

# 2014 Pennsylvania Annual Evaluation Report



## Pittsburgh Field Division – Harrisburg Office



**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 2014**

**(July 1, 2013 to June 30, 2014)**

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On the cover is a portion of the Crown/Tylersburg AML reclamation site in Farmington Township, Clarion County. 12.3 acres of the 25.3 acre site was reclaimed using the Forestry Reclamation Approach (FRA) advocated by the Appalachian Region Reforestation Initiative (ARRI). See Page 30 for a complete discussion.

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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 (OSMRE) in the Department of the Interior. SMCRA provides authority to OSMRE to oversee the implementation of and provide Federal funding for State regulatory programs that have been approved by OSMRE as meeting the minimum standards specified by SMCRA. OSMRE 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 2014 evaluation year, from July 1, 2013, to June 30, 2014. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at OSMRE'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 OSMRE Harrisburg Office develops an annual work plan/performance agreement 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/performance agreement also focuses on technical and program assistance activities jointly undertaken by OSMRE 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 2015 work plan/performance agreement is available from the OSMRE 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) 2014 (July 1 2013, through June 30 2014) the Pennsylvania coal regulatory and abandoned mine land programs continued to provide environmental protection for coal field citizens. The OSMRE 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, OSMRE conducted a total of 288 permit oversight inspections. One hundred fifty five of those inspections were oversight complete inspections (OC) of mine sites, with 123 conducted in the bituminous region and 33 conducted in the anthracite region. These inspections covered about 10 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 OSMRE conduct independent inspections on approximately 10 percent of the OC inspections. OSMRE conducted 15 oversight complete inspections as “independent” inspections, meaning OSMRE did not give PADEP advanced notice of the permit to be inspected. However, PADEP inspection staff was notified of the township in which the permit is located so they could arrange to accompany OSMRE.

The annual report presents findings and analysis of PADEP’s regulatory program arising from OSMRE’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 OSMRE issued were regarding retention of ponds as post mining land use features; PADEP’s response to citizen complaints; and PADEP’s reclamation of bond forfeited permits. OSMRE 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, OSMRE conducted 37 site visits to proposed or approved AML projects during various phases of completion. Included were 11 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 OSMRE during the review. The site visits conducted by OSMRE included 21 construction phase reviews, nine final phase reviews and seven to proposed Government Financed Construction Contract (GFCC) sites. In addition, OSMRE conducted 25 inspections of AML project sites to assess compliance with environmental controls, and Authorization to Proceed (ATP) project information. Overall, OSMRE 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.

### **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 dissected plateaus 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 2013, Pennsylvania produced 67,161,030 tons of bituminous and anthracite coal at surface and underground mines and refuse mining sites. This is a 1 percent decrease from the 67,551,683 tons reported for calendar year 2012. Bituminous coal accounted for 58 million tons and anthracite production totaled 9.2 million tons.

Coal refuse mine sites produced 7,342,526 tons of material. 2,827,332 tons of which were reported in the bituminous region and 4,515,194 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 80.4 percent of the total coal mined in the bituminous region and 69.4 percent of coal mined statewide. Bituminous and anthracite surface mining companies produced about 19.5 percent of the coal mined in Pennsylvania in 2013.

Bituminous mine operators reported production at 316 mine sites in 2013. That number includes 46 underground mines, 251 surface mines, and 19 coal refuse reprocessing sites, down from the 326 active bituminous mining operations reported in 2012.

Anthracite mine operators reported production on 120 mine sites. This includes 12 underground mines 67 surface mines, and 41 coal refuse reprocessing sites.

In 2013, 8,100 people were employed in the coal mining industry in Pennsylvania. This is a 2 percent decrease from 2012, when 8,297 people were employed.

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

During this evaluation period, PADEP and OSMRE 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 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 672 applications for permitting related actions that required the opportunity for public comment, including 230 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 630 annual bond calculations and 229 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, PADEP received 361 citizen complaints, 316 of which were investigated, and resolved by the close of this evaluation year. Forty one unresolved citizen complaints, were referred to other PADEP bureaus for action.. 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 OSMRE**

### **General Outreach**

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

OSMRE'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. 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 OSMRE 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, OSMRE'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 from 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.

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

## **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 2013, 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. Funds from this authorization have not been requested as the balance in the O&M Trust Account has remained well above the 3 million dollar minimum. However, as new projects are constructed, the amount available is expected to drop.

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 2014, 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 from January 1, 2013 through December 31, 2013 totaled \$445,384.60. This represents DEP staff time (\$20,338.75), sample costs (\$3,999.54), grants (\$303,985.79), and O & M costs under contracts (\$117,060.52).

The balance in the Reclamation Fee O & M Trust Account as of December 31, 2013 was \$3,564,435.07.

The December 31, 2013 balance in the ABS Legacy Sites Trust Account was \$5,692,061.64. This balance represents an increase in value from interest of \$12,172.51 during 2013.

Other funds are available for use for the ABS Legacy sites. The money available from the Released Bond account as of December 31, 2013 was \$2,029,975.56. The balance in the ABS Land Reclamation Closeout account as of December 2013 was \$2,662,901.15. The sum of additional commitments (designated, but not spent) in this account at the end of December 2013 was \$85,061.13. This leaves \$2,577,840.02 for additional land reclamation projects.

PADEP reports there are 13 ABS 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.

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 13 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.

PADEP reports that final payments to six trust accounts were made in 2013 to fully fund the trusts, resulting in the removal of these permits from the ABS Potential Sites list. The trusts are:

KMP Associates; Ehenger Park; Patriot Mining; Viable; Minerals Tech Inc.; Harmar

- There are 70 discharges that are being treated with facilities that are operable – 27 more than reported for EY12.
- All of the in-place treatment facilities are functioning, but some of the sites require rehabilitation, maintenance, or repair. PADEP is working to address the maintenance and repair issues through the Reclamation Fee O&M Trust Account.
- There are three discharges in which the treatment facilities are currently under construction. Eighteen discharges have facilities in the design phase and are projected to be constructed within the next few years. There are fifteen discharges that remain basic design work to establish treatment options. However, of the fifteen discharges, two are on a now permitted site and it is expected that the discharges will be abated during the permit reclamation phase.
- 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 – 70
- Treatment system under construction - 3
- Treatment system under design –18
- Work (design) not started –15

PADEP continues to make progress in addressing ABS Legacy Site discharges. Treatment facilities have been completed for 70 of the 106 discharges, and water treatment is ongoing. This represents 66% of the total. Many sites categorized in the design phase have the design finalized and are awaiting construction contracts. The number of discharges not addressed is decreasing and PADEP continues to regularly monitor all ABS BF Legacy site discharges. Progress is continuing and the number of discharges with designs not started decreased by four within this evaluation year. Also, the total number of discharges being treated increased by thirteen - from 57 to 70. Quarterly meetings and routine updates provide an in-depth review and transparency of the progress being made to address the discharges on the ABS Legacy Site list. PADEP staff remains committed to ensuring treatment options are addressed at every discharge on the ABS Legacy Site list. However, PFD notes that the 15 discharges for which no treatment system design has started represent 14% of the total. These discharges represent the most difficult to treat because of land owner concerns, and locations of the discharges among other obstructions.

## **B. Amendments to the Pennsylvania Approved Regulatory Program**

During this evaluation year, OSMRE submitted one program amendment to address the State's coal mining distance variances and set-aside the provisions of PASMCR 4.2(c) which are less stringent than 522(e)(4) and (5) of SMCRA. The amendment identification number is PA-163-FOR.

There are seven 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. The packages are combined in one final rule package, PA-156-FOR, to aid in streamlining the approval process.

There are nine required program amendments that require State regulatory program changes. OSMRE 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 OSMRE and PADEP management for review and recommendation.

This evaluation year's update includes information on program amendment packages spanning over several 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.”

**5. Evaluation year 2014 submission:**

- a. PA-163-FOR OSMRE-submitted program amendment addresses Coal Mining Distance Prohibitions. This amendment will set-aside the provisions of PASMCR 4.2(c) which are less stringent than comparable sections of 522(e)(4) and (5) of SMCRA.

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 review 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, OSMRE 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, OSMRE 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 Pollutational 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 requires concurrence from the Environmental Protection Agency (EPA), Region III because effluent limits in the Commonwealth are affected. EPA provided the required concurrence in a letter dated August 20, 2013. EPA provided updated comments on manganese in a letter dated July 3, 2014 and provided an email on July 29, 2014 to clarify and reiterate its concurrence.

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. OSMRE 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. Public hearings were held in Pittsburgh, PA and Pottsville, PA on October 17, 2012.

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.

The Final Rule for PA-162-FOR was published in the *Federal Register*, Vol. 78, No. 175, Pages 55210 - 55214 on September 10, 2013.

PA-163-FOR: On March 21, 2014, a memorandum provided information to the Chief, PFD describing PADEP’s approved PASMCR regulation for allowing distance waivers that are prohibited in 30 CFR 761.11(e)(f) and (9) and SMCRA 522(e)(4) and (5). The Chief, PFD concurred and the program amendment was initiated to set-aside the provisions in PASMCR 4.2(c).

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 2014 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. Appalachian Regional Reforestation Initiative (ARRI)**

The Appalachian Regional Reforestation Initiative (ARRI) is a joint effort of Appalachian States and the OSMRE 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.

OSMRE continues working with PADEP to expand ARRI in 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.

In June 2014, the BAMR program sponsored a field tour of several of its AML reclamation projects which incorporated aspects of the FRA. In Evaluation Year 2015, PFD and BAMR will be jointly conducting a survey of several reclamation projects which use the FRA, to determine tree survival and growth.

#### **Flight 93 National Memorial Reforestation Shanksville, Somerset County, Pennsylvania**

On April 25 and 26, 2014, 400 volunteers planted about 30,000 trees on 30 acres of land in the third year of organized tree planting at the Flight 93 Memorial. The areas designated for reforestation were previously mined and reclaimed with grass and trees. However, the surface was heavily compacted by mining equipment, and the few trees which survive 15 years later, are growth stunted because the tightly compacted soil will not easily allow roots to penetrate.

The National Park Service, which administers the memorial and the planting event, has been working with OSMRE and other organizations, over three years to reforest areas which have been designated in the master landscape plan as wind breaks around the central public viewing areas and visitation facilities.

As in past years, the acreage planted was “ripped” using a steel shank on the back end of a large dozer. This method is approved by the Forestry Reclamation Approach (FRA), under the Appalachian Regional Reforestation Initiative (ARRI). In this manner, the soil is loosened to a depth of 2 to 2.5 feet, allowing easier root and water penetration. Informal surveys of planting efforts in 2012 and 2013, indicates a tree survival rate up to 80% using this ground preparation method.

Over the two days, 20 planting teams of 20 volunteers each were assigned designated planting areas. Volunteers represented numerous organizations, corporations, individuals, as well as state and Federal

agencies including OSMRE, Pennsylvania Department of Environmental Protection, Pennsylvania Bureau of Forestry, Penn State Altoona and Dubois campuses, AmeriCorps and the Friends of Flight 93. Corporate help and volunteers were provided by Alcoa, UPS, Enterprise Car Rental, Arbor Day Foundation, REI and The American Chestnut Foundation, among many others. OSMRE had a large contingent of team leaders and planters representing the Appalachian Region.

In addition to the hardwood and pine tree mixture normally planted at this site, including maples, oaks, hickory, yellow poplar, and black cherry, this year included special plantings of Red Spruce and blight resistant American Elm trees. Also, 1,500 of the highly blight resistant American Chestnut (known as Restoration Chestnuts) trees were planted by a team from BAMR. Wildlife shrubs including hazelnut, crabapple, dogwood, elderberry and other species were also interspersed among the trees.

There is much land designated for reforestation, which remains to be planted, assuring the continuation of this popular event for several years to come.



**Volunteers preparing to plant trees at the Flight 93 Memorial near Shanksville Pennsylvania**

#### **D. 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 2015.

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 created the Mine Map Grant (MMG) Program in May 2013 (<http://www.pamsi.org/mmg.html>). The first grants awarded under the MMG provided seven grantees, including public and private colleges and a nonprofit organization, with up to \$1.65 million from mining program special funds to process over 35,000 mine maps into electronic files. Within the first eight months since the MMG was awarded, 7,513 maps had been scanned electronically and of those, 2,180 had been geo-referenced. In its first year, over 10,000 maps have been scanned, over 3,000 have been geo-referenced and 71 maps have been digitized at

a cost of \$404,864. Electronic maps are then used in computer applications that efficiently and economically provide mining information to the public, to PADEP and other government agencies, and to the mining, oil and gas, and construction industries via the Pennsylvania Mine Map Atlas on Penn State's Pennsylvania Spatial Data Access Web site (<http://www.minemaps.psu.edu>). In 2014, the Mine Map Atlas was linked to PADEP's PHUMMIS database, enabling a more convenient search of detailed mine map inventory records and their corresponding electronic map files. The MMG intends to provide annual grants to convert the inventory of tens of thousands of mine maps, documenting the history of coal mining in Pennsylvania, into electronic files.

#### **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 report for the period August 2008 through August 2013 has been drafted and is expected to be finalized and provided to the Department in August 2014, with distribution in the Fall of 2014. The reports may be accessed at:

[http://www.portal.state.pa.us/portal/server.pt/community/act\\_54/20876](http://www.portal.state.pa.us/portal/server.pt/community/act_54/20876)

#### **E. 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 2014, BAMR reported 140 full-time equivalent positions being paid through the Title IV AML grant. The Title IV grant award in 2014 was 52.4 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 21 major projects for a total of 233 acres of land reclamation. The total construction cost for these projects was 9.8 million dollars. Reclamation included 19,300 linear feet of dangerous highwalls; stabilization of mine voids beneath 42.3 acres to protect structures from subsidence; numerous deep mine shafts and entries; three water line extension projects to address impacted drinking water supplies; mine fire control projects; and, mine subsidence sinkholes.

During the year, contracts were awarded on 41 new projects at a cost of 18.5 million dollars. At the end of the evaluation period, the Bureau of Abandoned Mine Reclamation (BAMR) had 51 projects under

construction at a total cost exceeding 50 million dollars. Upon completion, these projects will address approximately 1,660 acres of abandoned mine land. Preparing for future reclamation, BAMR has approximately 75 projects in some stage of design and approximately 63 under development.

During the evaluation year, PFD issued 144 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 BAMR in EY 2014**

**Wilkes-Barre District Office**  
**Abandoned Mine Reclamation Project**  
**North Eynon**  
**Archbald Borough, Lackawanna County, Pennsylvania**

The project involved the reclamation of 3,150 feet of dangerous highwall, ranging in depth from 30 to 60 feet, by backfilling and grading with approximately 239,000 cubic yards of on-site material. Storm water drainage ditches were also constructed and the 25.7 acre project area was vegetated with grass and legume mixes. Photos of before, during, and after construction are below.



**Pre-reclamation**



**During reclamation**



**Post-reclamation**

**Accelerated Reclamation Projects**  
**Simpson Northeast Coal Refuse Bank Fire**  
**Accelerated Response Project**  
**Fell Township, Lackawanna County, Pennsylvania**

On December 18, 2013, a BAMR investigator responded to a report of a mine fire in Fell Township. He located the fire in a refuse bank which expressed itself by venting on the surface in a contained area of approximately 120 feet by 120 feet. The fire was obvious from the odor and smoke emitting from the ground. The refuse bank covers an area of more than four acres so performing this work quickly before it had time to spread would greatly reduce the size and cost of the project. Using the information from the investigation, a design was quickly engineered and a pre-quote meeting was held on January 9, with an opening and awarding of the project to the lowest bidder on January 15, 2014. On January 20, 2014, the contractor began work. Almost immediately, the initial excavation revealed that the fire was much larger than anticipated and the extinguishment plan was revised to overcome the situation that actually existed. In order to completely extinguish the refuse bank fire within an impressive 4 month period, over 156 million gallons were pumped from the Lackawanna River and 285,000 cubic yards of material were required to be excavated. Upon extinguishment, 17.6 acres were ultimately required to be affected and then re-vegetated with a grass mix.

This project is another example of how BAMR will coordinate and collaborate with OSMRE and many other agencies to expedite project development, design, administrative reviews, and construction when AML problems pose serious immediate risks to public safety and require prompt action. Photos of before, during, and after construction are below.



**Hot zones atop the burning spoil pile**



**Contractor excavating burning material to install the cut off trench**



**Fire Extinguished, project area being graded**

**Accelerated Response Project  
No. 2 Tunnel Opening  
Plymouth Township, Luzerne County, Pennsylvania**

On May 8, 2013, a BAMR investigator responded to a report of a potential mine related problem mine at the site of the “Avondale Mine Disaster” in Plymouth Township, Luzerne County, Pennsylvania. Due to the historic significance of the site, (This tunnel was used to access the 110 miners who were trapped and killed during the Avondale Mine Disaster of 1869) an extra effort was expended to honor the legacy that this venerated site deserved. The scope of the project included mobilizing equipment to the site, clearing and grubbing, minor excavating, forming an appropriate facing, pouring concrete, staining the concrete to blend into the surrounding topography, installing a bat gate, blending the area into an established historical park, demobilizing equipment, revegetating, and cleanup of the area upon completion. The opening was found to be approximately four feet wide by two feet high at the surface. Once inside the opening, it opened up to approximately ten feet by seven feet. Being an important and historical memorial park, the area was easily accessible and there were many indications that people not only frequent the area, but enter the mine through the opening. An accelerated response project was necessary to eliminate the risks to human health and safety. Construction began on October 31, 2013 and was completed on January 31, 2014 at a price of \$36,927.75. Photos of before, during, and after construction are below.



**Pre-Construction**



**Poured concrete bat gate prior to staining and installation of angle iron.**



**Completed Project**

**Wilkes-Barre District Office In-House AD Construction Crew**

**AD-949**  
**Enterprise Mine Opening**  
**Coal Township, Northumberland County, Pennsylvania**

On December 5, 2014, Department personnel from the Wilkes-Barre District Office completed AD-949. The work involved fabricating and installing a screen made of #6 rebar inside an eighteen (18) inch Reinforced Concrete Pipe End Section to allow water to flow out of the mine, but prevent entrance into the portal through the pipe end section. Minor excavation was then completed at the site to form the bedding and install the end section into the portal. The area around the end section was backfilled using the excavated and other onsite material. The project area was restored and revegetated prior to demobilization. Total cost to complete the project was \$4,909.35. Photos of before and after construction are below.



**Pre-Construction Photograph**



**Completed**

**Cambria District Office**  
**Accelerated Reclamation Project**  
**Jeans Mine Subsidence**  
**North Fayette Township, Allegheny County**

The Jeans Mine Subsidence Project filled a subsidence hole with direct access to a deep mine. The suddenly occurring mine subsidence hole was filled with 50 cubic yards of concrete and minor grading to blend the work area with the existing topography and restored a natural drainage course.

Golden Triangle Construction Inc. followed all safety precautions to ensure the subsidence hole was backfilled in a safe manner. Due to the remoteness of the site and the lack of an access road, the contractor used a rock truck to deliver the concrete to the subsidence hole.



**During Construction (above and below)**





**Post Construction - Completed Channel**

**CAMBRIA DISTRICT OFFICE**

**Abandoned Mine Reclamation Project  
Houtzdale Subsidence Control Project  
Houtzdale Borough, Clearfield County, Pennsylvania**

The Houtzdale Project stabilized 154 residential dwellings by filling the void space in the mine and upper rock strata beneath each structure with grout. The work consisted of drilling 722 boreholes and injecting 74,000 tons of cementitious grout into the abandoned mine below.

