DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Mining Programs

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TITLE: Conventional Bonding for Land Reclamation - Coal

EFFECTIVE DATE: April 5, 2014

AUTHORITY: Surface Mining Conservation and Reclamation Act
Coal Refuse Disposal Control Act

POLICY: The Department of Environmental Protection (DEP or Department) will require coal mining activities to be bonded in an amount that covers the Department’s cost to complete the site’s reclamation plan.

PURPOSE: This guidance describes the regulatory and statutory requirements for determining bond amounts. It also establishes bond rates and the process for determining the bond for land reclamation.

APPLICABILITY: This guidance applies to all anthracite and bituminous coal mining permits.

DISCLAIMER: The policies and procedures outlined in this guidance document are intended to supplement existing requirements. Nothing in the policies or procedures shall affect regulatory requirements.

The policies and procedures herein are not an adjudication or a regulation. There is no intent on the part of DEP to give these rules that weight or deference. This document establishes the framework within which DEP will exercise its administrative discretion in the future. DEP reserves the discretion to deviate from this policy statement if circumstances warrant.

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DEFINITIONS

ABS – the alternate bonding system.

AML – abandoned mine lands.

BAMR – the Bureau of Abandoned Mine Reclamation. This bureau of the Department of Environmental Protection bids and contracts the reclamation of abandoned mine lands and pre-primacy forfeited mine sites.

Bond Rate Guidelines (BRG) – the costs for given unit operations in land reclamation as published by the Department in the Pennsylvania Bulletin and used as the basis for determining bond amounts under the conventional bonding system.

CRDCA – the Coal Refuse Disposal Control Act. This is the Pennsylvania statute covering the disposal of coal refuse. (52 P.S. §§ 30.51-30.66)

CSL – the Clean Streams Law. (35 P.S. §§ 691.1-691.1001)

Department – Pennsylvania Department of Environmental Protection.

Inflation Rate – the average Consumer Price Index for Northeast Urban Areas (CPI) for the previous five-year period. The inflation rate will be published as a BRG by the Department in the Pennsylvania Bulletin.

Remining financial guarantee – an alternative financial assurance mechanism which may be issued in a sum-certain amount by the Department to eligible operators participating in the Remining Financial Guarantee Program.

Land reclamation – in the context of the conventional bonding system, land reclamation is the suite of activities needed to accomplish reclamation, e.g., backfilling, grading and planting, under the approved reclamation plan. It also includes the demolition of structures and sealing of boreholes and mine openings. It does not include the abatement or treatment of post mining discharges that occur during or after the permit term or activities necessary to address the impacts to land or water (including loss, diminution, or degradation of water supplies) resulting from mine subsidence.

Mining area – in the context of the conventional bonding system, this is the portion of the permit area on which mining and reclamation activities are authorized.

Multiple bench – this term applies to operations wherein the cross section looks like a set of steps, as opposed to operations with one highwall. This term does not apply to those operations with a highwall that has been developed with a “safety bench.”

Operational area – in the context of the conventional bonding system, the Operational Area is the maximum portion of the permitted area that the permittee is authorized to disturb at any specific time. The Operational Area is described in the permittee’s mining and reclamation plans. The Operational Area includes all of the land affected by mining activities that is not planted, growing and stabilized. The various sub-units of the Operational Area are used with the BRGs to calculate the sum of the permittee’s liability for mining and reclamation activities. The sum of the permittee’s liability for
mining and reclamation activities determines the amount of the bond. The Operational area may float (move) throughout the approved Mining Area within the Surface Mining Permit (SMP).

**OSM** – the United States Department of the Interior, Office of Surface Mining, Reclamation and Enforcement. It is the federal agency designated to implement the provisions of the federal Surface Mining Control and Reclamation Act of 1977.

**Permit** – a permit for coal mining activities issued under the following Pennsylvania statutes: the Surface Mining Conservation and Reclamation Act, the Coal Refuse Disposal Control Act and the Clean Streams Law.

