted of injecting a sand/grout mixture into mine voids beneath a private residence to stabilize the structure, which was showing severe settling damage. The project was completed on January 9, 2013, at a cost of $135,262. After treatment, the property owner is responsible for structural repairs. Photos below.

Subsidence damage before reclamation

Grout injection

Completed Project

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 small state workforces conduct 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.

The Bituminous District (BD) crew, located at the Cambria Office in Ebensburg, is made up of two Construction Foremen and five Equipment Operator B's. The BD Crew is called upon to correct a variety of AML problems that pose health and safety concerns to the public. These projects address: mine subsidence holes, single home stabilization projects, stray gas / mine gas problems, abandoned surface mines, acid mine drainage, dangerous slides, impoundments, clogged mine drains, mine blow outs, and mine fires. During the past year, the BD crew completed over 120 projects, including 35 accelerated projects addressing the kinds of problems that were previously addressed by OSM's emergency response program. The BD Crew also has provided assistance at the Department's active treatment plants and passive treatment systems. 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 settled, to removing debris or repairing ditches clogged by weather- related events. During this review period, the AD Crew completed 46 projects.

Accelerated Reclamation Projects

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. Pennsylvania was encouraged to assume the responsibilities of the emergency response program as a part of its State Reclamation Plan. Many state AML programs have accepted the emergency

response program, but Pennsylvania has not. However, to respond effectively and protect Commonwealth citizens, Pennsylvania adjusted their project investigation, development, and construction process to accelerate reclamation activities on sites that were previously addressed by the OSM emergency response program.

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 to expedite reclamation of certain sites. However, this accelerated procedure does not provide the documentation variances which could be made available to PADEP should they assume the full emergency program. All required project documentation, including NEPA compliance must be submitted as a part of the Authorization to Proceed (ATP) process administered by PFD.

During the evaluation period BAMR responded to 62 problems where an accelerated response was deemed necessary and completed or initiated the necessary repairs on 61 sites. PFD staff 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 included 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. In EY 2013, BAMR spent approximately 2 million dollars on construction and incurred $300,000 in personnel costs to investigate and/or address accelerated response projects. In addition, Pennsylvania redirected resources, both personnel and equipment, which were previously assigned to routine AML program projects.

Pittsburgh International Airport Radar Tower Spoil Fire Accelerated Reclamation Project
Findlay Township, Allegheny County

During the evaluation period, BAMR completed the Pittsburgh International Airport Radar Tower Spoil Fire Accelerated Reclamation Project to quickly isolate an underground fire burning in abandoned mine spoil piles, until a full excavation and extinguishment project could be designed, bid, and constructed. The completed project extended an existing trench and created a firebreak to prevent the rapidly advancing fire from moving into ground underlying a nearby airport radar tower facility and a high-pressure gas transmission pipeline. The contractor, in excavating the new 900-foot long trench, removed and relocated 12,700 cubic yards of spoil material, to a depth below the bottom of the coal seam. The disturbed areas were subsequently seeded with grasses and legumes to prevent erosion.

This project is another example of how BAMR and OSM collaborate to expedite project development, design, administrative reviews, and construction when AML problems pose serious immediate risks to public safety and require prompt action. Design work for the second-phase project, which will follow standard contracting procedures, is currently underway.

Hot zones atop the burning spoil piles

Completed trench separates burning spoil from the buried gas transmission line

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. In addition, 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, 346 Government-Financed Construction Contract (GFCC) project applications have been submitted since the program's inception.

During the evaluation year, 12 AML Enhancement Rule projects were completed reclaiming 93 acres of surface mine affected lands. The completed projects represent approximately $897,369 in reclamation savings to the AML program. Completed projects reclaimed barren land, eliminated 7,050 feet of abandoned highwall, and addressed 20.3 acres with mine subsidence features. PADEP approved eight complete applications. During the evaluation year, PADEP accepted six new applications. PADEP has a rigorous site review and application process. PADEP includes PFD in the initial pre- application site review and the public in the review of the application. PADEP rejects applications for reasons that may include site eligibility problems, incomplete documentation, and potential water-related problems. During the period, PADEP did not reject any formal applications. Applications are occasionally withdrawn by the applicant or are simply not pursued to contract.

Pennsylvania's AMD Set-Aside Program

As of June 30, 2013, Pennsylvania has a balance of $51,667,453 in the AMD Set-Aside fund. The total accumulated revenue with interest that has been placed into the fund since inception is $101,193,618. Within the fund, Pennsylvania has established an O&M Treatment 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 $6,140,697 has been reserved for this purpose.

Pennsylvania's AMD Set-Aside Activities

During the evaluation period, the BCR began design to construct new AMD treatment Plants and upgrade others as discussed below. BCR currently uses AMD Set-Aside Funds to operate and maintain treatment plants at the following locations:

Hollywood Treatment Plant
Brandy Camp Treatment Plant
Toby Creek Treatment Plant
Coal Hollow Treatment Facility
Swamp Creek Treatment Facility
Wildwood Treatment Plant
Rausch Creek Treatment Plant

BCR also is responsible for operating and maintaining numerous passive treatment facilities.

Hollywood AMD Treatment Plant

The Hollywood AMD Treatment Plant is located along the Bennett Branch Sinnemahoning Creek in Huston Township, Clearfield County, near the border with Elk County - an area known as the PA Wilds. This area was designated by the Commonwealth of Pennsylvania 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. The Bennett Branch has been degraded by mine drainage from numerous abandoned deep and surface mine discharges. This facility was located to treat 21 of the most significant discharges in an effort to restore the lower 33 miles of the Bennett Branch and the unique recreational opportunities of the region. These discharges are routed through pipelines to three pump stations that pump the mine drainage into the plant. The plant is operated and maintained by the Bureau of Conservation and Restoration (BCR). The annual operating budget for the plant is $400,000.

The plant became fully operational on July 1, 2012. Flows into the plant have ranged between 300,000 gallons per day during low flow conditions to 10 million gallons per day during higher flow conditions. The average flow into the plant has been approximately 2.7 million gallons per day. The acid mine drainage pumped into the plant typically has a pH of 3.4 and the treated effluent from the plant to Bennett Branch has a typical pH of 7.5. The plant has also significantly reduced the metals in the water to In-Stream Water Quality Criteria and has increased alkalinity to the stream. Water sampling results below the plant have the pH in the range of 6.9 to 7.2 with iron levels between 0.5 and 1.3 and aluminum levels between 0.5 and 0.7. The alkalinity has been in the 20 to 30 range with no acidity.

From treatment of AMD at the Hollywood plant and other locations of active and passive treatment, water quality in the Bennett Branch watershed has steadily improved. Recent sampling from this past spring (2013) at points along the Bennett Branch has shown the pH's to be in the 6 to 7 range. From these results, the Bennett Branch was stocked by the Pennsylvania

Fish and Boating Commission with trout for the first time ever on April 6, 2013. This enabled fishing in the Bennett Branch for the first time in over 60 years.

Toward the end of last summer into the fall (2012), during low flow conditions, there were instances of lower pH readings in the Bennett Branch below the plant. It appears that additional AMD discharges below the plant had a larger than normal effect on the stream due to the lack of rainfall and lower flows treated at the plant that resulted in a lack of stream dilution. A week-long decarbonation study at the Hollywood Treatment Plant is being conducted with the help of OSM to evaluate the effect decarbonation has on effluent alkalinity. This study will determine if operational adjustments at the plant can increase effluent alkalinity and provide the Bennett Branch with the buffering capacity needed to maintain a higher pH in the stream during these conditions.

Hollywood AMD Plant

Brandy Camp Treatment Plant

BCR is currently preparing a design contract to upgrade the Brandy Camp Treatment Plant. The upgrade will convert the plant from treating acid mine drainage through a lime silo and polymer to utilizing hydrogen peroxide and hydrated lime slurry. The use of hydrogen peroxide and hydrated lime slurry will reduce the amount of sludge generated. It will only require the sludge to be removed from the settling pond once a year versus twice a year with the current treatment. The yearly savings in operational costs will be approximately $69,500 with the hydrogen peroxide and hydrated lime slurry treatment.

An additional settling pond was also constructed at the Brandy Camp Treatment Plant to provide more capacity for treated water. The pond will also provide for settling of treated water when it needs diverted from the existing settling pond. Prior to construction of the additional pond, when water needed to be diverted from the existing settling pond, it was diverted through a bypass pipe untreated to the stream. The BAMR assisted with the design of the additional settling pond. The

BAMR Construction Crew did the construction.

Blacklick Creek Treatment Facility – Vinton/Wehrum mine pool connection Indiana County

PADEP's Bureau of Conservation and Restoration (BCR) has developed a Scope of Work. They will be soliciting for comprehensive design services related to BCR's proposed Blacklick Creek Treatment Facility located in Buffington and East Wheatfield Townships, Indiana County.

BCR is requesting design services for a project that will combine mine water discharges to facilitate future design of the Blacklick Creek Treatment Facility (BCTF), including collection, conveyance, and combining the Vinton #6. This will also include contribution from the Commercial #16 (Red Mill) discharge and Wehrum Mine pools, located in Buffington and East Wheatfield Townships, Indiana County, to allow for future treatment of all of the mine water at one location. This scope of work also includes assessment of the treatment plant site and evaluation of potential sludge disposal.

The treatment of the above discharges is expected to restore a recreational fishery to the mainstem of Blacklick Creek, down to its confluence with Twolick Creek, a distance of 23 miles. The above-connection design phase will be followed by a project to construct facilities to convey the discharges to the proposed treatment plant location. This phase will be followed by a treatment plant design phase, followed by plant construction in approximately 2015-2016.

Cresson AMD Treatment Plant

The BCR has entered into a contract with GAI Consultants, Inc., to begin design of the proposed Cresson Acid Mine Drainage Abatement Project, Task No. AMD 11(2724)102.1, located in Allegheny, Cresson, and Gallitzin Townships, and Sankertown Borough, Cambria County. PADEP had previously entered into an agreement with the Susquehanna River Basin Commission (SRBC) to provide treated AMD to the West Branch Susquehanna River. The proposed AMD treatment facility will be located in the Clearfield Creek watershed, a major tributary of the West Branch Susquehanna River. The facility is expected to provide up to 6.3 million gallons per day (MGD) to users in this river basin for agricultural consumptive use during low-flow conditions and to aid in the restoration of water quality in the main stem of Clearfield Creek.

The scope of this project includes the design of three (3) mine pool withdrawal wells, approximately 8,000 linear feet of pipeline, a treatment plant to treat up to 6.3 MGD of AMD, two (2) abandoned mine sludge injection wells, access roads, and necessary site amenities to serve the treatment plant facility.

The goal of the treatment facility is to mitigate pollution discharged into the watershed to restore consistent conditions for a recreational fishery, as well as to use treated mine drainage water to provide additional water to the West Branch Susquehanna River to compensate for consumptive use during periods of low stream flow. Design is expected to take approximately one year and

will be completed by July 2014. Construction is expected to begin by the end of 2014.

Rausch Creek AMD Treatment Plant - Schuylkill County

Evaluation of the Rausch Creek AMD Treatment Plant (RCTP) has been initiated. The comprehensive evaluation will explore the current treatment process used at the plant along with an evaluation of the entire Rausch Creek Watershed.

The RCTP was originally constructed in 1973 and was built to treat the entire acidic flow of Rausch Creek which has a drainage area of approximately nine square miles. The maximum flow that can be treated by the plant is approximately 11,000 gpm. The plant was originally designed to treat the entire flow of Rausch Creek due to the numerous large and small mine discharges in the watershed from both active and abandoned mine workings. During the design phase of the treatment plant, the acidic waters of Rausch creek also impacted Pine and Mahantango creeks to the confluence with the Susquehanna River.

Currently, the stream is primarily impacted by three abandoned mine discharges: Valley View Tunnel, Markson Airway, and Orchard Airway. Also, the water is generally net alkaline with elevated iron levels and minor occurrences of net acidic water.

The BCR Set Aside Program along with assistance from OSM is evaluating the current chemical treatment used at RCTP and is exploring other means to treat the mainly iron-laden water. The group is also exploring the feasibility of piping two of the three abandoned discharges directly to the plant and passively treating the third. In doing so, the natural flow of Rausch Creek will bypass the treatment plant and prevent any damage, especially during high flow events.

2013 Abandoned Mine Lands Project Reviews

PFD 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 PFD conducted 36 site visits to approved priority one and two AML reclamation projects during various phases of completion. These included 26 reviews in the Bituminous Region and ten in the Anthracite Region. When possible, site visits were coordinated with BAMR which is offered the opportunity to accompany PFD during the review. PFD 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 25 construction phase reviews, four pre-construction reviews, six final reviews, and one post-construction review. Types of AML problems reclaimed included mine subsidence, highwalls, refuse material, AMD treatment, landslides, and mine closures. Overall, PFD 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.

In addition to the 36 routine project reviews, the PFD conducted 34 field reviews in support of the 131 AML ATPs issued during the evaluation period. ATP field reviews are scoped to look at the potential impacts of project construction activities on environmental resources and to confirm that site assessments supporting agency findings under the National Environmental Policy Act are complete and accurate.

The PFD AML site visit form contains questions regarding the reclamation contract performance. The following observations were collated from the inspection reports.

1) Project Goals and Objectives were met on ten of the ten or 100 percent of the Anthracite Region projects and 24 of the 26 or 92 percent of the Bituminous Region projects.

   a) Bituminous Region

      Camp Run No. 3 (Fran Contracting) - AMD Remediation. Prior to the PFD inspection, the contractor had excavated a 20' x 50' area at a depth of about 50 feet to the coal seam. However, the coal seam was much smaller than anticipated and it was determined that the seam was most likely not a source of AMD. The contractor lined the excavated pit floor with lime as a precaution and installed a subsurface drain to convey pit floor to a rock energy dissipater at the surface. The pit was then backfilled with the spoil material containing alkaline addition. Since the size of the coal seam was much smaller than anticipated, it was determined that it was not a source of AMD.

      Hyde Park –Subsidence Control. During drilling activities the majority of the material found was collapsed/broken material from the mine roof. One of the goals of a drilling and grouting project is to find open voids to allow the grout under the structures for stability. Since this goal was not being reached, additional holes had to be drilled to find the open voids which initiated a change order and amended the contract price.

2) Quality of work was satisfactory on ten of the ten or 100 percent of the Anthracite Region projects and 26 of the 26 or 100 percent of the Bituminous Region projects.

3) Contract time extensions were granted on one of the ten or 1 percent of the Anthracite Region projects and one of the 26 or 4 percent of the Bituminous Region projects.

4) Contract modifications were not completed on any of the ten Anthracite Region projects reviewed. Seven of the 26 or 27 percent of the Bituminous Region projects were reviewed as discussed below.

   a) Bituminous Region

Hyde Park Subsidence –Additional boreholes were drilled to find the open voids . This initiated change orders and amended the contract price. The contract was also modified to add additional grout material, mainly the quantity of sand since aggregate was not used in the majority of the voids.

Green Street Subsidence - The contract was modified to add additional grout material which increased the contract price. The quantity of sand was largely increased since aggregate was not used in the larger voids at the inspector's discretion.

Annandale South - During earthmoving activities in Area 1, it was discovered that the invert elevation of the outlet of a subsurface drain, which is intended to supply the water to the permanent pond, was approximately five feet below the invert elevation provided on the design plans. This was due to one of the existing impoundments in Area 1 being at a greater depth than was shown on the design plans. The permanent pond was designed to hold a water depth of ten feet. However, due to the inaccurate depth measurement of the impoundment, the permanent pond would only hold approximately half of the anticipated amount in the design. The additional excavation of the pond was figured to be equivalent to 25,000 cubic yards of material. Therefore, a contract modification was submitted for this additional excavation, the lowering of the water intake structure, and additional pipe needed for the in-line water level control structure.

Crown – the contract was modified so that appropriate seeding and alkaline addition was used since this was an ARRI project. Additional Alkaline material was needed throughout the entire backfilling process not just the top two feet of finished grade as stated in the plan. If the ARRI areas were going to be seeded to establish vegetation, it was recommended by DEP personnel that hydro-seeding with hydro-mulching should be used rather than the conventional mulching as indicated in the original contract. These two amendments increased the contract amount.

Keister's Southeast – During construction, multiple seeps were identified above the highwall that were not identified during the design phase. The flow from the seeps created multiple erosion gullies throughout the graded area. To prevent future erosion, a contract modification was submitted to construct a grass-lined swale to convey the water to the drainage way and to add an Erosion Control Blanket to prevent the swale from eroding until vegetation was established.

Pine City - The contract was modified to add an additional 8,000 cubic yards of grading to the lump sum line item, which increased the contract price. The inspector supervisor was contacted by PFD requesting details of the additional 8,000 cubic yards of grading and how this was determined. However, there was no response.

Houtzdale – Numerous contract modifications were submitted for this project for a number of reasons including: the construction of a wind/sound barrier due to a homeowner complaint; additional boreholes were drilled within the design footprint to ensure proper stability of structures; and additional materials, as part of the grout mix, were needed to fill the additional voids found.

PFD concurred that the contract modifications were needed to meet the project reclamation objectives.

5) Adequate E&S Controls were in place on nine of the ten or 90 percent of the AR projects; 24 of the 26 or 92percent of the BR projects.

a) Anthracite Region

Alden Mountain East – PFD found areas on the site where the "waddles" were not working properly and areas where waddles were needed to prevent off-site impacts.

b) Bituminous Region

Grassflat – During the excavation and backfilling of a mine opening, the contractor unexpectedly increased the flow of an existing mine discharge originating from the opening, resulting in an approximately 3 gpm flow of AMD. The AMD was flowing down the southwestern end of Area B, creating runoff and entering into a roadside ditch. The discharge point had a pH of 5.5 and Iron of 1.5. Discussions took place with the inspection supervisor and PFD recommended conveying the discharge to a rip rap channel as stated in the specifications. According to the specifications, the rip rap channel should have been constructed prior to the backfilling of the mine opening. The rip rap channel was constructed within a week and the AMD was redirected to this channel as specified.

Truittsburg Southwest - The specifications and plans state that the rock construction entrance as well as the other E&S Controls should be installed prior to any grading. During the OSM field review, there were no E&S Controls installed and the contractor had finished backfilling one of the highwalls and was actively grading the area. The contractor failed to install the required silt fencing at least in the area he was excavating. A small pile of brush was placed to the east of where the silt fencing should have been installed. The pile would not have been sufficient to prevent off-site impacts after a rain. The Contractors Work Area (CWA) was very close to Hickory Ridge Road, is the area in which the contractor was actively grading. Material was not leaving the site the day of the review. However, there could be major problems with runoff onto the roadway after a rain or snow melt. The lack of the needed rock construction entrance could result in similar problems if not installed. The BAMR Inspector Supervisor was notified the day of the site review. The necessary E&S Controls were installed the following day.

6) State monitoring during construction was achieved on ten of the ten or 100 percent of the AR projects; 25 of the 26 or 96 percent of the BR projects.

a) Bituminous Region

Truittsburg Southwest – the proper E&S Controls were not installed prior to the beginning of work due to the lack of State monitoring at the site. Part of the State monitoring will ensure that proper E&S Controls are installed prior to the start of work. OSM contacted the BAMR Inspector Supervisor contacted the day of the site review. OSM suggested the State provide adequate monitoring of the site to ensure compliance with the E&S Control Plan.

VI. Success in Achieving the Purposes of SMCRA

OSM's national regulatory program oversight guidelines known as REG-8 require 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 (Environment, Facility, Application, Compliance Tracking System) database. Off-Site Impacts are grouped as impacts on people, land, water, and structures, and include 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) off the permit area. 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, affecting a large area, and/or having a major impact to the receiving stream. This 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 eFACT. eFACTS is PADEP's permit data management system.

Discussion of impacts

During the 2013 evaluation year, PADEP inspectors conducted partial and complete inspections on 1,775 active, inactive, surface, underground, refuse, and preparation plant permits and reported 198 off-site impacts. There were an additional 30 bond forfeited permits where the lands have been reclaimed, but contain moderate off-site untreated pollutional discharges. An additional 38 bond forfeited permits have ongoing water treatment facilities. This report focuses on the off-site impacts from the active and inactive permits.

There were 126 unique permits included in the off-site impacts. At the end of the EY, PADEP reported 1,775 inspectable units. Thus, about 93 percent of inspectable units were reported as free of off-site-impacts for the year. The 2012 Annual Report showed 91percent of the active/inactive permits were free of off-site impacts. The 2011 annual report showed 92 percent of the permits were free of off-site impacts. PADEP continues to maintain a high level of permits free of off-site impacts.

The 198 off-site impacts collected this year are identified by PADEP as 11 major, 41 moderate and 146 minor (**See Figure 1.)** They are categorized as follows: 157 water (79 percent of total), 33 land (16 percent of total) 4 people (4 percent of total), and 4 structures (3 percent of total.)