During construction, multiple home owners in the project area who previously had not signed an easement, decided to add their properties to the subsidence control project. Many residents remarked how well the restoration was occurring during the construction phase of drilling and grouting in the residents yards. During construction, the low cover or highly susceptible areas of Sue Street and Clara Street were completed without incident. The Construction Section completed the Change Orders to include the additional homes, quantities of material, and assisted in obtaining signed easements from the property owners. Due to the project's size, the contractor utilized two (2) separate batch plant sites. The contract was completed on June 19, 2014.



Houtsdale

**Cambria District Office**  
**Abandoned Mine Reclamation Project**  
**Truittsburg Southwest**  
**Redbank Township, Clarion County**

The Truittsburg Southwest Project reclaimed a 61 acre abandoned surface mine. The project consisted of backfilling dangerous, near vertical highwalls measuring 4,800 feet in length and ranging in height from 30 to 70 feet. The site was vegetated with grasses and tree seed. The project was completed on June 12, 2014 by Morgan's Excavating for \$997,350.

Also, there was a non-coal surface mining permit (rock quarry) located adjacent to the Contractor's Work Area. The Knox District Mining Office (DMO) was in the process of terminating the permit and collecting the forfeited bond. The Knox DMO did not believe the forfeited bond amount would be enough to cover the cost of mobilization, backfilling the one acre rock quarry and demobilization. The Construction Section coordinated with the Knox DMO, the Department's Contract and Legal Sections and the contractor to reclaim the forfeited rock quarry while already on site for the AML reclamation. This was accomplished with no additional cost to the AML reclamation contract.



**Pre-Construction**



**Pre-Construction (above) and During Construction (below)**



**Post-Construction**

**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 six 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 144 projects, including 58 accelerated projects addressing the kinds of problems that were previously addressed by OSMRE'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 four personnel: one foreman and three operators. The AD Crew is available to address a variety of AML-related problems in a timely and efficient manner to protect and eliminate the health and safety concerns they pose to the public. Hazardous situations that have previously been abated by the AD crew range from backfilling or maintaining recovered vertical shafts that settled, removing debris or repairing ditches clogged or damaged by weather-related events, installing bat gates, performing underground stabilization and grouting, and backfilling subsidences. During this review period, the AD Crew completed 31 projects.

### **Accelerated Reclamation Projects**

In May 2010, OSMRE 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 OSMRE 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 OSMRE 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 81 problems where an accelerated response was deemed necessary and completed or initiated the necessary abatement on 77 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, refuse bank and underground mine fires, 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 OSMRE's ability to conduct emergency response projects has a significant impact on Pennsylvania's implementation of their AML program. In EY 2014, BAMR spent approximately 3.7 million dollars on construction and incurred \$422,000 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.

## Appalachian Region Reforestation Initiative (ARRI)



### Appalachian Regional Reforestation Initiative 2013 Excellence in Reforestation Award

From Left to Right – Dean Baker, BAMR; Pat Webb, BAMR, Marty Gray, Gralan Corp; Deputy Secretary John Stefanko, AAMO; Tom Malesky, BAMR; Bill Dadamo, BAMR; Ron Lindemuth, BAMR

### 2014 PA ARRI Excellence in Reforestation Award

The Pennsylvania ARRI Excellence in Reforestation Award for 2014 was presented on May 13, 2014 to the PA Department of Environmental Protection, Bureau of Abandoned Mine Reclamation and the contractor Gralan Corporation for reclamation of the Crown/Tylersburg AML site in Farmington Township, Clarion County. The property owner was instrumental in seeking information regarding the ARRI program, and applying the Forestry Reclamation Approach (FRA) to his property.

The project consisted of grading the adjacent spoil material into the pit and returning the surface mine site to approximate original contour. The project included the draining and removal of two water impoundments and eliminating 3,500 linear feet of hazardous highwalls. The reclamation will provide cover and habitat for the local wildlife and provide enjoyment for the local sportsman of the area.

The project was designed and inspected by the Cambria Office Staff, Bureau of Abandoned Mine Reclamation. The site was reclaimed by Galan Corporation of West Port Ann, New York utilizing the FRA. The total project covered 25.3 acres of which 12.3 acres were planted with 5,381 trees utilizing the FRA method.

The contractor utilized end dumping of the fill material and a ripper tooth attached to an excavator to rip the cut areas of the project several feet deep providing very loosely compacted soil areas for tree planting. The tree species that were hand planted on site were: Northern Red Oak, Black Cherry, Yellow Poplar, Sugar Maple, White Oak, Black Walnut, Chestnut Oak, Bur Oak, Eastern White Pine, and American Chestnut that the land owner was able to obtain. Reclamation was completed May 13, 2013.

The ARRI method assured minimal run off from the site. The loose earth fill worked very well to control runoff during a wet spring and early summer, as the heavy rain soaked in the backfill. During the final construction inspection for the project, it was noted that the site was very stable and a high survival rate for the trees. The reclamation project returned the property to pre-mining land uses. The site was inspected in the summer of 2012 and even though the trees were planted in the fall the site had a 90% survivability rate for the tree species.

A photograph of the reclaimed site is on the cover of the Annual Report.

### **AML Enhancement Rule Projects**

Pennsylvania leads the nation in achieving reclamation under the AML Enhancement Rule promulgated by OSMRE 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 AML reclamation 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, 15 AML Enhancement Rule projects were completed reclaiming 212.7 acres of surface mine affected lands. The completed projects represent approximately \$1,076,508 in reclamation savings to the AML program. Completed projects reclaimed barren land, eliminated 4,650 feet of abandoned highwall, and addressed 2 acres with mine subsidence features. PADEP approved 12 complete applications. During the evaluation year, PADEP accepted 14 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.

**P&N Coal Company, Inc. Reclamation Award, Sandy Township, Clearfield County, Mahoning Creek Watershed:** P&N Coal Company's Slab Run GFCCs (17-08-01, 17-08-02) were selected to receive the National Association of State Land Reclamationists (NASLR) 2013 coal reclamation award. The two adjacent operations reclaimed nearly 3 miles of priority 2 abandoned highwall and 32 acres of abandoned mine lands on State Game Lands No. 77, near DuBois, Clearfield County. P&N also reconstructed 900 feet of stream channel that had been mined through and diverted into abandoned pits. The reclamation contracts, which authorized mining of the Lower and Middle Kittanning coals, also provided for the addition of large quantities of alkaline material to abate acidic mine drainage. The alkaline addition component of this project was effective in restoring Slab Run, which was previously acidic. Slab Run is a tributary to Sandy Creek, and trout stream. Reclamation performed by P&N on the two adjacent contracts had an estimated value of \$1.7 million, which was done at no expense to the Commonwealth. Alkaline addition rates were enhanced through a \$300,000 Growing Greener grant.

### **Pennsylvania's AMD Set-Aside Program**

As of June 30, 2014, Pennsylvania has a balance of \$65,984,815 in the AMD Set-Aside fund. The total accumulated revenue with interest that has been placed into the fund since inception is \$117,518,942.24, as of April 30, 2014. 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 \$12,202,790 has been reserved for this purpose.

Pennsylvania's Set-Aside staff, under the DEP's Bureau of Conservation and Restoration, has been very concerned about the long-term operational viability of the Set-Aside Program. This

concern has increased due to reduced fee collection projections from OSMRE. Due to the need to continue operations of treatment facilities beyond the end of OSMRE fee collections in 2021, BCR staff has looked at ways to increase funds in the long-term O&M sub-account.

Considerable analysis of long-term expenses and income has been completed. As a result, BCR management has decided to earmark additional funds on a regular, annual basis. In addition, changes were made in Pennsylvania's investment approach with regard to the Set-Aside funds. Significantly more funds were moved from a short-term investment program, which was providing a 0.18% return on investment, to a long-term investment program that is conservative but includes equities to increase return on investment. With this approach, BCR has a goal of having \$87 million in the O&M sub-account by the end of 2022. This is expected to allow for ongoing operation and maintenance of active and passive treatment facilities through 2036, after which time other funds will need to be located to continue operations.

BCR has also evaluated and proposed modifications to the draft AMD Set-Aside Guidelines initially developed in 2009. OSMRE has assisted in that effort. The final draft was completed in early 2014. The draft will be published in the PA Bulletin in 2014 and will be finalized after review of comments received during the comment period. Final Guidelines are expected to be in place by the end of 2014. This document will provide guidance for selection of watershed restoration efforts and projects to be funded with AMD Set-Aside funds.

### **Pennsylvania's AMD Set-Aside Activities**

During the evaluation period, the BCR continued design work 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 50 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 mg/l and aluminum levels between 0.5 and 0.7 mg/l. The alkalinity had been in the 20 to 30 mg/l range with no acidity. Operational changes were enacted over the past year as a result of a study conducted in conjunction with OSMRE. These changes increased alkalinity to approximately 50 mg/l, which helped buffer other AMD sources further downstream.

In 2013, Bennett Branch was stocked with fish for the first time. Fish were provided by local sportsman's groups. Due to the success of the initial stocking, the PA Fish and Boat Commission stocked the Bennett Branch in spring of 2014. Monitoring of the receiving stream and the recovery of aquatic life is ongoing.



**Hollywood AMD Plant**

**Brandy Camp Treatment Plant**

BCR is completing 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. There have been problems with leaks in the embankment of the pond. As a result, the treatment plant upgrade will include installation of a synthetic liner to protect the integrity of the embankment.

#### **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 OSMRE and USGS 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.

In the short-term, the plant is being modified to improve its efficiency to decrease costs and operational difficulties while the long-term studies continue.

### **Proposed Cresson AMD Treatment Plant, Cambria County**

The BCR is wrapping up a contract with GAI Consultants, Inc., for 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 and property acquisition are expected to be completed by the end of 2014. Construction is expected to begin in early 2015.

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

PADEP's Bureau of Conservation and Restoration (BCR) has signed a Task Agreement for a Task Implementation Plan with a consultant, Tetrattech, for this project. Work to be done includes a feasibility analysis and determination of treatment technology, as well as design of a conveyance system to convey AMD from 3 discharge locations to the proposed treatment plant location. The proposed Blacklick Creek Treatment Facility is 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 3 discharges. This will also include contribution from the Commercial #16 (Red Mill) discharge, Vinton #6 boreholes and Wehrum Mine shaft discharge, 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 feasibility/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 2017.

### **Little Conemaugh Watershed Restoration**

PADEP's BCR staff is working with OSMRE staff to develop a restoration plan and establish a Qualified Hydrologic Unit for the Little Conemaugh River in Cambria County. OSMRE's technical staff in Pittsburgh is providing mapping support and technical evaluations of the numerous mine pools in the watershed in order to determine how best to combine and treat the discharges. This will be followed by design and construction of a conveyance system, then design and construction of a treatment plant. BCR staff is currently characterizing discharge quality and quantity and receiving stream impacts. A multi-agency task force regularly meets to discuss progress on restoration plan.

### **Passive Treatment System Rehabilitation**

PADEP's BCR staff is developing Scopes of Work for several consultant contracts to evaluate and design passive treatment system rehabilitation projects at 8 sites. The consultants will evaluate the sites and make decisions on rehabilitation in consultation with BCR technical staff. Once decisions are made, the consultants will prepare the design and bid packages so that rehabilitation of failing systems can be completed.

### **2014 Abandoned Mine Lands Project Reviews Conducted by PFD**

PFD conducts site reviews of Title IV AML reclamation projects to understand how PADEP controls the reclamation process and to determine whether the program is meeting stated goals and objectives. When possible, site visits were coordinated with BAMR which is offered the opportunity to accompany PFD during the review. PFD gathers information on site status, BAMR monitoring, overall project success, and the existence of actual or potential problems. 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 EY 2014 PFD issued 144 Authorizations to Proceed (ATP) for projects to be constructed using funds granted through the Title IV AML Construction Grants. PFD staff conduct ATP document and field reviews to look at the potential impacts of project construction activities on environmental resources, to confirm that site assessments supporting agency findings under the National Environmental Policy Act are complete and accurate, to confirm that AMLIS information is correct, and that other required supporting documentation is provided.

A detailed analysis of PFD's oversight of BAMR's Title IV reclamation program follows.

## **EY2014 – Pennsylvania AML Site Reviews**

The PFD completed 37 oversight site reviews in Pennsylvania including 11 in the Anthracite Region (AR) and 26 in the Bituminous Region (BR) during the evaluation year. Seven of the oversight reviews in the BR were pre-GFCC reviews resulting in successful program reviews by the DEP BAMR. These pre-GFCC reviews are not included in the summary below since these projects were not construction inspections but field meetings. The remaining 30 site reviews resulted in overall successful hazard elimination and environmental stabilization and enhancement through mine subsidence repairs, abandoned highwall and pit backfilling, refuse pile removal, Acid Mine Drainage treatment, landslide repairs, and mine opening closures.

### Pre-GFCC:

1. Cassler; 56-13-01
2. McCracken; 26-13-01
3. OGM; 26-13-02
4. SGL276; 32-13-01
5. Susan; 33-13-18
6. Wes Smith; n/a
7. Wilhelm; 32-13-02

### Construction:

1. Delano; OSM 54(3101)104.1 (AR)
2. Stump Run; OSM 54(4134)101.1 (AR)
3. Huling Branch; OSM 18(6672) 201.1
4. Weedville; OSM 24(0515)101.1
5. Bowood; OSM 26(4689)103.1
6. North Freedom SE; OSM 03(6340)101.1
7. Florence East; OSM 63(6634)101.1
8. Brookville SE; OSM 33(3281)101.1
9. Houtzdale; OSM 17(1735)102.1
10. Ferndale SW; OSM 49(3232)101.1 (AR)
11. Alder Run West; OSM 17(4544)101.1
12. Strattanville ESE; OSM 16(2841)101.1
13. Pittston II; OSM 40(3031)103.1 (AR)
14. Perryville NE; OSM 16(3150)101.1
15. St. Clair East; OSM 54(4148, 4665)101.1 (AR)
16. Green Mountain; OSM 40(3219)101.1 (AR)
17. Houtzdale; OSM 17(1735)102.1
18. Boyers Knob Lookout; OSM 42(3237)101.1 (AR)
19. Diamondville East; OSM 32(2436)104.1
20. Green Mountain; OSM 40(3219)101.1 (AR)
21. Two Mile Run; OSM 56(5035)101.1

Final:

1. Stewart Cemetery; OSM17(7162)101.1
2. Rodney East; OSM 65(0896)101.1
3. Bakerton No. 3; OSM 11(2466)101.1
4. Spangler West; OSM 11(0777)101.1
5. Ferndale SW; OSM 49(3232)101.1
6. Glassport; 02(0072)101.1
7. Poplar Creek Shaft; AD 920 (AR)
8. Sandy Run South; 4009-01 (AR)
9. Silver Creek Road; AD 959X (AR)

BAMR representatives were present during all reviews except Glassport. Twenty reviews were also part of the EY14 AML field study.

BAMR advises that all contracted AML reclamation projects undertaken by the program are permitted for temporary control of runoff associated with construction activities in accordance with 25 PA Code Chapter 102 Erosion and Sediment Control. BAMR further advises that projects comply with PADEP's Erosion and Sediment Control Manual (363-2134-008), dated March 2012, and PADEP's Stormwater BMP Manual dated December 30, 2006. E&S controls are designed for a 2 year 24 hour storm event. BAMR advises that no permit violations were identified during any of the OSMRE site investigations.

The PFD site reviews resulted in the following findings:

Project goals and objectives were met or were being met on 11 of the 11 AR projects and 19 of the 19 BR projects.

A contract time extension was granted on the Huling Branch project due to road closures. A time extension was requested on the Delano project. However it had not been issued as of September 2, 2014 due to unresolved contract issues.

BAMR advises that environmental safeguards were maintained in accordance with design specifications on all sites visited. However, PFD staff recommended field changes on one of the AR projects and 5 of the BR projects to address concerns regarding potential off-site impacts as discussed below.

**Weedville** – As recommended by PFD, maintenance on the access road was performed to prevent tracking of mud onto roadways, and some minor silt fence repairs were completed. BAMR further notes that a small water impoundment, which pre-existed the project, was being used during construction as a retention and energy dissipater.

**Green Mountain** – As recommended by PFD, additional silt fencing was added to

prevent possible off-site impacts.

**North Freedom SW** – PFD recommended that a drainage control pipe be installed on the far western end of the project. BAMR considered this recommendation, and determined that the existing under drain, which was installed in accordance with the approved project design, was sufficient as the discharge flowed into a vegetated area and was not causing any erosion and did not require a rock lining.

**Florence East** – PFD recommended that additional silt fencing and/or filter socks be installed at the north western portion of the project area to prevent off-site impacts. BAMR evaluated the E&S control measures at the project and determined they were adequate.

**Brookville SE** – PFD recommended that additional drainage collection and control be installed along Sentner Hill Road due to ponding and uncontrolled flow into the roadside ditch. BAMR evaluated the situation and determined that the water leaving the project area along Sentner Road pre-existed and was not increased by the project. No further action was determined necessary by BAMR.

**Bowood (Rock Works)** – PFD recommended installation of drainage collection and control at the southern end of the project area due to ponding. Silt fencing and/or filter socks were also recommended in this area to prevent off-site impacts. BAMR evaluated this recommendation and determined that the area in question was flattened and was being used as a staging and material storage area, causing minor ponding. Also, some of the water being used to extinguish the mine fire was accumulating in the area. BAMR installed super silt fencing as recommended by OSMRE to control any off-site impacts.

Adequate engineering and designs were implemented on 11 of the 11 AR projects and 18 of the 19 BR projects.

**North Freedom SW** – PFD observed that the installed subsurface drain at the far western end of the site was discharging more water than anticipated at the design phase, creating uncontrolled flow to a local tributary.

BAMR provided the following explanation regarding this discharge. The discharge pre-existed the project and was collected in a pipe in order to divert the water so the highwall could be backfilled. At the time of PFD's inspection, the flow was higher than normal. PFD questioned why there was no rock outlet and BAMR explained that the underdrain was installed as designed and the discharge was causing no erosion. Subsequent inspections of the underdrain confirmed that the discharge was causing no erosion and that a rock outlet was not necessary.

Control and monitoring of the construction contract was achieved on 11 of the 11 AR projects and 19 of the 19 BR projects.

### **Summary**

Overall, PFD found that BAMR successfully manages the Title IV AML Program and has met the goals and objectives of the program.

PFD found that BAMR's AML project management showed a minimal deficiency in the installation/maintenance of E&S controls within specific areas of 3 of the 30 projects evaluated. PFD did not find any violations of the approved NPDES (E&S control) permits issued for each project site.

In addition to the 37 routine project reviews, the PFD conducted 25 project reviews which focused on Erosion and Sedimentation Controls, NEPA compliance and the Authorization to Proceed (ATP). The results of those reviews are discussed below. Of the total of 25 projects with site reviews, 20 were also reviewed as routine inspections as summarized above.