**SMCRA** – the Surface Mining Conservation and Reclamation Act. This is the Pennsylvania statute covering the surface activities of coal mines. It covers both anthracite and bituminous mines. (P.S. 52 §§ 1396.1-1396.31)

**Unit costs** – in the context of the conventional bonding system, these are the costs for the individual unit operations that make up land reclamation and are based on the actual costs incurred by the Department to complete reclamation or based on other appropriate sources. Examples of unit operations are grading, topsoil replacement, and planting.
BACKGROUND

For almost 60 years Pennsylvania law has regulated surface mining, and has required some degree of land reclamation. For most of the same period it has also required bonds, in changing amounts and formats, to ensure the required land reclamation. The current requirements for both land reclamation and bonding are found in the Surface Mining Conservation and Reclamation Act (SMCRA) (52 P.S. §§ 1396.1-1396.31), the Coal Refuse Disposal Control Act (CRDCA) (52 P.S. §§ 30.51-30.66) and the Clean Streams Law (CSL) (35 P.S. §§ 691.1-691.1001). These acts require a bond to be filed prior to commencement of mining, and provide “that the permittee shall faithfully perform all of the requirements” of SMCRA, the CSL and other applicable statutes. (SMCRA § 4(d); CRDCA § 6(a); CSL § 315(b)). One of these requirements mandates the implementation of the restoration measures to ensure that there will be no polluting discharges after mining ceases. Land reclamation operates to reduce pollution from erosion. The permit will not be issued if there is evidence there will be a post mining discharge 25 Pa. Code Chapter 86.37(a)(3).

The conventional bonding system replaced the alternative bonding system and is based on the mine operator’s description of the maximum amount of reclamation needed during the term of the permit. The total bond is primarily calculated using the proposed dimensions of the mining activity and the BRGs which the Department is authorized to recalculate annually. The Department developed BRGs using actual bid costs submitted for abandoned mine lands and forfeited mine sites reclamation contracts and other appropriate sources. Revised BRGs are published in the Pennsylvania Bulletin annually.

Timely final (Stage 3) bond release is the ultimate goal for both the Department and the surface coal mine operators.
PROCEDURES

I. GENERAL

Regulatory requirements for plans and minimum performance standards are found in 25 Pa. Code Chapters 86-90. This guidance document does not change the requirements of 25 Pa. Code Chapter 86 subchapter F Bonding and Insurance Requirements. The minimum amount of bond remains $10,000 for bituminous mines and $5,000 for anthracite mines. 25 Pa. Code Chapter 86.150.

The conventional bonding system described by this guidance covers permits for surface coal mining, coal refuse reprocessing, coal refuse disposal, underground coal mining and coal preparation plants. It does not include water supply replacement bonds issued in accordance with Technical Guidance Document #562-2500-702, Insurance Requirements and Water Supply Replacement Assurance. It also does not include bonding to address impacts to land or water resulting from mine subsidence under the Bituminous Mine Subsidence and Land Conservation Act.

A mine operator who intends to delay activation of a newly issued Coal Mining Activity Permit, may submit a written request for the Department to adjust downward the bond amount calculated for the permit and to issue a conditional permit that will allow the operator to post the minimum bond amount ($10,000 for bituminous mine and $5,000 for an anthracite mine). If such written request is approved by the Department and a permit is then issued, the permit may contain a special condition requesting the operator to give the Department notice of its intent to activate the permit prior to activation of the permit.

The regulations provide that a mining permit must have an approved operations plan, reclamation plan and conventional bond liability calculation based on the approved maps and plans. 25 Pa. Code Chapter 86.149. This reduces the likelihood of a second review of the operations plans upon activation where there are no revisions to the approved plans. A permittee granted a delayed activation special condition should not disturb any area on the permit until the bond is adjusted upwards and the full amount of the bond has been posted and approved.

The following is suggested wording for the permit condition:

“Pursuant to 25 Pa. Code § 86.152, the Department has approved a request by the permittee to adjust the amount of the bond based on the permittee’s submission of evidence that the site will not be activated for a period in excess of ninety (90) days but not to exceed three (3) years and that no reclamation liability will be incurred at the permitted site during the inactive period. This permit is being issued with the minimum bond amount required by § 86.150 while the permit remains inactivated. Prior to activation, the permittee shall provide the Department with reasonable advance notice of its intent to activate the permit so that the required bond amount can be adjusted upward based on the permit’s approved reclamation plan and then-current bond rate guidelines. No earth disturbance activities related to the mining operations will be allowed until the determination of the upward adjusted bond liability in accordance with the approved mining and reclamation plan is completed and the required additional bond coverage is submitted by the permittee and approved by the Department.”
Operators who wish to use Blanket Bonding which allows a surface coal mine operator to post a single bond covering all reclamation obligations at all of the operator’s surface coal mine sites should refer to the technical guidance document titled Blanket Bond Program for Coal Surface Mine Sites (563-2504-201).