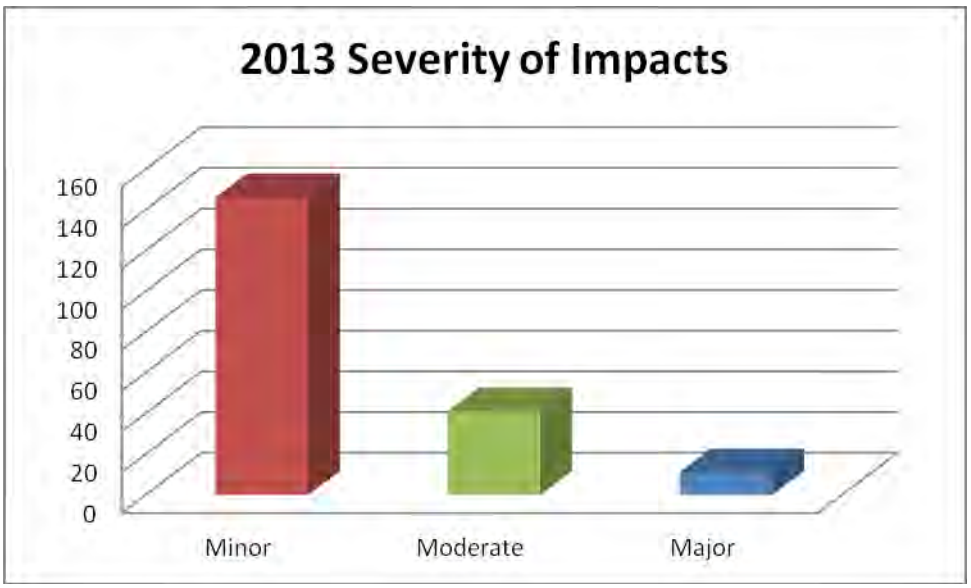


Figure 1. Off-site impacts by category

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 147 hydrology impacts (75 percent of the total). Of the 149 hydrology impacts, 5 were major, 25 were moderate, and 119 were minor. The five major hydrology impacts were for the following violations:

- One for failure to conduct mining activities to protect fish and wildlife

- Two for failure to properly design, construct or maintain erosion and sedimentation controls

- One for failure to control pond discharges to prevent erosion

- One for discharging effluent which does not meet regulatory limits

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

Figure 2. Hydrologic off-site impact in the Bituminous area of Pennsylvania

The second largest category of off-site impacts fell into the other category with 25 impacts (13 percent of the total). There were three major impacts with violations cited for the following reasons:

- One for conducting mining activities without a valid mining license.

- Two for conducting mining activities without a permit.

Moderate and minor violations were listed for the following citations: Failure to properly design, construct or maintain erosions and sedimentation controls; failure to comply with the terms and conditions of the permit; discharging water that does not meet quality limits; failure to revegetate disturbed areas in accordance with approved plans; failure to conduct required surface water monitoring; failure to maintain treatment facilities; and others.

There were 15 land stability impacts (7 percent of the total) with 11 moderate impacts associated with the following violations:

- One for failure to apply mulch to regarded and top-soiled areas.

- One for failure to plant disturbed areas during the first planting season after backfilling.

- Six for failure to properly design and construct erosion and sedimentation controls.

- One for failure to apply mulch to top soiled areas.

- One for failure to backfill concurrent with mining.

- One for failure to maintain haulroads.

There were no major land stability impacts.

Encroachment had seven violations (3 percent), with three major impacts, two moderate impacts, and two minor impacts. The major impacts were associated with the following violations

- Unauthorized impoundment.

- Failure to comply with the terms of the permit.

- Mining in an unbonded area.

The category with the fewest number of off-site impacts was blasting with four minor violations (2 percent):

- Two for failure to conduct pre-blast surveys.

- Two for exceeding the peak particle velocity limits.

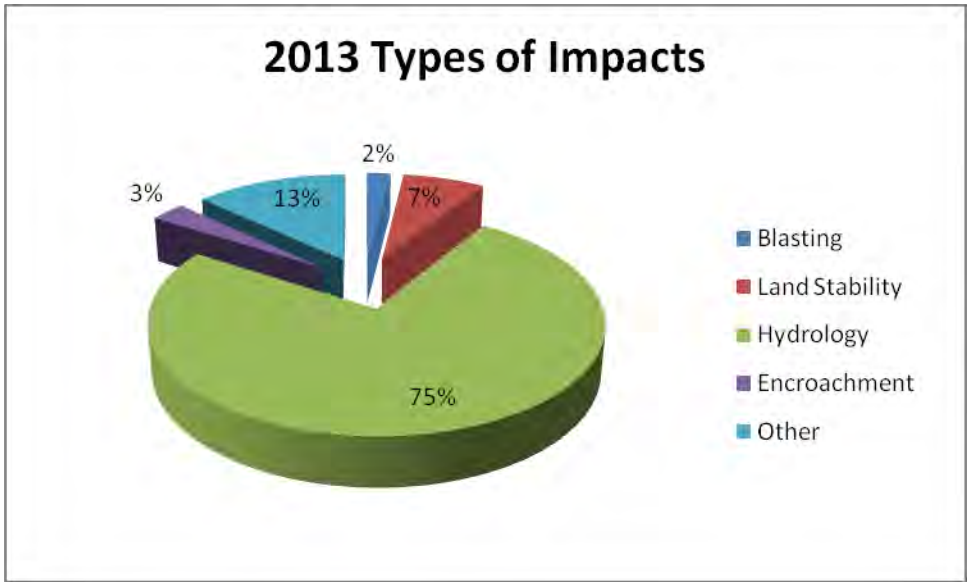


Figure 3: Total number of off-Site Impacts by Type

OSM inspectors conducted 150 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. This year, 11 of the 109 violations observed were considered to have resulted in off-site impacts. The off-site impacts included six violations related to "hydrologic impacts;" four violations related to "encroachment;" and one violation related to "land stability." Thus, 93 percent of the permits which OSM inspected were

free of off-site impacts. This compares favorably to PADEP's report of 93 percent of permits free of off-site-impacts. In EY 2012, 86 percent of the permits inspected by OSM over the course of the evaluation period were free of off-site impacts.

An analysis of the PADEP data determined that various categories of violations were being reported as off-site- impacts, when it was not evident how the violation could result in an off-site-impact. Also, some violations were reported as having no off-site impacts, when it seemed an impact should have been reported. OSM will meet with the DMO inspector supervisors in EY 2014 to discuss the issue.

Conclusions

The number of permits with no off site impacts has remained consistently high for the last several evaluation years. In 2011 evaluation year, there were 201 off-site impacts recorded for 1,388 active and inactive permits for an 86 percent compliance rate assuming one off-site impact per inspectable unit. The 2012 evaluation year reports 136 off-site impacts for 1,463 active and inactive permits for a 91 percent compliance rate. In 2013, 198 off-site impacts were reported on 126 permits of 1,775 inspectable units, providing a 93 percent compliance rate. Hydrology still remains the highest source of off-site impacts with failure to properly design, construct, or maintain erosion and sedimentation controls, and discharging water that does not meet quality limits being overall the largest violations.

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 are 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 operators' reporting on the Annual Bond Review and Coal Completion Reports. Only acreage achieving Stage I, II, or III requirements since the last report, is placed on the current review. This information is entered into eFACTS and compiled every year for Table 6.

For the current evaluation year, PADEP reports 5,291 Stage I acres; 6,045 Stage II acres; and 6,162 Stage III acres reclaimed, for a total of 17,498 acres. The stage I, II, and III acres reclaimed and total is higher than EY 2012, when 10,386 total reclaimed acres were reported, and EY 2011, when 13,138 total reclaimed acres were reported. PFD also notes that the number of permits is higher this year (1,775) which reverses a gradual decrease in the number of permits in recent years. The number of permits had decreased from 1,731 in 2011, to 1,649 in 2012 to 1,596 in 2013.

In Evaluation Year 2013, 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 2013 Reclamation Success Inspection Form was completed for 35 permits where reclaimed acreage was reported. An additional 47 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. Most of the permits reporting no acres reclaimed were still in active mining operations. Thus, they were not required to meet Stage I reclamation standards.

Nineteen of the permits reported acreage meeting Stage I requirements (mining completed and area backfilled and planted). Twelve of the permits reported acreage meeting Stage II reclamation standards (vegetation established, with 70 percent coverage). Two of the permits inspected reported Stage III reclamation (vegetation requirements met for five years). PFD permit selection process for oversight emphasizes permits actively producing coal. Therefore, PFD inspections would show more Stage I and II reclamation. A total of 373.2 acres of Stage I reclamation was reported by the operators, and PFD verified that 572.5 acres met Stage I requirements on the same permits. A total of 199.3 acres met stage I requirements and had not been reported by the operators. A total of 209.9 acres of Stage II reclamation was reported by the operators, and PFD verified that 504.2 acres met Stage II requirements. Therefore, 294.3 acres had not been reported by the operators. A total of 43 acres of Stage III reclamation was reported by the operators, and PFD verified that 67.4 acres met Stage III reclamation requirements. In addition, PFD found six permits where Stage I backfilling had been completed with no report in the ABR; two permits where reclamation was complete with no report in the ABR or CCR; and one permit where the reclamation was complete, but only Stage I acreage had been reported.

The fact that PFD 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 PFD's inspections. One would expect mining and reclamation activities to advance between the submittal of the ABR or CCR and PFD's inspection, and that the acreages would catch up. However, a concern that needs to be addressed in discussions with PADEP is that on 10 permit inspections by PFD, Stage I reclamation acreage was observed, and the ABR or CCR indicated Stage I reclamation on two of those permits. Similarly, there were six permits with Stage II acreage observed with two of those reported in the ABR or CCR. These acreages may be lost in the system as reclamation advances to later Stages. Also, the discrepancies between operator-reported reclaimed acres and PFD-observed acreages does raise the concern that large numbers of acres are not being reported. The elimination of the Forester positions in the Bureau of District Mining Operations, who were responsible for verifying reclamation acres submitted on the two bond review forms, may be causing a growing gap between acres reported and actual acres reclaimed.

There are several other possible explanations for these discrepancies. The acreage was previously reported and no additional reclamation had met Stage I, II, or III standards; the operator was waiting for bond release to report the acreage (which would be an incorrect procedure); the acreage was not being entered timely into eFACTS; or other explanations. In EY 2014, PFD will investigate these observations with PADEP.

PFD notes that PADEP is in the process of eliminating the ABR, in favor of a mid-term and

renewal bond review. The operators will still be required to report acreage reclaimed, but it would be on longer term intervals. PFD will take this opportunity to evaluate the process used for collecting reclamation success data for Table 6.

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. In EY 2012, PFD initiated a customer service study involving PADEP's implementation of Technical Guidance 563-2000-655 – Surface Water Protection – Underground Bituminous coal Mining Operations. The loss of stream flow from underground mining activities is of great concern to individual citizens and environmental groups in south west Pennsylvania.

PADEP uses Technical Guidance Document 563-2000-655 to outline the strategy to ensure underground mining activities are designed to protect the hydrologic balance and to protect and maintain the existing and designated uses of perennial and intermittent streams. The purpose of the guidance is to provide direction to staff who review underground mining applications and to provide direction to coal operators on how to comply with regulatory requirements. Technical guidance documents are not regulations and the state may deviate from the guidance if conditions warrant.

The guidance is extensive and outlines a wide array of procedures, including permit application requirements, mitigation requirements, impact and restoration monitoring requirements, impact and restoration evaluation criteria, and pre- and post-mining inspection requirements. OSM developed an oversight study that was limited to evaluating compliance with permit application requirements outlined in Section IV.1.d and e of the Technical Guidance. This section of the guidance outlines the permit application requirements for underground operations that either have the *potential* or are *likely* to cause mining-induced stream flow loss or stream "pooling" caused by planned subsidence. The guidance doesn't contain a definition for *potential* or *likely*, but describes *potential* as mining plans that contain a low probability of causing flow loss or pooling. Therefore, it is assumed that *likely* is used to describe mining scenarios that contain a high probability of causing flow loss or pooling. Properly classifying flow loss predictions as either *potential* or *likely* is important because the technical guidance specifies different pre-mining data requirements for each classification.

The purpose of this study was to evaluate compliance with Sections IV.1.d and e of the Surface Water Protection - Underground Bituminous Coal Mining Operations, Technical Guidance Document No: 563-2000-655. The first part of the study consisted of performing a comparative analysis between the Technical Guidance document and the permit application. The study found all of the required information is contained in the permit application. The second part of the study consisted of reviewing permit revision #150 for the Consol Bailey mine to validate that all of the required information was submitted in the permit application. Permit revision #150 added three longwall panels to the existing permit. The permit application predicted that mining activities would impact nine biologically "diverse" streams. OSM reviewed the permit

application and found the vast majority of required data was submitted with the permit. However, there were some deviations from the Technical Guidance requirements. For example, Strawn Hollow, a biologically "diverse" stream, did not have its own biological monitoring station for the pre- and post-mining comparison, which is required by the Technical Guidance and permit application. In addition, OSM did not find any public notice for three biologically "diverse" streams that were predicted to have a temporary flow loss. This study recommends PADEP start requiring public notice for streams that are classified as "*likely"* to have a flow loss due to subsidence, as required by the guidance.

D. Bond Adequacy to Reclaim Forfeited Permits

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. OSM prepared and distributed a full report 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 PADEP's full cost bonding program procedures, and PADEP's 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 Pennsylvania's approved bonding program. Review of the reclaimed forfeiture sites provided mixed results in that land reclamation on the three reclaimed sites did not fully match the approved reclamation plan in the permit, partially due to a lack of funds available to achieve reclamation required in the permit.

The report identified 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 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 percent 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 ensure sufficient funds are available to complete permit reclamation requirements on a case-by-case basis.

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

- PADEP should aggressively pursue water treatment bonds or trust agreements on operations that develop post-mining pollutional discharges.

- PADEP should discontinue bond adjustment waivers when the upward adjustment is less than 15 percent 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 pollutional discharges.

During the year, PFD met with PADEP to discuss the status of the bonding program. PFD was advised that PADEP is proposing changes in the bonding program which will address several of the recommendations, including elimination of the annual bond review in favor of mid-term and renewal bond reviews and adjustments. This in itself will address the 15 percent bond adjustment waiver and waiver of the ABR when the permit has been inactive. PADEP is proposing to include a multiplication factor in the bond calculation which will apply to the years between permit approval and mid-term or renewal. Bond Rate Guidelines will still be used to calculate the initial bond amount and the amount required at mid-term or renewal. PADEP is also taking steps to address the "foot print of the coal" issue through modification of the bonding technical guidance. PFD will continue to conduct bond adequacy assessments as a part of its routine oversight complete inspections, and notify PADEP, through the TDN process if necessary, where a bonding deficiency exists.

As a result of the 2010 study, it is now PFD's ongoing objective to inspect each bond forfeited permit to document the reasons for forfeiture, the status of reclamation at forfeiture, and the amount and adequacy of bond to complete the reclamation plan. PFD will also inspect each forfeited permit where reclamation has been achieved through Department contract, or third party or surety reclamation, or by a decision that no additional reclamation is needed.

For EY 2012, PFD received a list from PADEP of outstanding bond forfeiture actions on primacy permits which are conventionally bonded. This list does not include the 13 permits forfeited under the alternative bonding system, for which reclamation obligations continue to

exist. The list was dated November 9, 2011, and contained 18 permits declared forfeited from 2007 through July 2011 that had not been reclaimed. All were forfeited with some element of land reclamation required. Permits forfeited solely for post-mining pollutional discharges were not included. The list did not include Alternative Bonding System (ABS) land reclamation bond forfeitures, which are being reclaimed under a program discussed elsewhere in this report. PFD inspected 12 of the permits. The EY 2012 report is on OSM's web site and in the Harrisburg Office Evaluation File. As of the end of the evaluation year, PADEP reported that there were 13 conventionally bonded forfeited permits with unreclaimed lands. There are additional permits forfeited with only water treatment liabilities remaining. Pennsylvania overall has a very low rate of bond forfeiture compared to the total number of permits.

Of the 12 bond forfeited permits inspected by PFD in 2012, eight were unreclaimed at the end of the evaluation year. This Evaluation Year, OSM updated the status of those unreclaimed bond forfeited permits. We found that two of the permits have now been reclaimed in accordance with the terms of a Consent Order and Agreement (CO&A) with the surety company. One permit is currently being reclaimed under a surety reclamation CO&A. PADEP is negotiating an Act 181 reclamation contract on one permit with the mining company which owns the property. The operator will agree to reclaim the site for the value of the bond. PADEP is waiting on a landowner waiver on one permit to allow the haulroad to remain, which will complete reclamation requirements. One permit will be reclaimed under a Departmental contract. PADEP is waiting on clearance to use tannery sludge as a soil amendment. One permit will be reclaimed by the forfeited operator under a "rehabilitation" CO&A through which the forfeited operator can re-establish its eligibility to acquire a mining license. One permit will be reclaimed under a surety reclamation CO&A. PFD will continue to track these bond forfeited permits until they are reclaimed. PFD notes PADEP's efforts to secure reclamation of all outstanding unreclaimed permits from the EY 2012 list. A summary of the permits is contained in Appendix C

In EY 2013, PFD inspected ten additional conventionally bonded forfeited permits. A summary of the status of these permits is contained in Appendix C. Forfeitures covered the following years:

One - 2002
One - 2003
Four - 2008
Two - 2009
One - 2010
One - 2012

PFD found that five of the permits had been reclaimed. One was reclaimed through an Act 181contract with the landowner, under which about $12,920 in estimated reclamation work was completed for the $5,000 bond. One permit was reclaimed by the surety for the value of the bond. The CO&A for this forfeited permit allowed a post-mining land use change from forest land to unmanaged natural habitat, and several ponds were retained as post-mining land use features. Two permits were largely reclaimed by the operator prior to forfeiture. For these permits, PADEP will request landowner authorization to allow ponds to remain. Otherwise, there are sufficient bonds to remove the ponds. On one permit, all reclamation was completed by the

operator with the exception of planting trees, removal of ponds, and an access road. PADEP will request a landowner reclamation waiver. However, there is sufficient bond to remove the features if needed. PFD did not identify any unresolved reclamation issues on these five permits, and concur with retaining the ponds, as all are stable, well vegetated and serving as wildlife habitat.

PADEP has received authorization for companies to reclaim one permit as a reclamation in lieu of civil penalty project. Removal of a large sediment pond and collection ditches have been completed. The company now proposes to drill a well to replace a degraded residential water supply. The remaining $12,300 in bond will be used to plumb the well to the house and provide a water treatment system if needed.

There are two unreclaimed underground mine permits, which were bonded at the then standard rate of $5,000. Bond is insufficient to reclaim either site. On one site, Pottsville DMO is coordinating with BAMR to close the mine openings as a part of backfilling the AML eligible highwall. On the other site, OSM estimates reclamation of the site will cost about $10,000. Pottsville DMO will coordinate with BAMR to reclaim the remaining features.

On one site, $82,558 in bonds were forfeited. However, $78,938 consists of remining financial guarantees. About 8 acres of the 102 acres of disturbed land remain to be reclaimed. Greensburg District Mining Office is working on a reclamation in lieu of civil penalty proposal to remove and revegetate sediment ponds, construct a lined drainage ditch, and remove a large equipment tire. The remaining land reclamation, including grading, erosion repair, revegetation, and tire and junk removal, will be accomplished through a Departmental contract. However, there are two Subchapter F discharges which were degraded by mining. There are no plans to treat these discharges.

One permit is the site of a preprocessing permit to remove silt and refuse material. The permit forfeited with only part of the site re-graded. The reclamation plan called for creation of an upland forest wetland system and restoration of a stream. There is also a Subchapter F discharge associated with this permit. It is not clear if the discharge was degraded by the limited amount of disturbance. PADEP reports that the refuse material was removed from the stream and wetlands, and that the refuse pile was re-graded, but not re-vegetated. PADEP will schedule an inspection later in 2013 to determine if any additional reclamation work is needed.

PFD notes that most of the ten bond forfeited permits inspected this year were forfeited after Stage II reclamation had been completed, thus significantly reducing the Department's potential reclamation liability. The exceptions were Anthracite underground mines, which were bonded at the flat rate of $5,000/permit. The continued ability of PADEP to negotiate with the sureties for reclamation, and with operators for reclamation in lieu of penalty, can provide a financial buffer should there be bonding deficiencies on individual sites. PFD will continue to observe these types of agreements to determine if the permit reclamation plan has been followed.

E. Inspection Frequency

In accordance with 30 CFR § 840.11 (a), (b), and (h), PADEP is required to conduct an average of at least one inspection for active permits every month (12 per year), in a combination of partial

and complete. Complete inspections are required on an average of one per calendar quarter, and partial inspections are required on an average of one every month, with complete inspections also counting as partial inspections. Thus, the standard for active permits is eight partial and four complete inspections per year. Permits are considered in active status until the site has been backfilled and graded, and is Stage II eligible for bond release.

PADEP is required to conduct at least an average of one complete inspection of inactive permits per calendar quarter, and to conduct partial inspections of inactive permits as necessary to ensure compliance with the approved program and permit. PADEP is authorized to determine the frequency and number of partial inspections of inactive permits and coal exploration sites as necessary to ensure compliance with the approved program. Thus, the standard for inactive permits is four complete inspections per year. Permits are considered inactive until the site is successfully vegetated, the five-year vegetation success period has expired, and the permit is eligible for Stage III bond release.

Abandoned (forfeited) permits are subject to the same inspection frequency unless an alternative inspection frequency is established. PADEP has not officially established alternative inspection frequencies for any abandoned permits. Therefore, for purposes of this study, it is assumed that forfeited permits should receive quarterly complete inspections and partial inspections as necessary.

Using data available in eFACTS (PADEP's mining program data management system), the PFD selected active, inactive, and forfeited permits (abandoned) from each District Mining Office with permit inspection responsibilities. Permits represent surface, underground, refuse disposal, preparation plants, and coal processing permits. Permits were selected to represent the various activity codes for active, inactive, and bond forfeited.

PFD selected 20 permits from each of the five District Mining Offices which conduct inspections. They are Knox, Cambria, Greensburg, Moshannon, and Pottsville. The California District Office is a permitting office and does not conduct mine permit inspections. One hundred permits were selected in total. This represents about 6 percent of the 1,620 total inspectable units reported by PADEP at the beginning of Evaluation Year 2013. PFD then determined the number and types of inspections conducted for each permit from July 1, 2011, through June 30, 2012, and analyzed the results.