## **COMPILATION REPORT AND SUMMARY ANALYSIS** **E&S CONTROL, NEPA COMPLIANCE and ATP**

PFD selected a set of 15 Title IV AML land reclamation projects in the Bituminous region, and 5 in the Anthracite region. BAMR staff was notified, at a minimum, seven days prior to the scheduled site visit for evaluation. BAMR staff attended 19 of the 20 sites evaluated. The following sites were evaluated between January 1, 2014 and May 15, 2014:

### **Bituminous Region**

1. **Alder Run West** - OSM 17(4544)101.1
2. **Strattanville ESE** – OSM 16(2841)101.1
3. **Perryville Northeast** – OSM 16(3150)101.1
4. **North Freedom SE** – OSM 3(6340)101.1
5. **Houtzdale** – OSM 17(1735)102.1
6. **Diamondville East** - OSM 32(2436)104.1
7. **Florence East** – OSM 63(6634)102.1
8. **Bowood (Rock Works)** – OSM 26(4689)103.1
9. **Stewart Cemetery** - OSM 17(7162)101.1
10. **Weedville** - OSM 24(0515)101.1
11. **Two Mile Run** - OSM 56(5031)101.1
12. **Rodney East** - OSM 65(0896)101.1
13. **Bakerton No. 3** – OSM 11(2466)101.1
14. **Spangler West** - OSM 11(0777)101.1
15. **Brookville SE** – OSM 33(3281)101.1

### Anthracite Region

1. **Ferndale SW** – OSM49(3232)101.1
2. **Pittston II** – OSM 40(3031)103.1
3. **St. Clair East** – OSM 54(4148, 4665)101.1
4. **Green Mountain** – OSM 40(3219)101.1
5. **Boyers Knob Lookout**–OSM 42(3237)101.1

### E&S Control Compliance Evaluation

During the site evaluations, the OSMRE found that the environmental safe guards specified in the drawings and contract specifications were implemented on site and were effective on 19 of the 20 projects or 95%. The project is discussed below. Minor E&S control issues were found on 6 of the 20 projects during the site evaluations. These 6 projects are discussed in the preceding section and will not be repeated here.

One of the 20 projects had a serious project deficiency resulting in off-site impacts. This project is known as **Green Mountain** and is located in the Anthracite Region. More specifically the E & S controls were overwhelmed by a greater than a 2 year/24 hour storm event (exceeded project design and permit requirements) resulting in off-site deposition of sediment. The sediment load was carried off site via an unnamed tributary and deposited into Oley Creek and Lake of the Four Seasons. The sediment load contributed to a pre-existing delta at the confluence point of Oley Creek and the lake, with additional material migrating beyond to a beach and marina area. PADEP is planning on addressing this off site impact by the removal of the material via dredging and transporting to a designated area.

Overall the OSMRE has found that the PADEP BAMR has effectively implemented the environmental safe guards specified in the NEPA documents and the contract specifications with a few exceptions. The exceptions, addressed above, were discussed with the inspector on site and were addressed appropriately.

### NEPA Compliance and ATP Evaluation

Based on the site evaluations, PFD found that the NEPA compliance was achieved on 19 of the 20 projects and ATP was properly obtained on all twenty projects. An issue with ATP coverage was raised on one project as discussed below.

PFD found that scope of work for the Houtzdale Subsidence control project was expanded to include numerous additional homes, businesses, and acreage that were not addressed in the ATP. BAMR investigated this concern and responded as follows.

A review by BAMR of the ATP and NEPA documents submitted to OSMRE for approval compared with the revised scope of work for the project did not indicate a need to revise and

resubmit these documents. Furthermore the additions were discussed with PFD in Sept 2012 prior to the BAMR moving forward. It was determined that the overall acreage footprint of the project was not being changed significantly from the originally approved ATP and NEPA submissions.

BAMR advises that the submission for NEPA compliance and the ATP listed 75 structures. The number of 75 structures in the submission was an approximate number at the time of development. The project footprint of the mine subsidence reclamation project did not significantly change from development through construction. In a dense residential area the addition of one street can and did increase the number of residential structures significantly. The number of residences do not weigh on the reclamation due to subsidence control projects being reported and measured by acreage.

PFD accepts this explanation as adequate justification for not requesting an amended environmental assessment and ATP.

PFD found that 1 of the 20 projects reviewed failed to have a necessary permit. This project is known as **Green Mountain**. More specifically, BAMR received a Category 1 Waiver (PADEP permit waiver) which was believed to be sufficient, but failed to notify the United States Army Corp of Engineers (USACE) regarding jurisdiction and potential Federal permitting requirements under Section 404 of the Clean Water Act. As advised by the USACE, BAMR submitted an after-the-fact permit application (NAB-2013-02413-PB). The project involved filling an approximate 2.2 acre water body/pond and associated encroachments into approximately 735 linear feet of the unnamed tributary (UNT) of Oley Creek. To compensate for the loss of the 2.2 acre water body at the site, approximately 2.46 acres of open water and wetlands will be created at a separate off-site location by BAMR. Mitigation will consist of open water, palustrine emergent wetland (PEM), and palustrine scrub shrub (PSS) components.

All of the necessary permits were acquired by BAMR for the remaining 19 projects.

Overall the OSMRE has found that the BAMR effectively complied with NEPA requirements with only one exception, and has also effectively complied with the ATP process.

## **VI. Success in Achieving the Purposes of SMCRA**

OSMRE'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**

OSMRE 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 OSMRE'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. The inspector's report, determining off-site impacts, is reviewed by the supervisor and verified for correctness. The compliance officer reviews the information provided in the inspection report and the district compliance officer or legal assistant determines the impact and severity of the impact and enters the data in eFACTS. eFACTS is PADEP's permit data management system.

### **Discussion of impacts**

During the 2014 evaluation year, PADEP inspectors conducted partial and complete inspections on 1,530 active, inactive, surface, underground, refuse, and preparation plant permits and reported 116 off-site impacts. There were an additional 28 bond forfeited permits where the lands have been reclaimed, but contain moderate off-site untreated pollutional discharges. An additional 40 bond forfeited permits have ongoing water treatment facilities. This report focuses on the off-site impacts from the active and inactive permits.

There were 79 unique permits included in the off-site impacts. At the end of the EY, PADEP reported 1,530 inspectable units. Thus, about 95 percent of inspectable units were reported as free of off-site-impacts for the year. The 2013 Annual Report showed 93percent of the active/inactive permits were free of off-site impacts. PADEP continues to maintain a high level

of permits free of off-site impacts.

The 116 off-site impacts collected this year are identified by PADEP as 7 major, 27 moderate and 83 minor (See Figure 1.) This is substantially lower than the 198 reported in EY 2013. This reduction may be partially attributed to the reduced number of inspectable units, 1,775 at the end of EY 2013 to 1,530 at the end of EY 2014. Also, at the beginning of EY 2014, PFD met with DMO to discuss the identification of off-site impacts. PFD noted that DMO staff were counting all violations as off-site impacts even under circumstances where the impact was contained to the permit area, and where the violation was administrative in nature. The off-site impacts are categorized as follows: 95 hydrology (82 percent of total); 4 blasting (4 percent of total); 6 land stability (5 percent of the total) 5 encroachment (4 percent of the total); and 6 other (5 percent of total.)

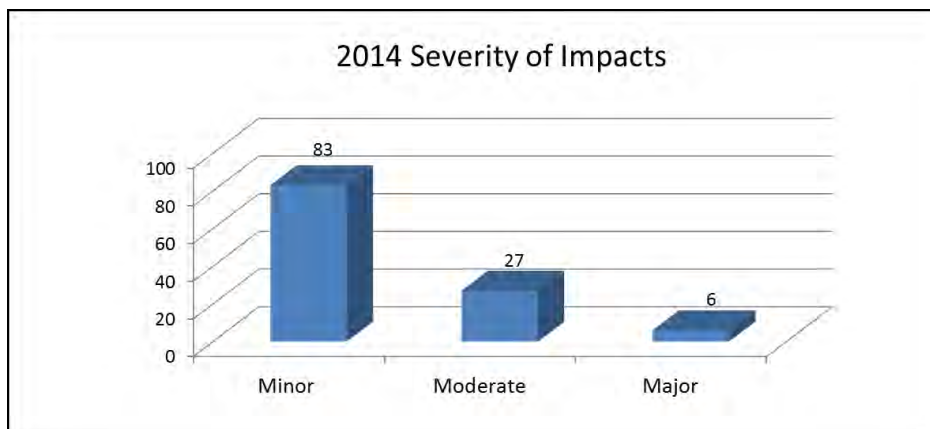


Figure 1. Off-site impacts by category

### 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 95 hydrology impacts (81 percent of the total). Of the 95 hydrology impacts, 2 were major, 19 were moderate, and 74 were minor. The two major hydrology impacts were for the following violations:

- Failure to conduct mining activities to protect fish and wildlife
- 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 6 impacts (6 percent of the total). There were no major impacts identified.

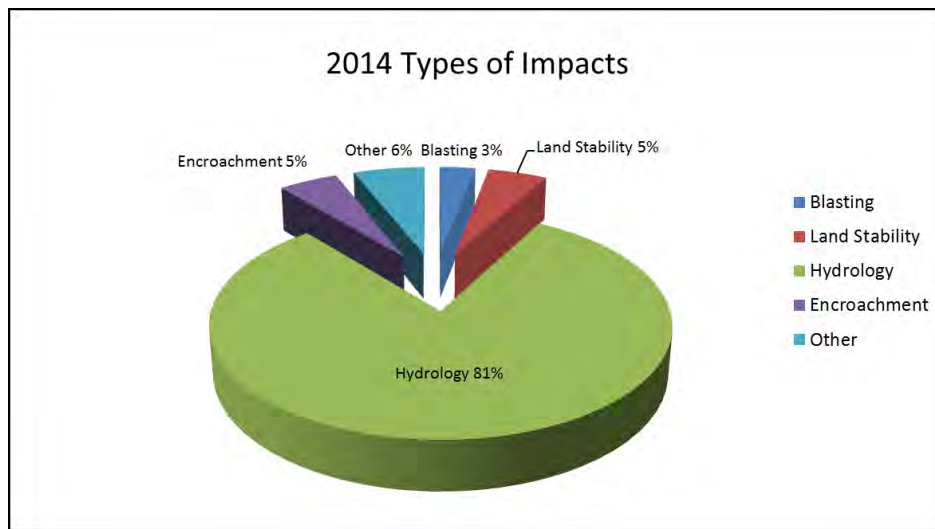
Moderate and minor violations were listed for the following citations: Failure to properly design, construct or maintain erosions and sedimentation controls, and failure to comply with the terms and conditions of the permit.

There were 6 **land stability** impacts (5 percent of the total) with 3 moderate impacts associated with the following violations including failure to revegetate; failure to comply with the terms of the permit; and failure to properly compact refuse and reclaim concurrently. There were no major land stability impacts.

**Encroachment** had 5 violations (5 percent), with four major impacts, and one minor impact. The major impacts were associated with the following violations

- Failure to maintain required oil and gas barrier.
- Failure to properly design, construct, and maintain support facilities.
- Conducting mining activities without a permit.
- Conducting mining activities on an unbonded area.

The category with the fewest number of off-site impacts was **blasting** with 3 moderate violations to structures and one to land (3 percent).



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

OSMRE inspectors conducted 156 oversight complete inspections in the bituminous and anthracite areas. As an independent check of the data collected by PADEP, OSMRE’s oversight complete inspections note any off-site impacts. This year, 10 of the 110 violations observed were considered to have resulted in off-site impacts. The off-site impacts included nine violations related to “hydrologic impacts”, and one violation related to “land stability.” Thus, 94 percent of the permits which OSMRE inspected were free of off-site impacts. This result is similar to PADEP’s report of 95 percent of permits free of off-site-impacts.

An analysis of the PADEP data at the end of EY 2013 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. PFD met with DMO at the beginning of 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 2013, 198 off-site impacts were reported on 126 permits of 1,775 inspectable units, providing a 93 percent compliance rate. In 2014, 116 off-site impacts were reported on 79 permits of 1,530 inspectable units, providing a 95 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.

OSMRE 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**

OSMRE 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 bond calculation 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 5,467 Stage I acres; 3,989 Stage II acres; and 3,972 Stage III acres reclaimed, for a total of 13,428 acres. The stage I, II, and III acres reclaimed and total is lower than EY 2013, when 17,498 total reclaimed acres were reported; higher than EY 2012, when 10,386 total reclaimed acres were reported, and about equal to EY 2011, when 13,138 total reclaimed acres were reported. PFD also notes that the number of permits is lower this year (1,465) which reverses a one year uptick from 2013 (1,775). The number of permits has been on a gradual decline from 1,731 in 2011, to 1,649 in 2012.

PADEP requires the mine operator to submit a report of acres reclaimed to Stage I, II, and III standards since the last report. This report was previously submitted with the Annual Bond Review (ABR) or Coal Completion Report (CCR) which is filed for bond release. However, on April 5, 2014, PADEP revised its reclamation bond calculation technical guidance. PADEP implemented a change in its program, which eliminates the requirement for an annual bond review. Operators now have the option to wait until the mid-term review (2.5 years from permit issuance), or until permit renewal (5 years) to review and adjust the reclamation bond. An inflation factor (3 or 5 years) is applied to the base bond calculation to account for the out years. This change was implemented at the end of the Evaluation Year, so it did not affect the data collected for Table 6.

However, as permits transition to a mid-term or renewal date for reporting acres reclaimed, we may notice some unevenness in annual reporting. Eventually, the annual reclaimed acres should even out.

In Evaluation Year 2014, PFD inspection staff collected reclamation success data on 134 permits inspected through our normal oversight complete inspection. Acres reclaimed are those observed since the last report to PADEP. PFD inspectors reported that 1,753 acres had met Stage I reclamation requirements (backfilling and grading completed), versus 1,124 acres reported by the operators. PFD found 1,690 acres met Stage II reclamation requirements (planted and vegetation established), versus 1,245 acres reported by the operators. PFD inspectors found 262 acres had met Stage III reclamation requirements (vegetation established for 5 years), versus 65

reported by the operators.

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. No other significant reclamation success issues were noted by PFD inspectors.

### C. Customer Service

OSMRE 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.

For EY 2014, OSMRE looked at Citizen Complaints for the various PADEP district mining offices. As per Technical Guidance Document 562-3900-402, the PADEP maintains a database for complaints received. For this review, the PADEP reported a total of 244 citizen complaints the reporting period of July 1, 2013 to March 31, 2014. The breakdown of complaints by county and type are summarized in the following table.

It is evident that the majority of complaints were related to blasting, with over half of those from Schuylkill County alone. In addition, Schuylkill County accounted for over a quarter of the complaints received, with a total of 65. Clearfield was the second highest county, with 35 total complaints received.

The following chart shows the county distribution and type of complaint.

County	General	Blasting	Dust	Erosion & Sediment Control	Mud	Pollutional Discharge	Water Supply Degradation/ Loss	Other*
Allegheny	5							
Armstrong	3							
Bedford				1			2	
Bradford	1							
Butler			2	1	2		1	
Cambria			14		2		5	
Centre	1	8						
Clarion		1		1				
Clearfield	2	19	6				7	1
Elk				1				
Fayette	1		8	3			1	
Greene	3					1	1	

Indiana	3			1	3	1		
Jefferson			1	1		1	1	
Lackawanna				1				
Lawrence		1		1			1	
Luzerne	1	6			1			2
Northumberland	5		4	1	6			5
Schuylkill	1	48	8	1	3	1	1	2
Somerset	6			1		1	10	1
Washington	1		1				2	
Westmoreland	3					2		

\*Note: "Other" includes 4 noise complaints from Northumberland, 4 illegal site complaints (Northumberland, Schuylkill, and 2 from Luzerne), 1 biosolids complaint from Northumberland, 1 ash complaint from Schuylkill, and 1 encroachment complaint from Somerset.

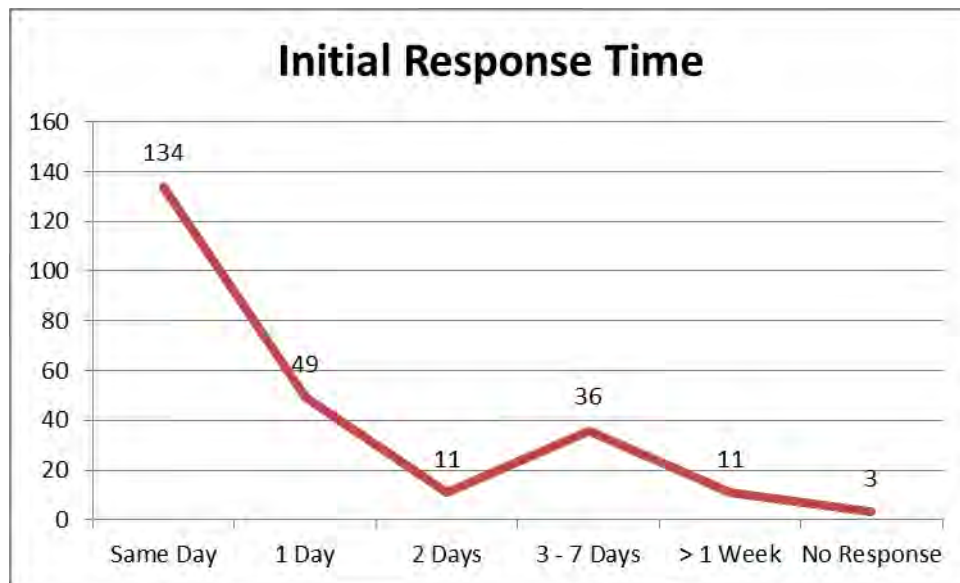
The distribution of complaints by calendar is shown below.



The majority of the complaints were received in the summer months. The other months average approximately 20 per month. Since the reporting period is July 1 to March 31, this review does not include complaints received in the months of April through June 2014.

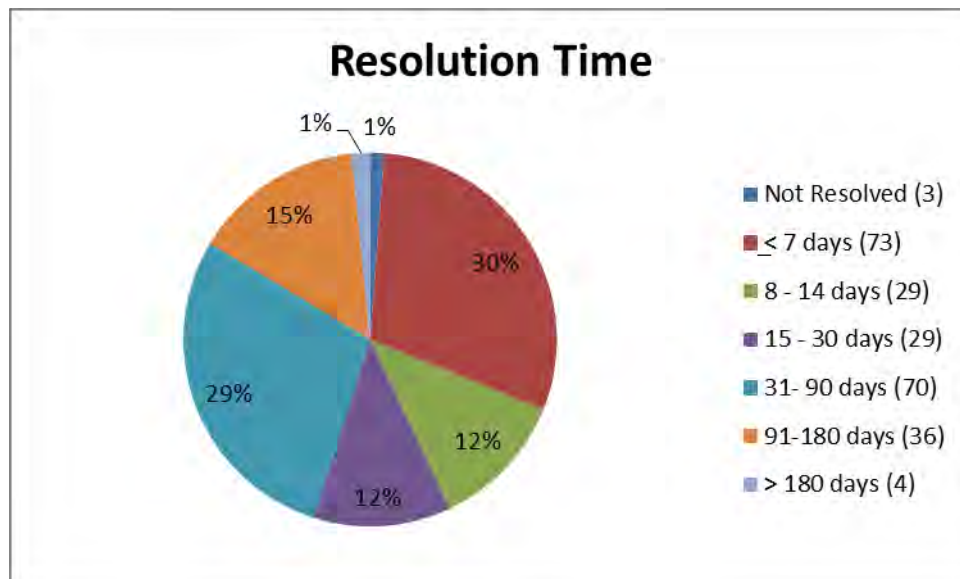
As evidenced in the next chart, PADEP makes an effort to respond to the citizen immediately

after receiving the complaint. The following chart shows the initial response time per complaint.



The PADEP responds to most requests on the same day and almost 80% within 2 days of receiving the complaint. Then, upon responding to the citizen, the complaint may be investigated or referred to another office, to include BAMR, air quality, a hydrogeologist, explosives safety division, and deep mining, before being resolved.

The following pie chart shows the resolution time of complaints.



The majority of the complaints received are resolved within one calendar week, with the period between 31 and 90 calendar days as a close second. In addition, 97% are resolved within 180

days. The three unresolved complaints are in Clearfield, Somerset and Bradford Counties. One was received in September 2013; one was received in November 2013; and one was received in December 2013. Two involve contamination of well water supplies, and one involves an AOC issue. One well contamination complaint was investigated and determined to be bacterial and not coal mining related. The homeowner was advised to chlorinate the well. DMO will issue a final report and close out the investigation. The AOC complaint was resolved in July of 2014, and the other well water complaint was still under investigation at the writing of this report. In addition, of all 244 complaints, only 6 resulted in notices of violation. All citizens are notified either verbally, in person or over the telephone, or by a written letter.