II. SETTING BOND RATE GUIDELINES

A. Discussion

Pennsylvania’s mining laws, SMCRA, CRDCA and CSL, provide the basis for establishing the conventional bonding system. The conventional bonding system incorporates the bonding obligations imposed by those acts and the supporting regulations and considers the following:

The bond amount is the cost to the Commonwealth for hiring a contractor to complete the permitted reclamation plan to regulatory standards. It reflects the Commonwealth’s maximum responsibilities under the approved operation and reclamation plan for land reclamation.

Permit approval requires a finding that there is “…no presumptive evidence of pollution of the waters of this Commonwealth…” (25 Pa. Code § 86.37(a)(3)). Consequently, post-mining pollutional discharges of mine drainage are not anticipated in the reclamation plan and the calculation of the initial bond amount for a coal mining permit does not include costs for the treatment of mine drainage or anything not anticipated in the approved permit and reclamation plan.

The operation and reclamation plans in the coal mining permit application describe how the operator will mine and reclaim the site. The Department may rely upon the operator’s plans and site-specific special conditions, when calculating the total bond. The Department will consider, but not necessarily rely upon, cost estimates provided by the applicant.

Many factors contribute to the design of a mine site, and those factors may affect the total bond amount. This guidance and the BRGs do not attempt to anticipate all possible scenarios. The BRGs were developed specifically for mining and reflect current actual estimates of unit costs. As such, they should be used to the maximum extent possible. Department personnel are expected to handle each case by giving as much deference as possible to the operator’s plans, including recognizing the expertise of professional engineers and geologists certifying the mine permit applications. If changes in mining method or operations or standards of reclamation occur, or the cost of reclamation, restoration or abatement work increases, the Department may require the permittee to recalculate the bond.

Under the conventional bonding system the applicant should predict the maximum extent of the disturbed areas based on site conditions and the operation and reclamation plans in the permit application. Regulatory requirements for plans and minimum performance standards are found in 25 Pa. Code Chapters 86-90. The total bond is calculated using the unit costs for the various operations necessary to complete the reclamation plan.
The conventional bonding relies on two different calculations. First is the calculation of the costs for the different unit operations typically needed to complete land reclamation. These are called the BRGs. Second is the application of the BRGs to the operator’s proposed mining activities to arrive at the bond amount.

B. General Methodology for Determining BRG

The Department has historically used unit costs developed from contracts to reclaim abandoned mine land and forfeited sites to set the BRGs. The unit cost for a specified unit operation was obtained by averaging the three lowest unit costs for that unit operation from each contract awarded in the last three years.

In the event that a given unit operation was not adequately represented in the preceding three years, then any additional cost information available was used. If enough data was still not available, the rate was set from a standard reference like “Means Building Construction Cost Data.” Occasionally, specific unit costs may be adjusted using information provided by BAMR and other stakeholders.

The Department establishes the BRG annually, as required by 25 Pa. Code § 86.145, and publishes the BRG each year in the Pennsylvania Bulletin.

C. Additional Considerations

Not all unit operations included in the BAMR database are included in the BRGs. For example, the “Clearing and Grubbing” unit operation is not normally applicable to reclamation of bond forfeiture sites. Other unit operations listed in the database were combined to streamline the BRGs.

Several unit operations deserve special attention in the BRGs. Two of these involve grading for the purpose of backfilling and replacing topsoil. Typically, costs for grading are based on the volume of material in cubic yards to be moved and consider, among other factors, the type of equipment to be used and the distance that material must be moved. The distance is easily determined from the operations map by measuring from the outside limit of spoil to the highwall.

The lower unit cost for grading listed in the grading BRG has been based on the presumption that the spoil is pushed into the excavation. The higher unit cost for grading has been based on the need to load and haul the spoil. The break point between these two is 500 feet, which is roughly the maximum distance spoil is typically pushed with a large dozer. Therefore, distances over 500 feet should use the higher unit cost listed in the grading BRG.

Another unit operation that involves grading is called selective grading. This unit operation is used for removing, or grading out, ditches, roads, storage areas and other features that have earthen material within or adjacent to the feature.

The last unit operation requiring an explanation is the cost per stem for tree planting. Since most site reforestation by BAMR on primacy forfeitures has been done under an agreement with the Department of Conservation and Natural Resources (DCNR), Bureau
of Forestry, the BAMR contract cost does not adequately represent the cost for tree planting. To get a better cost estimate the unit cost for tree planting is based on pricing information from the DCNR Penn Nursery.