A full discussion of the results of the survey is in the report, which can be found on OSM's web site and in the evaluation file in Harrisburg. To summarize a few findings, PFD found compliance with the mandated inspection frequency varied among the District Offices. Overall, PADEP met the required partial inspection frequencies on 71 percent of the active status (coal being removed) permits surveyed, and met the required complete inspection frequencies on 78 percent of the active permits surveyed. PFD found PADEP met the required complete inspections on 38 percent of the inactive (coal removal complete) permits surveyed, and met the required complete inspections on 20 percent of the bond forfeited permits.

PFD notes that the FY 2013 grant proposal contains a request for $300,000 to contract with a helicopter service so 1,500 partial inspections can be conducted from the air. PADEP has

developed a procedure to maximize the impact of this activity and to ensure maintenance of quality. Inspectors will be authorized to land on a mine permit if needed to verify observations and communicate with mine personnel. Inspectors will also conduct follow-up ground inspections as needed. The number of inspections per inspector will be controlled to allow time for reports to be filed, violations to be issued, and follow-up inspections to be conducted. This activity should improve mandated partial inspection frequency compliance, and may allow additional mandated complete inspections on the ground. By the end of the evaluation year, PADEP reports it had fully implemented the aerial inspection program.

PADEP also reports that it is in the process of filling five coal mine inspector positions which were vacant and frozen until July 1, 2012. When the new staff are fully authorized to conduct coal mine permit inspections, the compliance rate should improve. Filling these positions will bring PADEP's coal mining inspector complement up to its authorized level. PADEP reports that two positions will be filled in the Cambria District Office, which currently has the lowest compliance rate and highest number of permits per inspector. Cambria currently has two Environmental Trainee positions, which will convert to SMCI positions when they are authorized. Moshannon District Office will receive two of the inspector positions, and currently has one Environmental Trainee. Moshannon District Office currently has the next lowest inspection frequency compliance rate. Greensburg will receive one position and currently has one Environmental Trainee. Pottsville and Knox are at full complement. PADEP advises that the incoming personnel may go into Environmental Trainee status depending on prior experience. Therefore, the impact of the new positions will not be immediately apparent.

PFD concludes that PADEP is taking several actions to improve compliance with mandated inspection frequencies. However, OSM notes that even with filling vacancies and use of helicopters to conduct partial inspections, PADEP may need additional mine site inspectors to fully meet required and discretionary inspection requirements. The overall impact of these actions will be reassessed by PFD and PADEP in evaluation year 2014.

VII. OSM Assistance

A. Maintaining the Mine Drainage Inventory

The annual Mine Drainage Inventory (MDI) Study by PFD reinforces the PADEP commitment to track acid mine drainage (AMD) resulting from coal mining practices.

In EY 2013, PFD reviewed ten permits identified in the PADEP eFACTS to have an AMD discharge related to coal mining. PADEP maintains the MDI in its Environmental Facility Application Compliance Tracking System (eFACTS). With the MDI being part of the PADEP eFACTS, water quality and inspection information are routinely updated by PADEP staff into the eFACTS and the information provides a current site status.

The MDI Study for 2013 continues the work plan objective for PFD to conduct regulatory oversight on sites identified with a pollutional discharge. The OSM MDI database will be used as a reconciliatory tool to ensure all discharges on the OSM MDI are also listed in the PADEP eFACTS and that the discharges are being adequately treated to effluent

limits. A total of ten permits were selected for this evaluation year's review. Sites were selected with permits identified as having a pollutional discharge. PFD inspection staff conducted the inspections along with providing and logging the information in the OSM Inspection and Evaluation database.

The ten bituminous mining sites selected for this year's review include four Surface Mining sites, two Underground Mining sites, two Coal Refuse Disposal sites, one Coal Refuse Reprocessing site, and one Industrial Waste site identified as having an AMD discharge.

- Five of the ten sites have ongoing active treatment of the discharges with two of the sites being part of a treatment trust and three sites remaining bonded.

- One of the five remaining untreated discharge sites will be recommended for removal from the MDI because the discharge no longer exists.

- An internal State investigation will be recommended for four of the discharge sites in which the discharge site information requires further evaluation.

- The final permit with an untreated discharge is scheduled to be investigated by PADEP within the next few years to review water quality data and potential treatment options.

The Acid Mine Drainage Inventory Study is the only PFD annual review that focuses on sites with AMD discharges. This study provides the opportunity for OSM to review the permit files, perform an inspection of the discharge sites, review the adequacy of treatment for the discharges, and ensure the site and discharge are monitored through the PADEP eFACTS. The report reflects the progress in treating as well as identifying the sites that require additional treatment. Each permit that is part of the EY 2013 study is discussed in the following paragraphs.

PFD staff inspected the following permits and provided an analysis for each site:

Permit No.	Company Name	Site Name	Type	Status	Trmnt
02743703	BCNR Mining Corp	Russellton CRDA	CRD	BFCT	Y
17743187	Empire Coal Co Inc	Empire 9 Oak Ridge	CSURF	BFR	N
17764039	Benjamin Coal Co	Marshall	CSURF	BDFTD	N
17830122	Glacial Minerals Inc	Helvetia	CRR	PBF	N
30753026	Samuel A Oliverio	Hatfield Site	CSURF	BDFTD	N
32841302	PA Mines LLC	Greenwich N1 & S2 Deep	CUG	RECH	Y

56020103	Amfire Mining Co	Job 120	CSURF	RECH	Y
56773708	Miller Springs Rem	Strayer Coal RDA	CRD	RECH	Y
63891301	Mon Valley Steel	Clyde Deep Mine	CUG	BDFTD	N
65981701	LTV Steel Co	Banning & Euclid AMD Trmt	CIWD	RECH	Y

The permits have various status codes and are categorized as Bond Forfeited (BDFTD) – bonds were forfeited; Reclaimed Chemical Treatment (RECH) – chemical treatment remains for pollutional discharge on a reclaimed mine site; Primacy Bond Forfeiture (PBF) – permit was a full-cost bonded site with forfeited bonds; Bond Forfeited Reclaimed (BFR) – bond was forfeited and land reclamation completed.

Adequate treatment is occurring on five of the ten sites reviewed. These sites are either part of a treatment trust or are bonded. Four permits identified and verified as having a discharge do not have ongoing treatment of the discharge. A discharge could not be located at one of the permit sites identified as having a discharge and will be recommended for removal from the MDI inventory.

Following is a discussion for each of the sites:

- Permit 02743703, BCNR Mining Corp, Russellton CRDA is a refuse disposal area undergoing reclamation. It was permitted under the now defunct LTV Steel Co. The property was deeded to The Clean Streams Foundation, Inc. in 2004. In 2005, the foundation entered into an agreement with AMD Industries, Inc. to operate the Russellton Berry AMD Treatment Plant. The treatment costs are being funded through a treatment trust account. In 2009, the foundation entered into a lease agreement with Coal Valley Sales, LLC to remine the Russellton site. On April 19, 2011, Permit 02090201 was approved. The site is currently being remined. The Leachate from the site is being collected and pumped to the Russellton Deep Mine where it is being treated. Discharges are being monitored as part of the current permit.

  The operation lies in the drainage area of Little Deer Creek and an unnamed tributary of the creek is within the permit boundary. Little Deer Creek is classified as a Trout Stocking Stream. The eFACTS database lists three AMD discharges associated with the permit. However, the information is not supported by on-the-ground data and all three discharges conflict with the coordinates in the Trust Fund File. The current permit lists two pre-existing discharges, SW-6 andSW-7. These two discharges were sampled for this study. SW-6 is a point discharge and was flowing at a rate of 10-15 gpm at the time of the inspection. Field tests showed a pH of 7.5 and Fe of 2.8. SW-7 is a point discharge and was flowing at a rate of 15-20 gpm at the time of the inspection. Field tests showed a pH of 4.5 and Fe of 7.6.

PFD recommends that Pennsylvania conduct a review of the permit, eFACTS entries, and actual site conditions. It is important to have the permit, eFACTS, and the site conditions mirror each other so a clear picture of the permit site is available for review.

- Permit 17743187, Empire Coal Co., Inc., Empire 9/Oak Ridge, was a surface mining site that is listed as a reclaimed bond forfeited site. One discharge was noted during the inspection. It emanates at the toe of the spoil along the northern permit area. The state inspector confirmed the area directly adjacent and up slope from the discharge was the permit in question. The inspector had no knowledge of the discharge and was unaware of any discharges remaining on the site. The discharge is not being treated and land reclamation is not completed. The receiving stream, Lost Run, is adjacent to the permit and has a designated use as a cold water fishery. Water monitoring on Lost Run indicates degradation.

  PFD recommends that Pennsylvania conduct an investigation of the permit land reclamation and discharge to ensure current information is reflected. If applicable, the permit should remain as a part of an ongoing list of permits with discharges requiring treatment.

- Permit 17764039, Benjamin Coal Co., Marshall Mine is a bond forfeited surface mine that started out as permit 4576SM2. Both permits, 17764039 and 4576SM2, are listed in a Consent Order and Agreement dated April 11, 1995. The bonds under 4576SM2, $11,850, were to be released as Amerikohl posted substitute bonds, completed reclamation of the sites, and installed a passive treatment system where necessary. Permit 17764039 was superseded by 17860105 which is listed as a primacy bond forfeited permit. No mine drainage seeps were listed under permits 4576SM2 or 17764039. Two discharges, MP3 and MP4, are listed under permit 17860105. These two discharges appear to be the same ones created under the previous permits. The discharges are not being treated and the site still has land reclamation needs even though the Consent Order and Agreement remains in place for reclamation. Permit 177860105 is identified on the Primacy Bond Forfeiture list where reclamation is required and is listed on the PADEP MDI.

  PADEP reports that it plans to investigate the site within the next few years to evaluate land reclamation and acid mine drainage conditions.

- Permit 17830122, Glacial Minerals Coal Co., Helvetia, is a primacy bond forfeited coal refuse reprocessing site. Reclamation status is listed as complete although an untreated discharge remains associated with the permit. The receiving stream, Stump Creek, is a designated cold water fishery. The Consent Order and Agreement established at the time of forfeiture required the sureties to demonstrate that the criteria for land reclamation be met and water supplies

replaced. There are no requirements in the CO&A for treatment of the identified discharge.

During the inspection for this study, two discharges were observed. Discharge HV3 is located within the vicinity of a gas well and the northern permit seep, 13, is located directly adjacent to a former sedimentation pond. The discharges meet, combine, and exit the permit boundary via a collection ditch and empty into the receiving stream. The State inspector said, to his knowledge, all discharges were eliminated through reclamation.

PFD recommends that Pennsylvania conduct an investigation of the permit and discharges to ensure information in the permit, eFACTS, and MDI are updated to reflect current conditions. If applicable, the permit should remain as a part of an ongoing list of permits with discharges requiring treatment.

- Permit 30753026, Samuel A. Oliverio, Hatfield Mine, is a bond forfeited surface mining site with the forfeiture declaration issued on March 28, 1989. At the time, one discharge was identified at the toe of the spoil. Further notations indicated the seep existed in 1990 and 1991. PADEP attempted to sample the seep in 2003 and 2004. Both times the area was found to be only damp. During the inspection for this study, there were no visible signs of a discharge or damp area remaining. The soil appears to be completely dry at the surface. Approximately 400 feet from the discharge location, there is a roadside ditch with a small amount of water and cattails. Testing of the water determined it is not likely to be AMD.

  PFD recommends this discharge be removed from the MDI, since it no longer exists.

- Permit 32841302, PA Mine, LLC, Greenwich North #1 / South #2 Deep Mine, is a reclaimed underground mine site with a chemical treatment facility for the remaining discharge. The current permit is for approved stream encroachment and reclamation activities. There is $4,382,137.00 of surety bonds posted for the permit. The treatment system and access road are included in the 6.5 acres of surface area that is approved for this permit. The annual cost for the treatment system is estimated at $53,657.00 per year.

  At the time of the inspection, the underground mine pool was being pumped and treated. Records reflect the discharge exiting the treatment facility meets NPDES effluent requirements.

- Permit 56020103, Amfire Mining Co., Job 120 was a surface mining operation that is reclaimed with a chemical water treatment facility. A permit exists on the site for reclamation activities. There is $1,999,387 in bonds posted for this permit.

Annual cost for the treatment facility is estimated at $25,279.00. This facility is linked to the Amfire Global Trust currently being negotiated by PADEP. The treatment system consists of three treatment ponds and active caustic soda treatment. All discharges are routed to the treatment ponds where the water is mixed with the caustic soda in either the first or second pond before entering the third pond. Final discharge test results show the discharge meets effluent limits.

- Permit 56773708, Miller Springs Remediation Management Inc, Strayer Coal Refuse Disposal Area, is a coal refuse disposal area that is reclaimed with an adjacent chemical treatment facility for treating the remaining very low flow discharges. Approximately 30,000 tons of coal refuse was disposed at the site. The site is entirely reclaimed with two ponds at the base of the refuse pile. One pond collects runoff from the reclaimed area and the other pond collects water from the underdrain of the refuse pile. The pond that collects the water from the underdrain has an automated pump installed to pump water to the adjacent deep mine treatment facility when the water reaches a certain height. Bond remains on the site for $36,500.00.

  During the inspection, there was some water in the ponds, but not enough to engage the pump and no flowing discharge was observed.

- 65981701, LTV Steel Co., Banning, and Euclid AMD Treatment, are facilities designed to chemically treat mine drainage from the Banning Deep Mine. LTV filed bankruptcy around 2000. A treatment trust fund, established in 2002 for these and other facilities, has a value of $22 million. The Clean Streams Foundation oversees operations at the treatment trust sites and entered into an agreement with AMD Industries to contract services at both sites.

  The Banning and Euclid sites were constructed in the 1960's. The Banning site has two pump boreholes, three sludge disposal boreholes, a treatment building, mixing tank and clarifier, one pond, and a bulk lime storage bin. The area is 90 percent vegetated. After treatment, the water discharges into the Youghiogheny River. The effluent flows at approximately 2600 gpm.

  The Euclid site is across the river from Banning and has a treatment building, mixing tank and clarifyier, one pond, one bulk lime storage bin, three pump boreholes, one sludge disposal borehole, and four monitoring boreholes. The effluent flows at approximately 4600 gpm.

  Treatment operations at both plants involve chemical addition, mixing, aerating, clarifying, and discharging treated water. The sludge is disposed of iron sludge via injection borehole into the abandoned underground workings. Both plants operate 24 hours a day, seven days a week. Treated water meets effluent limits.

In conclusion, further review of four of the discharge sites by PADEP is warranted at permits:

- Permit 02743703, BCNR Mining Corp, Russellton CRDA
- Permit 17743187, Empire Coal Co., Inc., Empire 9/Oak Ridge
- Permit 17830122, Glacial Minerals Coal Co., Helvetia
- Permit 63891301, Mon Valley Steel, Clyde Deep Mine

The removal of one discharge from the MDI is recommended:

- Permit 30753026, Samuel A. Oliverio, Hatfield Mine

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, 93 WCAP grants have been awarded to Pennsylvania non-profit watershed groups for a total of about eight million dollars. Total costs for these projects including all partner cash and in-kind donations of labor and services are about 36.3 million dollars. In total, OSM's contribution to the projects averages about 22 percent. Eighty-six of the projects have been awarded to construct passive treatment systems, with most projects involving more than one treatment system. Three projects were for land reclamation to reduce or eliminate a source of mine drainage. Four projects were for active treatment of mine water.

During the evaluative year, there were three new project grants awarded for a total of $220,596. These awards were made to Trout Unlimited for a project in the Kettle Creek Watershed, the Babb Watershed Association, and the Pittsburgh Botanic Garden. 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 ensure 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, 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, 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

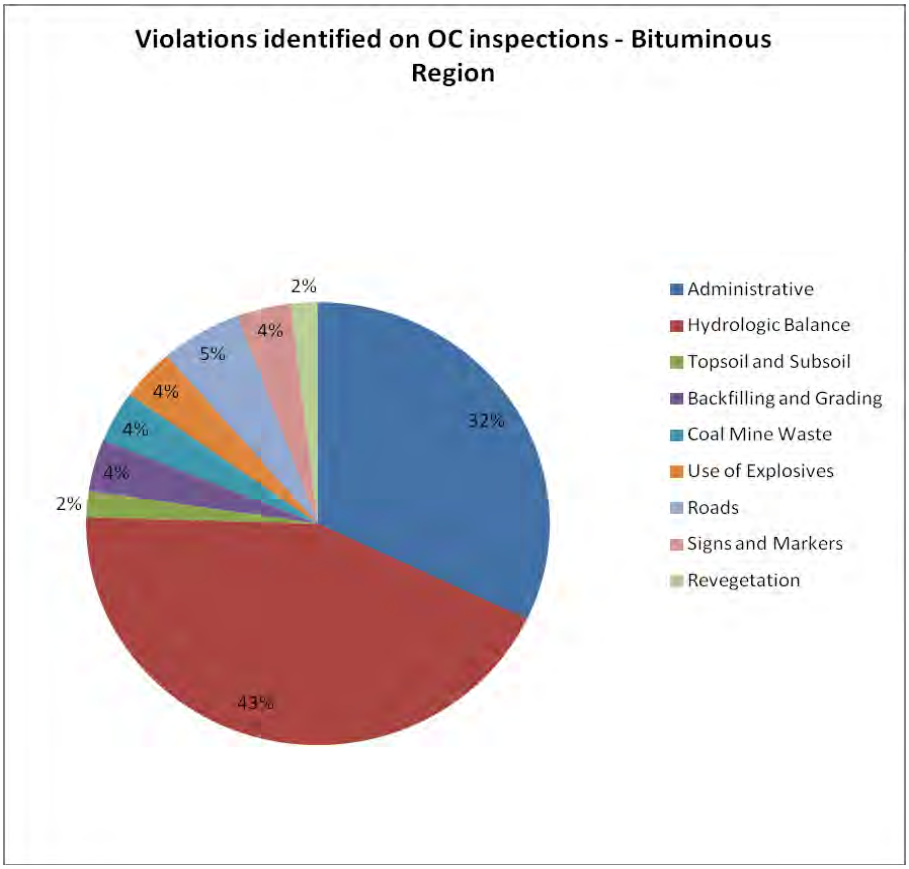
PADEP reported a total of 1,775 mining permits in the Bituminous and Anthracite Regions of Pennsylvania at the end of the Evaluation Year. PFD staff conducted 150 Oversight Complete ("OC") inspections in the 2013 evaluation year (comprising 120 bituminous permits and 30 anthracite permits). This is about 9 percent of the total mining operations occurring statewide. Of these, 18 were performed as independent inspections, where no advanced notice of the selected permit is given to PADEP. In addition to the 150 total OCs performed by PFD staff, 165 other inspections were performed as classified below:

Document Review
Citizen Complaints TDN Referral
Citizen Complaints Follow-up
Citizen Complaint Initial Site Visit
State Enforcement Action Follow up
State assistance-government financed construction contract (GFCC)
Bond Forfeiture
Oversight Mine Drainage
Partial Independent
Oversight Inspection "Partial"
Reclamation Fees Inspections

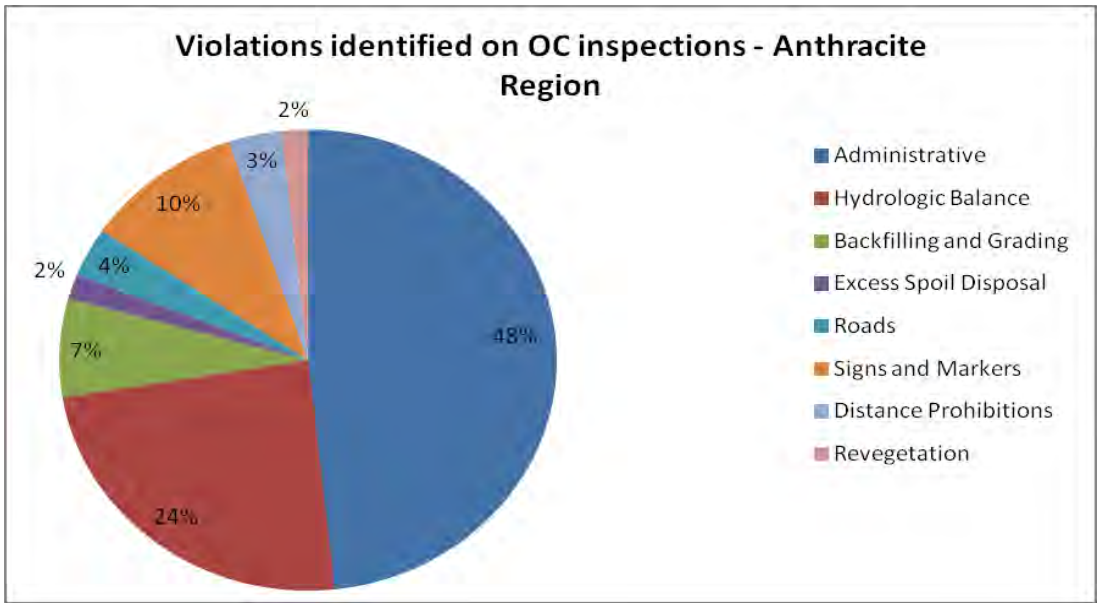
State enforcement follow-up inspections are conducted to track compliance with notices of violation issued by PADEP inspectors as a result of OSM's oversight inspections, or TDNs. In summary, in EY 3013, PFD conducted 315 total inspections, with 150 oversight complete

inspections. By comparison, in EY 2012, OSM inspectors conducted a total of 144 oversight complete inspections. PFD identified 109 violations during these inspections as discussed below.