Based upon this information, it is PFD's conclusion that the PADEP is performing well in responding to most citizen complaints within a reasonable period of time. The PADEP responds to the majority of the complaints initially the same day. In addition, the PADEP resolves over 97% of the complaints within 180 days, with the majority of those resolved in less than 90 days. The PADEP also is maintaining a database to track the citizen complaints received, as well as the timeframes involved in responding to citizens and resolving the complaints. Since this is the first evaluation year that the OSMRE has reviewed the PADEP's handling of citizen complaints, there is no prior year's evaluation data for comparison.

#### **D. Bond Adequacy to Reclaim Forfeited Permits**

During the 2010 evaluation year, OSMRE 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 state's process for calculating and updating bonds; that the OSMRE 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. OSMRE 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 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 be redistributed at time of reclamation; the manner in which spoil volume is calculated does not address actual pit size, but rather is limited to the coal foot print; inclusion of a 15 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, OSMRE made the following recommendations:

- PADEP should aggressively pursue water treatment bonds or trust agreements on operations that develop post-mining polluttional discharges.
- PADEP should discontinue bond adjustment waivers when the upward adjustment is less than 15 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 polluttional discharges.

During the year, PFD met with PADEP to discuss the status of the bonding program. PADEP has changed its bonding technical guidance to eliminate 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 has included 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 has also revised the Bond Calculation Worksheet to eliminate use of the “foot print of the coal” in bond calculations and notified the industry of the changes, and the need to review and update bond calculations.

In August 2014 PFD and PADEP executed an Action Plan to assure that all active permits, and newly issued permits calculate bond use full volume of the excavated area as the basis for bond calculations and established a schedule to bring permits into compliance. PFD and PADEP will meet quarterly to assess progress in reviewing permits for bond adequacy. The action plan also contains an objective for further discussions of the redistribution of excess material to achieve post mining approximate original contour .

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.

In EY 2012 PFD inspected 12 bond forfeited permits and in EY 2013, PFD inspected another 10 bond forfeited permits. A Status of bond forfeited permits inspected by PFD, which were unreclaimed at the end of the current evaluation year is included in Appendix B.

For EY 2014, PFD inspected five bond forfeited permits. One permit, Twin Creek Coal Inc. Swift Breaker has been fully reclaimed under a reclamation contract with the Northumberland County Conservation District. One permit Cobra Mining LLC, Refuse Dump No. 4 has been reclaimed except for an untreated discharge coming from the toe of the reclaimed refuse pile. One permit, Benjamin Coal Company, Johnston Sinclair site, has been fully reclaimed and presents no environmental issues. One permit Power Operating Company, Vought site remains to be reclaimed. One permit, Sunray Coal Company, Hammond Mine was partially reclaimed through a surety reclamation contract, and the remaining reclamation obligations were assumed by the City of Philadelphia Inc. when the permit was transferred. A summary of the status of each permit is included in Appendix B.

#### **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.

In the Fall of 2012, the PFD completed an analysis of PADEP's compliance with Federally mandated inspection frequencies and published its finding in a report entitled Compliance with Required Inspection Frequencies. In summary, PFD found PADEP was achieving complete

inspection frequency compliance on 78% of active permits and partial inspection frequency compliance on 71% of active permits. Complete inspection frequency was met on 38% of inactive permits. Complete inspection frequency was met on 20% of bond forfeited permits. In 2013, OSMRE and PADEP met to discuss the inspection program, and agreed to develop an Action Plan to address the required inspection frequency deficiencies. Towards the end of EY2014, PADEP and OSMRE reviewed progress on this issue and it was decided to revise the Action Plan. PADEP estimated that an additional 16 Surface Mining Conservation Inspectors (SMCI) work effort are needed to enable the Bureau of District Mining Operations to achieve the mandated inspection frequencies. That would increase the work effort from the SMCI from 41 to 57 positions. The 16 additional positions are to come from activities discussed below. In August of 2014, PFD and PADEP signed a revised action plan, which contains a milestone of full compliance with the mandated inspection frequencies by January of 2017.

PFD notes that the FY 2013 and FY 2014 Title V regulatory grants contain about \$300,000 to contract with a helicopter service so that an average of 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 is expected to result in a work load increase of five FTE positions and will improve mandated partial inspection frequency compliance, and allow additional mandated complete inspections on the ground. In 2013, PADEP reported it conducted 1,975 aerial partial inspections. OSMRE will conduct reviews to ensure the advocacy of the method of conducting partial inspections.

As a part of the Action Plan milestone, PADEP's mining program received approval in June 2014 and initiated the immediate hiring of five SMCI which have been vacant since July 5, 2013.

PADEP reports that, as of September 2014, those positions have been filled. The newly hired inspectors will enter as trainees, with limited inspection and enforcement responsibilities. 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.

PADEP's Mining Program is currently conducting a complement evaluation across the Bureau of District Mining Operations with the goal of systematically assessing management and administrative staffing. This reassessment is expected to lead to opportunities to increase the SMCI complement by up to six positions over the next six months through reclassifications. As

noted above, the reclassified positions may begin as trainees, with limited inspection and enforcement authority. Therefore an improvement in inspection frequency compliance may not be immediately noticeable. Implementation completion is January 2015.

PFD concludes that PADEP is taking action to achieve compliance with mandated inspection frequencies. However, OSMRE 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 periodically assessed by PFD and PADEP in accordance with the Action Plan milestones.

Progress toward required inspection frequency compliance is already evident at the end of EY 2014. PADEP reports that in EY 2014, it conducted 80 percent of the required complete inspections on active (coal being removed) permits; 69 percent of the required complete inspections on inactive (permit in reclamation status) permits; and 65 percent of required complete inspections on abandoned (forfeited) permits. This compliance rate is substantially improved from EY 2013, when there was complete inspection compliance on 66 percent of the active mining permits; 42 percent complete inspection compliance on inactive permits; and 64 percent compliance on abandoned sites. See Table 10 for details. PADEP attributes this improvement in inspection frequency compliance to its aerial partial inspection program, which frees up time to conduct additional complete inspections, and an increased emphasis in data base updating to assure the inspections are recorded.

## **VII. OSMRE Assistance**

### **A. Maintaining the Mine Drainage Inventory**

The purpose of the Acid Mine Drainage (AMD) study is to evaluate discharges associated with coal mining operations in Pennsylvania. The PADEP tracks the Mine Drainage Inventory (MDI) in the eFACTS database. In addition, PFD maintains its own MDI database, which is used to reconcile and verify the discharges the PADEP tracks in eFACTS.

The AMD Inventory Study is the only annual PFD review that focuses on sites with AMD discharges. This study provides the opportunity for OSMRE to review the permit files, review the adequacy of the treatments, ensure that PADEP is tracking the discharges in eFACTS, and in most cases, inspect the sites and collect water samples for testing. The report identifies sites that require additional treatment as well as sites the demonstrate progress in treating the AMD discharges.

In EY 2104, PFD reviewed six permits to determine if AMD is still present at the sites and whether any treatment systems are in place and working to ensure the discharges meet NPDES effluent limits. PFD inspection staff conducted investigations with water testing at four sites and a document review only at two sites. PFD staff then entered the inspection information into the OSMRE Inspection and Evaluation database.

The six sites reviewed this year were located in the bituminous coal region and consist of two

surface mining sites, three coal refuse disposal sites, and one underground mining site.

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

<b>Permit No.</b>	<b>Company Name</b>	<b>Site Name</b>	<b>Type</b>	<b>Status</b>	<b>Trmnt</b>
17793123	Strishock Coal Co	Bailey Mine	CSURF	RECH	Y
17970102	EnerCorp Inc	Forcey Mine	CSURF	RECH	Y
30940701	Cobra Mining LLC	Refuse Dump No. 4	CRD	RECH	Y
32733705	Helen Mining Co	Homer City Mine Refuse Area	CRD	RECH	Y
33763701	Doverspike Bros Coal Co	Dora Refuse Area	CRD	BFPT	N
56841310	Rosebud Mining Co	Solar No. 7 Deep Mine	CUG	RECH	N

The permits have various status codes – Reclaimed Chemical Treatment (RECH) and Bond Forfeited Passive Treatment (BFPT).

Following is a discussion of each site.

- A. Permit 17793123, Strishock Coal Co., Bailey Mine is a surface mine in bond release. The original permit issuance date was March 14, 1979 and the current permit expires on February 3, 2019. The site was backfilled in October 2004 and the status of the site is Phase II bond release. Current bonding for the permit consists of a \$203,746 letter of credit. The discharge is currently treated by a passive treatment system comprised of a collection sump, conveyance ditch, and manganese removal beds.

The NPDES outfall on this permit discharges to an unnamed tributary of Sugarcamp Run, which has a designated use of a cold water fishery. At the time of inspection, there was no discharge from the treatment system and the operator's monitoring reports only showed a discharge during the months of January and February this year. However, it was noted during the field inspection that water is seeping from the conveyance ditch, bypassing the treatment system, and creating wet spots in a landowner's yard. A follow-up inspection is recommended to verify if abatement work on the seep has been performed. In addition, the inspection report has been forwarded to the USEPA since the NPDES outfalls are missing Waste Load Allocation for the treatment system in the Total Maximum Daily Load report. The current treatment system is effectively reducing manganese and aluminum concentrations, although without treatment the elevated manganese and aluminum concentrations from the raw discharge could degrade the water quality of the receiving stream.

- B. Permit 17970102, Enercorp Inc., Forcey Mine is a surface mine in inactive status, with mining complete and awaiting bond release. The original permit was issued on November 25, 1997 and the current permit expires on November 25, 2017. A letter was sent to the operator on March 19, 2014 informing him that the permit area had met Stage

II and III reclamation requirements, but the remaining bonds would not be released until there was a fully funded treatment trust to treat the two discharges in perpetuity.

The two discharges are on the western edge of the permit area and emanate from the toe of the spoil, directly adjacent to Alder Run. These NPDES outfalls discharge to Alder Run, which has a designation of a cold water fishery. Each discharge has its own treatment. The downstream discharge has an active system using caustic soda, with a catch basin and a settling pond. The upstream discharge has a passive treatment system with a catch basin, conveyance pipes, manganese removal bed, and settling pond. During the time of the field investigation, both systems were discharging at a rate of 5-8 gpm. The monitoring reports for the downstream discharge show two occurrences of high pH, along with one occurrence of exceeding the manganese limit. There currently is no standard for aluminum and the discharge has had concentrations of aluminum up to 31.09 mg/l. Aluminum concentrations in streams greater than 2 mg/L can be toxic to fish. In addition, visible aluminum precipitates were evident within the conveyance ditch which discharges to Alder Run. No discrepancies were noted on the upstream discharge. Although no follow-up inspection is necessary, the permit will be forwarded to the U.S.EPA for further review.

- C. Permit 30940701, Cobra Mining LLC, Refuse Dump No. 4, is a refuse disposal area with a reclaimed forfeiture status. This site was the subject of an oversight inspection on December 11, 2012 which resulted in a Ten-day Notice for 6 violations. The company responded to the resulting compliance orders by filing for bankruptcy. Forfeiture proceedings were initiated and the forfeiture was issued on February 19, 2014. Currently, the refuse pile is capped and vegetated and the haul roads and ponds are permanent. There is a seep below the haul road, which does not pass through either sediment pond or receive treatment of any kind.

At the time of this inspection, the seep was not actively flowing. Sediment Pond 1 was currently discharging degraded water. Sediment Pond 2 was not discharging. Discharges eventually reach the Monongahela River. The only treatment at the site is a caustic tank drip into the inlet of sediment pond 1, but maintenance has been discontinued on it and once the tank is empty, there will be no treatment at the pond. The degraded discharge will remain long term and even if all bonds are eventually collected, the bond would not be enough for perpetual long term treatment.

- D. Permit 32733705, Helen Mining Co., Homer City Mine Refuse Area is an active non-operational refuse disposal area with an inactive permit status. The permit was originally issued in 1985 and expired in July 1995 without being renewed. A compliance order was issued during this inspection for failing to renew the permit before the expiration date. The corrective action for this violation is for the operator to submit an application to the DEP California District Mining Office by February 8, 2014.

Currently, a hydrated lime with aeration treatment system is functioning, along with a raw water pond and 3 settling ponds prior to the final outfall. The most recent DMR reports indicate that the outfall is meeting the NPDES established limits.

OSMRE completed a follow-up Document Review in April. As per a 3/27/14 letter, the operator is to submit an application and bond in the amount of \$11,636,742.56 for the permit and long-term treatment liability. OSMRE will follow up to determine if the bond has been submitted.

- E. Permit 33763701, Doverspike Brothers Coal Co., Dora Refuse Area is a refuse disposal area with no ongoing reclamation. The current permit was issued July 16, 1985, renewed December 28, 1994, and expired on July 16, 2000. The operator failed to reclaim the site, failed to revegetate the site, failed to prevent pollution, and failed to maintain insurance, resulting in the forfeiture of the \$107,000 bond. There is currently no water treatment at the site, and no plan to provide treatment.

There are seeps at the site that currently flow into a series of ponds. There is not enough space to install a proper passive treatment system. Settling ponds at the site are still functional. All ponds were full, with the main pond discharging across the permanent, paved on-site road. Previous state monitoring records showed low pH with elevated Fe loads. At the time of inspection, a water sample was taken for laboratory analysis. The discharge point had a flow rate of 12 gpm and field testing yielded a pH of 4.7 with Fe > 10.

- F. Permit 56841310, Rosebud Mining Co., Solar No. 7 Deep Mine is an underground mine. The current permit was renewed in March 2013 and expires on February 10, 2017. This inspection consisted of a Document Review only. In December 2010, a Ten Day Notice was issued to DEP for a lack of treatment bond for the permit. The Document Review yielded that the operator had posted a \$1,636,084.84 bond for treatment. Treatment at the site consists of pumping a deep mine pool with lime treatment. Monitoring records indicate that the treated discharge was meeting the current NPDES effluent limits indicating effective treatment.

## **B. Watershed Cooperative Agreement Program**

In 1999, OSMRE 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, 97 WCAP grants have been awarded to Pennsylvania non-profit watershed groups for a total of about 8.2 million dollars. Total costs for these projects including all partner cash and in-kind donations of labor and services are about 37.4 million dollars. In total, OSMRE'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 six new project grants awarded for a total of \$417,630. These awards were made to Schrader Creek Watershed Association; Evergreen Conservancy for a project in the Bear Run watershed; The Western Pennsylvania Conservancy for a project in the Sewickley Creek watershed, Headwaters Charitable Trust for a project in the Mill Creek Watershed; Stream Restoration Inc. for the Pine Glen Project; and the Evergreen Conservancy for a project in the Bear Run Watershed. Partner contributions to these projects total \$2,564,947. 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 OSMRE Harrisburg Office staff coordinates with PADEP to help ensure the successful completion of the projects.

Funds provided by OSMRE complete the remediation budget, and OSMRE receives a large number of financial assistance requests from Growing Greener program applicants. Recently, partner funds have also been coming from Act 13 Marcellus Shale Impact Assistance funds. 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 OSMRE 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 OSMRE 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, OSMRE, in consultation with PADEP, develops an oversight work plan, as required by the OSMRE 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 OSMRE will evaluate for effectiveness, innovation, and compliance. OSMRE'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 OSMRE Harrisburg Office. Starting with EY 2012, evaluation reports will also be posted on OSMRE'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 1,465 mining permits in the Bituminous and Anthracite Regions of Pennsylvania at the end of the Evaluation Year. PFD staff conducted 155 Oversight Complete (“OC”) inspections in the 2014 evaluation year (comprising 123 bituminous permits and 32 anthracite permits). This is about 10 percent of the total mining operations occurring statewide. Of these, 15 were performed as independent inspections, where no advanced notice of the selected permit is given to PADEP. In addition to the 155 total OCs performed by PFD staff, 132 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
- Bond Forfeiture
- Oversight Mine Drainage
- Federal Inspection Ten-Day Notice
- Reclamation Fees Inspections

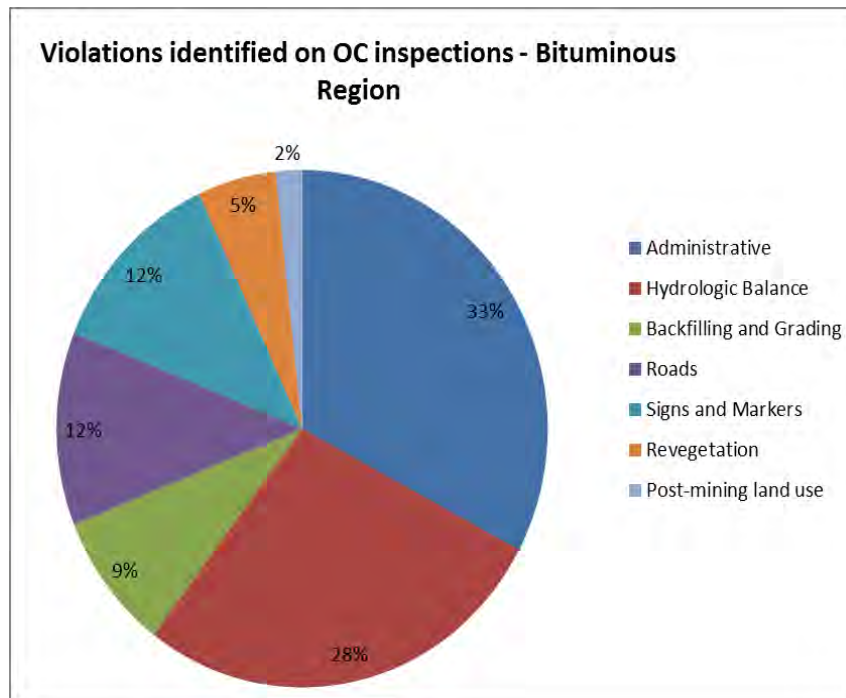
State enforcement follow-up inspections are conducted to track compliance with notices of violation issued by PADEP inspectors as a result of OSMRE’s oversight inspections, or TDNs.

In summary, in EY 2014, PFD conducted 288 total inspections, with 155 oversight complete inspections. By comparison, in EY 2013, OSMRE inspectors conducted a total of 315 oversight inspections with 150 OC. PFD identified 110 violations during these inspections as discussed below.

#### Bituminous Region Violation Itemization:

The following is an itemization of the 59 violations identified during oversight complete inspections in the Bituminous Region. Of these 59 violations, 50 of the violations were immediately deferred to PADEP action—in the form of a Notice of Violation or Compliance Order. Two violations were previously cited by PADEP but abatement was pending during the oversight inspections. The remaining 7 violations were deferred to PADEP in the form of multiple TDNs.