D. **Mine Sealing/Boreholes**

Bond amounts for sealing drifts, shafts, and slopes may be determined based on the actual amount of labor and materials required to complete the sealing of a bituminous underground opening and the units costs ascribed to performing individual components of that work. Under this approach sealing plans and cost estimates included in bituminous underground mine permit applications and contracts awarded for sealing abandoned mine openings may be reviewed to develop components describing the work performed in sealing a drift or slope opening and the work involved in sealing a shaft opening. In the case of a drift or slope opening, the basic components of sealing work may include mobilization, installation of security fencing, concrete work, masonry work, and placement of fill and earthwork. In the case of a shaft opening, the basic components of sealing work may include mobilization, installation of security fencing, placement of concrete, placement of aggregate and placement of fill and earthwork. Differences in work components reflect differences in the nature of mine openings and methods of seal installation (drifts and slope openings are horizontal to slightly inclined; shafts openings are vertical).

Once the basic components of the work are established, information may be gathered to identify potential unit costs for each of the components. This information may be obtained from sealing cost estimates submitted with recent permit applications, reclamation contracts, *Walker’s Building Estimator’s Reference Book*, the *Means Estimating Book* and labor rates maintained by the Pa. Department of Labor and Industry. The unit costs of each component should then be adjusted to current dollars using labor rates compiled by the United States Department of Labor’s Bureau of Labor Statistics (www.bls.gov/cpi/) and material cost indices, published in the *Engineering News Record*.

A similar approach may be used to develop the BRG for boreholes. Cost information may be gathered from sealing estimates included in permit applications and contracts for mine site reclamation. Using this information will likely show that the BRG for borehole sealing should be based on cost per-foot of depth with a minimum total cost per borehole. Unit cost figures derived from such an analysis may be subsequently adjusted to account for inflation.

### III. CALCULATING SITE-SPECIFIC BOND AMOUNTS

#### A. **Operational Area Concept**

The conventional bonding system utilizes the concept of an operational area that involves bonding a pit or extraction area at one rate to cover the grading and revegetation obligations. The area reclaimed to Stage 2 standards is bonded at another lower rate to cover the Stage 3 maintenance period. Under this concept, the location of the pit moves within the Mining Area. The concept diminishes the importance of delineating the exact location on the permit where mining activities are occurring at a given point in time.
Using this approach for the conventional bonding system, the operator delineates the total area to be bonded and affected by surface mining activities on the operations map (Exhibit 9 in the permit application). This is called the Mining Area. The operator needs to describe the size and characteristics of the mining activities that comprise the Operational Area such as the maximum volume of open pit(s), the size of the pit and spoil area, the area needed for support activities, the areas in the process of being reclaimed, and the revegetation requirements. 25 Pa. Code Chapter 86.149. These factors may be used to calculate the bond. Once an operator has posted the appropriate bond, which covers the Operational Area, then the Operational Area (mining activities) can move throughout the Mining Area. The approved dimensions (e.g. volume, area) of the Operational Area components should appear as special conditions in the permit. Figure 1 illustrates the relationships of the Operational Area, Mining Area and permit area.

Phased mining on permits is allowed, including on refuse disposal sites. To phase an operation, the operator shows the phases on the operations map (Exhibit 9). The bond for the initial phase is calculated based upon the Operational Area within that phase only. The Mining Area becomes the initial phase. Consequently, the Operational Area (mining activities) must remain within that phase of the permit. Activating additional phases, i.e., increasing the Mining Area, may require the bond to be recalculated.
FIGURE 1

The operator should only need to post the bond to cover the removal and reclamation of the ponds and features that are temporary. Ponds, roads and other approved features that remain after mining and reclamation may not need to be included in the bond calculation. The unit costs for sediment control features are addressed in the annual BRGs.

B. Bond Calculation Procedures

The amount of the site-specific conventional bond depends to a great extent on how the operator chooses to mine the site. The operator’s mining plan determines the maximum possible liability on the site during the permit term. The operator identifies the volumes, area, and other measures of the unit operations in the operation and reclamation plans including the maximum disturbed area not planted. The permittee should submit its bond calculations using the bonding worksheet for mine sites (www.elibrary.dep.state.pa.us/dsweb/Get/Document-75368/5600-FM-MR0466.pdf) and the bonding worksheet for structure demolition (www.elibrary.dep.state.pa.us/dsweb/Get/Document-72089/5600-FM-MR0467.pdf). The Department typically calculates the bond amount by applying the current BRGs.
Usually the total bond for the site is the sum of the costs for the component unit operations, any indirect costs and adjusting the cost to take into account inflation. The bonds will be recalculated during the permit renewal. The permittee has the option of recalculating the bond amount at the Mid-Term Review. The term of the permit is five (5) years and three (3) years is typically deemed half of the permit term. 25 Pa. Code Chapter 86.40. If the permittee elects to recalculate the bond amount at the Mid-Term the number of years to adjust for inflation would be three (3) years or if the operator chooses to recalculate the bond amount during the permit renewal only then the number of years to adjust for inflation would be five (5) years.