The following is a classification of the 51 violations identified during OCs in the Bituminous Region. Of these 51 violations, 34 of the violations were immediately deferred to PADEP action—in the form of a Notice of Violation or Compliance Order. Nine violations were abated during the course of the inspection. The remaining eight violations were deferred to PADEP in the form of multiple TDNs.



The following is a classification of the 58 violations identified during OC inspections in the Anthracite Region. Of these 58 violations, 54 were immediately deferred to PADEP action—in the form of a Notice of Violation or Compliance Order. Four violations were abated during the course of the inspection.



Analysis of the data shown above supports two major conclusions. Hydrologic impacts within the Bituminous and Anthracite regions continue to be prevalent environmental concerns.

At the end of the evaluation year, there were five authorized OSM inspectors assigned to Pennsylvania. OSM conducts both joint inspections with PADEP and independent inspections. The Field Offices conduct at least10 percent 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, that are not corrected during the inspection, are deferred to PADEP for action and OSM follows up to ensure compliance.

Disagreements are addressed through the Ten-Day Notice (TDN) process. Of the 150 oversight complete inspections, 18, or 12 percent were independent. 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, OSM issues a TDN.

Table 1 demonstrates the distribution of inspection sites and site status that were included in the random sample draw for the 2011 evaluation year. The numbers in **blue** indicate the total violations found for each site status.

DMO	Cambria	Greensburg	Moshannon	Knox	Pottsville
AP * Sites = 79	18 (2)	9 (7)	25 (20)	9 (2)	18 (41)
P-1 Sites = 6	1	1 (1)	1	2	1 (1)
P-2 Sites = 3	0	1	1	1	0
MC Sites = 14	9 (1)	4 (1)	0	0	1 (2)
AN Sites = 27	5 (2)	11 (11)	5	4	2 (2)
TC Sites = 8	1 (2)	1 (2)	0	1	5 (7)
NM Sites = 2	0	0	1	0	1 (3)
EX Sites= 9	2	2	2	2	1 (1)
ND Sites = 2	0	0	1	0	1 (1)
Totals = 150	36 (7)	29 (22)	36 (20)	19 (2)	30 (58)

* These individual site statuses are defined in the Mine site Evaluation ("MSE") as: AP, Active Producing; P-1, Phase I Releases; P-2, Phase II Releases; P-3, Phase III Releases; MC, Mining Complete; AN, Active Non-producing ; EX, Coal Exploration; FO, Abandoned; FR, Forfeited and Reclaimed ; FP, Forfeiture Pending ; TC, Temporary Cessation; NM, No Mining ; ND, No disturbance; DMO, District Mining Office.

As documented in Table 1, the Active Producing sites (identified as "AP sites") have the most violations identified by OSM and deferred to PADEP for enforcement. This finding can likely be attributed to the fact that AP sites are the classification of sites that are most frequently inspected and have the most activities ongoing, providing a greater potential for non-compliance. To maintain consistency, the distributions of OC inspections were evenly applied across DMOs.

The 150 bituminous and anthracite region OCs revealed 58 permits had at least one violation, equivalent to 39 percent of the sites inspected. Seventy-one of the 144 OC inspected sites had violations in the 2012 evaluation period. This equated to 49 percent of the permits inspected having violations in EY 2012. In the 2013 evaluation period, a total of 109 violations were identified during PFD's OC inspections. Therefore, the proportion of violations to inspections has been reduced from slightly over one violation/inspection (1.1 in EY 2012), to slightly under one violation/inspection in EY 2013 (.73 violations per inspection). This year, multiple violations were observed on 28 permits.

PFD will continue to monitor to see if a trend of greater permit compliance continues.

Violation Deferral

Of the 109 violations discovered pursuant to PFD's OC inspections, 96 were ultimately deferred

to PADEP for enforcement action. Those 96 were either addressed by PADEP through a Notice of Violation (NOV) or Compliance Order (CO) or were identified by PFD through issuance of a Ten-Day Notice (TDN). Additionally, there were 13 violations that were abated during the inspection. This year, 11 of the 109 violations observed were considered to have resulted in off-site impacts. The off-site impacts included six violations related to "hydrologic impacts;" four violations related to "encroachment;" and one violation related to "land stability." This rate (10.1 percent) is somewhat higher than in EY 2012, when 7.7 percent of the cited violations had off-site impacts.

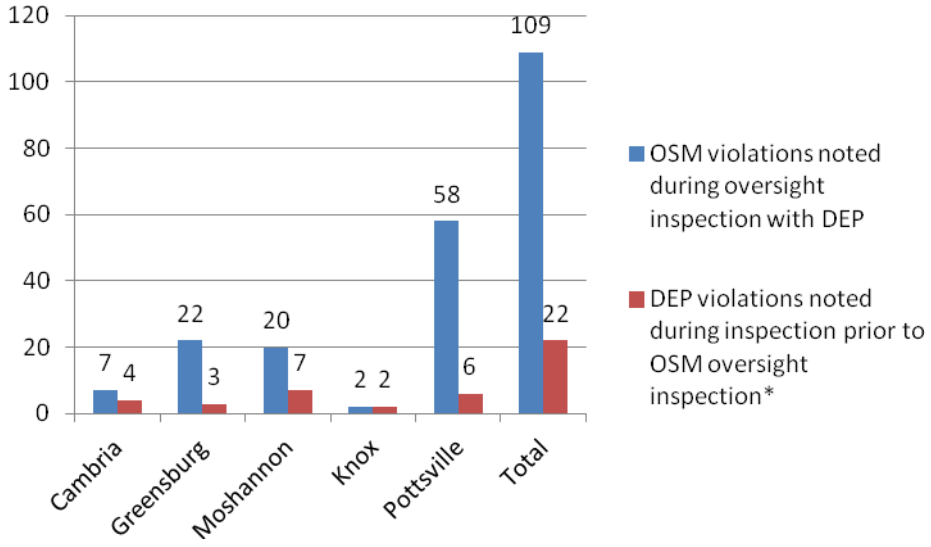
During the 2010 evaluation period, OSM instituted a study to acquire data regarding violations noted during OSM oversight inspections compared to complete and/or partial inspections conducted by PADEP inspectors performing inspections without OSM, during the six-month period prior to the OSM OC inspection. This study was extended in 2012/2013 and the 2013 results of this study are outlined in Table 2 and the bar graph below:

PADEP District Mining Office	OSM inspections per DMO	OSM violations noted during joint inspection with PADEP	PADEP violations noted during inspection*without OSM presence
Cambria	37	7	4
Greensburg	28	22	3
Moshannon	36	20	7
Knox	19	2	2
Pottsville	30	58	6
Total	150	109	22

*Note: PADEP violation data included the total for all inspections conducted in the past six months.

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 150 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 chart below shows the distribution the Table 2 information among the five District Mining Offices.



Special emphasis has been placed on gathering data to ascertain: "How many violations do PADEP inspectors identify and cite, when conducting inspections without OSM oversight?" as compared to: "How many violations do PADEP Inspectors identify and cite when OSM inspectors accompany PADEP on inspections?" This study was continued in the 2013 evaluation period and will be continued throughout the 2014 evaluation period. This will be achieved by OSM continuing its policy to review PADEP inspection reports and document the amount and type of violations cited by PADEP in the six-month period prior to the OSM OC inspection. This review and documentation enables an evaluation of DEP individual inspection enforcement actions to ensure the Pennsylvania program objectives are appropriately implemented.

OSM notes the following trends in yearly violation citations. In EY 2012, PADEP cited 658 violations for 12,600 inspections for an average of .05 violations per inspection. In EY 2013, PADEP cited 568 violations for 12,567 partial and complete inspections for an average of .045 violations per inspection. 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, .04 in 2011 and .05 in 2012. OSM found an average of .73 violations per inspection in EY 2013. OSM will continue to investigate this issue during the 2014 Evaluation Year.

PADEP reports that in EY 2013, it conducted 66 percent of the required complete inspections on active mining (coal being removed) permits; 42 percent of the required complete inspections on inactive permits (permit in reclamation status); and 64 percent of the required complete inspections on abandoned (bond forfeited) sites. PADEP reports it conducted 55 percent of the required complete inspections on inactive sites. See Table 10 for details. Inspection frequency is an issue being addressed by PADEP, and will be subject to an Action Plan between PFD and PADEP in EY 2014.

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

an inspection independently.

A total of 11 TDN's were issued to PADEP during the 2012 evaluation period. Eight of the TDN's were the result of Citizen's Complaints. Three of the TDN's were issued based on oversight inspections.

The three TDN's resulting from a Federal oversight inspection contained 11 violations. PADEP's responses and OSM's determinations are summarized below.

. 3 - Good Cause that the violation did not exist.

. 7 - Appropriate Action to cause the violation to be corrected.

. 1 - Arbitrary and capricious. PFD's determination under informal review by Regional Director.

The eight Citizen Complaint TDNs contained 17alleged violations. PADEP's responses and OSM's determinations are summarized below.

. 12 - Good cause that the violation did not exist.

. 5 - Appropriate action to cause the violation to be corrected.

. One good cause determination resulted in a citizen request for informal review by the Regional Director, which is underway.

The Regional Director issued one informal review decision for a citizen complaint during the evaluation year, upholding PFD's good cause determination that no violation existed. One Regional Director decision to uphold PFD's good cause determination on a citizen complaint, was appealed to the Department of The Interior's Board of Land Appeals (IBLA). That appeal has not been heard. At the end of the evaluation year, there were five requests for informal review pending with OSM.

A brief description and current status of each TDN is included in Appendix B.

B. 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 coal mining 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. PADEP tracks all treatment trust and bonding information in the Department's eFACTS. eFACTS is a department-wide database that provides a holistic view of the clients and sites that PADEP regulates.

There are specific features in the eFACTS database regarding discharge tracking and providing information for officials and the public. Descriptions used in the eFACTS database are used to

track trusts in a more efficient manner. The partially funded trusts are 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." 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. The eFACTS database contains 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. For this evaluation year report, the pre-primacy and non-coal information is omitted.

Reports can be generated in the several format styles – summary, detailed, and executive. The summary 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. As of June 2012, the eFACTS listed 49 partially funded and fully funded primacy treatment trust agreements, encompassing 107permits and addressing 184 discharges. There are six trusts that fall in the Fully Funded Inadequately Funded category. There are 46 permits with 64 discharges that are conventionally bonded and do not require a trust.

For this evaluation year, the following table identifies the district offices, the number of trusts each office is associated with, the disposition of the trust – Partially funded, fully funded, or fully funded inadequately funded, and the number of permits and discharges are associated with trusts. Also listed are the number of permits and discharges that are conventionally bonded.

	Partially Funded	Fully Funded	Fully Funded Inadequately Funded	No. of Permits assoc. w/trusts	No. of Discharges assoc. w/trusts	Permits w/Bonds	Discharges assoc. w/bonds
Pottsville							
Linked to Bond						0	0
	1			1	1		
		1		2	1		
Moshannon							
Linked to Bond						5	11
	2			3	3		

		7		24	34		
			1	1	5		
Greensburg							
Linked to Bond						15	17
	6			10	13		
		4		4	7		
			1	5	8		
Cambria							
Linked to Bond						17	19
	9			29	68		
		9		11	21		
			3	5	7		
Knox							
Linked to Bond						9	17
	1			2	1		
		3		4	8		
			1	6	7		
Totals:	**19**	**24**	**6**	**107**	**184**	**46**	**64**

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 is in place. The eFACTS tracking database provides an easier avenue for officials and the public to keep abreast of the discharge tracking and treatment trust information in Pennsylvania.

A. Hydrologic Balance – Total Dissolved Solids

In recent years, there has been increased focus on the concentration of Total Dissolved Solids (TDS) being discharged from mine sites. Much of the focus has centered on valley fill mines in Central Appalachia, but EPA and others are starting to examine TDS levels from mines in Northern Appalachia states like Pennsylvania. In Pennsylvania, it is well known that long-term pollutional mine drainage contain elevated concentrations of TDS. On the other hand, TDS levels from surface run-off from active (unreclaimed) and reclaimed mines (stage II approved) are still poorly understood. Surface run-off at active mine sites includes drainage flowing to

sediment ponds and to haulroads sumps. Surface run-off at reclaimed mine sites includes drainage in permanent impoundments, overland flow that occurs during precipitation events (diversions), and surface flow being discharged from haulroads.

During the evaluation year PFD completed a study to document levels of total dissolved solids (TDS) in surface water discharging from reclaimed and unreclaimed operations. Pollutional mine drainage, or long-term mine drainage discharges, were not sampled or part of this study. TDS samples were collected at five actively producing surface mines and seven samples were collected at reclaimed mines. Sample locations included sedimentation ponds, diversions, and haulroad sumps. Samples were collected shortly after precipitation events to evaluate TDS levels in surface run-off.

The study found reclaimed sites had a lower range in TDS values compared to unreclaimed sites. The highest TDS value measured was 344 mg/L at a sedimentation pond located at an unreclaimed site. The study found sulfate was the major contributor to TDS at nine sites and alkalinity at three sites. Two reclaimed sites had TDS levels < 100 mg/L, which indicates that successful reclamation techniques can lower the TDS of surface water run-off.

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
BCR	Bureau of Conservation and Restoration
BMP	Bureau of Mining Programs
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 2013 Ten-Day Notices

TDN 12-121-411-004 (TV1), Amerikohl Mining Company – Walters Mine. The TDN was issued based on a citizen complaint for removing timber from a property without a surface coal mining permit. PADEP responded that the timber operation was not within the proposed permit boundary. Therefore, there was no violation. PFD accepted PADEP's response as "good cause" that no violation of the approved program exists. Subsequently, PFD advised the timber company that removing timber within the proposed permit boundary would constitute mining without a permit, and the activity could lead to a Federal enforcement action. Timber removal within the proposed permit boundary was postponed. This is a program issue which PFD and PADEP are working to resolve. PADEP does not currently consider timber removal prior to permit approval to be mining without a permit.

TDN 13-121-411-001 (TV1); Wilson Creek Energy - Cramer Mine. This TDN was issued based on a citizen complaint that untreated mine water was leaving the permit and degrading a stream. PADEP responded that, although there is iron staining visible from the seep, the water meets effluent standards by the time it leaves the permit, and that the downstream monitoring point also meets in-stream standards. PFD accepted the response as a "good cause" that no violation currently exists. However, PADEP will conduct a hydrologic investigation to determine if there are other sources of permit discharges which are staining the creek. PFD will follow up.

TDN 12-121-536-00 (TV3); CONSOL Energy - Bailey Mine stream loss. This TDN was issued based on a citizen complaint that underground mining had dewatered a stream crossing her property and that subsidence had caused material damage to the stream banks. PADEP responded that it had ordered CONSOL to restore the stream flow, and after several years of effort, had concluded that the stream was irreparable. PADEP found that CONSOL had restored the stream to the extent technologically and economically feasible, and had advised CONSOL that it was moving to a compensatory mitigation phase for the stream loss. PADEP determined that the stream banks had not been affected by underground mining. PFD accepted this response as "appropriate action" to cause two violations to be corrected and one good cause that no violation existed.

TDN 13-121-011-001 (TV2); Rosebud Mining Company - Lady Jane Plant. This TDN was issued based on a PFD inspection which determined the coal preparation facility was significantly under-bonded while a permit renewal/ revision was under review. PADEP separated the bond adjustment from the renewal action, and Rosebud posted the required additional bond. PFD accepted this response as "appropriate action" to cause the violations to be corrected.

TDN 13-121-411-002 (TV2); PBS Coals - Schrock Run. The TDN was issued based on a citizen complaint which alleged two sediment ponds were removed, resulting in inadequate erosion and sedimentation controls; and that a filter fence was being inadequately maintained. PADEP

responded that the ponds were temporarily removed, that runoff was being controlled pending their replacement, and that the fence was being properly maintained. PFD accepted PADEP's response as demonstrating good cause that no violations existed.

TDN 12-121-411-006 (TV1); Wilson Creek Energy – Acosta Mine # 3. The TDN was issued based on a citizen complaint that blasting has caused structural damage to a residence. PFD accepted PADEP's response as demonstrating good cause that a violation did not exist.

TDN 12-121-536-002 (TV6); Cobra Mining – Refuse Dump no. 4. The TDN was issued based on an OSM oversight inspection, for various administrative and site compliance issues. PADEP responded that it had issued compliance orders to cause four violations to be corrected. Two violations were determined to not exist. PFD accepted PADEP's response as demonstrating appropriate action to cause four violations to be corrected and two good cause that no violation existed.

TDN 12-121-011-001 (TV4); PURCO Coal Inc. - Watkiss Mine and Spruell Mine. The TDN was issued based on a citizen complaint that the permits were discharging untreated mine water. PFD accepted PADEP's response that appropriate action had been taken to cause three of the violations to be corrected. Compliance orders were issued, but the company is in bankruptcy. PADEP is pursuing treatment through the ABS Legacy Sites fund. One violation was determined to not exist. PFD accepted PADEP's response and determined appropriate action for three violations, and good cause for one violation.

TDN 12-121-411-005 (TV2); Rosebud Mining Company - Mine 78. The TDN was issued based on a citizen complaint. The violation cited was failure to control dust and dirt from leaving the mine site, causing problems on public roads and nearby residences. PADEP showed a record of compliance orders and remediation measures taken by the company demonstrating that no current violations existed. PFD accepted PADEP's response as demonstrating good cause that there were no violations. The complainant has requested an informal review.

TDN 12-121-011-002 (TV3); PBS Coals – Mostoller and Hart Mines. This TDN was issued based on a citizen complaint for structural damage from blasting, dewatering a personal water supply, and mining off the permit boundary. PADEP's response demonstrated that mining activities did not cause the alleged damages and that the mining operation was within permit boundaries and permit conditions. PFD accepted PADEP's response as demonstrating good cause that no violations existed.

TDN 12-121-011-003 (TV3); McKay Coal Co. – Hamilton No. 2 Mine. This TDN was issued based on an OSM oversight inspection for failure to maintain adequate bond, mining sandstone without a permit, and failure to demonstrate AOC could be achieved. In response, PADEP ordered the company to revise its permit to allow removal of the sandstone and to demonstrate that adequate material was available to achieve AOC. PADEP maintained that bond was calculated in accordance with the Department's bond rate guidelines. PFD accepted PADEP's response to two violations as demonstrating appropriate action to cause the violation to be corrected and good cause that no violation existed. However, PFD determined PADEP's response to the bonding deficiency to be arbitrary and capricious. PADEP asked for an informal review of PFD's decision on December 12, 2012. A ruling has not been made by the Regional Director.

APPENDIX C

Evaluation Year 2013 Bond Forfeiture Permit Reclamation Status Update

Mine Hill Coal Company No. 59
Little Buck Slope
Permit No. 54931302

Date of Inspection: August 1, 2012
Date of Forfeiture: December 18, 2003
Amount of Forfeiture: $5,000
Status: The site has been reclaimed to specifications except for seeding which was to be completed in the Fall of 2012.

This permit was the site of an underground mine. At forfeiture, there were two unrestricted mine openings, a hoist house, hoist, steel tipple generator shed, unreclaimed refuse pile, a buggy track, a second hoist and rubbish. The Department's estimate for reclamation was $12,920. The landowner entered into an Act 181 contract with the Department to reclaim the site for the amount of the bond.

PFD's inspection determined that the site had been reclaimed except for some seeding, which was to be completed in the Fall of 2012. Some of the facilities are being used by the landowner, and some metal remains on the site, which will be scrapped by the landowner. PADEP reports that the reclamation contract has been completed.

L&L Coal Company
L&L Mine
Permit No. 54901301
Date of Inspection: March 29, 2013
Date of Forfeiture: May 15, 2002
Amount of Forfeiture: $5,000
Status: Un-reclaimed

This permit was the site of an underground mine. Three openings, and a wooden tipple need to be removed or sealed, and the area needs to be revegetated. Since forfeiture, a significant amount of rubbish has been deposited in the area. The openings are located in an abandoned mine pit. Depending on contractor accessibility to the pit, $5,000 may be sufficient to reclaim the site. There is discussion of conducting a joint reclamation project with BAMR to backfill the pit, and

in the process, sealing the openings and removing the tipple for the amount of the bond. PADEP reports that the new landowner has been contacted and has given consent for a BAMR AML reclamation project to be constructed. Pottsville District Mining Office will coordinate reclamation of the bond forfeited facilities with the BAMR operation.

Buck Mountain Coal Company
Buck Mountain Slope
Permit No 54851343
Date of Inspection: March 29, 2013
Date of Forfeiture: June 7, 2012
Amount of Forfeiture: $5,000
Status: Un-reclaimed

This permit was the site of an underground mine. The site consists of three areas needing reclamation: a support area, a refuse disposal area, and a mining area that included a drift entry and coal preparation facility. The mining area was partially reclaimed by the operator prior to forfeiture. The entry was covered, and included a mine water discharge pipe, for a pre-existing discharge. Remaining work needed to reclaim the site include removing foundation remains, cribbing, and debris, grading the refuse, and preparation plant area, constructing a stable channel for the mine entry discharge, addressing stream channel erosion, and seeding the area. The bond was collected on May 31, 2013. OSM estimates a reclamation cost of $10,000. PADEP reports that it will negotiate an Act 181 reclamation contract with the adjacent mine operator, Blaschak Coal Corporation.

Millwood Development Company
Slickville Mine
Permit No. 65880106
Date of Inspection: May 1, 2013
Date of Forfeiture: August 14, 2008
Amount of Forfeiture: $82,558 ($3,620 surety and $78,938 remining financial guarantee)
Status: Un-reclaimed

This permit was issued for remining ribs and stumps on the Pittsburgh coal seam. About 110 acres were affected, with 102 acres reclaimed and about 8 acres needing additional reclamation including pond removal, selective grading for roads, revegetation, and tire and junk removal. PFD estimates the reclamation costs at about $35,200 excluding junk removal. However, the primary reclamation issues are the two Sub Chapter F discharges which the operator degraded. Failure to treat these discharges, submit additional water treatment bond, and failure to make required financial guarantee payments, were the primary reasons for forfeiture.