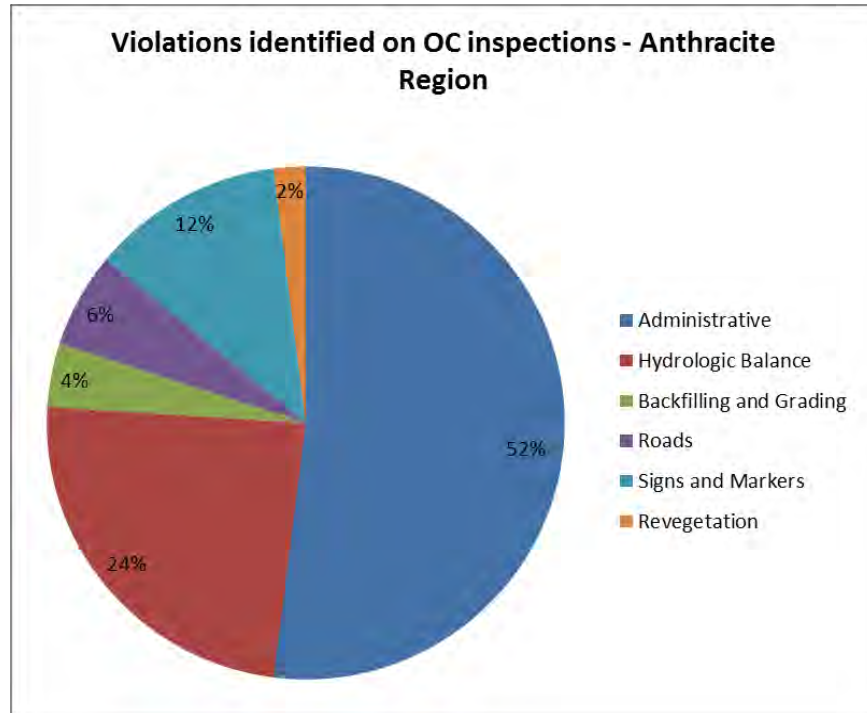
Table 3: Bituminous Region Violations



Anthracite Region Violation Itemization:

The following is an itemization of the 51 violations identified during oversight complete inspections in the Anthracite Region. Of these 51 violations, 45 of the violations were immediately deferred to PADEP action—in the form of a Notice of Violation or Compliance Order. Three violations were abated during the course of the inspection. Three violations were previously cited by DEP but abatement was pending during the oversight inspections.

Table 5: Anthracite Region Violations



Similar to the last four evaluation periods, the most prevalent category of violations identified in the Anthracite Region relate to Administrative issues. Both Administrative and Hydrologic Balance violations were frequently cited in 2012 and 2013, as well; demonstrating a trend of potential concern in PADEP's program that should be addressed. Similar to the Bituminous region, historical data demonstrates patterns of violations.

At the end of the evaluation year, there were five authorized OSMRE inspectors assigned to Pennsylvania. OSMRE conducts both joint inspections with PADEP and independent inspections. The Field Offices conduct at least 10 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 OSMRE/PADEP inspections, the OSMRE 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 OSMRE follows up to ensure compliance.

Disagreements between PADEP and OSMRE are addressed through the Ten-Day Notice (TDN) process. Of the 155 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, OSMRE issues a TDN.

Table 1 demonstrates the distribution of inspection sites and site status that were included in the random sample draw for the 2014 evaluation year. The numbers in [blue](#) indicate the total violations found for each site status.

Table 1: OC Inspections Per Site Status and PA DEP District Mining Office

DMO	Cambria	Greensburg	Moshannon	Knox	Pottsville
AP * Sites = 58	12 (1)	9 (7)	16 (10)	9 (1)	12 (24)
P-1 Sites = 9	1	2	1	3 (1)	2 (1)
P-2 Sites = 13	1	2	4 (1)	6 (2)	0
P-3 Sites = 1	1	0	0	0	0
MC Sites = 24	8	7 (7)	3 (2)	5	1 (1)
AN Sites = 23	6 (2)	4 (1)	9 (14)	1	3 (6)
TC Sites = 16	4	2 (4)	1	0	9 (10)
NM Sites = 11	0	2	4 (6)	0	5 (9)
EX Sites = 1	0	0	0	0	0
ND Sites = 0	0	0	0	0	0
Totals = 155	33 (3)	28 (19)	38 (33)	24 (4)	32 (51)

\* 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; 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 OSMRE and deferred to DEP 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. In order to maintain consistency, the distributions of OC inspections were evenly applied across DMOs.

The 155 bituminous and anthracite region OC inspections revealed 53 permits had at least one violation; equivalent to 34% of the sites inspected. In the 2013 evaluation period, 58 of the 150

OC inspected sites had violations, which equated to 39% of the sites inspected having violations. This equates to a marginal improvement in permit compliance. Sixty six percent of the permits inspected in the 2014 evaluation period had no observed violations. In the 2014 evaluation period, a total of 110 violations were identified during OC inspections. Therefore, the proportion of violations-to-inspections was approximately .70 violations per OSMRE inspection, versus .73 in EY 2013.

#### Analysis of Total Violations Incurred During Oversight Complete (OC) Inspections

During the current evaluation year, 110 violations were documented during 155 OC inspections. Ninety seven permits of the 123 inspected in the Bituminous Region had no violations. Thus 79% of the Bituminous mines inspected were free of violations. In the Anthracite Region, 6 of the 32 OC inspections conducted revealed no violations, equating to 18% of the sites inspected. During the 2014 evaluation year, multiple violations were observed on 25 sites.

#### Violation Deferral

Of the 110 violations discovered pursuant to OSMRE OC inspections, 102 were deferred to PADEP for enforcement action through issuance of a Departmental Notice of Violation (NOV) or Compliance Order (CO). Where PADEP was unwilling to immediately take a state enforcement action, the violations were submitted to PADEP by way of a Ten-Day Notice (TDN). Additionally, there were 8 violations that were abated during the inspection. This year, 10 of the 110 violations observed were considered to have resulted in off-site impacts. The off-site impacts included 9 violations related to “hydrologic impacts” and 1 violation related to “land stability”.

Special emphasis has been placed on gathering data to ascertain: “How many violations do PADEP Inspectors identify and cite, when conducting inspections without OSMRE oversight?” as compared to: “How many violations do PADEP Inspectors identify and cite when OSMRE inspectors accompany PADEP on inspections?” This study was continued in the 2014 evaluation period and will be continued throughout the 2015 evaluation period. This will be achieved by OSMRE 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 OSMRE OC inspection. This review and documentation enables an evaluation of PADEP individual inspection enforcement actions to ensure the Pennsylvania program objectives are appropriately implemented.

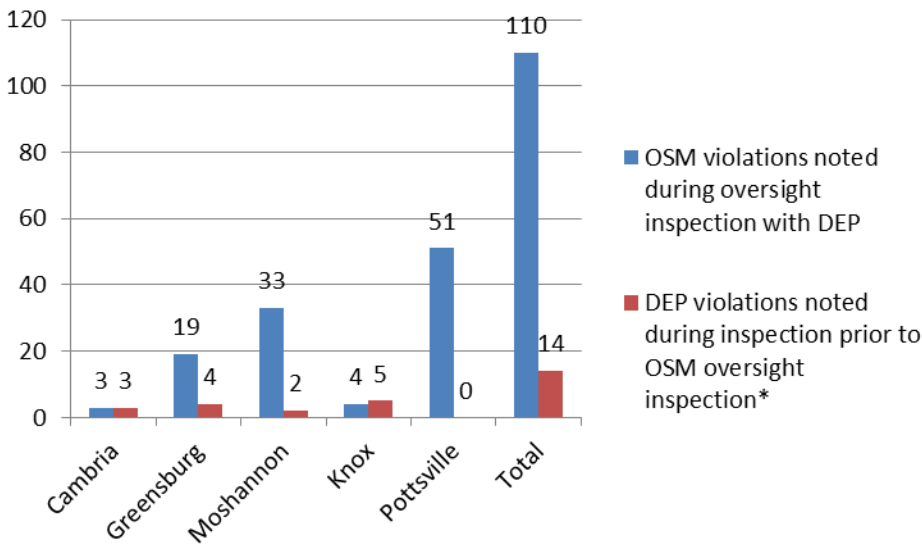
The results of this study are outlined in Table 2 and the bar graph below:

Table 2: OSMRE and DEP Violation Data

PADEP District Mining Office	OSMRE inspections per DMO	OSMRE violations noted during joint inspection with DEP	DEP violations noted during inspection*without OSMRE presence
Cambria	33	3	3
Greensburg	28	19	4
Moshannon	38	33	2
Knox	24	4	5
Pottsville	32	51	0
<b>Total</b>	<b>155</b>	<b>110</b>	<b>14</b>

In the chart above, column two shows the total number of permits inspected by OSMRE and the distribution by District Office. Column three shows the total number and distribution of violations observed on the 156 permits inspected by OSMRE. 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.



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

PFD notes the following trends in yearly violation citations. In EY 2012, PADEP cited 658 violations on 12,600 partial and complete inspections for an average of .05 violations per inspection. In EY 2013, PADEP cited 568 violations on 12,567 partial and complete inspections for an average of .045 violations per inspection. In EY 2014 PADEP cited 563 violations on 13,408 partial and complete inspections for an average of .04 violations per inspection. Although the number of inspections has increased by 6% from 2013, the number of violations cited remained essentially the same. This raises a question as to whether aerial inspections are resulting in missed violations. PFD will explore this issue with PADEP in the coming year. PFD will continue to monitor trends in the number of inspections versus violation citation. OSMRE found an average of .70 violations per inspection in EY 2014, which is essentially the same rate as the .73 violations per inspection found in EY 2013. Stated another way, PADEP cites 4 violations per 100 inspections, and PFD finds 70 violations per 100 inspections.

PADEP reports that in EY 2014, it conducted 80 percent of the required complete inspections on active (coal being removed) permits; 69 percent of the required complete inspections on inactive (permit in reclamation status) permits; and 65 percent of required complete inspections on abandoned (forfeited) permits. This compliance rate is substantially improved from EY 2013, when there was complete inspection compliance on 66 percent of the active mining permits; 42 percent complete inspection compliance on inactive permits; and 64 percent compliance on abandoned sites. See Table 10 for details. Inspection frequency compliance is an issue being addressed by PADEP, and OSMRE through an Action Plan signed in August of 2014.

A total of 18 TDN's were issued to PADEP during the 2014 evaluation period. Fifteen 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 8 violations. PADEP's responses and OSMRE's determinations are summarized below.

- . 3 - Good Cause that the violation did not exist.
- . 5 - Appropriate Action to cause the violation to be corrected.

The 15 Citizen Complaint TDNs contained 28 alleged violations. PADEP's responses and OSMRE's determinations are summarized below.

- . 13 - Good cause that the violation did not exist.
- . 13 - Appropriate action to cause the violation to be corrected.
- . 2 - Arbitrary and Capricious determination by PFD. This TDN was written for failure to install adequate erosion and control measures to control off permit discharge of sediment from a timbering operation on a surface mine permit. PFD's determination was upheld by the Regional Director, and a Federal Inspection was conducted. This inspection resulted in issuance of a Notice of Violation, which was appealed by the company to the Department of the Interior's Office of Hearings and Appeals. A hearing was held in June 2014, and the judge upheld OSMRE's position in a decision issued on September 8, 2014.

The Regional Director issued one informal review decision for a citizen complaint TDN, which was appealed in the previous evaluation year. The alleged violation was that a coal preparation plant was creating off site dust and dirt conditions on public roads and on private property. The decision upheld PFD's good cause determination that no violation existed. At the end of the evaluation year, there were four requests for informal review pending with OSMRE.

## **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, OSMRE 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 2014, the eFACTS listed 51 partially funded and fully funded primacy treatment trust agreements, encompassing 109 permits and addressing 191 discharges. Included in the total are six trusts that fall in the Fully Funded Inadequately Funded category. There are 52 permits with 68 discharges that are conventionally bonded and do not require a trust. Remaining are 63 permits encompassing 88 discharges that have not been addressed in any manner to have a trust or bonds in place for water treatment liabilities.

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 and the number of permits and discharges that have not been addressed.

	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	Permits not addressed	Discharges not addressed
<b>Pottsville</b>								0	0
Linked to Bond						1	1		
	1			1	1				
		1		2	1				

<b>Moshannon</b>								10	15
Linked to Bond						5	8		
	3			4	4				
		7		24	35				
			1	1	5				
<b>Greensburg</b>								14	16
Linked to Bond						15	17		
	6			10	13				
		4		4	7				
			1	5	8				
<b>Cambria</b>								31	44
Linked to Bond						21	24		
	9			29	70				
		10		12	24				
			3	5	7				
<b>Knox</b>								8	13
Linked to Bond						10	18		
	1			2	1				
		3		4	8				
			1	6	7				
<b>Totals:</b>	<b>20</b>	<b>25</b>	<b>6</b>	<b>109</b>	<b>191</b>	<b>52</b>	<b>68</b>	<b>63</b>	<b>88</b>

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.

### **C. Post Mining Retention of Sediment Ponds as Permanent features**

PFD completed a review of post mining retention of sediments ponds as permanent features of

the landscape. The review determined if retention of the ponds was requested by the property owner, and authorized by PADEP upon demonstration that the six requirements of Pa Code Title 25 Chapter 87.111 Hydrologic Balance; impoundments, had been met. Additional information was collected for each pond including a physical description and condition, whether the pond was holding, and discharging water, pH, size and condition of any receiving stream, whether the pond meets the criteria of Chapter 87.111, whether any wildlife use was observed, and whether the pond conforms with the post mining land use. Data collection forms were completed for each pond, and are available for review in the 2014 Evaluation File. PFD inspectors reviewed 12 permits with 16 post mining land use ponds.

PADEP requires a notarized owner request that a pond remain as a post mining land use feature. PADEP releases the operator from any further responsibility for pond certification and maintenance after approval for post mining land use, and after the pond is no longer necessary for erosion and sediment control. This point of responsibility transfer usually occurs with Stage II reclamation approval. PFD found that 14 of the sixteen ponds reviewed, had the necessary land owner request for pond retention. One pond was in Stage I, and although the permit map indicated that it would be retained, no land owner request was needed at that time. The other pond was 25 years old and no file documentation could be located.

Chapter 87.111 requires a demonstration of the following criteria before PADEP can authorize retention as a post mining land use. They are:

- (1) The quality of the impounded water shall be suitable on a permanent basis for its intended use, and discharge of water from the impoundment will not degrade the quality of receiving waters to less than the water quality standards established under 87.102 (relating to hydrologic balance; effluent standards.)
- (2) The level of water shall be sufficiently stable to support the intended use.
- (3) Adequate safety and access to the impounded water shall be provided for proposed water users.
- (4) Water impoundments shall not result in diminution of the quality or quantity of water used by adjacent or surrounding landowners for agricultural, industrial, recreational or domestic uses.
- (5) The size or the impoundment is adequate for its intended purposes.
- (6) The impoundment will be suitable for the approved postmining land use.

PFD's review found the required demonstration for 2 of the ponds, and no written demonstration for 10 ponds. Four ponds had a partial demonstration in the form of a checklist which addressed water quality and whether the pond was holding water.

Post mining land use was designated as pastureland for three permits; forest for five permits and a combination of forest, pasture, unmanaged natural habitat, and cropland for four permits.

PFD assessed several environmental conditions regarding the ponds.

- All 16 pond banks and slopes were well vegetated. However, one pond did not have the dewatering pipe required by the permit, causing water to discharge over the emergency spillway which is causing erosion issues where the water outlets the pond.
- Fourteen ponds were holding water and two were dry.
- Fifteen of the ponds met water quality standards, and had a pH greater than 6.5. One pond had experienced elevated iron during quarterly monitoring in the past year. However, the surrounding area was seeded in 2013, and it is expected that the issue will be resolved as the vegetation increased and sediment runoff into the pond is reduced.
- Many ponds were providing habitat for birds, amphibians, and fish. Several were being used as agricultural water sources by the land owners.

PFD found that despite the lack of the required demonstration in Chapter 87.111, thirteen of the ponds met the requirements. Three ponds on one permit, P&N Coal Company No. 17080104 Hurd Operation, were constructed as replacement mitigation for the loss of 1.88 acres of open water. Two of the ponds were dry, and one pond was holding an insufficient amount of water. PFD requests that DMO follow up to assure the terms of the permit are met.

In summary, PFD found only two issues with a follow up recommendation.

- PFD recommends that DMO issue a standard checklist for all ponds being retained as post mining land use features, which conforms with Chapter 87.111. This will assure that the required demonstration is made and placed in the permit file.
- PFD requests that DMO monitor P&N Coal Company permit No. 17080104 to assure that all required wetland mitigation replacement ponds meet the requirements of the permit.

## 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
OSMRE	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

### **Evaluation Year 2014 Bond Forfeiture Permit Reclamation Status – Unreclaimed Permits**

Cobra Mining LLC  
Refuse Pile No. 4  
Permit No. 30940701  
Date of Inspection: May 14, 2014  
Date of Forfeiture: February 19, 2014  
Amount of Forfeiture: \$86,388 – Uncollected.

This permit was forfeited for numerous unabated water quality violations. Rather than abate the violations, the company filed for bankruptcy.

Status of Reclamation: Land reclamation complete. Untreated discharge remains.

Power Operating Company  
Vought Operation  
Permit No. 17820114  
Date of Inspection: March 05, 2014  
Date of Forfeiture: September 26, 2000  
Amount of Forfeiture: \$213,900  
Status of Reclamation: Unreclaimed

The permit was forfeited for a variety of unabated violations including failure to submit ground water and surface water monitoring reports; failure to meet effluent limitations, maintain liability insurance and abandonment of the permit. The unreclaimed obligations include a 12 acre open cut that is 1680 feet long, 603 feet wide and up to 115 feet deep. 9.5 acres of adjacent spoil remain unreclaimed. Also, a pre-existing discharge was degraded. Total land reclamation cost is estimated at \$1,588,320. Long term operation and maintenance of the discharge is estimated a \$611,000.

On September 10, 2010, the permit was transferred to Junior Coal Contracting with a CO&A which requires reclamation of the remaining surface lands. PADEP issued a Growing Greener grant in the amount of \$500,000 to provide for extra alkaline addition in the hope it will improve the water quality of the discharge. To date, Junior has not initiated reclamation activities, and PADEP is purchasing caustic to begin treatment of the discharge.

### **Evaluation Year 2013 Bond Forfeiture Permit Reclamation Status Update - Unreclaimed Permits**

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 tibble 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 tibble 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. A conference call is scheduled for July 23, 2014 with BAMR to coordinate a reclamation effort. The deep mine reclamation is a small portion of a much larger Priority 2 feature.

Buck Mountain Coal Company

Buck Mountain Slope

Permit No 54851343

Date of Inspection: July 11, 2014

Date of Forfeiture: June 7, 2012

Amount of Forfeiture: \$5,000 – Project cost \$24,667

Status: Reclaimed

This permit was the site of an underground mine. The site consisted 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.

An Act 181 contract was awarded to Penn Equipment in the amount of \$24,667 for the reclamation work. Grass and leaf compost was used to mulch the site. The project was completed in July 2014.

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 remaining financial guarantee)  
Status: Un-reclaimed

This permit was issued for remaining 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 a proposal from Neiswonger Construction Inc. to perform a reclamation in lieu of civil penalty payment contract to reclaim the three sediment ponds, construct a 250 foot rock lined drainage channel, and remove one large equipment tire. On October 22, 2013 Neiswonger completed the reclamation in lieu project. The three sediment ponds were reclaimed, the 250 foot rock lined drainage channel was constructed, the large equipment tire was removed and in addition one truck load of junk metal was removed. 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 immediate plans for water treatment. They are not considered a high priority because of the degraded quality of the receiving stream, Getty Run. A large deep mine discharge forms the headwaters of Getty Run.

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 grassland and cropland. Also, a spring, which was being used for a private water supply, was degraded by mining. PADEP authorized a reclamation in lieu of civil penalty payment project 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. A replacement well was drilled on October 2, 2013. The Greensburg DMO continues to evaluate the quality and quantity of the replacement well by way of pump tests. Options for increasing the yield are being evaluated. 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 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. OSMRE 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. KDMO sent letters to affected landowners on July 14 announcing its intentions to contract completion of reclamation and offering to meet with landowners to discuss permanent retention of roads, ponds and or ditches. A scope of work will be prepared for this site and forwarded to BAMR for consideration to have the BD crew complete reclamation work.