The suggested formula for calculating the bond amount is:

$$\text{Total Site Bond} = (\text{Direct Costs} + \text{Indirect Costs}) \times (1+E)^{\text{YRS}}$$

Direct Costs are the sum of all the different unit operations multiplied by the appropriate unit cost listed in the BRGs.

Indirect Costs are a percentage of the direct costs. Two types of indirect costs are usually considered in the conventional bonding system. They are mobilization/demobilization of equipment and the installation of erosion and sediment controls.

Inflation Rate (E) is the average rate of inflation for the previous five-year period as published annually in the Pennsylvania Bulletin as a BRG.

Mobilization/demobilization costs apply to every site. The cost for erosion and sediment control is not applicable in every situation but is calculated when the reclamation plan calls for construction of temporary erosion and sediment control structures after backfilling and grading.

The procedures for calculating the bonds based on the next scheduled bond review are discussed in more detail in Section VI.A. Reporting and Recalculation of Bond Amounts at Permit Renewal and Mid-Term Reviews.

Conventional bonding provides for bonding several kinds of activities previously not bonded under the alternative bonding system. Bonds to complete stream, public road, and utility relocations may be required. Likewise, the costs to the Commonwealth to complete wetland mitigation or removal and demolition of structures, such as electric substations, should be included in the bond amount.

Part of the Department’s job is to ensure that the operation and reclamation plans in the application can be feasibly accomplished as required by 25 Pa. Code § 86.37(a)(2). The Department may compare the information submitted by the operator with the other plans and data in the application modules. If the data on the Bond Calculation Worksheet conflicts with the application data or other information available to the Department, the Department may discuss the discrepancy with the operator. If unresolved, then the Department may apply the factors or dimensions that it considers appropriate and request bond.
In the event an applicant declines to specify a volume and/or acreage, the Department may assume a regulatory maximum. For instance, if the applicant does not specify a pit size the bond may be based upon the regulatory maximum of 1,500 feet by 300 feet (457.2 meters by 91.4 meters) for the highest overburden on the mining area. 25 Pa. Code Chapters 87.141(2), 88.115(c)(1)

In any event, the Department may include a draft copy of the special conditions with the request for bond.

If a permittee disagrees with the District Office staff about the amount of bond needed for a permit, the dispute resolution process detailed in Appendix A should be used.

IV. MAINTENANCE BOND

When the permit area is eligible for Stage 2 release, a calculation for the maintenance bond should be done. This calculation may be made using these three components:

- Mobilization of the equipment that would be needed if corrective planting is required.
- A per acre bond rate for fixing vegetation or erosion failures.
- Reclamation for any remaining structures that are not approved to remain (most commonly sediment ponds).

BRGs have been established for the equipment mobilization, the per-acre rate and the manner of calculating the cost to reclaim any remaining structures. There are three categories for the per acre rate that have been calculated. The per-acre bond rate will vary with the approved post mining land use. Most permit area post mining land uses (except cropland/pastureland/land occasionally cut for hay) use the standard rate. Two rates for cropland areas are included in the BRGs. These are recommended for areas that need to be seeded from year to year (e.g., row crops) and for areas that would not need to be totally replanted (e.g., pasture or land occasionally cut for hay).

At Stage 2 bond release the cost of reclaiming the remaining temporary structures, such as sediment ponds, should be calculated using a specific calculation. Up until the point where the permit is eligible for Stage 2 release, the BRG for pond reclamation is a flat rate. However, the bond needed for the reclamation of a sediment pond, if it remains at Stage 2 release, is usually calculated using the BRG for earth moving for the volume of the embankment plus the cost for revegetating the area affected by the pond removal. Similarly, the cost for removing the collection ditches also should be calculated and added to the bond amount.

V. BONDING SPECIAL FEATURES

A. Structures Not Needing Bonds

Under the conventional bonding system some facilities do not need to be considered in determining the bond amount. For instance, if the application includes releases to allow ponds or haul roads to remain as part of the post mining land use, then no bond is needed for their reclamation. Several scenarios are possible which can eliminate the need to bond certain activities:
The activity is completed prior to mining. For example, the permanent relocation of utility lines; or the construction of mitigation wetlands prior to disturbing the existing wetland.