Greensburg DMO reports that on June 3, 2013, it received an application from Neiswonger Construction Inc. to perform a reclamation in lieu of penalty contract to reclaim the three

sediment ponds, construct a 250 foot lined drainage channel, and remove on large equipment tire. The remaining land reclamation issues including selective grading, erosion repair, revegetation, and tire and junk removal will be completed under a future reclamation project. However, there are no plans for water treatment. They are not considered a high priority because of the degraded quality of the receiving stream.

Thomas E. Siegel
Reed Mine
Permit No. 10840111
Date of Inspection: November 7, 2012
Date of Forfeiture: June 8, 2010
Amount of Forfeiture: $98,300
Status: Reclaimed

This permit was forfeited for failure to backfill, grade and revegetate the site. The surety negotiated a CO&A with the Department to complete reclamation for the value of the bond. Post mining land use was changed to unmanaged natural habitat from forest land. Sediment and treatment ponds were retained as permanent features. Alkaline material was incorporated to promote vegetative growth. Reclamation was completed and accepted on October 11, 2011, and bonds were released. OSM inspection determined that the site was successfully reclaimed in accordance with the terms of the CO&A. The remaining ponds are well vegetated, contain cattails, and are discharging compliant water. An abandoned pit was also backfilled and vegetated. There are no notable issues remaining.

Allegheny Milestone Inc.
Heffner Mine
Permit No. 03990110
Date of Inspection: December 12, 2012
Date of Forfeiture: April 13, 2009
Amount of Forfeiture: $12,330
Status: Reclamation needed (water supply replacement)

This permit was initially bonded for $82,200, and was forfeited after Stage II release left $12,300 remaining. A large sediment pond and associated collection ditches remained at forfeiture. The pond was interfering with the landowners' desire to use the property as pasture/grassland. Also, a spring, which was being used for a private water supply, was degraded by mining. PADEP authorized reclamation in lieu of penalty to complete the land reclamation. This was completed on September 18, 2012. On June 17, 2013, the Greensburg DMO received a proposal from Original Fuels, Inc. to conduct a reclamation in lieu of civil penalty project to drill a new well to replace the degraded spring water supply. This will leave the remaining bond to plumb the well to the house, and, if needed, install a water treatment system and provide for increased operation and maintenance costs to the owner.

Allegheny Milestone Inc.
Eagleson II Mine
Permit No. 16970106
Date of Inspection: November, 6, 2012
Date of Forfeiture: March 20, 2008
Amount of Forfeiture: $3,810
Status: Reclaimed

At the time of forfeiture, reclamation needed included stabilization of a slide area, and removal and revegetation of a pond. Knox office will get landowner sign off to allow pond to remain. The pond has alkaline water. OSM verified that the slide area is stable and well vegetated, and no additional work is needed.

Allegheny Milestone Inc.
Eagleson Mine
Permit No. 16960109
Date of Inspection: November, 6, 2012
Date of Forfeiture: March 20, 2008
Amount of Forfeiture: $12,590; Partial collection of $9,090 was made on April 23, 2008.
Status: Reclamation needed, or land owner sign off on ponds and access road.

The permit was forfeited with reclamation of drainage ditches, treatment ponds, and roads needed. Post mining land use is non-commercial forest. No trees were planted, but volunteer species are colonizing some areas. OSM determined that the entire site is stable and re-vegetated; the ponds are holding water and alkaline. Knox office is seeking landowner approval to leave the ponds and access road. However, the amount of bond collected is adequate to complete reclamation as required in the permit.

Allegheny Milestone Inc.
Milestone Mine 155
Permit No. 16803004
Date of Forfeiture: March 20, 2008
Amount of Forfeiture: $65,165; Partial collection of $61,665 was made on April 28, 2009.
Status: Reclamation needed or landowner sign off on ponds.

The permit was forfeited for failure to reclaim erosion and sedimentation controls, treatment ponds, and failure to correct erosion gullies. The Knox Office plans on asking the landowner for authorization to leave the ponds. OSM found the site to be stable and re-vegetated. The ponds are holding water and support aquatic life. If landowner sign off cannot be achieved, the bond is sufficient to complete reclamation.

Falcon Coal and Construction Company
Mildred Silt Pond
Permit No. 57960201

Date of Forfeiture: August 28, 2009
Amount of Forfeiture: $17,100; $5,200 in Remining Financial Guarantee, and $11,900 in surety bond
Status: Un-reclaimed

This was a refuse reprocessing permit to remove coal silt and refuse from a stream and wetland. Some refuse material was removed prior to forfeiture, and part of the site was regraded. However, the objective to create an upland forest wetland and restore the stream was not achieved. There was also a subchapter F discharge associated with this permit. On the day of the inspection the pH of the discharge was 4.5 with iron less than .5mg/l. PADEP conducted a site visit with the new landowner in April of 2013. PADEP reports that the operator had removed all marketable material, and that no refuse material remains in the stream or wetlands, and that the refuse piles had been re-graded, but not re-vegetated. PADEP will conduct a follow up inspection in 2013 to determine if additional reclamation work is needed.

Status of Bond Forfeited Permits which were un-reclaimed at the end of EY 2012.

Reilly Mineral Resources
Newkirk Mine
Permit No. 5498101
Un-reclaimed

PADEP, Pottsville District Office is negotiating a CO&A with the forfeited operator under which he will be "rehabilitated" to be eligible to receive a mining license and coal mine permits. A condition of the rehabilitation is that the Newkirk mine be reclaimed in accordance with the terms of the CO&A. Un-reclaimed features include two pits, a spoil pile, a silt pond and associated vegetation.

D&D Coal Company
Seven Foot Drift Mine
Permit No. 54871303
Un-reclaimed

PADEP, Pottsville District Office is working on an Act 181 contract with Reading Anthracite under which they will reclaim the site including removal of equipment, structures, and backfilling mine openings, for the amount of the bond ($5,000)

Laurel Run Reclamation Company Inc.
Laurel Ridge Mine
Permit No. 17941301
Under reclamation

Reclamation of the permit is being accomplished through a CO&A with the surety company.

There is a bond collection waiver schedule as reclamation is completed. The terms of the CO&A require completion of the reclamation by July 2015. The adjacent mine operator is under contract with the surety to reclaim the site. Significant reclamation was needed including backfilling a six acre portal area, removal of sediment ponds, buildings and re-vegetating the land.

Allegheny Milestone
McCall Mine
Permit No. 16980105
Partially reclaimed

The permit was reclaimed prior to forfeiture except for removal of the haul road. PADEP was seeking a landowner waiver to allow the road to remain. There are sufficient bonds to reclaim the haul road if needed.

RJ Coal Company
Bloom 2 Mine
Permit No. 17980121
Un-reclaimed

PADEP has prepared a reclamation contract proposal, which will go to bids as soon as PADEP's waste management approves the use of tannery sludge as a soil amendment on the site. About 42 acres needs reclamation including backfilling and grading, and revegetation. With use of the tannery sludge, PADEP believes the bond will be sufficient to complete reclamation.

Johnson Brothers Coal Company
Chase Mine
Permit No. 17980105
Reclaimed

PADEP reports that the permit has been reclaimed in accordance with the terms of the CO&A. PADEP has no plans to address the off-permit degraded monitoring points.

Shamrock Minerals Corporation
Shamrock Preparation Plant
Permit No. 37891610
Reclaimed

PADEP reports that the permit has been reclaimed in accordance with the terms of the CO&A and landowner requests for retention of several of the structures/features for post-mining land use.

Black Dog Mining Inc.
Dodson Mine
Permit No. 05773002
Un-reclaimed

PADEP entered into a Surety Reclamation Contract on October 7, 2013, to backfill the two highwalls on this permit. The Department will then implement an Act 181 contract in early 2014 to complete vegetation and construct a passive treatment system to treat a small post mining discharge.

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 USE [A]
(Millions of short tons)

Calendar Year	Surface Mines	Underground Mines	Total
2010	10.8	47.9	58.7
2011	11.4	44.7	56.1
2012	10.8	43.7	54.5

[A] Coal 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

	Numbers of Permanent Program Permits and Initial Program Sites									Area in Acres[3]				
	Permanent Program Permits				Initial Program Sites					Permanent Program Permits (Permit Area)		Initial Program Sites		
Mines and Other Facilities	Active	Inactive	Aban-doned	Total	Active	Inactive	Aban-doned	Total	Insp. Units[1,2]	Federal Lands	State/ Tribal and Private Lands	Federal Lands	State/ Tribal and Private Lands	Total Area
Surface Mines	633	465	261	1,359	0	0	0	0	1,359	0	306,446	0	0	306,446
Underground Mines	125	31	13	169	0	0	0	0	169	0	48,439	0	0	48,439
Other Facilities	186	25	36	247	0	0	0	0	247	0	39,534	0	0	39,534
Total	944	521	310	1,775	0	0	0	0	1,775	0	394,419	0	0	394,419

Permanent Program Permits and Initial Program Sites (Number on Federal Lands: 0)	**Total Number:** 1,775	**Average Acres per Site:**	222.21
Average Number of Permanent Program Permits and Initial Program Sites per Inspectable Unit (IU):	**Total Number:** 1.00	**Average Acres per IU:**	222.21
Permanent Program Permits in Temporary Cessation:	**Total Number:** 12	**Number More than 3 Years:**	0

EXPLORATION SITES	Total Number of Sites	Sites on Federal Lands[4]	Exploration Inspectable Units
Exploration Sites with Permits:	0	0	0
Exploration Sites with Notices:	249	0	0

[1]An 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.

[2]Total Inspectable Units calculation includes Exploration Sites Inspectable Units

[3]When 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.

[4]The number of Exploration Sites on 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

CHART 2A HISTORICAL TRENDS
NUMBER OF INITIAL PROGRAM SITES AND PERMANENT PROGRAM PERMITS

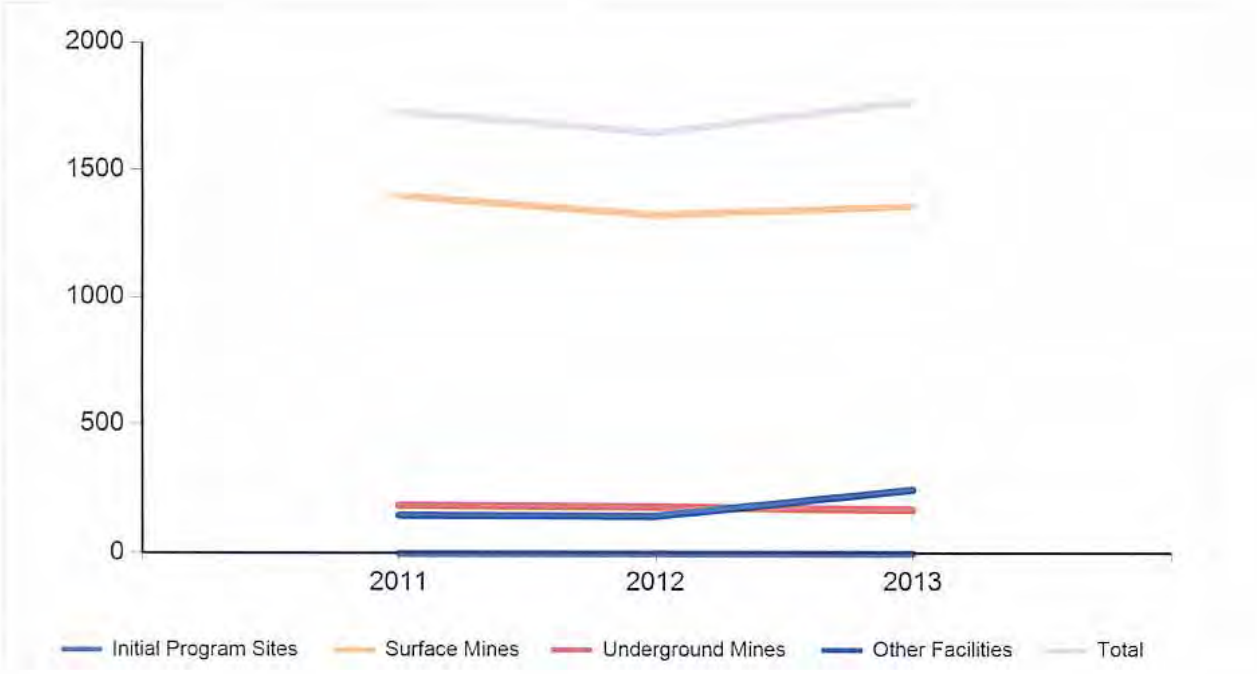


TABLE 2A

NUMBER OF INITIAL PROGRAM SITES AND PERMANENT PROGRAM PERMITS

Year	Initial Program Sites	Permanent Program Permits			Total
		Surface Mines	Underground Mines	Other Facilities	
2011	0	1398	184	149	1731
2012	0	1324	179	146	1649
2013	0	1359	169	247	1775

CHART 2B HISTORICAL TRENDS
AREA OF INITIAL PROGRAM SITES AND PERMANENT PROGRAM PERMITS

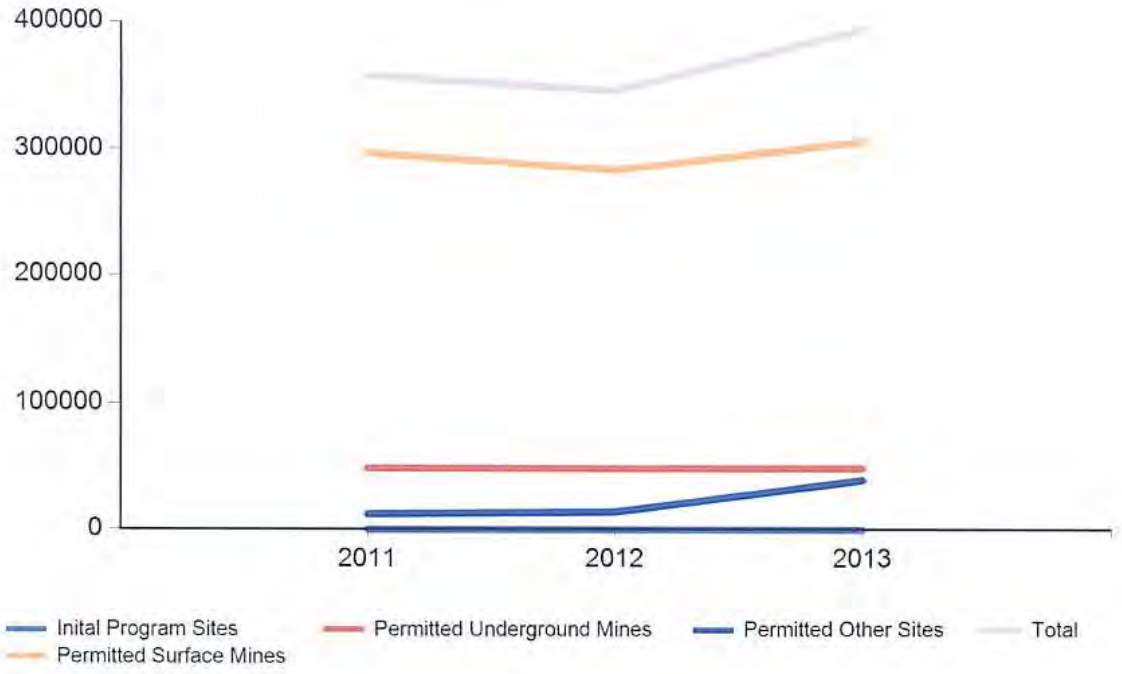


TABLE 2B

AREA OF INITIAL PROGRAM SITES AND PERMANENT PROGRAM PERMITS

Year	Initial Program Sites	Permanent Program Permits			
		Surface Mines	Underground Mines	Other Facilities	Total
2011	0.0	296951.0	48276.0	12455.0	357682.0
2012	0.0	283788.0	48128.0	14162.0	346078.0
2013	0.0	306446.0	48439.0	39534.0	394419.0

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)	N/A	N/A
Mountaintop Removal Mining	785.14(c)(5)	N/A	N/A
Steep Slope Mining	785.15(c)	N/A	N/A
AOC Variances for Steep Slope Mining	785.16(b)(2)	N/A	N/A
Prime Farmlands Historically Used for Cropland	785.17(e)	N/A	N/A
Contemporaneous Reclamation Variances	785.18(c)(9)	N/A	N/A
Mining on or Adjacent to Alluvial Valley Floors	785.19(e)(2)	N/A	N/A
Auger Mining	785.20(c)	N/A	N/A
Coal Preparation Plants Not Located at a Mine Site	785.21(c)	N/A	N/A
In-Situ Processing	785.22(c)	N/A	N/A
Remining	773.15(m) and 785.25	N/A	N/A
Activities in or Within 100 Feet of a Perennial or Intermittent Stream	780.28(d) and/or (e) 784.28(d) and/or (e)	N/A	N/A

CHART 3A HISTORICAL TRENDS
PERMITS ALLOWING SPECIAL CATEGORIES OF MINING

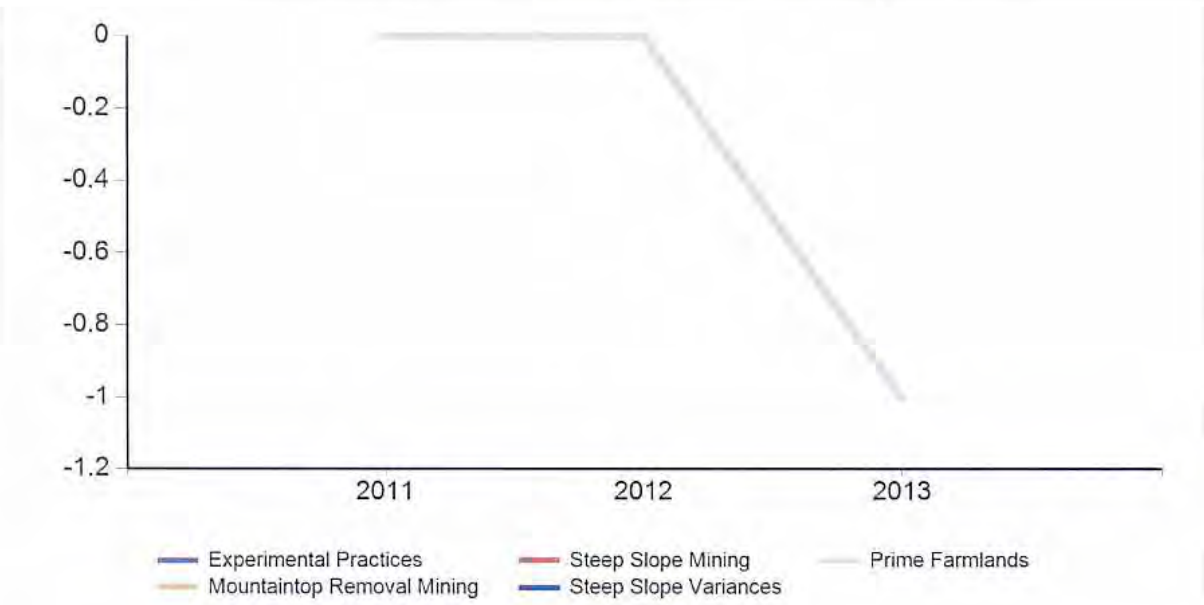


TABLE 3A

NUMBER OF PERMITS ISSUED AND REVISIONS APPROVED

Year	Experimental Practices	Mountaintop Removal Mining	Steep Slope Mining	Steep Slope Variances	Prime Farmlands
2011	0	0	0	0	0
2012	0	0	0	0	0
2013	N/A	N/A	N/A	N/A	N/A

CHART 3B HISTORICAL TRENDS
PERMITS ALLOWING SPECIAL CATEGORIES OF MINING

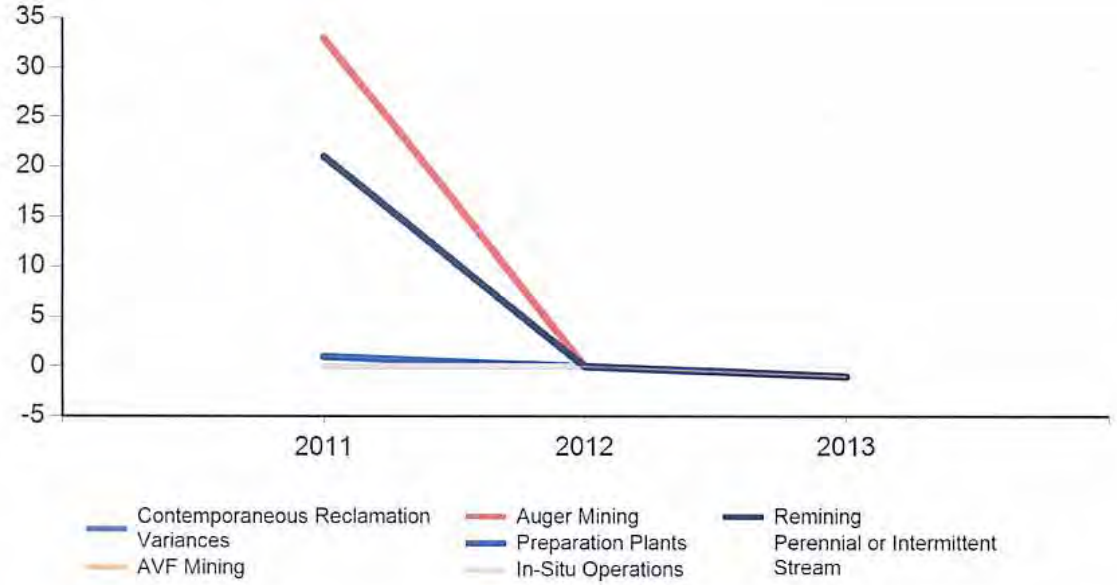


TABLE 3B

NUMBER OF PERMITS ISSUED AND REVISIONS APPROVED

Year	Contemporaneous Reclamation Variances	AVF Mining	Auger Mining	Preparation Plants Not at Mine Site	In-Situ Operations	Remining	Perennial/ Intermittent Streams
2011	0	0	33	1	0	21	0
2012	0	0	0	0	0	0	0
2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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	36	60	4,703	3	9	616	3	1	127	42	70	5,446
Renewals	139	140		21	24		31	43		191	207	
Transfers, sales, and assignments of permit rights	24	25		0	1		3	4		27	30	
Small operator assistance	0	0		0	0		0	0		0	0	
Exploration permits										0	0	
Exploration notices[2]											249	
Revisions that do not add acreage to the permit area	207	191		51	58		72	84		0	333	
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	406	416	4,703	75	92	616	109	132	127	590	889	5,446