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. OSMRE 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.

### **Evaluation Year 2012 Bond Forfeiture Permit Reclamation Status Update - Unreclaimed Permits**

Reilly Mineral Resources

Newkirk Mine

Permit No. 5498101  
Un-reclaimed

PADEP, Pottsville District Office negotiated 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. The operator is considering grass and leaf compost as a mulch to reclaim a large area of coal refuse.

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). A sole source grant is being considered to reclaim the site. A bat cage will likely be installed on the opening. A cost estimate is being developed.

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.

July 2014 update: Reclamation is about 70% complete. However; approximately 100,000 tons of coal refuse (out of an original 350,000 tons) remains to be removed from the site and reclamation work has stopped because the designated coal refuse-burning power plant (Piney) ceased operations. The surety company (Travelers) is looking for an alternative site to take the coal refuse. If an alternative site is found, we plan to modify the Surety Reclamation CO&A to allow ash from a different approved facility. If no alternative becomes available, the reclamation plan is to be modified to allow burial of the remaining coal refuse on-site and encapsulation by fly ash. This is expected to add another two years to the anticipated completion date of reclamation.

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. KDMO sent letters to affected landowners on July 14 announcing its intentions to contract completion of reclamation and offering to meet with landowners to discuss permanent retention of roads, ponds and or ditches. A scope of work will prepared for this site and forwarded to BAMR for consideration to have the BD crew complete reclamation work.

RJ Coal Company  
Bloom 2 Mine  
Permit No. 17980121  
Under reclamation

PADEP has prepared a reclamation contract proposal, which will go to bid 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. July, 2014 update: Contract (bid) in the amount of \$117,571 to reclaim the mine site using beneficial-use tannery waste from the defunct Howes Tannery was awarded to Gearhart Bros. Services of Lancaster, PA on 4/22/14. Notice to Proceed issued 6/4/14. Reclamation operations are underway. An additional \$30,000 of funding was supplied by the Solid Waste Abatement Fund. Also received a \$50,000 grant from the 319 NPS Program to apply 2,250 tons of waste lime to the mine site under a separate contract.

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.

July, 2014 update: With the completion of reclamation, the collection of surety bonds was formally waived on August 14, 2012. Contrary to the original report, the reclamation work did include enhancements to natural passive treatment which had developed on the site. Discharges were routed via a constructed channel to a former sedimentation pond. The pond outlet was lowered and included a constructed limestone spillway. The final discharge is routed to an existing natural wetland.

Black Dog Mining Inc.  
Dodson Mine  
Permit No. 05773002  
Partially Reclaimed

PADEP entered into a Surety Reclamation Contract on October 7, 2013, to backfill the two highwalls on this permit. This backfilling work was completed on January 16, 2014. The Department is now reviewing an executed Act 181 contract with Miller Excavating Contractors. The contract is to complete the re-vegetation site requirements and to upgrade an existing passive treatment system to treat a small post mining discharge. This final site work is to begin in during the July/August 2014 time period.

## **APPENDIX C**

### **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 OSMRE 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 OSMRE in its evaluation of Pennsylvania's performance is available for review in the evaluation files maintained by the Harrisburg OSMRE Office.

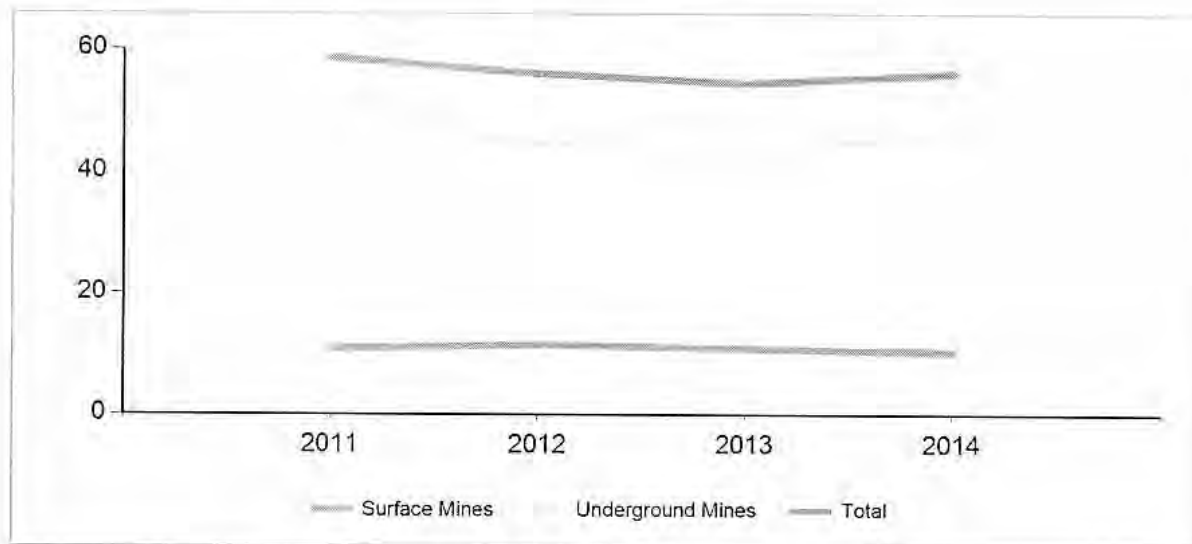
When OSMRE's Directive REG-8, Oversight of State Programs, was revised in December 2006, the reporting period for coal production on Table 1 was changed from a calendar year basis to an evaluation year basis. The change was effective for the 2007 evaluation year. However, with Change Notice REG-8-1, 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 <sup>A</sup>**  
*(Millions of short tons)*

<b>Calendar Year</b>	<b>Surface Mines</b>	<b>Underground Mines</b>	<b>Total</b>
2010	10.8	47.9	58.7
2011	11.4	44.7	56.1
2012	10.8	43.7	54.5
2013	10.3	45.9	56.2

<sup>A</sup> 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 1**  
**COAL PRODUCED FOR SALE, TRANSFER, OR USE**  
**DURING THE CALENDAR YEAR**  
 (Millions of short tons)



**COAL PRODUCED FOR SALE , TRANSFER, OR USE <sup>A</sup>**  
 (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
2013	10.3	45.9	56.2

<sup>A</sup> 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

Mines and Other Facilities	Numbers of Permanent Program Permits and Initial Program Sites								Insp. Units <sup>1,2</sup>	Area in Acres <sup>3</sup>				Total Area	
	Permanent Program Permits				Initial Program Sites					Permanent Program Permits (Permit Area)		Initial Program Sites			
	Active	Inactive	Abandoned	Total	Active	Inactive	Abandoned	Total		Federal Lands	State/Tribal and Private Lands	Federal Lands	State/Tribal and Private Lands		
Surface Mines	647	298	89	1,034	0	0	0	0	1,034	0	239,412	0	0	239,412	
Underground Mines	131	19	8	158	0	0	0	0	158	0	47,465	0	0	47,465	
Other Facilities	239	30	4	273	0	0	0	0	273	0	39,536	0	0	39,536	
<b>Total</b>	<b>1,017</b>	<b>347</b>	<b>101</b>	<b>1,465</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,465</b>	<b>0</b>	<b>326,413</b>	<b>0</b>	<b>0</b>	<b>326,413</b>	
Permanent Program Permits and Initial Program Sites (Number on Federal Lands: 0)				Total Number:		1,465		Average Acres per Site:				222.81			
Average Number of Permanent Program Permits and Initial Program Sites per Inspectable Unit (IU):				Total Number:		1.00		Average Acres per IU:				222.81			
Permanent Program Permits in Temporary Cessation:				Total Number:		18		Number More than 3 Years:				6			
<b>EXPLORATION SITES</b>				<b>Total Number of Sites</b>				<b>Sites on Federal Lands<sup>4</sup></b>				<b>Exploration Inspectable Units</b>			
Exploration Sites with Permits:				0				0				0			
Exploration Sites with Notices:				207				0				0			

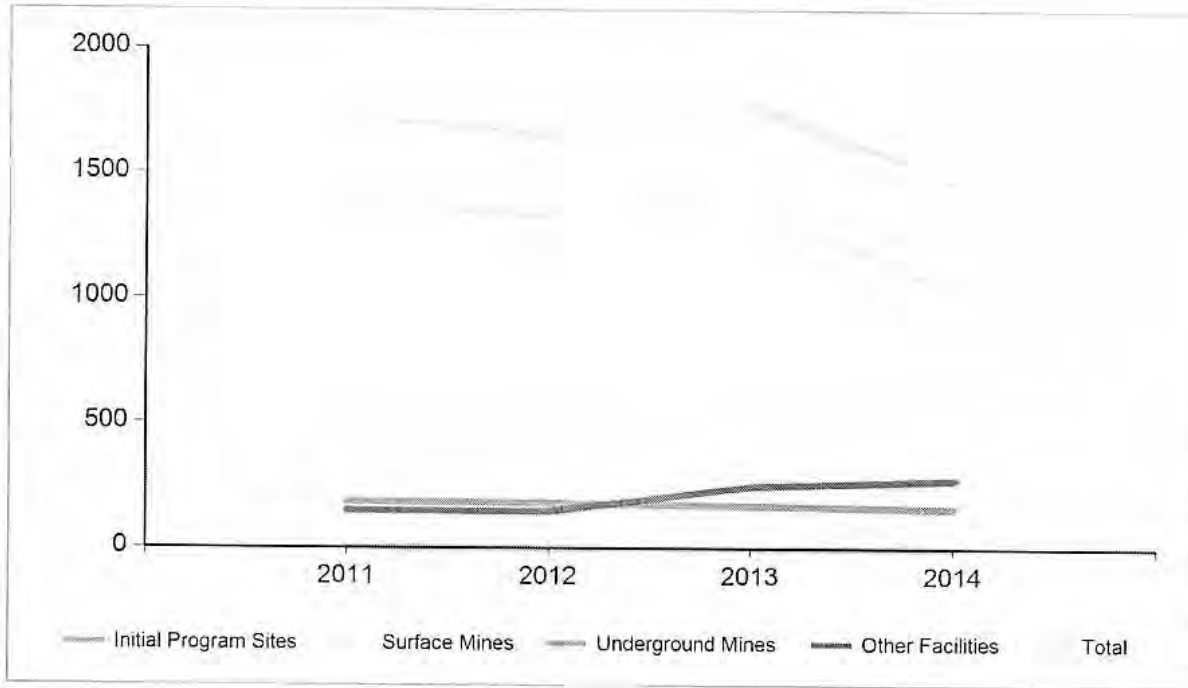
<sup>1</sup>An Inspectable Unit may include multiple small and neighboring Permanent Program Permits or Initial Program Sites that have been grouped together as one Inspectable Unit, or conversely, an Inspectable Unit may be one of multiple Inspectable Units within a Permanent Program Permit.

<sup>2</sup>Total Inspectable Units calculation includes Exploration Sites Inspectable Units

<sup>3</sup>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.

<sup>4</sup>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**

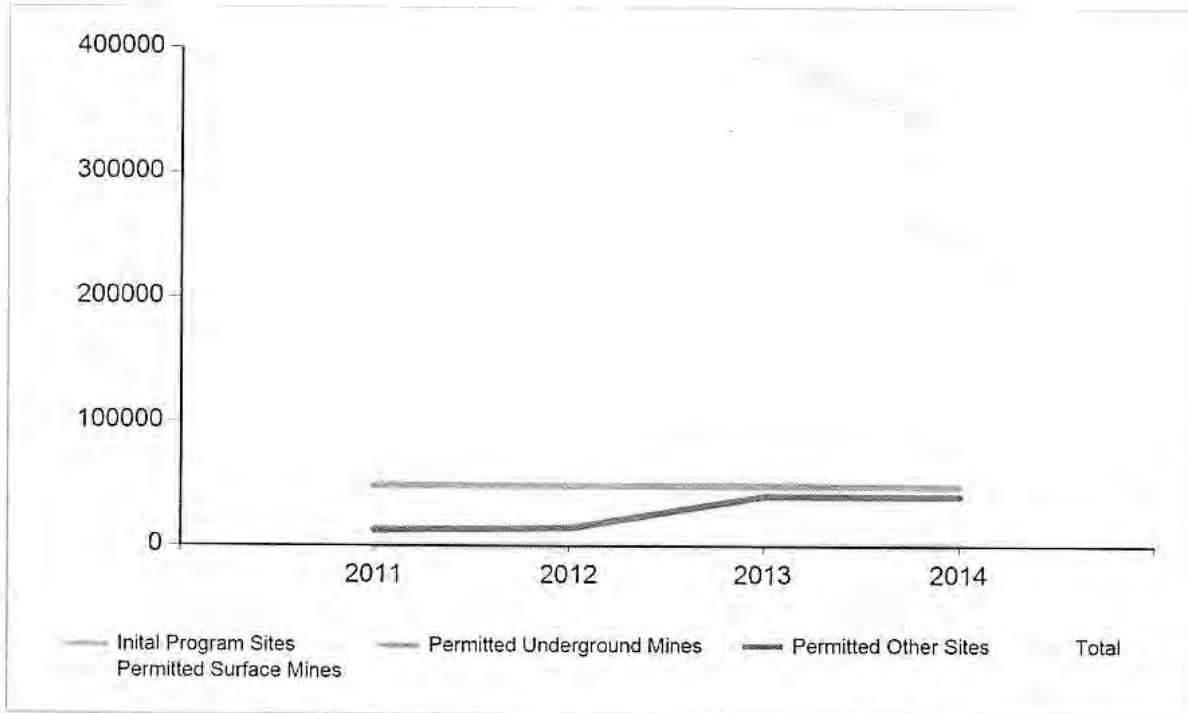


**TABLE 2A**

**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
2014	0	1034	158	273	1465

**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			Total
		Surface Mines	Underground Mines	Other Facilities	
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
2014	0.0	239412.0	47465.0	39536.0	326413.0



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	1	0	0	0	0	0	3	0
Land Stability	6	0	0	0	3	3	0	0	0	0	0	0	0
Hydrology	95	0	0	0	0	0	0	74	19	2	0	0	0
Encroachment	5	0	0	0	1	0	4	0	0	0	0	0	0
Other	6	0	0	0	0	0	0	0	0	0	5	1	0
<b>Total</b>	<b>116</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>74</b>	<b>19</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>0</b>

Total Number of Inspectable Units<sup>1</sup>: 1560  
 Inspectable Units with one or more off-site impacts: 79  
 Exploration Inspectable Units with one or more off-site impacts<sup>2</sup>: 0  
 Inspectable Units free of off-site impacts: 1481      % of Inspectable Units free of off-site impacts<sup>4</sup>: 95

<sup>1</sup> 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

<sup>2</sup> 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	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrology	24	0	0	0	0	0	0	24	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
<b>Total</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Total Number of Inspectable Units<sup>3</sup>: 24  
 Inspectable Units with one or more off-site impacts: 24  
 Inspectable Units free of off-site impacts: 0      % of Inspectable Units free of off-site impacts<sup>4</sup>: 0

<sup>3</sup> 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	1	0	0	0	0	0	3	0
Land Stability	6	0	0	0	3	3	0	0	0	0	0	0	0
Hydrology	119	0	0	0	0	0	0	98	19	2	0	0	0
Encroachment	5	0	0	0	1	0	4	0	0	0	0	0	0
Other	6	0	0	0	0	0	0	0	0	0	5	1	0
<b>Total</b>	<b>140</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>98</b>	<b>19</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>0</b>

Total Number of Inspectable Units<sup>5</sup>: 1584

Inspectable Units with one or more off-site impacts: 103

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

Inspectable Units free of off-site impacts: 1481

% of Inspectable Units free of off-site impacts<sup>4</sup>: 93

<sup>4</sup> % 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.

<sup>5</sup> 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 forfeiture 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.

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 Total Acres Released in Approved Phase I Releases	Phase II Releases		Phase III Releases			Total Acres Released During the EY	
	Total Acres Released in Approved Phase II Releases	Acres not previously released under Phase I	Total Acres Released in Approved Phase III Releases	Acres not previously released under Phase II	Acres not previously released under Phase I or II		
5,467		0			0	Phase I	5,467
	3,989			0		Phase II	3,989
			3,972			Phase III	3,972
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					118	Bond Forfeiture	242
<b>Areas of Permits Bonded for Disturbance by Surface Coal Mining and Reclamation Operations</b>							

	Total Acres at Start of EY	Total Acres at End of EY	Change in Acres During EY
New Area Bonded for Disturbance			6,367
Total Area Bonded for Disturbance	319,859	322,238	2,379
Area Bonded for Disturbance without Phase I Bond Release	192,028	195,603	3,575
Area Bonded for Disturbance for which Phase I Bond Release Has Been Approved	80,011	81,603	1,592
Area Bonded for Disturbance for which Phase II Bond Release Has Been Approved	48,007	48,962	955
Area Bonded for Disturbance with Bonds Forfeited During Evaluation Year			16
Area Bonded for Remining	491	275	(216)

**Areas of Permits Disturbed by Surface Coal Mining and Reclamation Operations**

Disturbed Area	320,046	326,413	6,367
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TABLE 7

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

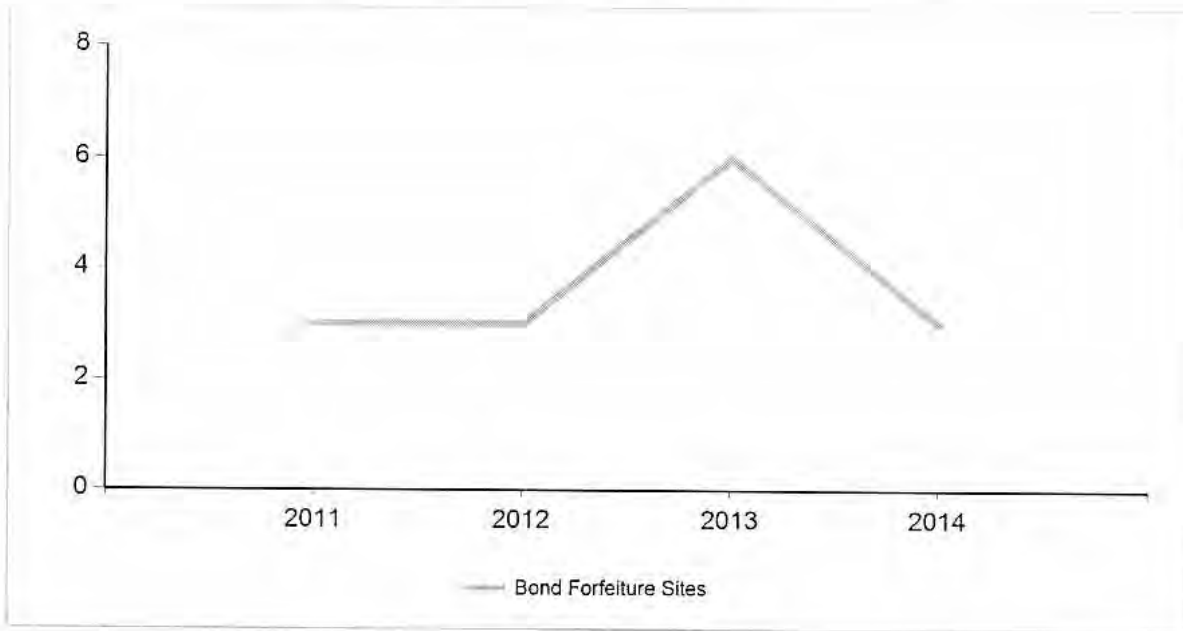
Bond Forfeiture and Reclamation Activity	Number of Sites	Dollars	Acres
Sites with bonds forfeited and collected that were un-reclaimed at the start of the current Evaluation Year (i.e, end of previous Evaluation Year) <sup>1</sup>	23		831
Sites with bonds forfeited and collected during the current Evaluation Year	1	94,700	16
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		242
Sites with bonds forfeited and collected that were un-reclaimed at the end of the current Evaluation Year <sup>1</sup>	23		605
Sites with bonds forfeited but un-collected at the end of the current Evaluation Year	2		7
<b>Forfeiture Sites with Long-Term Water Pollution</b>			
Bonds forfeited, lands reclaimed, but water pollution is still occurring	28		
Bonds forfeited, lands reclaimed, and water treatment is ongoing	40		
<b>Surety/Other Reclamation Activity In Lieu of Forfeiture</b>			
Sites being reclaimed by surety/other party at the start of the current Evaluation Year (i.e., the end of previous Evaluation Year) <sup>2</sup>	1		26
Sites where surety/other party agreed during the current Evaluation Year to do reclamation	3		33
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 <sup>3</sup>	0		0
Sites being reclaimed by surety/other party at the end of the current Evaluation Year <sup>2</sup>	4		59

<sup>1</sup> Includes data only for those forfeiture sites not fully reclaimed.