The activity is bonded for reclamation by other agencies. An example would be the mining out and reconstruction of a public road. If the agency with control of the road requires a bond for replacing or reconstructing the road then duplication of bonding by the Department is unnecessary.

Buildings and structures for which the applicant provides the Department with an agreement or instrument allowing the structure to remain as part of the approved post mining land use.

B. Coal Ash Placement

A number of permits involve coal ash placement for reclaiming abandoned pits, i.e., the beneficial use of coal ash as fill material. The purpose of the bond for coal ash placement is to cover and vegetate any coal ash that has been placed in the abandoned pit. The bond is not intended to cover the complete filling of the abandoned pit.

If coal ash placement has been approved under a permit, the operation and reclamation plans may identify the source and type of material to be used as the cover and growing medium and the plan for revegetation. Therefore, the bond amount is mainly determined by the size of the placement area, in acres, the unit cost for select grading to shape the coal ash that has been placed, the unit cost for grading to cover the area with soil or other material identified in the reclamation plan and the unit cost for revegetation.

If a permit includes coal ash placement in an active pit, i.e., a pit the operator is responsible for reclamation, the bond should be based on achieving the approved reclamation plan with the assumption that there is no coal ash on-site and that backfilling will involve only spoil.

C. Coal Refuse Reprocessing

The objective of the bond on refuse reprocessing operations is to stabilize and vegetate the operational area, i.e., the area affected by reprocessing activities. For these sites, the bond is typically determined by applying the unit cost for select grading to reduce working faces and other areas affected by the operator, the unit cost for grading to cover the area with the soil or other material identified in the reclamation plan and the appropriate unit cost for revegetation. Reclamation of areas not affected by the operation is not the responsibility of the operator, even if those areas are on the permit area.

D. Water Supply Replacement Bonds

Section 3.1(c) of SMCRA requires mine operators to provide insurance to cover damage to public and private water supplies that the Department determines may be affected by the mining activities. This requirement applies only to surface coal mines and the surface facilities of underground coal mines, coal preparation plants, and coal refuse disposal operations. It is not applicable to damage to water supplies from underground mine workings or mine subsidence. A mine operator may use insurance coverage or a water supply replacement bond to provide financial assurance that water supplies affected by
surface mining activities can be replaced. Technical Guidance Document 562-2500-702, *Insurance Requirements and Water Supply Replacement Assurance*, describes the policy and procedures for implementing this requirement. The water supply replacement bond is a separate bond instrument. It is not included in the conventional bonding system and is not subject to staged bond releases and public notice.

E. Bonding of Bituminous Underground Mines and Coal Preparation Facilities

Reclamation liability for bituminous underground mines and coal preparation facilities has been and may continue to be calculated at the time of major permitting actions. The scope of reclamation work at these sites seldom changes between permit issuance and permit renewal. Any increase in the area of surface disturbance usually requires a permit revision and recalculation of the reclamation liability. These periodic calculations and corresponding bond adjustments are sufficient to address changes in reclamation liability as they occur over the life of the permit.

F. Remining Financial Guarantees Bond Program

The Department has developed a number of programs to address the environmental problems associated with abandoned mine lands (AML). The most cost-effective program is remining. In remining, a mine operator re-affects and reclaims abandoned mine lands in order to extract the remaining coal.

The Department has developed several incentives to encourage remining. One of these is the Remining Financial Guarantees Program. This program allows the Department to provide remining operators with remining financial guarantees to satisfy part of their bonding obligation. The amount of a remining financial guarantee is based on the size of the remining area.

Early in the permit application process an operator may apply to the Department for participation in the Remining Financial Guarantees Program. The Department would be responsible to make an AML eligibility determination of the remining area, and calculate the Department’s cost of reclaiming the AML site using the BRGs. The conventional bond for the permit will be calculated. The Department will issue a remining financial guarantee as part of the requisite bond in an amount equal to the cost of reclaiming the AML portion of the permit up to the operator and permit limits established in the Remining Financial Guarantee Program. (25 Pa. Code Chapter 86.281) The operator will provide a bond for the difference between the state-issued guarantee and the full conventional bond calculation for the permit.