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:	6,162.0
Permits in temporary cessation	Notices received:	12	Terminations:	5576
Midterm permit reviews completed	Number:	0		

[1]Includes only the number of acres of proposed surface disturbance
[2]State approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

CHART 4A HISTORICAL TRENDS
NEW PERMITS ISSUED

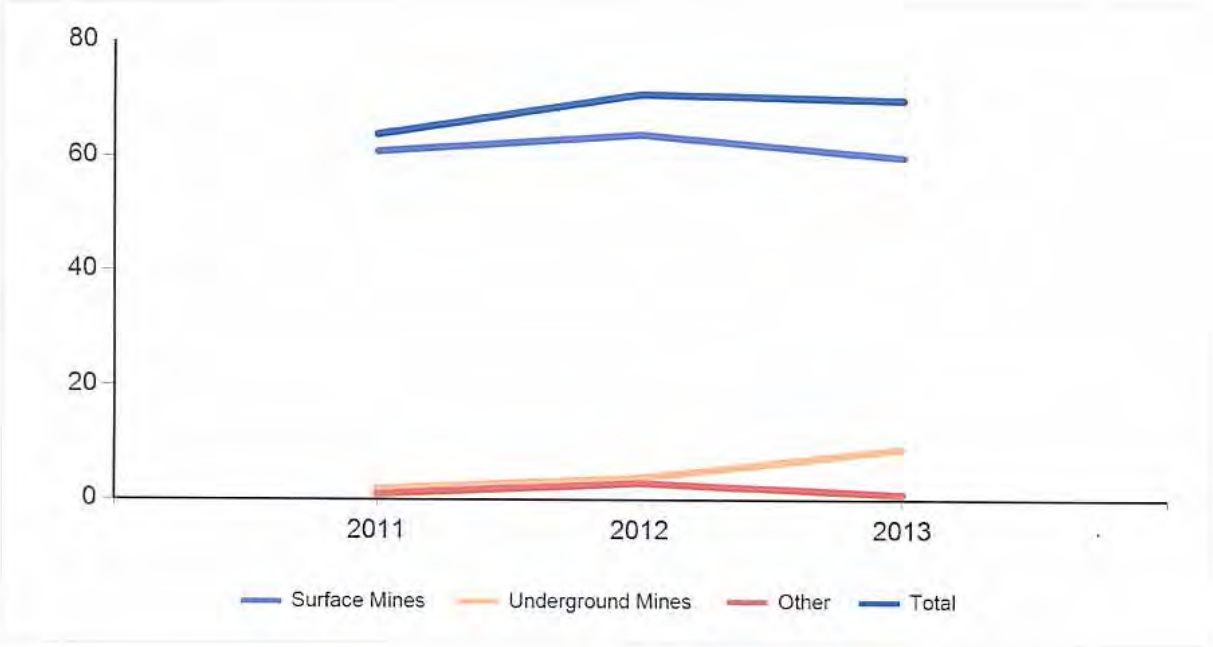


TABLE 4A

NEW PERMITS ISSUED

Year	Surface Mines	Underground Mines	Other	Total
2011	61	2	1	64
2012	64	4	3	71
2013	60	9	1	70

CHART 4B HISTORICAL TRENDS
NEW ACREAGE PERMITTED

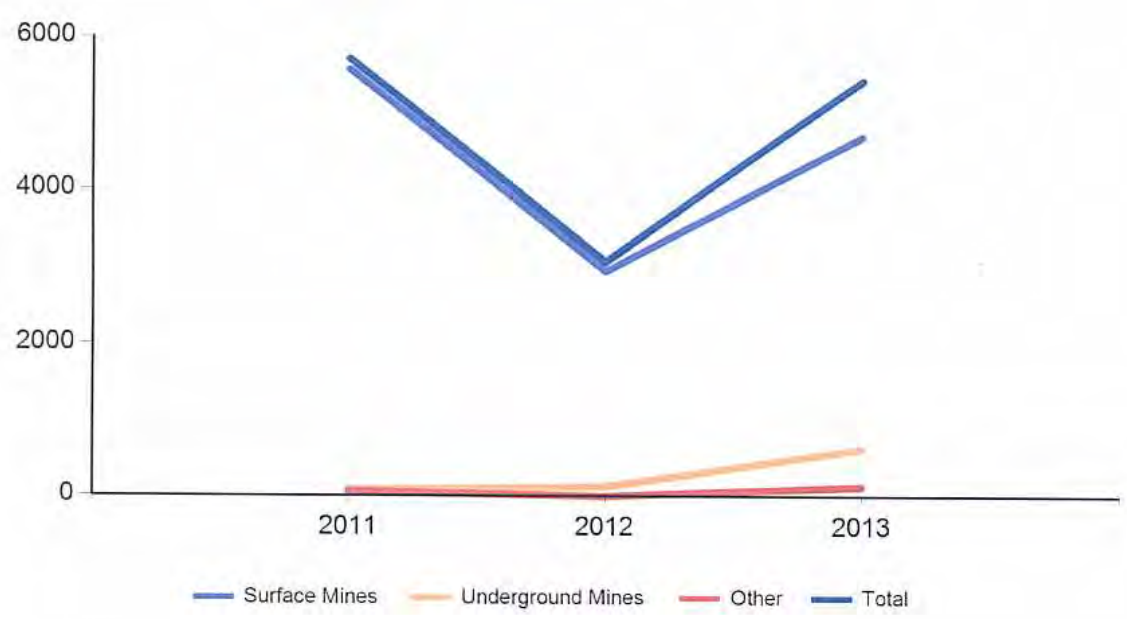


TABLE 4B

NEW ACREAGE PERMITTED

Year	Surface Mines	Underground Mines	Other	Total
2011	5582.0	84.0	57.0	5723.0
2012	2948.0	126.0	0.0	3074.0
2013	4703.0	616.0	127.0	5446.0

TABLE 5

OFF-SITE IMPACTS
EXCLUDING BOND FORFEITURE SITES

RESOURCES AFFECTED		People			Land			Water			Structures		
DEGREE OF IMPACT		Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT EVENT	NUMBER OF EVENTS												
Blasting	4	0	0	0	0	0	0	0	0	0	4	0	0
Land Stability	15	0	0	0	3	10	0	0	2	0	0	0	0
Hydrology	138	0	0	0	0	0	3	110	25	2	0	0	0
Encroachment	7	1	0	0	1	2	2	0	0	1	0	0	0
Other	34	1	1	1	11	1	11	7	1	0	0	0	0
Total	198	2	1	1	15	13	16	117	28	3	4	0	0

Total Number of Inspectable Units[1]: 1780

Inspectable Units with one or more off-site impacts: 126

Exploration Inspectable Units with one or more off-site impacts[2]: 0

Inspectable Units free of off-site impacts: 1654 % of Inspectable Units free of off-site impacts[4]: 93

[1] Total number of Inspectable Units is (1) the number of active and inactive inspectable units at the end of the Evaluation Year and (2) the number of Inspectable Units that were final bond released or removed during the Evaluation Year

[2] Exploration Inspectable Units with one or more off-site impacts is a subset of Inspectable Units with one or more off-site impacts

OFF-SITE IMPACTS AT BOND FORFEITURE SITES

RESOURCES AFFECTED		People			Land			Water			Structures		
DEGREE OF IMPACT		Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT EVENT	NUMBER OF EVENTS												
Blasting	0	0	0	0	0	0	0	0	0	0	0	0	0
Land Stability	2	0	0	0	0	1	0	0	1	0	0	0	0
Hydrology	0	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	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	0	0	1	0	0	1	0	0	0	0

Total Number of Inspectable Units[3]: 24

Inspectable Units with one or more off-site impacts: 1

Inspectable Units free of off-site impacts: 23 % of Inspectable Units free of off-site impacts[4]: 96

[3] Total number of Inspectable Units is (1) the number of bond forfeiture sites that were reclaimed during the Evaluation Year and (2) the number of bond forfeiture sites that were unreclaimed at the end of the Evaluation Year

TABLE 5
(Continued)

TOTAL OFF-SITE IMPACTS
INCLUDING BOND FORFEITURE SITES

RESOURCES AFFECTED		People			Land			Water			Structures		
DEGREE OF IMPACT		Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT EVENT	NUMBER OF EVENTS												
Blasting	4	0	0	0	0	0	0	0	0	0	4	0	0
Land Stability	17	0	0	0	3	11	0	0	3	0	0	0	0
Hydrology	138	0	0	0	0	0	3	110	25	2	0	0	0
Encroachment	7	1	0	0	1	2	2	0	0	1	0	0	0
Other	34	1	1	1	11	1	11	7	1	0	0	0	0
Total	200	2	1	1	15	14	16	117	29	3	4	0	0

Total Number of Inspectable Units[5]: 1804

Inspectable Units with one or more off-site impacts: 127

Exploration Inspectable Units with one or more off-site impacts: 0

Inspectable Units free of off-site impacts: 1677 % of Inspectable Units free of off-site impacts[4]: 93

[4] % of Inspectable Units free of off-site impacts is based on the number of Inspectable Units during the Evaluation Year. The number of Inspectable Units may vary during the Evaluation Year.

[5] Total number of Inspectable Units is (1) the number of active and inactive Inspectable Units at the end of the Evaluation Year and (2) the number of Inspectable Units that were final bond released or removed during the Evaluation Year and (3) the number bond forefeiture sites that were reclaimed during the Evaluation Year and (4) the number of bond forfeiture sites that were unreclaimed at the end of the Evaluation Year.

CHART 5A HISTORICAL TRENDS PERCENT OF INSPECTABLE UNITS FREE OF OFF-SITE IMPACTS

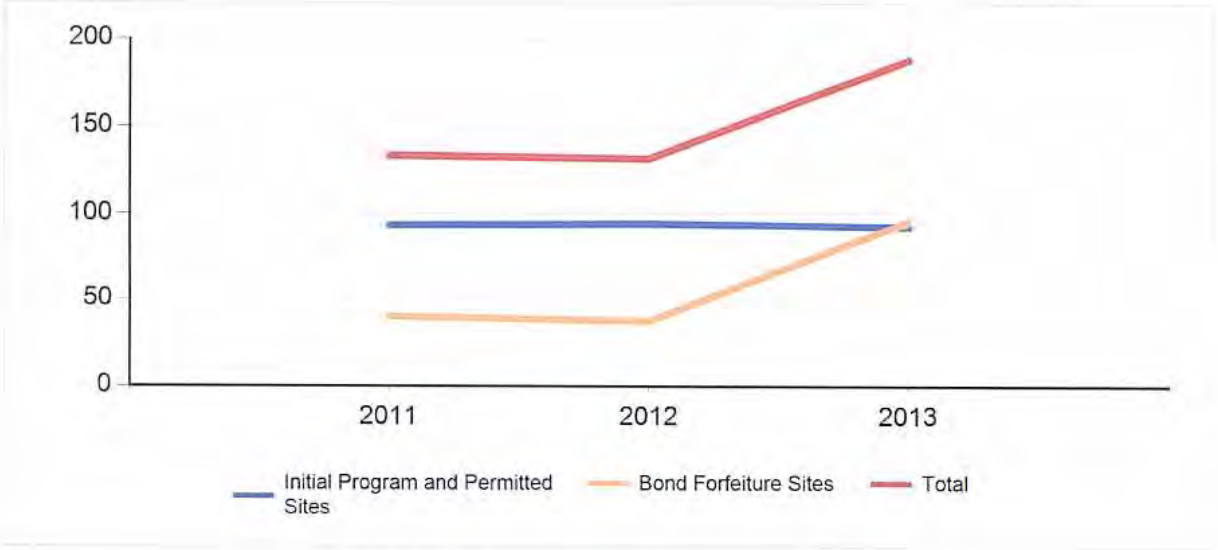


TABLE 5A

PERCENT OF INSPECTABLE UNITS FREE OF OFF-SITE IMPACTS

Year	Initial Program and Permanent Program Permits	Bond Forfeiture Sites
2011	93.6	40.0
2012	94.6	37.3
2013	92.8	95.8

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 I Releases	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		
5,291		0			0	Phase I	5,291
	6,045			0		Phase II	6,045
			6,162			Phase III	6,162

Number of Permanent Program Permits with Jurisdiction Terminated Under Phase III Bond Release During the Evaluation Year	0	Other Releases - Acres	
Initial Program Sites with Jurisdiction Terminated During the Evaluation Year	0	Administrative Adjustments	0
Number of Inspectable Units Removed	28	Bond Forfeiture	42

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 Bonded for Disturbance			5,111
Total Area Bonded for Disturbance	321,097	319,859	(1,238)
Area Bonded for Disturbance without Phase I Bond Release	204,000	192,028	(11,972)
Area Bonded for Disturbance for which Phase I Bond Release Has Been Approved	43,702	80,011	36,309
Area Bonded for Disturbance for which Phase II Bond Release Has Been Approved	27,611	48,007	20,396
Area Bonded for Disturbance with Bonds Forfeited During Evaluation Year			187
Area Bonded for Remining	335	491	156

Areas of Permits Disturbed by Surface Coal Mining and Reclamation Operations

Disturbed Area	0	320,046	320,046

CHART 6A HISTORICAL TRENDS
ACRES OF PHASE I, II, AND III BOND RELEASES

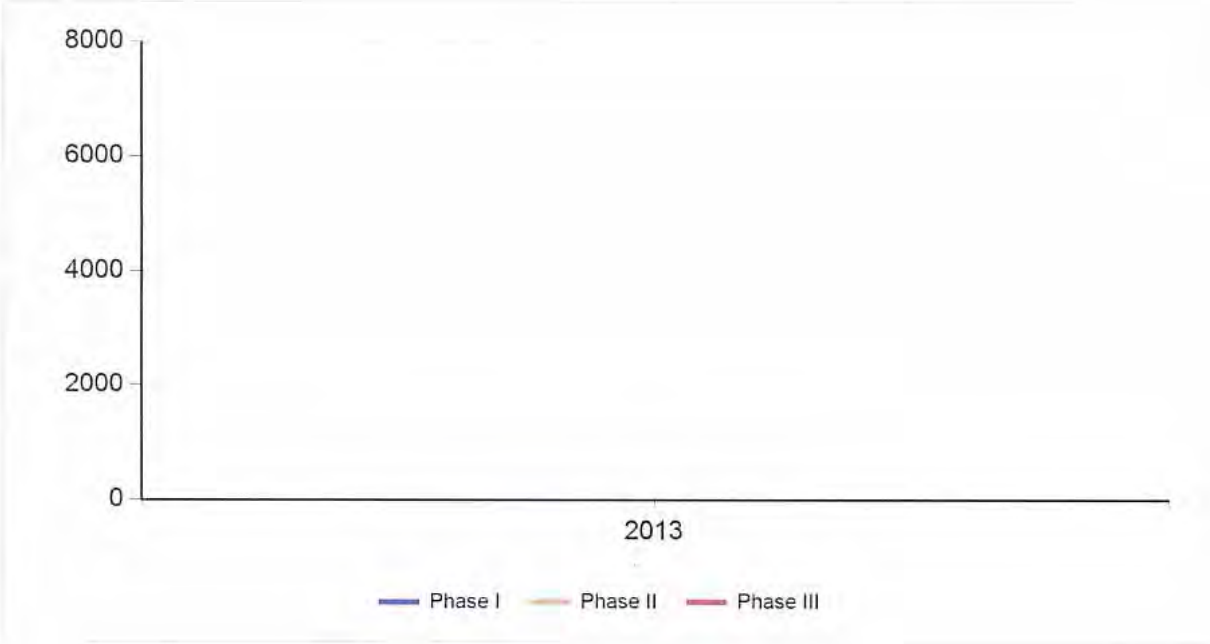


TABLE 6A

ACRES OF PHASE I, II, AND III BOND RELEASES

Year	Phase III	Phase II	Phase I
2013	6162	6045	5291

CHART 6B HISTORICAL TRENDS
ACRES BONDED FOR DISTURBANCE AND DISTURBED AREA

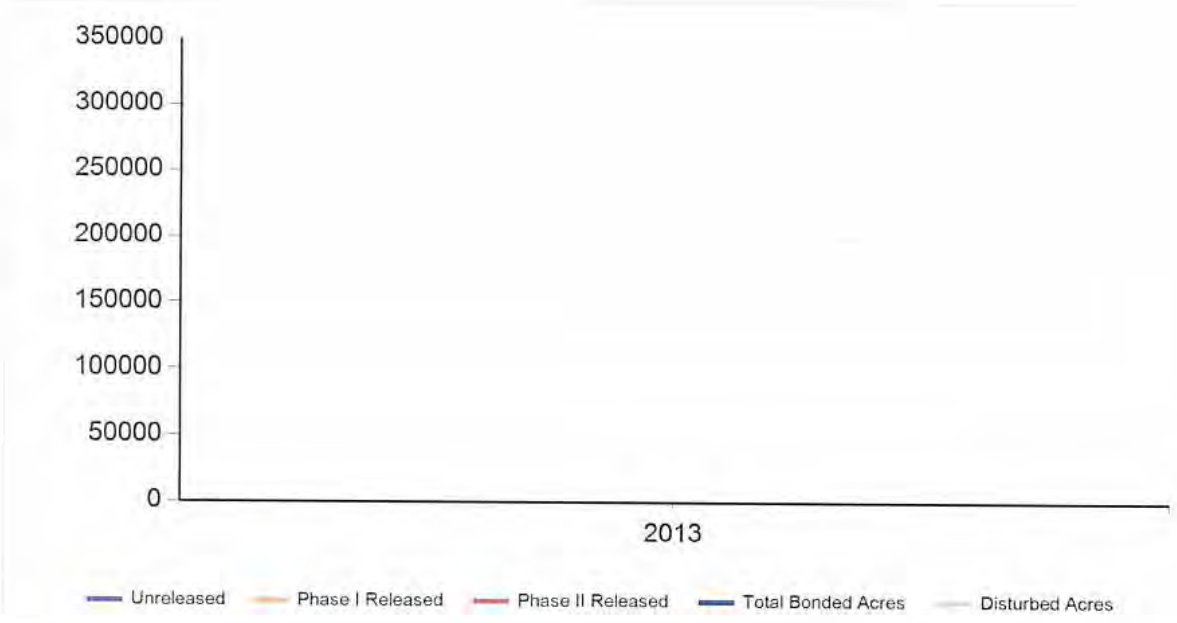


TABLE 6B

AREAS BONDED FOR DISTURBANCE AND DISTURBED AREA

	ACRES BONDED FOR DISTURBANCE				
Year	Unreleased	Phase I Released	Phase II Released	Total Bonded Area	Disturbed Area
2013	291975.0	80011.0	48007	319859.0	320046.0

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]	20		686
Sites with bonds forfeited and collected during the current Evaluation Year	4	377,634	187
Sites with bonds forfeited and collected that were re-permitted during the current Evaluation Year	0		0
Sites with bonds forfeited and collected that were reclaimed during the current Evaluation Year	1		42
Sites with bonds forfeited and collected that were un-reclaimed at the end of the current Evaluation Year [1]	23		831
Sites with bonds forfeited but un-collected at the end of the current Evaluation Year	2		28
Forfeiture Sites with Long-Term Water Pollution			
Bonds forfeited, lands reclaimed, but water pollution is still occuring	30		
Bonds forfeited, lands reclaimed, and water treatment is ongoing	38		
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]	3		109
Sites where surety/other party agreed during the current Evaluation Year to do reclamation	0		0
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		83
Sites being reclaimed by surety/other party at the end of the current Evaluation Year [2]	1		26

[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.

