

Bond Schedule for the Calculation of Bond Amounts on Noncoal Mining Operations

[Saturday, December, 2016]

The Department of Environmental Protection (Department) announces the bond schedule for noncoal mining operations. The authority for bonding noncoal mining operations is found under The Clean Streams Law (35 P. S. §§ 691.1—691.1001), the Noncoal Surface Mining Conservation and Reclamation Act (52 P. S. §§ 3301—3326) and the regulations promulgated thereunder at 25 Pa. Code Chapter 77, Subchapter D (relating bonding and insurance requirements). The rates listed in this schedule will be used in calculating the bonds for surface noncoal mining operations including surface mines and facilities and the surface facilities of underground mining operations. Other activities, including special revegetation plans, wetland mitigation or stream channel restoration will be estimated on a case-by-case basis.

Under 25 Pa. Code §77.202 (relating to determination of bond amount), the Department is providing notice of the bond schedule for bonding Noncoal Surface Mine Sites.

The bond schedule reflects the requirement that the amount of bond shall be the estimated cost to the Department if it had to complete the reclamation, restoration and abatement work under the Noncoal Surface Mining Conservation and Reclamation Act. The rates will become effective January 1, 2017, and will remain in effect until they are revised through a subsequent notice.

General Methodology

The basic approach to bonding large noncoal sites is to apply a flat per-acre rate (to cover minor grading and revegetation) and supplement that with bond to account for spoil storage, backfilling, highwall blasting, demolition or other site-specific costs. For mine sites where consolidated material is mined below the water table, the reclamation bond calculation must account for reclamation slopes to a depth of 50 feet below the anticipated post-mining water level.

For sites that can be mined in lateral phases, the operator can choose to bond the permit area by phase. The operator must identify the portion of the permit area on which mining and reclamation activities will occur within the phase. The Department will calculate the bond liability based on the maximum portion of the permitted area that the permittee is authorized to disturb at any specific time. This area is described in the permittee's mining and reclamation plans and must include all of the land affected by mining activities that is not planted, growing and stabilized.

Per-Acre Rates-Applicable to Disturbed (Not Reclaimed) area

\$3,500 per acre for mining area (This rate includes select grading and revegetation)

\$1,900 per acre for support areas (This rate includes revegetation)

Spoil Storage/Earthmoving

The rate of \$1.20 (cost per cubic yard) for grading applies to spoil stored or other additional earthmoving (for example, backfilling for contour mines or subsoil replacement where more than 12 inches of soil is needed to meet post-mining land use).

Blasting to Achieve the Reclamation Slope

The following rates apply to highwalls where blasting is necessary to achieve the final slope. Blaster's estimates may be used in lieu of these rates.

Table 1

Highwall/Bench Height (feet) Cost per linear foot of Highwall/Bench

Up to 20	\$10.00
>20 <30	\$20.00
>30 <40	\$35.00
>40 <50	\$45.00
>50	\$60.00

Mine Sealing

Mine sealing costs should be calculated using the Bond Rate Schedule in Table 2.

Table 2

Mine Sealing Bond Rate Schedule

Sealing Underground Mine Drift and Slope Openings

Unit Operation	Unit Measure	Unit Costs (\$)
Concrete Work	Cubic yard	128.00
Masonry Work	Square foot	11.00
Fill Material and Earthwork	Cubic yard	23.00
Security Fencing	Lineal foot	29.00
Mobilization Cost	Job	5% of Total Amount

Sealing Underground Mine Shaft Openings

Unit Operation	Unit Measure	Unit Costs (\$)
Concrete Material	Cubic Yard	96.00
Aggregate Material	Cubic Yard	27.00
Fill Material and Earthwork ¹	Cubic Yard	4.00
Security Fencing	Lineal Foot	29.00
Mobilization Cost	Job	5% of Total Amount

Sealing Boreholes at Underground Mines

Dimension	Minimum Cost Per Hole (\$)	Unit Cost (\$) Per Lineal Foot
12-Inch or Less Diameter	1,500	5.50
Larger Than 12-Inch Diameter	2,000	5.50

Other Items

A flat rate of \$3,800 will be used for each pond requiring reclamation. This rate includes dewatering, grading, topsoil replacement and revegetation.

Large equipment tires remaining at a site will be bonded at \$300 per tire.

Available cost information will be used in the event that a unit operation necessary to calculate a reclamation bond is not listed in the schedule. If enough data is not available, the rate will be set from a standard reference like *Means Building Construction Cost Data* or *Walker's Building Estimator's Reference Book*.

Structure demolition costs, for structures that are not compatible with the post-mining land use, will be calculated using these references. Structures that have reasonable post-mining uses do not require bonding.

Mobilization

Add 4% of the amount, up to \$40,000, for mobilization costs.

Large Noncoal—Unconsolidated material

Mining of unconsolidated material includes sites where the mining is above and below groundwater. The cost of reclamation for these two types of mining include selective grading to achieve the reclamation slopes and the safety bench around the water impoundment to meet the requirements of 25 Pa. Code § 77.594 (relating to final slopes).

The cost to grade the highwall to the approved reclamation slope above the groundwater table will be calculated based on the area of the highwall (determined by the length of highwall to be reclaimed multiplied by the horizontal width of the reclamation slope) to be reclaimed and the height of the highwall. The Department will use the following rates for bonding permits mining unconsolidated material:

\$1,700 per acre for mining up to 35 feet

\$2,400 per acre for 35 to 65 feet

\$5,000 per acre over 65 feet

The cost to establish the safety bench on water impoundments will be calculated based on the area around the perimeter of the impoundment multiplied by the width of the safety bench. The Department will use \$1,700 per acre for bonding the safety bench.

The Department will use the Bond Rate Schedule for spoil, storage, and earthmoving (cost per cubic yard) for sites that will use unmarketable material to achieve the reclamation contours on unconsolidated material mine sites.

Small Noncoal Sites

For small noncoal sites that comply with 25 Pa. Code § 77.108(e)(4) (relating to permit for small noncoal operations) and the permit is one acre or less, the bond amount is \$1,500 per acre and an additional \$2,500 for mobilization/demobilization

For small noncoal sites that comply with 25 Pa. Code § 77.108(e)(4) (relating to permit for small noncoal operations) and the permit is over 1 acre, the following rates apply:

\$1,500 per acre for support

\$3,000 per acre for mining up to 35 feet

\$4,000 per acre for 35 to 65 feet

\$5,000 per acre over 65 feet

Small Noncoal—Consolidated Material

The Department will use the following rates for bonding permits mining consolidated material that need to exceed the 1-acre limit imposed by 25 Pa. Code § 77.108(e)(4). These are the rates that also apply to the General Permit for Bluestone (GP-105).

\$1,500 per acre for support

\$3,000 per acre for mining up to 35 feet

\$4,000 per acre for 35 to 65 feet

\$5,000 per acre over 65 feet

Additional \$2,500 for mobilization/demobilization

Small Noncoal—Unconsolidated Material

A flat rate of \$3,500 per acre should be used for small sand and gravel pits that exceed the 1-acre limitation of 25 Pa. Code § 77.108(e)(4).

Effective Date: This schedule will become effective , January 1, 2017.

Patrick McDonnell
Acting Secretary

¹ Mine sealing costs are minimum costs. Additional costs per mine seal will be assessed based on specific design criteria, such as the thickness of the seal and the volume of backfill material required, using appropriate material, equipment and labor costs from BAMR bid abstracts or from an industry-standard cost estimation publications, for example, *Means Estimating Handbook* or *Walker's Building Estimator's Reference Book*.

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