VI. REPORTING AND RECALCULATION OF BOND AMOUNTS

A. Permit Renewal and Mid-Term Reviews

The permittee submits the bond recalculation during the permit renewal process. (25 Pa. Code Chapter 86.55(g)(4)) In addition to the permit renewal recalculation, the permittee has the option of submitting the bond recalculation at the Mid-Term timeframe. If the permittee chooses the Mid-Term option, the information identified below should be submitted no later than 90 days prior to the Mid-Term date. The Department typically
notifies the permittee on the two-year anniversary of the permit issuance that the information should be submitted for the Mid-Term Review. The Permit Renewal application and the Mid-Term Review are opportunities where the permittee can document the reclamation progress accomplished on the permit as well as document that the reclamation liability is equal to or below the cost for the Department to complete reclamation on the site (bond amount). The permittee may also use these opportunities to document which areas have been planted so the “5-year clock” can start on future Stage 3 achievements.

Because the conventional bonding system will generally eliminate incremental bond releases, it is in the operator’s interest to provide written notice to the owners of properties on which Stage 1 or 2 reclamation was achieved as close to the time the reclamation is achieved as possible. The operator should provide the District Mining Office with a copy of this notice at each milestone bond review. The notice should inform the landowners of the reclamation and explain that they should contact the appropriate District Mining Office if they wish for the Department to make a formal determination on the adequacy of the reclamation and have the right to appeal that determination. The permittee may still be required to submit the Annual Pond Certification annually. Copies of the Annual Pond Certification should be submitted by the anniversary of the permit issuance.

The Permit Renewal application and at the Mid-Term, when applicable, the permittee should submit the following:

- A map documenting the current operation, the mining area, the current location and dimensions of the operating area, and areas reclaimed to Stage 1 or 2 standards since the last review. The map must be sealed by a Professional Engineer or Professional Land Surveyor.
- Comparison of current reclamation liability vs. bonded liability using the Conventional Bonding Bond Calculation Summary form (5600-FM-BMP0436) with complete description of the calculations attached.

The permittee should submit the bond recalculation at the specified timeframes until the pit has been completely backfilled. This includes sites that are being renewed for “Reclamation Only” where a backfilling liability still exists.

Total Site Bond calculations are based on the current BRGs when the renewal or mid-term review is submitted and on adjusting the cost to take into account inflation. If the permittee elects to recalculate the bonds at the permit renewal only, the number of years used to calculate amount of inflation should be five (5). If the permittee elects to also recalculate the bond at the Mid-Term the number of years used to calculate amount of inflation should be three (3).
The suggested formula to adjust the bond to account for inflation is:

\[ \text{Total Site Bond} = (\text{Direct Costs} + \text{Indirect Costs}) \times (1+E)^{\text{YRS}} \]

Where:
- \( E \) = the inflation rate, expressed as a decimal
- \( YRS \) = the number of years until the bond will be recalculated

For permits seeking to have the bond recalculated at the permit renewal only, the suggested formula is:

\[ \text{Total Site Bond} = (\text{Direct Costs} + \text{Indirect Costs}) \times (1+E)^5 \]

For Example: Total Site Bond = \((90,000 + 10,000) \times (1+0.022)^5 = 111,494 \)

For permits seeking to have the bond recalculated at the permit Mid-Term the suggested formula is:

\[ \text{Total Site Bond} = (\text{Direct Costs} + \text{Indirect Costs}) \times (1+E)^3 \]

For Example: Total Site Bond = \((90,000 + 10,000) \times (1+0.022)^3 = 106,746 \)

If, at the expiration of the permit term, the operator chooses to renew a permit for additional mining or to continue mining, or there is still backfilling liability the bond amount may be recalculated using the current BRG when the renewal application is filed and may be adjusted for inflation until the next bond recalculation. The additional bond should be submitted and approved prior to renewal. (25 Pa. Code Chapter 86.55(g)(4)) The Department may evaluate reclaimed areas to determine if they meet approximate original contour, Stage 1 and 2 standards. (Note: This provision includes renewal at 3 years for permits on which mining activities have not started.)

### B. Permit Revisions/Bond Adjustments

Revisions that require recalculation of the operational liability or that affect the operation or reclamation plans can require a recalculation of the bond amount at current rates. Except for the addition of boreholes associated with underground mines, coal preparation plants and coal refuse disposal operations, the additional bond, if needed, is posted and approved prior to approval of the revision. (25 Pa. Code Chapter 86.143(a)) Bonds for additional boreholes associated with underground mines, coal preparation plants and coal refuse disposal operations may be requested at permit renewal.