CHART 7A HISTORICAL TRENDS
NUMBER OF BOND FORFEITURE SITES

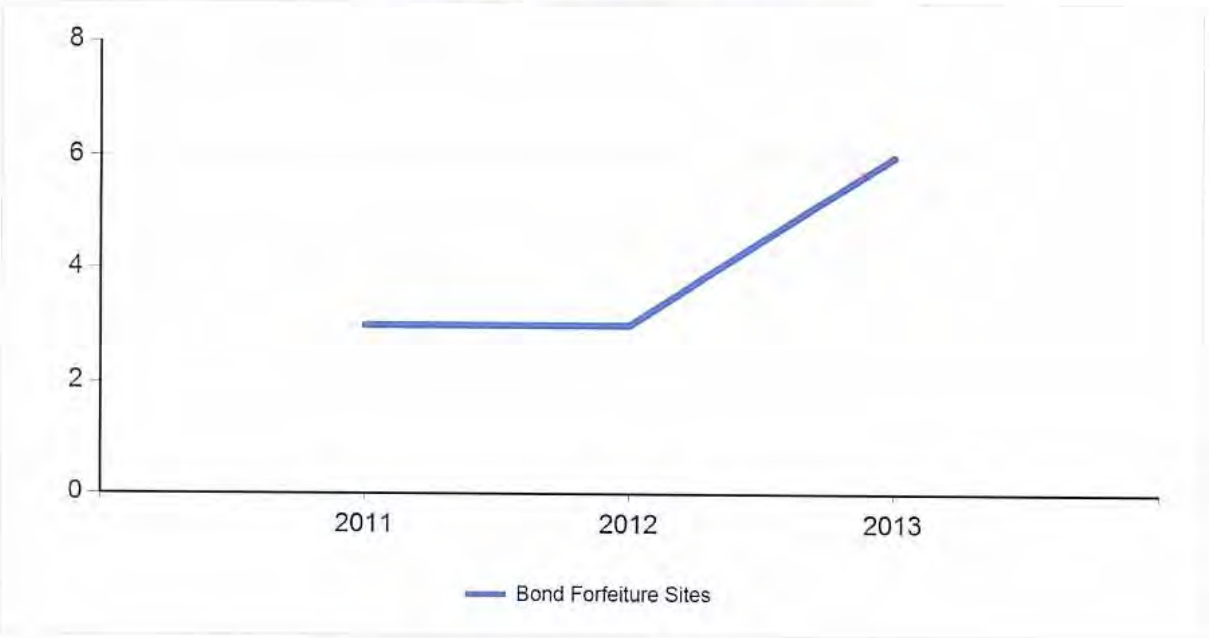


TABLE 7A

NUMBER OF BOND FORFEITURE SITES

Year	Bond Forfeiture Sites
2011	3
2012	3
2013	6

CHART 7B HISTORICAL TRENDS
ACREAGE OF BOND FORFEITURE SITES

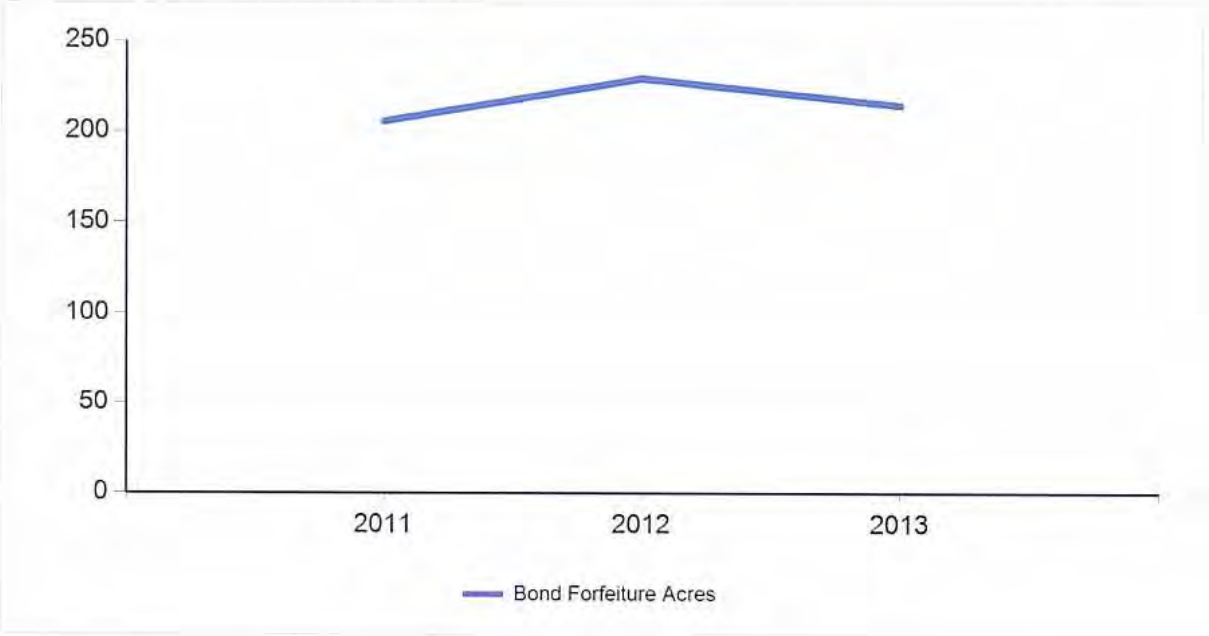


TABLE 7B

ACREAGE OF BOND FORFEITURE SITES

Year	Acres
2011	206
2012	230
2013	215

CHART 7C HISTORICAL TRENDS
NUMBER OF SITES WITH WATER POLLUTION STILL OCCURRING

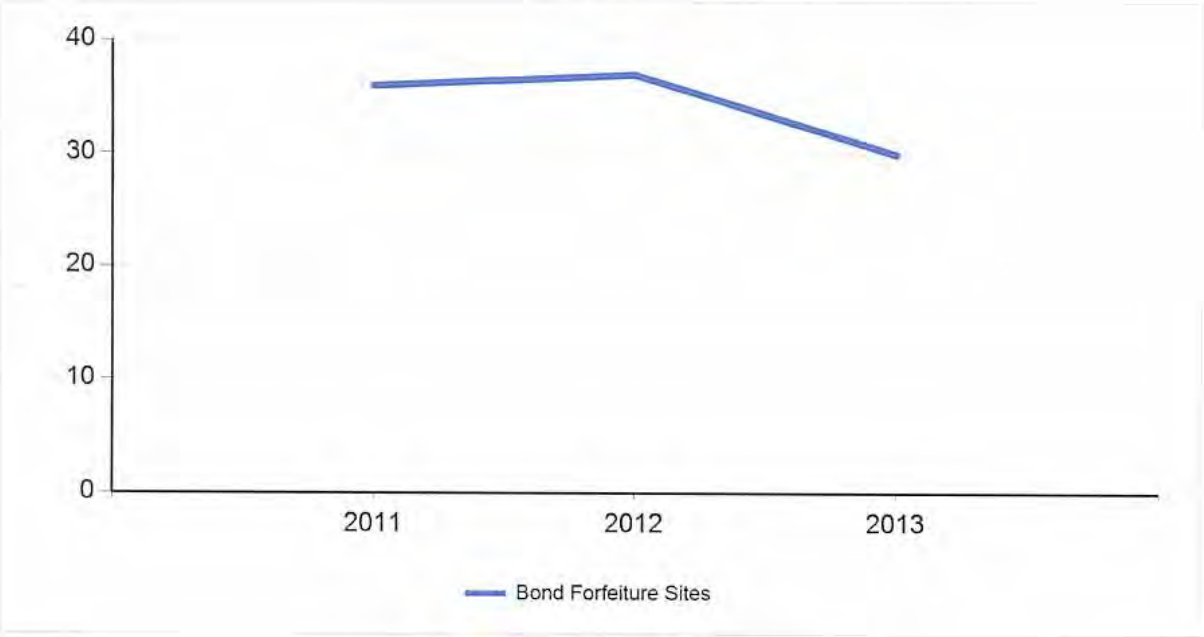


TABLE 7C

NUMBER OF SITES WITH WATER POLLUTION STILL OCCURRING

Year	Sites
2011	36
2012	37
2013	30

CHART 7D HISTORICAL TRENDS
NUMBER OF SITES WITH WATER TREATMENT ONGOING

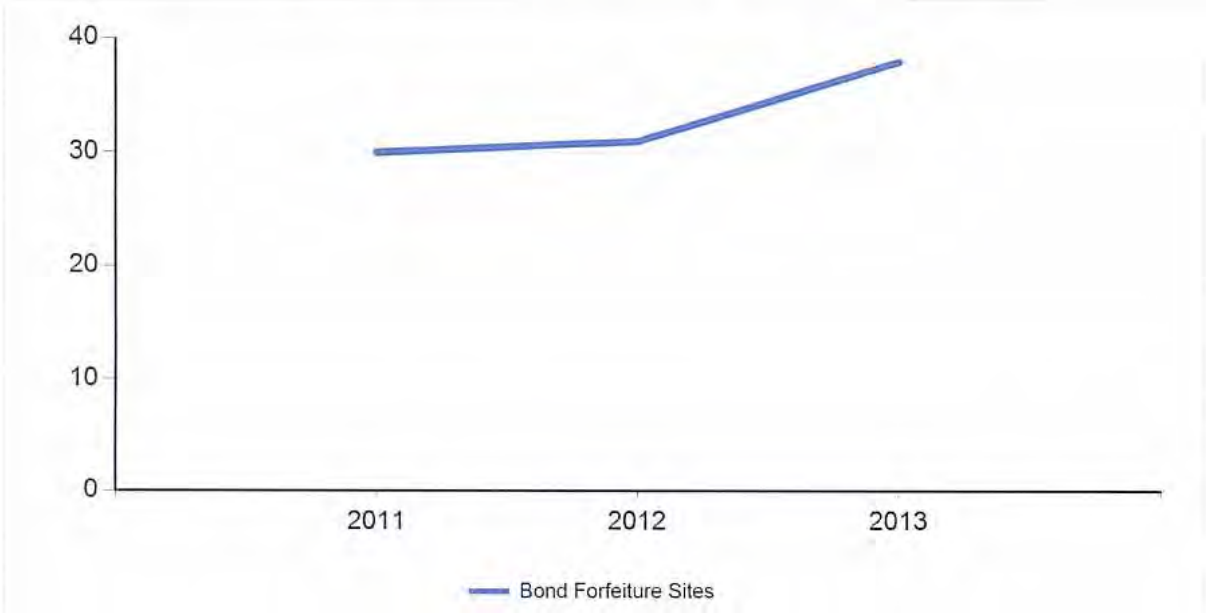


TABLE 7D

NUMBER OF SITES WITH WATER TREATMENT ONGOING

Year	Sites
2011	30
2012	31
2013	38

TABLE 8

REGULATORY AND AML PROGRAMS STAFFING

Function	Number of FTEs
Regulatory Program	
Permit Review and Maintenance	39.00
Inspection	76.87
Other (supervisory, clerical, administrative, fiscal, personnel, etc.)	89.38
Regulatory Program Total	205.25
AML Program Total	147.00
TOTAL	352.25

CHART 8A HISTORICAL TRENDS
REGULATORY AND AML PROGRAMS STAFFING

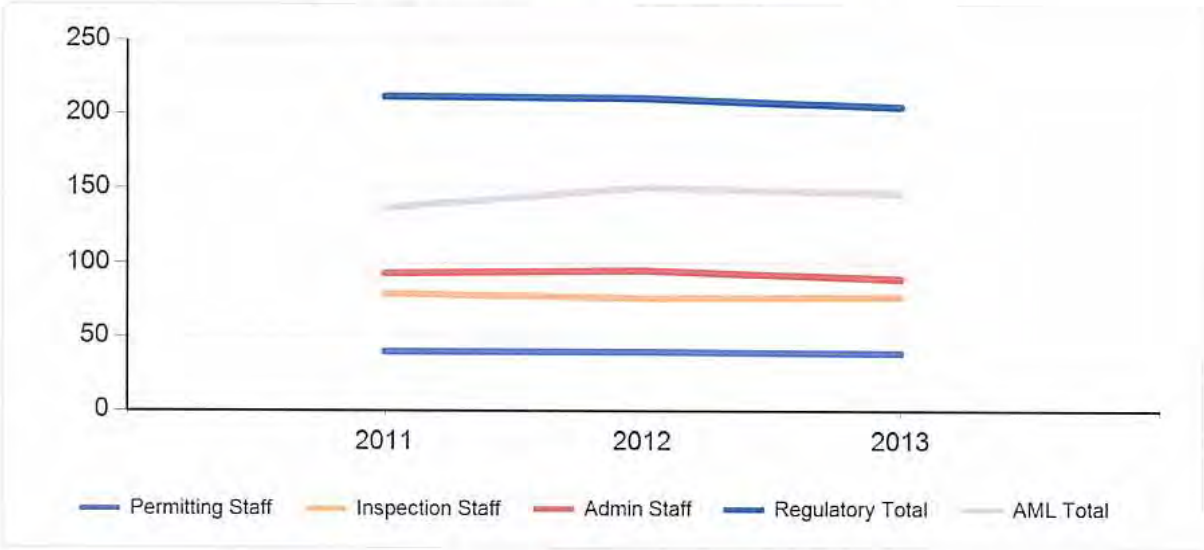


TABLE 8A

REGULATORY AND AML PROGRAMS STAFFING

	Regulatory Program				
Year	Permitting	Inspection	Admin	Total	AML Program
2011	40	79	93	212	137
2012	40	76	95	211	151
2013	39	77	89	205	147

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 Progam Costs
Regulatory Funding			
Administration and Enforcement Grant	7,555,238		
Other Regulatory Funding, if applicable	312,905		
Subtotal (Regulatory Funding)	7,868,143	15,110,476	52
Small Operator Assistance Program Grant Funding	0	0	
Abandoned Mine Land Reclamation Funding	58,547,563	58,547,563	100
Watershed Cooperative Agreement Program	220,000	1,125,927	20
TOTAL	66,635,706		

CHART 9A HISTORICAL TRENDS
FUNDS GRANTED TO STATE OR TRIBE BY OSM

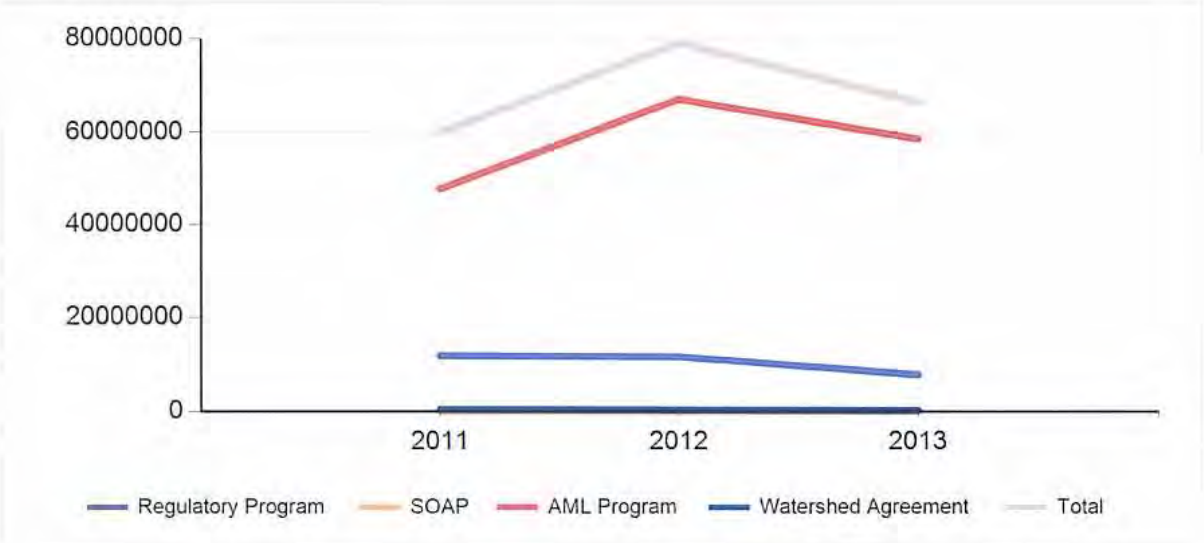


TABLE 9A

FUNDS GRANTED TO STATE OR TRIBE BY OSM

Year	Regulatory Program	SOAP	AML Program	Total
2011	11,971,265	0	47,627,365	60,002,408
2012	11,770,233	0	67,152,367	79,220,664
2013	7,868,143	0	58,547,563	66,635,706

TABLE 10

STATE INSPECTION ACTIVITY

INSPECTABLE UNITS FOR WHICH STATE MET REQUIRED INSPECTION FREQUENCY ON AN INSPECTABLE UNIT-BY-INSPECTABLE UNIT BASIS [1]

Inspectable Units (IUs)	Total number of inspectable units [2]	Number of inspections required annually		Number of inspections conducted		IUs Met Complete Inspection Frequency Requirement		IUs Met Partial Inspection Frequency Requirement		IUs Met Complete and Partial Inspection Frequency Requirements		
		Complete inspections	Partial inspections	Complete inspections	Partial inspections	Number	Percent	Number	Percent	Total number of IUs	Number that met inspection frequency	Percent
COAL MINES AND FACILITIES												
Active	967	3868	7736	3384	7039	640	66	529	55	967	455	47
Inactive	389	1556	0	1022	590	164	42	389	100	389	215	55
Abandoned	102	102	0	332	200	65	64	10	10	102	43	42
TOTALS [3]	1458	5526	7736	4738	7829	869	60	928	64	1458	713	49

Coal Exploration Activities [4]	Complete Inspections	Partial Inspections
Exploration sites with permits	0	0
Exploration sites with notices	38	12

[1] Caculated on a site-specific basis.

[2] Total number includes both permanent program permits and initial program sites.

[3] OSM is assuming that all states have gone through the process described in 30 CFR 840.11(h) and 842.11(f) to reduce inspection frequency on abandoned/forfeited sites

[4] Includes all valid notices and permits. No inspection frequency data are provided since SMCRA does not establish a minimum numerical inspection frequency for coal exploration activities.

[5] NA - Not Available

CHART 10A HISTORICAL TRENDS
STATE OR TRIBAL INSPECTION ACTIVITY

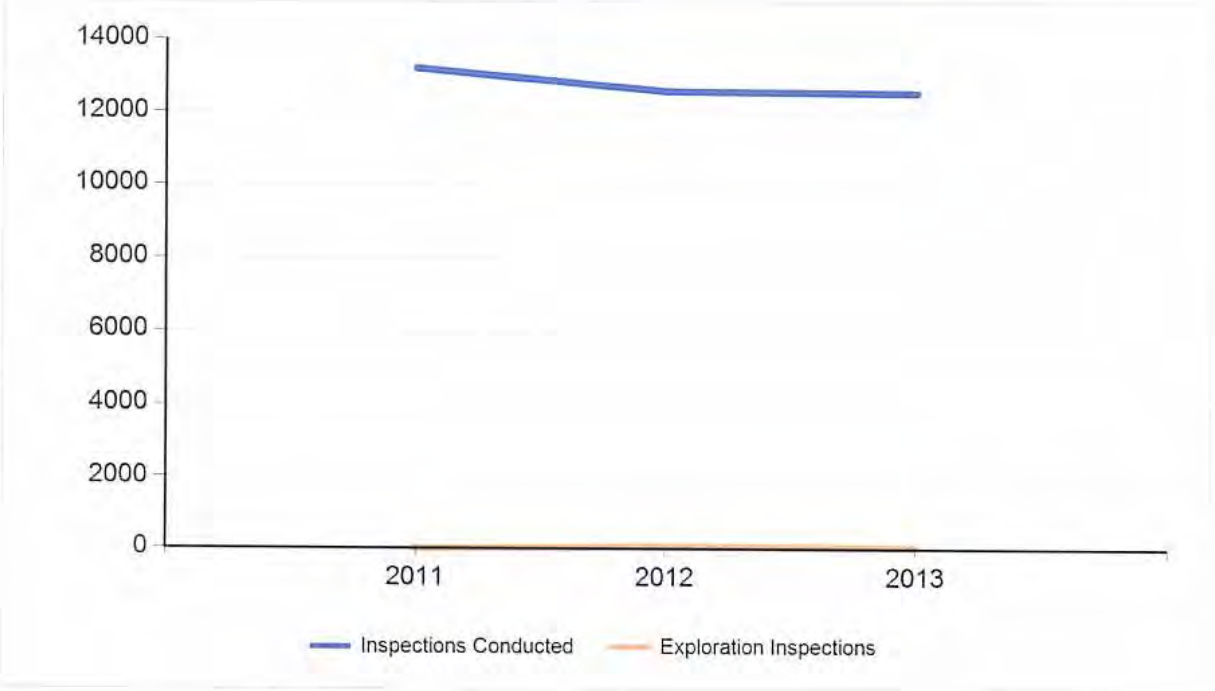


TABLE 10A

STATE OR TRIBAL INSPECTION ACTIVITY

Year	Inspections Conducted	Exploration Inspections
2011	13207	0
2012	12600	70
2013	12567	50

TABLE 11

STATE OR TRIBAL ENFORCEMENT ACTIVITY

Type of Enforcement Action	Number of Actions [1]	Number of Violations [1]
Notice of Violation	468	586
Failure-to-Abate Cessation Order	3	3
Imminent Harm Cessation Order	48	62

[1] Does not include actions and violations that were vacated.