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

<sup>3</sup> 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**

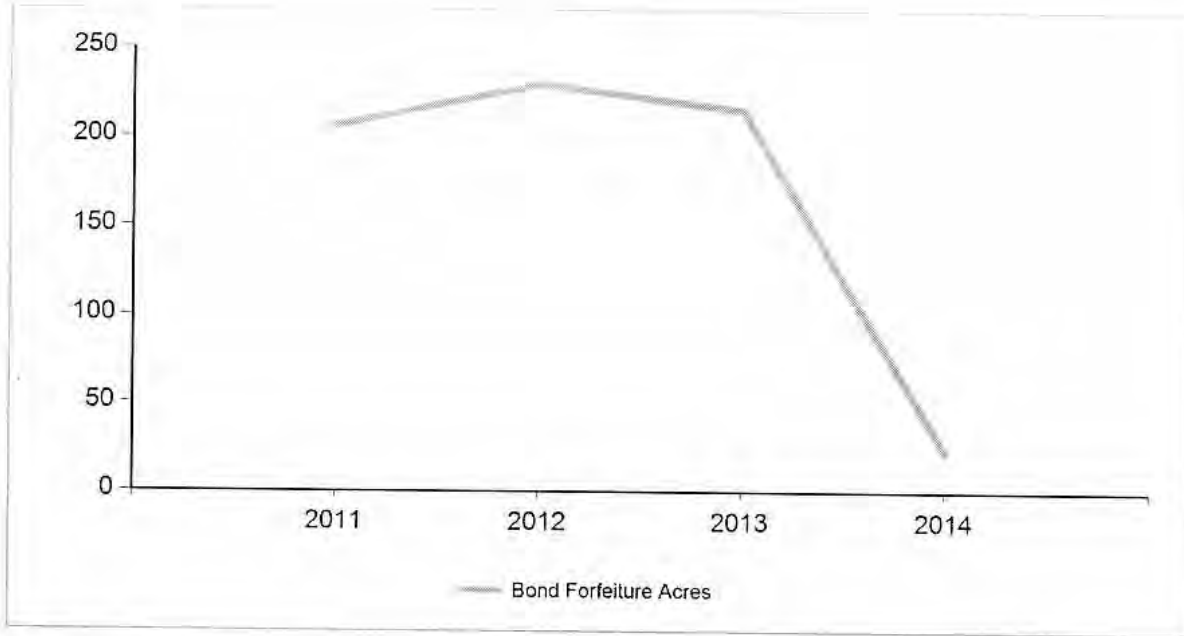


**TABLE 7A**

**NUMBER OF BOND FORFEITURE SITES**

<b>Year</b>	<b>Bond Forfeiture Sites</b>
2011	3
2012	3
2013	6
2014	3

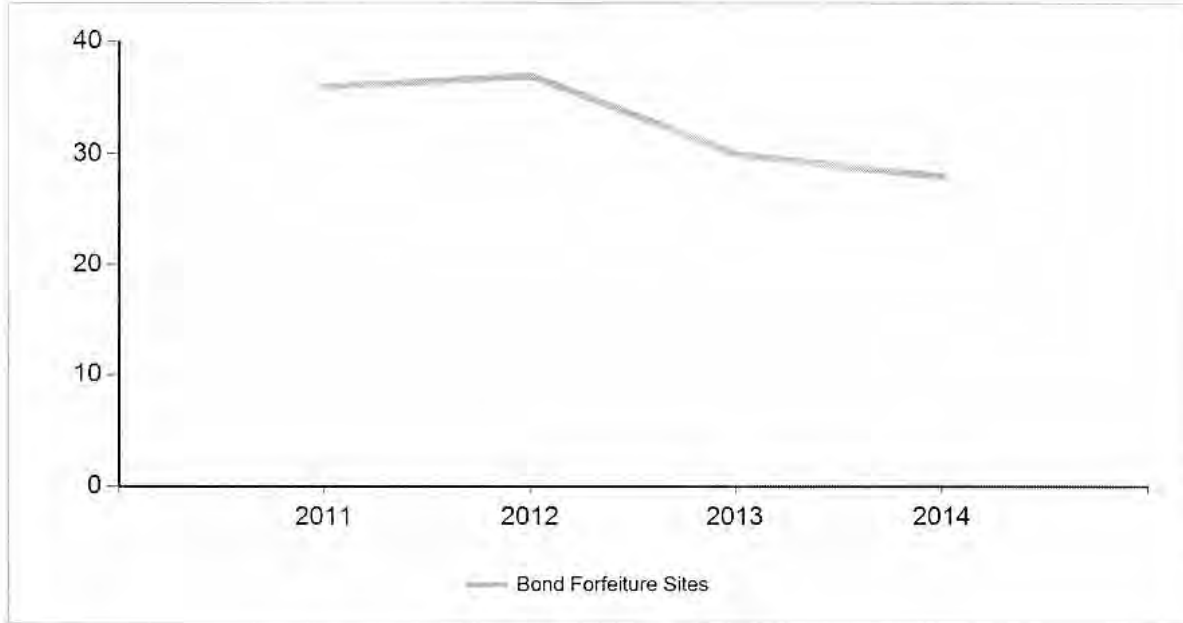
**CHART 7B HISTORICAL TRENDS  
ACREAGE OF BOND FORFEITURE SITES**



**TABLE 7B  
ACREAGE OF BOND FORFEITURE SITES**

<b>Year</b>	<b>Acres</b>
2011	206
2012	230
2013	215
2014	23

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

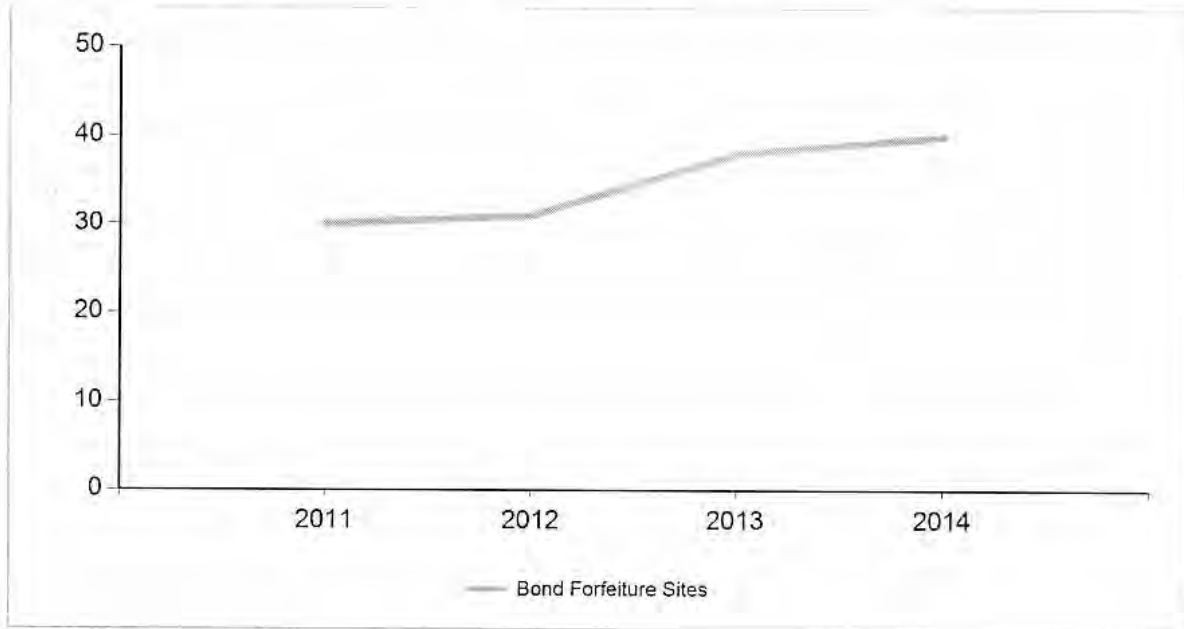


**TABLE 7C**

**NUMBER OF SITES WITH WATER POLLUTION  
STILL OCCURRING**

<b>Year</b>	<b>Sites</b>
2011	36
2012	37
2013	30
2014	28

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



**TABLE 7D**

**NUMBER OF SITES WITH WATER  
TREATMENT ONGOING**

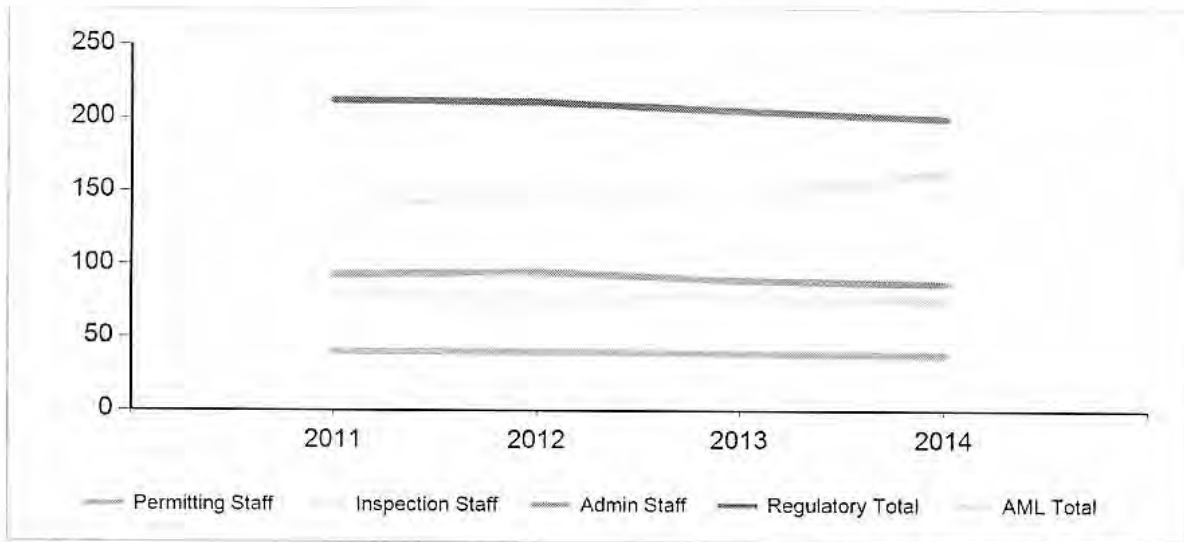
<b>Year</b>	<b>Sites</b>
2011	30
2012	31
2013	38
2014	40

TABLE 8

**REGULATORY AND AML PROGRAMS STAFFING**

<b>Function</b>	<b>Number of FTEs</b>
<b>Regulatory Program</b>	
Permit Review and Maintenance	38.02
Inspection	74.94
Other (supervisory, clerical, administrative, fiscal, personnel, etc.)	87.14
<b>Regulatory Program Total</b>	200.10
<b>AML Program Total</b>	163.00
<b>TOTAL</b>	363.10

**CHART 8A HISTORICAL TRENDS  
 REGULATORY AND AML PROGRAMS STAFFING**



**TABLE 8A**

**REGULATORY AND AML PROGRAMS STAFFING**

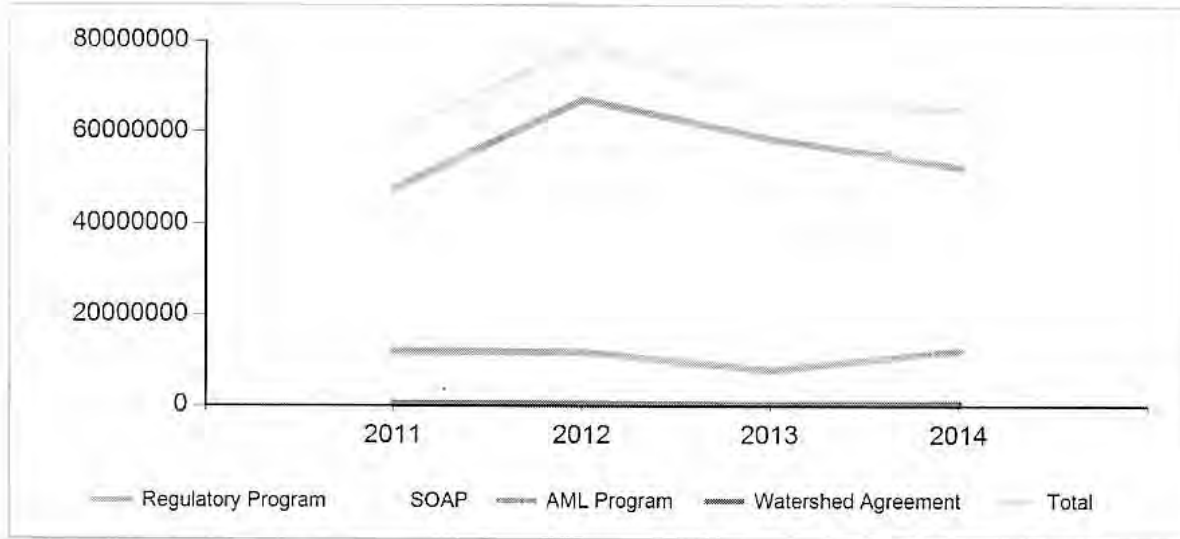
Year	Regulatory Program				AML Program
	Permitting	Inspection	Admin	Total	
2011	40	79	93	212	137
2012	40	76	95	211	151
2013	39	77	89	205	147
2014	38	75	87	200	163

TABLE 9

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

Type of Funding	Federal Funds Awarded	Total Program Cost	Federal Funds Awarded as a Percentage of Total Program Costs
<b>Regulatory Funding</b>			
Administration and Enforcement Grant	12,175,307		
Other Regulatory Funding, if applicable	0		
<b>Subtotal (Regulatory Funding)</b>	12,175,307	24,350,614	50
<b>Small Operator Assistance Program Grant Funding</b>	0	0	
<b>Abandoned Mine Land Reclamation Funding</b>	52,378,972	52,378,972	100
<b>Watershed Cooperative Agreement Program</b>	491,380	2,564,947	19
<b>TOTAL</b>	65,045,659		

**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
2014	12,175,307	0	52,378,972	65,045,659

TABLE 10

**STATE INSPECTION ACTIVITY  
INSPECTABLE UNITS FOR WHICH STATE MET REQUIRED INSPECTION FREQUENCY ON AN  
INSPECTABLE UNIT-BY-INSPECTABLE UNIT BASIS <sup>1</sup>**

Inspectable Units (IUs)	Total number of inspectable units <sup>2</sup>	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
<b>COAL MINES AND FACILITIES</b>												
Active	1017	4068	8136	3847	7348	809	80	702	69	1017	661	65
Inactive	347	1388	0	1040	622	248	71	347	100	347	248	71
Abandoned	101	101	0	354	197	66	65	15	15	101	62	61
<b>TOTALS <sup>3</sup></b>	1465	5557	8136	5241	8167	1123	77	1064	73	1465	971	66
<b>Coal Exploration Activities <sup>4</sup></b>		<b>Complete Inspections</b>					<b>Partial Inspections</b>					
Exploration sites with permits		0					0					
Exploration sites with notices		38					12					

<sup>1</sup> Calculated on a site-specific basis.

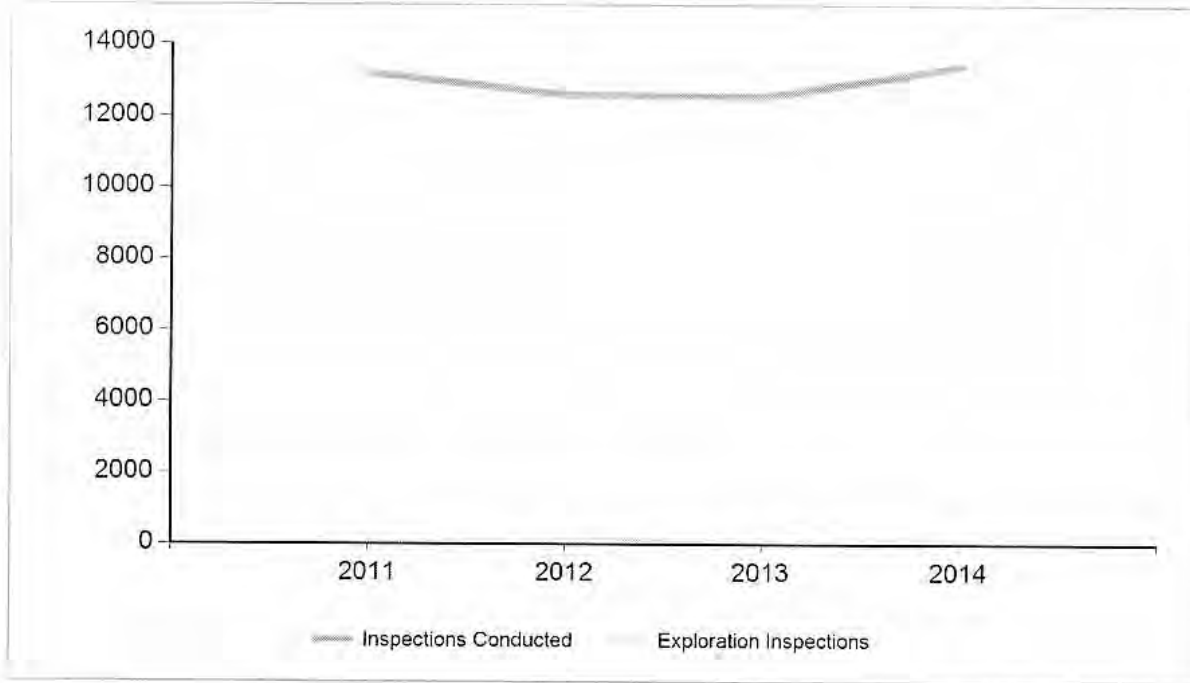
<sup>2</sup> Total number includes both permanent program permits and initial program sites.

<sup>3</sup> 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

<sup>4</sup> 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.