Bonds may be adjusted up or down if there are changes to the operational area or the reclamation plan. Bond adjustments involving land no longer proposed for disturbance or for revising the cost estimate for land reclamation are not considered bond releases subject to the provisions of 25 Pa. Code §§ 86.170-175. Some reasons for adjusting bond amounts are:
• Moving onto a new phase of mining where conditions can affect the cost of reclamation or adding area to the unreclaimed area. These are adjustments to the operational area.
• Barrier reductions that affect the cost of reclamation.
• Revisions to the approved operation or reclamation plan such as:
  ▪ Leaving a road, pond, or other structure as part of the post mining land use.
  ▪ Moving into higher or lower cover.
  ▪ Changing the post mining land use.

A change in the mining area does not necessarily require an adjustment in the amount of bond. Approval of Stage 2 would start the time clock for the five-year vegetation liability period.

VII. BOND RELEASE

25 Pa. Code § 86.175(b) establishes the schedule for bond release. The amount of bond released may not exceed 60% of the total bond amount on the permit area, or designated phase of a permit area, upon completion of Stage 1 reclamation and approval by the Department.

Under the conventional bonding system, bond release can begin when the final pit is reclaimed to Stage 1 standards. At this time the operator may also request an adjustment of the bond down to the appropriate amount that was needed for the final pit at its maximum reclamation obligation and the other site conditions. The adjusted bond amount becomes the total amount of the bond from which the 60% is calculated. The bond reduction is based upon the final pit size as delineated in the approved operations plan in Module 10 of the permit. Bond adjustment and Stage 1 bond release may occur at the same time. In order for a bond adjustment to be approved for reducing the number of pits Stage 1 bond release criteria should be met. Additionally, the permittee may at this or any other time request final release of liability on any areas on the permit that meet Stage 3 standards.

Upon completion of Stage 2 reclamation, the Department may release an additional amount of bond while retaining an amount of bond sufficient to cover the cost of reestablishing vegetation and reconstructing drainage structures if completed by a third party.

The Department will release the final portion of the bond on the permit area or designated phase of a permit area after the standards for Stage 3 reclamation have been attained. Stage 2 and Stage 3 bond releases with split post-mining land uses would be released according to each post-mining land use time frames.

VIII. MONITORING AND COMPLIANCE

To effectively monitor an operation an SMCI should compare the operational liability used to calculate the bond with the conditions found on the site of the various components of the operational area used to calculate the bond. If the SMCI believes the operational liability exceeds the bond, the SMCI should direct the operator to verify the operational liability

Some large complex mine operations may require the mine operator to submit verification that the existing mining activities are in compliance with the permit conditions. This verification is
in addition to the bond amount review discussed in Section VI.A. above. These sites will be addressed on a case-by-case basis.

In cases where the actual liability exceeds the amount of bond, the operator is issued an NOV or compliance order for violating permit conditions. Those instances in which the liability is 15% or more than the bond, is a basis for cessation of additional overburden/coal removal, or coal refuse disposal until either additional bond is posted or reclamation has reduced the liability.

IX. RECLAMATION FEES

The reclamation fee is to be based upon the maximum size of the operational area as described in the approved operation and reclamation plans. For permits with remining financial guarantees, the reclamation fee will be reduced based on the amount of remining area included in the mining area. (25 Pa. Code § 86.283(c)) For example, if the operational area is 10 acres and the remining area on the entire permit is 6 acres, then the reclamation fee is due for 4 acres. If the remining area is greater than the operational area, then no reclamation fee is due. If the permittee changes the operation and reclamation plan and the operational area is increased resulting in a permit amendment, then a reclamation fee may be required for the additional area. A permittee should complete reclamation of the abandoned mine land area that has been used to justify using Remining Financial Guarantees.
APPENDIX A: DISPUTE RESOLUTION

When a dispute arises on the amount of bond calculated for the site, the operator may request a review of the calculation by the Permits Chief or the District Mining Manager. If following this review the dispute is not resolved, the operator can request that the Department establish an informal, three-person review board comprised of one Permit Chief or District Mining Manager from any of the other District Mining Offices, the Director of the Bureau of District Mining Operations or his designee, and the Director of the Bureau of Mining Programs or his designee.

Both the operator and the District Mining Office may present their positions to the informal review board. The decision of this board is not binding on the operator. If, following the informal review board’s decision, the dispute remains, the operator can choose to either provide the bond and appeal the permit issuance to the Environmental Hearing Board, or refuse to provide the bond and appeal the permit denial to the Environmental Hearing Board.

Failure of an operator to invoke the dispute resolution process does not affect the operator’s right to challenge the bond amount in an appeal to the Environmental Hearing Board.