CHART 11A HISTORICAL TRENDS
STATE OR TRIBAL ENFORCEMENT ACTIVITY

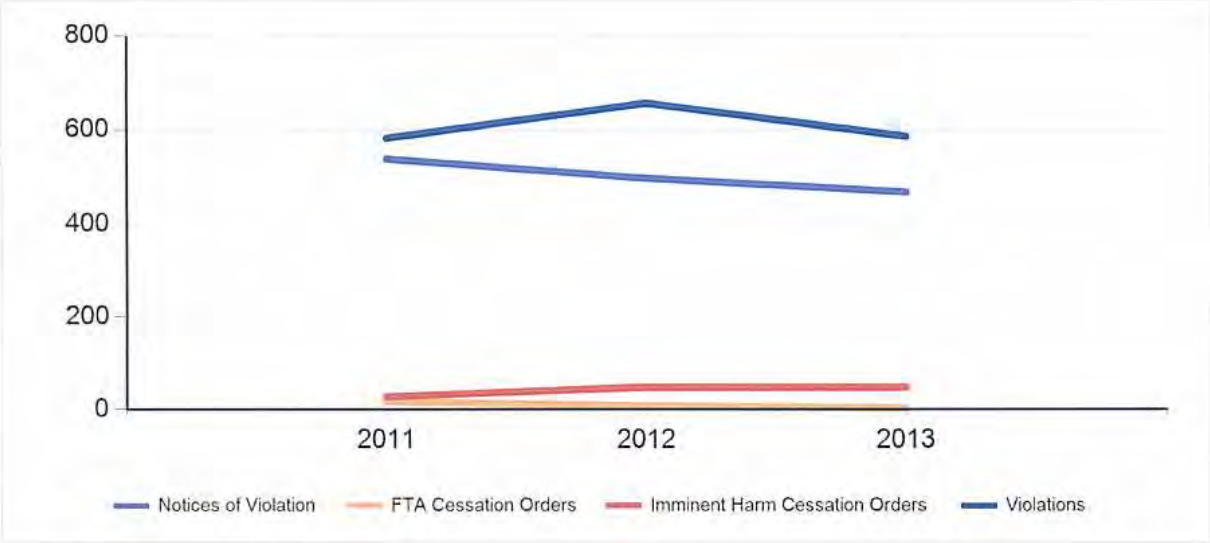


TABLE 11A

STATE OR TRIBAL ENFORCEMENT ACTIVITY

Year	Notices of Violation	Violations	FTA Cessation Orders	Imminent Harm Cessation Orders
2011	538	582	16	27
2012	497	658	7	48
2013	468	586	3	48

TABLE 12

LANDS UNSUITABLE ACTIVITY

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

CHART 12A HISTORICAL TRENDS
LANDS UNSUITABLE ACTIVITY

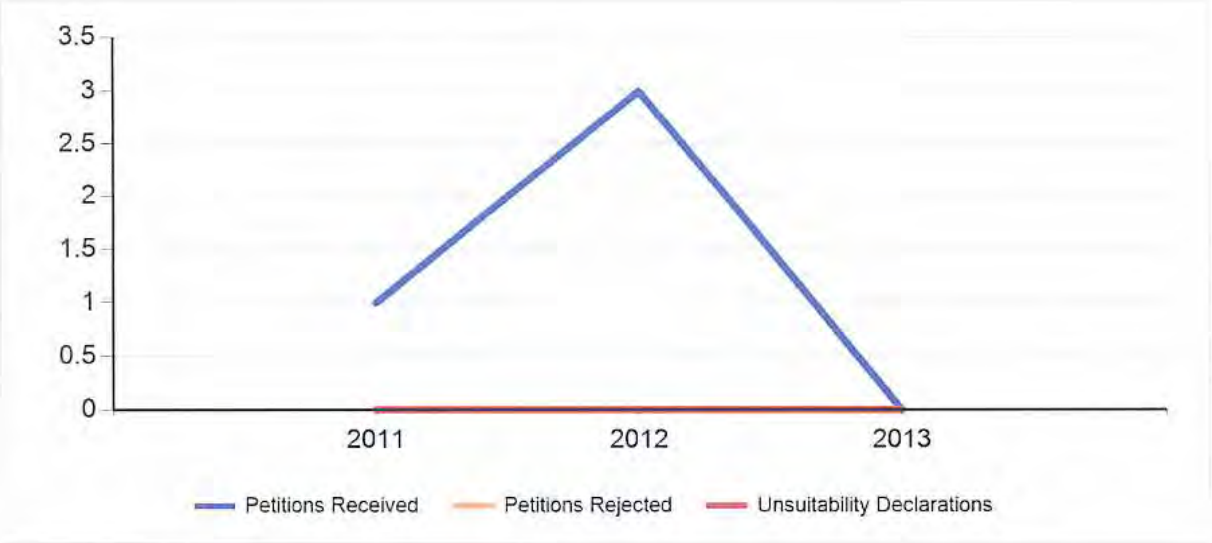


TABLE 12A

LANDS UNSUITABLE ACTIVITY

Year	Petitions Received	Petitions Rejected	Unsuitability Declarations
2011	1	0	0
2012	3	0	0
2013	0	0	0

CHART 12B HISTORICAL TRENDS
ACRES DECLARED UNSUITABLE

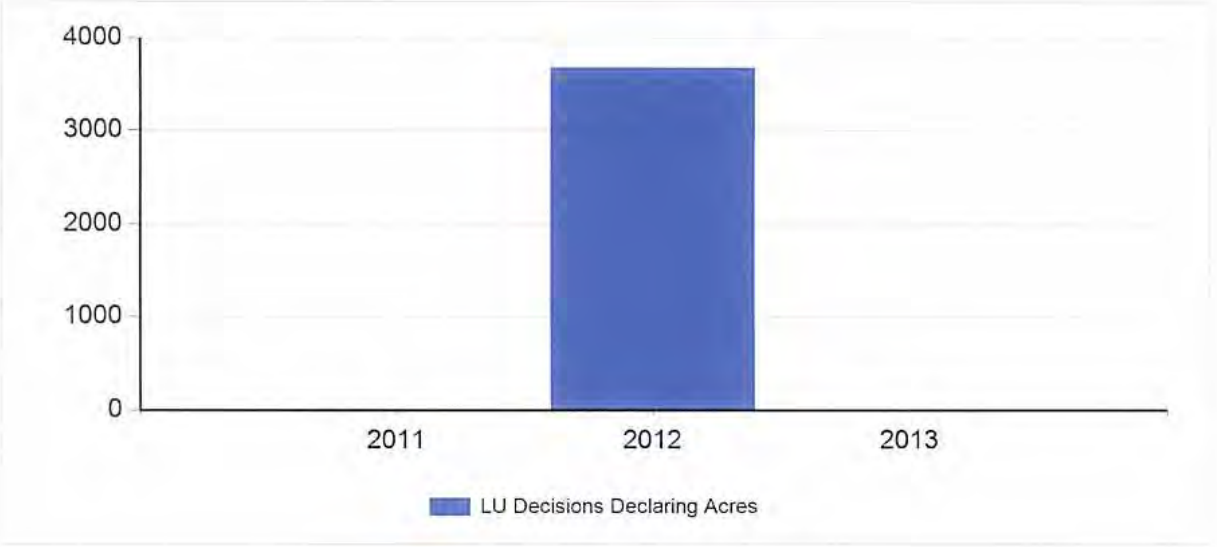


TABLE 12B

ACRES DECLARED UNSUITABLE

Year	Acres Declared Unsuitable
2011	0.0
2012	3688.0
2013	0.0

TABLE 13

OSM OVERSIGHT ACTIVITY

Oversight Inspections and Site Visits

	Complete		Partial		
	Joint	Non-Joint	Joint	Non-Joint	Total
Oversight Inspections	141	0	70	15	226
	Technical Assistance		Other		Total
Site Visits	2		65		67

Violations Observed by OSM and Citizen Requests for Inspection[1]

Type of Action	Total number of each action
How many violations were observed by OSM on oversight inspections?	123
Of the violations observed, how many did OSM defer to State action during inspections?	97
Of the violations observed, how many did OSM refer to the State through Ten-Day Notices? [2]	11
How many Ten-Day Notices did OSM Issue for observed violations? [3]	3
How many Ten-Day Notices did OSM issue to refer citizen requests for inspection?	9
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?	0

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.

CHART 13A HISTORICAL TRENDS
OSM OVERSIGHT ACTIVITY

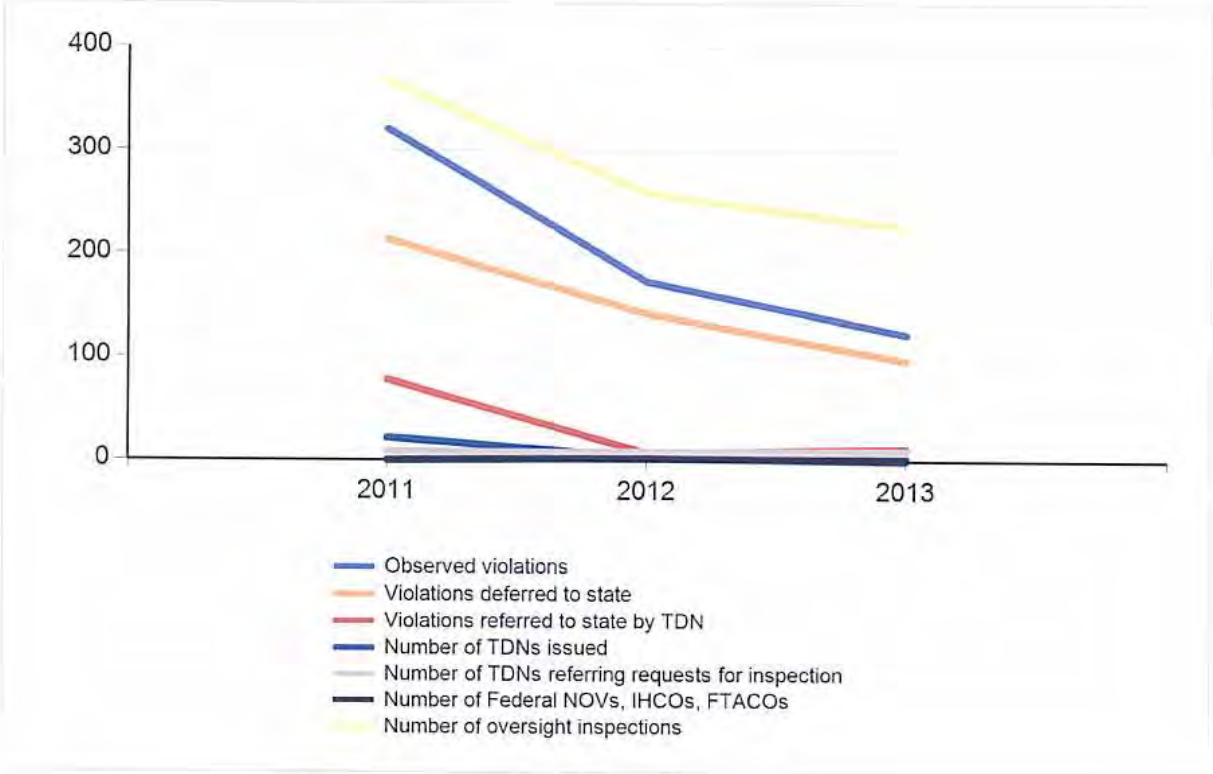


TABLE 13A

OSM OVERSIGHT ACTIVITY

Year	Number of violations observed on OSM oversight inspections	Number of violations deferred to state action	Number of violations referred to state by TDN	Number of TDN's issued	Number of TDN's issued to refer reqeuests for inspection	Number of Federal NOVs, FTACOs, & IHCOs issued	Number of oversight inspections
2011	321	214	78	22	8	0	368
2012	174	143	7	3	8	2	259
2013	123	97	11	3	9	0	226

APPENDIX E

Abandoned Mine land reclamation accomplishments Data derived from AMLIS and other sources.

Table 1 – Pennsylvania Status of AML Inventory all Priority 1, 2, and 3 Hazards on June 30, 2013					
	High Priority		Elevated Priority 3	Stand-Alone Priority 3 (Not adjacent or in conjunction w/ P1&2)	Total
	Priority 1	Priority 2			
UNFUNDED					
GPRA Acres	881	22753	N/A	20419	44053
Dollars	57287020	4595491994	N/A	316232459	4969011473
FUNDED					
GPRA Acres	263	6124	0	6296	12683
Dollars	9022397	143820520	0	16163280	169006197
COMPLETED					
GPRA Acres	1674	24156	0	25223	51053
Dollars	76031184	363312765	0	44431487	439343949

Table 2 - Pennsylvania Accomplishments in Eliminating Health and Safety Hazards Related to Past Mining Priority 1 and 2 Hazards (As of June 30, 2013)

	PROBLEM TYPE (keyword)																	
	Clogged Stream (CS) (miles)	Clogged Stream Lands (CSL) (acres)	Dangerous Pile or Embankment (DPE)(acres)	Dangerous Highwall (DH) (feet)	Dangerous Impoundment (DI) (count)	Dangerous Slide (DS) (acres)	Gases: Hazardous /Explosive (GHE) (count)	Hazardous Equip. /Facilities (HEF) (count)	Hazardous Water Body (HWB) (count)	Industrial/Residential Waste (IRW) (acres)	Portal (P) (count)	Polluted Water:Agri/Industrial (PWAI)(count)	Polluted Water: Human Consumption (PWHC)(count)	Subsidence (S) (acres)	Surface Burning (SB) (acres)	Underground Mine Fire (UMF) (acres)	Vertical Opening (VO) (count)	TOTAL
UNRECLAIMED/REMAINING HAZARDS (Unfunded)																		
Units	29	708	1956	1144110	8	19	7	382	170	151	305	21	142	1072	56	1285	567	N/A
GPRA Acres	141	792	1956	16338	40	18	7	38	845	151	31	105	710	1071	56	1285	57	23641
Dollars	10280820	10763601	152031486	1.81E+08	954925	151397	2038000	5845162	32759742	9849173	2E+06	3605654239	3605654239	35040339	5196202	590341999	4094701	4652779015
Annual Reclamation 2013																		
Units			6	43240		1		2	1		2		17	28	4		11	N/A
GPRA Acres			6	618		1		1	1		1		85	28	4		1	747
Dollars			335546	6498000		490295		15439	46240		81634		172917	1722890	66366		954093	10228420
HISTORICAL RECLAMATION - EY1978 - 20xx (Completed)																		
Units	146	310	870	1134573	16	112	2	393	135	42	349	28	535	2571	192	1198	724	N/A
GPRA Acres	701	333	822	16188	81	111	2	39	684	42	35	139	2621	2570	192	1198	72	25830
Dollars	11476204	5806073	20613005	1.9E+08	1434917	2097742	759	6701460	8937713	567301	3E+06	36655	15245391	83960410	2978725	79647357	7607954	439343950

Table 3 - Pennsylvania Accomplishments in Eliminating Environmental Problems Related to Past Mining Priority 3 and SMCRA section 403(b) Hazards (As of June 30, 2013)

	PROBLEM TYPE (keyword)														
	Bench , Solid Bench, Fill Bench (BE) (acres)	Industrial/Residential Waste Dump (DP) (acres)	Equipment and Facilities (EF) (count)	Gob (GO) (acres)	Highwall (H) (feet)	Haul Road (HR) (acres)	Mine Opening (MO) (count)	Pit, Open Pit, Strip Pit (PI) (acres)	Spoil, Spoil Bank (SA) (acres)	Slurry (SL) (acres)	Slump (SP) (acres)	Water (WA) (gallons)	Other (specify)	Water Supplies (WS) – Section 403(b) (count)	TOTAL
UNRECLAIMED/REMAINING HAZARDS (Unfunded)															
Units	**72**	1	53	1120	304544	3	91	1331	5077	138	280	30487	4868		N/A
GPRA Acres	**72**	1	5	1120	4351	3	9	1332	5078	138	281	8028	3		20419
Dollars	**362000**	1000	577201	12126310	100868226	2016666	4368468	22910927	30283236	1867816	6140219	115115942	19594448		316232459
ANNUAL RECLAMATION - EY20xx only (Completed)															
Units			3	2	2000			3	354			7256			N/A
GPRA Acres			1	2	29			3	354			7256			7645
Dollars			3	1	92542			3	35			10887521			10980105
HISTORICAL RECLAMATION - EY1978 - 20xx (Completed)															
Units			35	329	28546		45	308	8156	10	174	18628	15		N/A
GPRA Acres			3	329	379		4	308	5752	10	159	18267	12		25223
Dollars			87130	2777886	3046763		166740	4053724	8382818	37501	568888	25114878	197159		44431487

Table 4 – Pennsylvania Public Well-Being Enhancement
(All Priority 1, 2, and 3 AML projects completed during EY 2013)

#	PAD Number	Project Name	Problem Type(s) Reclaimed	GPRA Acres	Cost	Number of People with Reduced Exposure Potential (State Estimated /or/ Census Data)
1	PA000059	Pumping Station Cuddy Subsidence	S	0.2	173877.5	498
2	PA000085	Brisban	S	27	1396100	655
3	PA000351	Clinton SE PIA Radar Spoil Fire	SB	3.5	66366.25	667
4	PA000430	NORMALVILLE SOUTH	DS	1	447351.02	273
5	PA000435	OSM 54(0435)101.1 Mauer Mine	VO	0.2	28897.8	758
6	PA000471	Amsterdam North	DH;SA	5	225925.84	593
7	PA000759	East Bovard	DH;SA	41.4	327875.03	206
8	PA000821	Lancashire no 15 AMD treatment plan	WA	7000	10887517.42	291
9	PA000876	Clarence Southeast	DH;SA	52.61429	199070.55	46
10	PA000886	Crown	DH;SA	40.3	302246.42	264
11	PA000982	Clarion Limestone High School West	DH;SA	33.3	248663.71	352
12	PA001052	Stackhouse Park	VO	0.1	396334.35	1097
13	PA001068	Bentleyville West	VO	0.1	93038.6	3450
14	PA001069	Waynesburg	P	0.2	81634	1341
15	PA001310	Cemetery Street Subsidence	VO	0.1	73175	1739
16	PA001550	Beckets Run (Wyne Slide)	DS	0.2	42944	725
17	PA001748	Riverside East 102 BF	EF;GO;HEF;PI	9.55	350989.62	2934
18	PA002084	Clarkson Avenue Subsidence	VO	0.11	381023	2934
19	PA002190	Willow Street Subsidence	VO	0.1	196342	2747
20	PA002553	North Belle Vernon Green Street Subs	S	1.2	152912.5	1597
21	PA002810	Slate Lick	DH;SA;VO	49.7	261138.56	170
22	PA003128	South Bruin	DH;SA	22.7	116457.36	257
23	PA003236	Boydtown	VO;WA	200.1	79062.07	995
24	PA003316	Crown	DH;SA	8.9	65233.61	132
25	PA003339	B B S Coal Co	DH;SA	92.3	1241539.39	202
26	PA003361	McCrea Furnace	DH;H;SA	227.9	1322444.78	195
27	PA003452	Pine Grove Cemetery BD 2929	DH;SA	13	27228.96	218
28	PA003463	Harlan East	DH;SA	46.7	371004.82	218
29	PA003631	South Cass Citizens Fire Co Subsidence	VO	0.1	14979.76	376
30	PA003649	Newtown South 2	DH;HWB;PI;SA;VO;WA	65.2	87501.59	347
31	PA003739	Strip Mall Slope Subsidence	VO	0.1	79576.5	2589
32	PA003822	Prymak Road Waterline	PWHC	35	117583.34	217
33	PA003823	Prymak Road Waterline	PWHC	50	55333.34	217
34	PA003888	Dark Hollow	DH;SA	108.5	457293.39	55
35	PA003902	CRAIGSVILLE SOUTHEAST REMEDIAL	DH	0	83652.28	290
36	PA004710	White North	DH;SA	21.5	104096.96	285
37	PA004727	Kimberly Run	DH;P;SA	56.5	391522.25	739
38	PA006080	Miola West	DH;SA	26.8	79722.46	212
39	PA006255	Mount Air South	DH;SA	33.4	267114.33	183
40	PA006457	Baughman Cemetery East	DH;SA	29.28571	200382.13	352
41	PA007182	Baney Settlement	DH;SA	49.6	321597.66	49
42	PA007228	Walley Mill North	DH;SA	63.4	334626.9	257
TOTAL				8303.86	21495152.49	31416

Table 5 – Pennsylvania - Partnership Financial Resources Dedicated to Protecting the Public from Adverse Effects of Past Mining (AML projects completed during EY 2013)

#	PAD Number	Project Name	SMCRA Program Funding Source	Total SMCRA funding	Alternate Non-SMCRA Funding Source	Total non-SMCRA Funding	In-Kind Services	Total Project Funding	Comments
1	PA003339	BBS Coal CO.	SGA	1,241,537.00	BF	19,400		1,260,937	
2	PA000642	Burns GFCC		0	ENH Savings	190,000		190,000	
3	PA007155	HDL GFCC		0	ENH Savings	148,320		148,320	
4	PA006489	Kovalick		0	GFCC	90,000		90,000	
5	PA006489	Lancashire No. 15	AMA	10,887,517	AFS	2,000,000		12,887,517	
6	PA001190	Luxor GFCC		0	ENH Savings	121,650		121,650	
7	PA002998	Madas GFCC		0	ENH Savings	82,600		82,600	
8	PA004526	Maxton GFCC		0	ENH Savings	300,000		300,000	
9	PA003049	Murphy GFCC		0	ENH Savings	91,650		91,650	
10	PA003649	Newtown South 2	SGA	167,078	AFS	593,254		760,332	
11	PA001748	Riverside East 102	SGA	373,320	BF	48,682		422,002	
12	PA004319	Roman #1 GFCC		0	ENH Savings	61,500		61,500	
13	PA006489	Saville GFCC		0	ENH Savings	117,600		117,600	
14	PA001431	Seanor GFCC		0	ENH Savings	253,000		253,000	
15	PA002998	Valley Fork GFCC		0	EHN Savings	56,000		56,000	
16	PA000017	Zora GFCC		0	ENH Savings	40,000		40,000	
TOTAL				**12,669,452**		**4,213,656**	**0**	**16,883,108**	

Table 6 – Pennsylvania Reclamation Projects Started and/or Completed during EY 2013		
Project Type	**Projects started/under construction**	**Projects Completed**
Pennsylvania	43	42
Total EY 2013	43	42

Table 7 Pennsylvania AML Program Grant Awards and Staffing (During EY 2013)	
AML Program Costs	
Administration	**1,345,230**
Construction	**42,085,833**
Water Supply Construction	**0**
AMD Set-Aside	**15,166,500**
Other(s) (Specify)	**0**
Total AML Funding	**58,547,563**
AML Program Staffing (full-time equivalents on June 30, 2013):	**147**