<sup>5</sup> NA - Not Available

**CHART 10A HISTORICAL TRENDS  
STATE OR TRIBAL INSPECTION ACTIVITY**



**TABLE 10A**

**STATE OR TRIBAL INSPECTION ACTIVITY**

<b>Year</b>	<b>Inspections Conducted</b>	<b>Exploration Inspections</b>
2011	13207	0
2012	12600	70
2013	12567	50
2014	13408	50

**Pennsylvania**

EY 2014, ending June 30, 2014

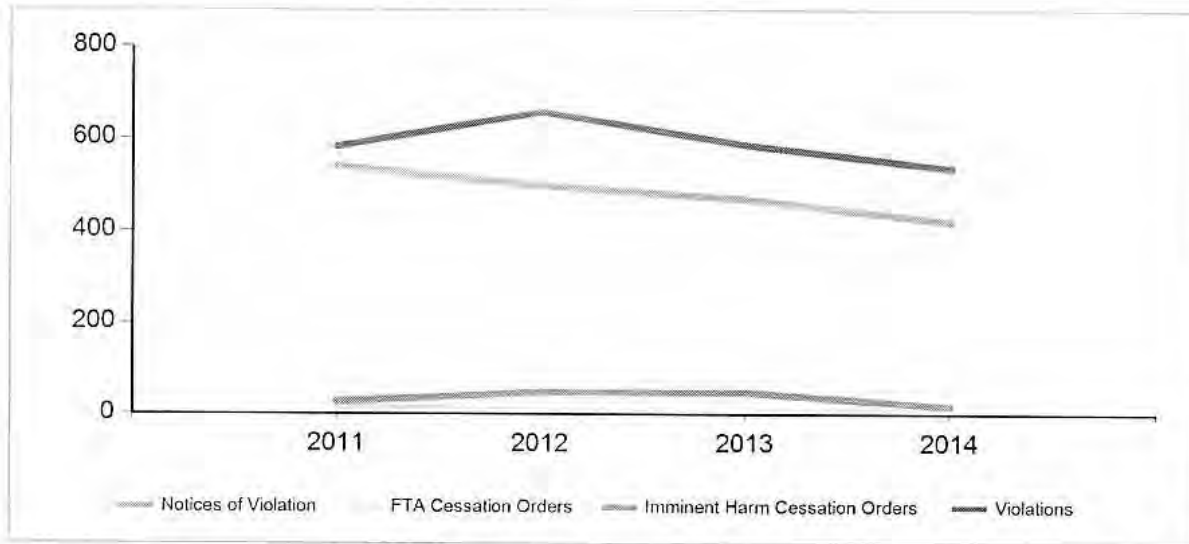
TABLE 11

**STATE OR TRIBAL ENFORCEMENT ACTIVITY**

Type of Enforcement Action	Number of Actions <sup>1</sup>	Number of Violations <sup>1</sup>
Notice of Violation	420	535
Failure-to-Abate Cessation Order	5	7
Imminent Harm Cessation Order	17	21

<sup>1</sup> Does not include actions and violations that were vacated.

**CHART 11A HISTORICAL TRENDS  
STATE OR TRIBAL ENFORCEMENT ACTIVITY**






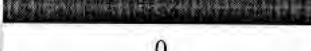
**TABLE 11A**

**STATE OR TRIBAL ENFORCEMENT ACTIVITY**

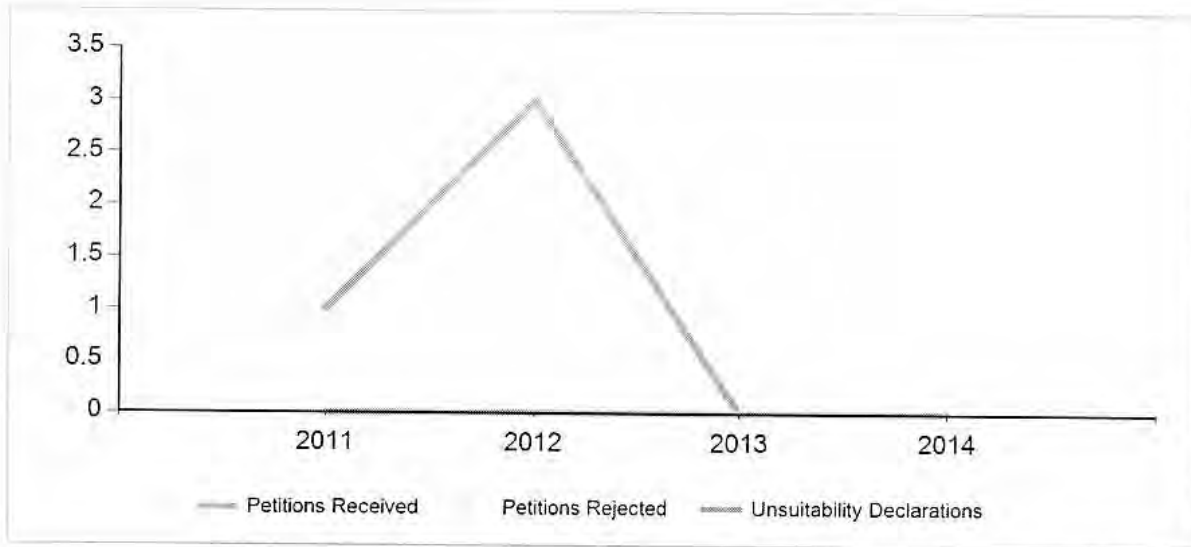
Year	Notices of Violation	Violations	FTA Cessation Orders	Imminent Harm Cessation Orders
2011	538	582	16	27
2012	497	658	7	48
2013	468	586	3	48
2014	420	535	5	17

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**

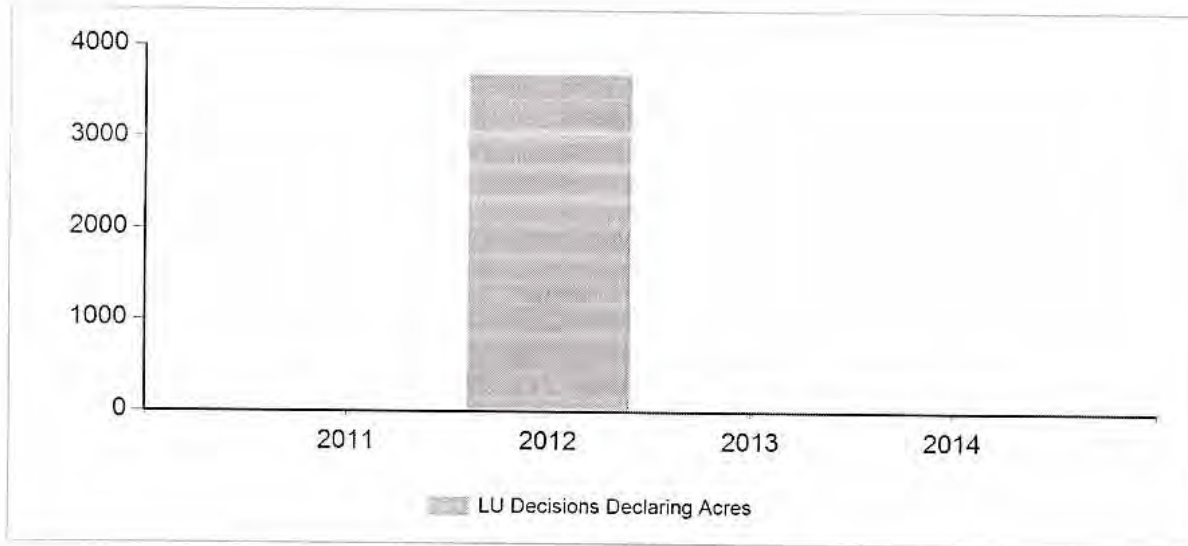


**TABLE 12A**

**LANDS UNSUITABLE ACTIVITY**

<b>Year</b>	<b>Petitions Received</b>	<b>Petitions Rejected</b>	<b>Unsuitability Declarations</b>
2011	1	0	0
2012	3	0	0
2013	0	0	0
2014	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
2014	0.0

**TABLE 13**  
**OSM OVERSIGHT ACTIVITY**

**Oversight Inspections and Site Visits**

	Complete		Partial		Total
	Joint	Non-Joint	Joint	Non-Joint	
Oversight Inspections	152	3	40	3	198
Site Visits	Technical Assistance		Other		Total
	0		37		37

**Violations Observed by OSM and Citizen Requests for Inspection<sup>1</sup>**

Type of Action	Total number of each action
How many violations were observed by OSM on oversight inspections?	112
Of the violations observed, how many did OSM defer to State action during inspections?	96
Of the violations observed, how many did OSM refer to the State through Ten-Day Notices? <sup>2</sup>	10
How many Ten-Day Notices did OSM Issue for observed violations? <sup>3</sup>	3
How many Ten-Day Notices did OSM issue to refer citizen requests for inspection?	15
How many Notices of Violation did OSM issue?	2
How many Failure-to-Abate Cessation Orders did OSM issue?	1
How many Imminent Harm Cessation Orders did OSM issue?	0

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

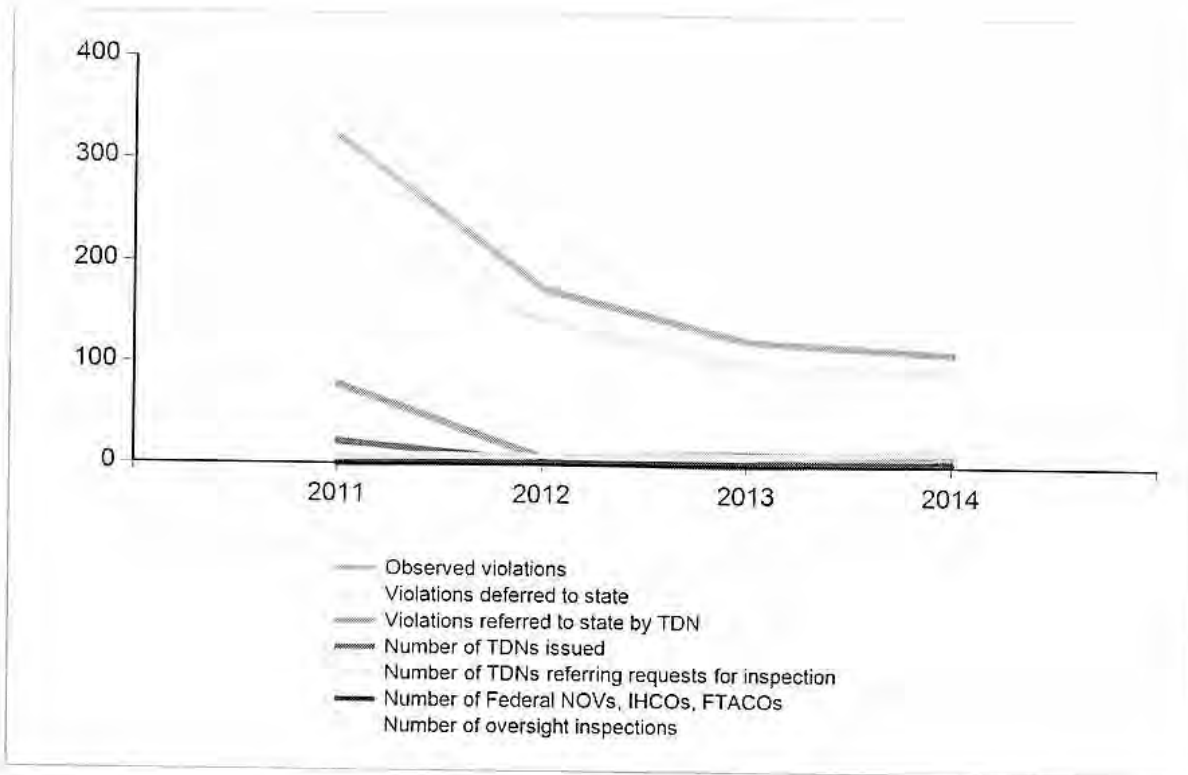
How many Ten-Day Notices for delinquent reporting or non-payment of Federal AML reclamation fees did OSM issue?	0
How many Notices of Violation for delinquent reporting or non-payment of Federal AML reclamation fees did OSM issue?	0
How many Federal Failure-to-Abate Cessation Orders for delinquent reporting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

<sup>1</sup> 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.

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

<sup>3</sup> 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 requests 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
2014	112	96	10	3	15	3	198

## **APPENDIX D AML Tables**

**Table 1 - Pennsylvania Status of AML Inventory all Priority 1, 2 and 3 Hazards on June 30, 2014**

	High Priority		Elevated Priority 3	Stand-Alone Priority 3 (Not adjacent or in conjunction w/ P1&2)	Total
	Priority 1	Priority 2			
<b>UNFUNDED</b>					
<b>GPRA Acres</b>	880.31	22849.54	N/A	20888.15	44618
<b>Dollars</b>	57382220	4588415775	N/A	317682914	4963480910
<b>FUNDED</b>					
<b>GPRA Acres</b>	377.5	6363.89	0	11823.68	18565.07
<b>Dollars</b>	10239479.95	159693588	0	17073993.1	187007061.2
<b>COMPLETED</b>					
<b>GPRA Acres</b>	1689.93	25104.95	0	26625.11	53419.99
<b>Dollars</b>	76394151.81	375536225.9		47214176.83	499144554.5

0

Table 2 - Pennsylvania Accomplishments in Eliminating Health and Safety Problems Related to Past Mining Priority 1 and 2 Hazards (As of June 30 2014)

		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 (PWA)(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(Untended)																			
Units	28.94	683.5	1956.7	1132990	8	47.9	7	395	172	150.8	309	21	134	1085	102.5	1294.6	544.1	N/A	
GPRA Acres	104.07	1002.4	1959.2	16178.48	40	17.1	7	38.6	855	150.8	30.9	105	670	1084.3	102.5	1294.1	54.4	23729.55	
Dollars	6805820	10676101	152036486	178882162.8	954925	162397	2039000	5865162	32769263	9846173	1605578	4893807	3605629239	36645789	5196202	588641999	4268901	4645797995	
Annual Reclamation - EY 2014 only (Completed)																			
Units	0.1		26.5	17970				1						50	56.3	17.6	1	3	N/A
GPRA Acres	0.5		26.5	256.8				0.1						250	56.3	17.6	1	0.3	609.1
Dollars	7688.75		186035.99	5303534.41				0						1973356.46	4450631.64	2214617.8	49185	500136.75	12349164
HISTORICAL RECLAMATION - EY 1978- 2014 (COMPLETED)																			
Units	144.23	289.67	892.7	1173344.28	16.2	123.45	4	392.8	134.8	41.8	358.1	27.8	601.5	2643.95	176.7	1199.9	788.55	N/A	
GPRA Acres	694.7	313.6	845	16742.09	81	122.75	4	39.28	684	41.5	35.81	139	2955.5	2642.65	176.6	1198.5	79.9	57266.11	
Dollars	8301834.3	5601217	20802223.27	192424946.5	1434917	2236877.9	12433.8	6701460.3	8937712.8	567301	2799928.99	36655	15615643.96	88559584.8	2978724.75	79647357.47	15271658.03	5267661440	

**Table 3 - Pennsylvania Accomplishments in Eliminating Environmental Problems Related to Past Mining Priority 3 Hazards (As of June 30 2014)**

**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
<b>UNRECLAIMED/REMAINING HAZARDS (Unfunded)</b>															
Units	72	5.1	61	1127.8	310644	3.4	94	1399.1	5177.6	140.8	279	30682.6	4869		N/A
GPRA Acres	72	5.1	6.1	1127.8	4437.65	3	9.4	1399.9	5178.1	141	280.1	8224	4		20888.15
Dollars	362000	6000	977201	12126313	1.01E+08	2016666	4384468	23018077	30553237	1872316	6140219	1.15E+08	19628448		317682915
<b>ANNUAL RECLAMATION - EY 2014 ONLY (COMPLETED)</b>															
Units				1.5					220.1			879			N/A
GPRA Acres				1.5					220.1			879			1100.6
Dollars				15350					820115.4			1854663			835468.4
<b>Historical Reclamation - EY 1978 - 2014</b>															
Units					34.7				330.1			28546.2			N/A
GPRA Acres					3.47				330			407.84			26625.11
Dollars					87130				2793236			3139305			47214176.83
									44.5			327.7			
									8628.7			10			
									137.5			19506.9			
									159			19146			
									566888			26969515			
									37501			566888			
									9202952			197159			

**Table 4 - Pennsylvania Public Well-Being Enhancement (all Priority 1, 2 and 3 AML projects completed during FY 2014)**

#	PAD Number	Project Name	Problem Type(s) Reclaimed	GPRA Acres	Cost	Number of People with Reduced Exposure Potential (State Estimated /or/ Census Data)
1	2941	Codgan North waterline	PWHC	30	26235.75	472
2	2138	Curry Hill Avondale	DH;SA	169.2	4741250	470
3	817	Fran Contracting Camp Run 3	WA	50	753428	35
4	6802	Grass Flat	GO;SA;DH	124	662249	328
5	1416	hollywood Treatment Facility	WA	140	483912	145
6	1050	Hyde Park	S	40	3735492	1738
7	3110	No. 2 Tunnel Opening	VO	0.1	36927.75	470
8	345	Jeans Mine Subsidence	VO	0.1	14350	1410
9	1582	Murray School East Fredrick St.	S	1.3	492607	718
10	623	Jamestown Waterline	PWHC	35	36100.71	623
11	1395	Grampian	DH;SA	20.2	93762	225
12	3031	Mill Street Subsidence	S	0.6	195778	1040
13	3802	Monessen	S	0.4	57844	3792
14	3147	Parker Northwest	DH;SA	54.7	209302	257
15	1047	Pine City	DPE	15.1	162964.74	271
16	1520	Powderly Creek Isolation Trench	UMF	1	49185	756
17	2517	Railroad Street Windber	CS;DPE	7.5	30755	4138
18	1122	Robbins Hollow	WA	89	109501	35
19	2767	Romney North Kalp Discharge	WA	600	507821	285
20	6348	Shannondale North	DH;SA	109.9	432434.87	229
21	4294	Simpson Northeast Coal Refuse	DPE;HEF;SB	22.1	2214617.8	749
22	827	St. Benedict Waterline	PWHC	185	135000	445
Totals				1,695.20	15,181,517.62	18,631.00

**Table 5 - Pennsylvania Partnership Financial Resources Dedicated to Protecting the Public from Adverse Effects of Past Mining (AML Projects completed during FY 2014)**

#	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	99	Alyssa GFCC			153 ENH Savings	149400		149400	
2	1416	Hollywood Treatment Facility	AMID Set Aside	483912	198 Growing Greener	14125000		14608912	
					209 PA Capital Budget				
3	3071	Camp Ligonier GFCC			153 ENH Savings	53389		53389	
4	3779	Tiche GFCC			153 ENH Savings	42400		42400	
5	4319	Roman # 2 GFCC			153 ENH Savings	96000		96000	
6	4528	Sullivan GFCC			153 ENH Savings	51800		51800	
7	4905	Snyder GFCC			153 ENH Savings	75285		75285	
8	6456	Baker GFCC			153 ENH Savings	1000		1000	
9	6790	Poorman Slide GFCC			153 ENH Savings	14000		14000	
11	6797	Morgan GFCC			153 ENH Savings	39000		39000	
12	6869	SGL # 60 GFCC			153 ENH Savings	45000		45000	
<b>TOTAL</b>				<b>483912</b>		<b>14692274</b>	<b>0</b>	<b>15176186</b>	

**Table 6 Projects Started and Completed in EY 2014**

<b>Project Type</b>	<b>Projects Started</b>	<b>Projects Completed</b>
Pennsylvania EY 2014	41	21
Federal EY 2014	0	0
Total EY 2014	41	21

**Table 7 Pennsylvania Grants and Staffing EY 2014**

**AML Program Costs**

Administration	1,356,356
Construction	46,627,616.00
Water Supply Construction	0
AMD Set-Aside	4,395,000.00
Other(s) (Specify)	0
<b>Total AML Funding</b>	<b>52,378,972.00</b>
<b>AML Program Staffing (Full time Equivalent Positions) June 30 2014</b>	<b>140</b>