

Notice of Bond Rate Guidelines for the Calculation of Land Reclamation Bonds on Coal Mining Operations

The Department of Environmental Protection (DEP) announces the 2019 bond rate guidelines for anthracite and bituminous coal mining operations. These rates become effective April 1, 2019. The authority for bonding coal mining operations is found under the Clean Streams Law, act of 1937 (P.L. 1987, No. 394), the Surface Mining Conservation and Reclamation Act, act of 1945 (P.L. 1198, No. 418), the Coal Refuse Disposal Control Act of 1968 (P.L. 1040, No. 318), and the regulations promulgated thereunder at 25 Pa. Code Chapter 86, Subchapter F. The unit costs listed in these guidelines will be used in calculating the land reclamation bonds for surface coal mining operations including, surface mines, coal refuse reprocessing sites, coal processing facilities, and the surface facilities of underground mining operations.

The procedures for calculating land reclamation bonds are described in Technical Guidance Document 563-2504-001, "Conventional Bonding for Land Reclamation – Coal," which is available on DEP's website (<http://www.elibrary.dep.state.pa.us>). DEP calculated the rate of inflation and rate of return using 5-year averages. For the rate of inflation, the Consumer Price Index (Northeast Urban) from the United States Department of Labor, Bureau of Labor Statistics, was averaged for the calendar years 2013-2017, resulting in a rate of 1.10%. This rate of inflation will be used in calculating bond amounts for permit renewal or permit mid-term bond liability reviews on or after April 1, 2019.

DEP may review the adequacy of bonds on existing permits based on the bond rate guidelines at any time. DEP will conduct these reviews before issuing permit renewals. DEP may conduct similar reviews at the mid-term of a permit and before approving a permit revision.

These bond rate guidelines do not apply to bonds ensuring replacement of water supplies under subsection 3.1(c) of the Surface Mining Conservation and Reclamation Act, or to bonds ensuring compliance with the requirements of the Bituminous Mine Subsidence and Land Conservation Act.

General Methodology:

DEP developed the bond rate guidelines for 2019 from the unit costs for competitively bid contracts for mine reclamation. Contract bid data is available for various unit operations needed to complete reclamation of a mine site for the years 1998 - 2018. For most categories, a three-year (2016-2018) average was used to calculate the guidelines. Some categories required another approach due to limited data. For example, there were no contracts in 2014 through 2018 that included selective grading. Therefore, a multi-year average of available data was used for the 2019 selective grading bond rate.

In general, the costs for a given unit operation for each year are determined using the weighted average of the three lowest total bids for each contract. However, grading costs were calculated using a frequency distribution in combination with the weighted averages.

In the event that a unit operation necessary to calculate a reclamation bond is not listed in Tables 1 or 2, then additional cost information available may be used. Unit costs may be adjusted using a standard reference like “*Means Building Construction Cost Data*” or “*Walker’s Building Estimator’s Reference Book*.” Specific unit costs may be adjusted using information provided by other stakeholders including the permittee provided the reclamation cost estimates include supporting calculations such as prevailing wage costs, installation costs, etc.

The fees associated with the Land Maintenance Bond Program are presented in Table 3. There has been no change in these rates for 2019.

The bond rate guidelines are available electronically at <http://www.dep.pa.gov/Business/Land/Mining/BureauofMiningPrograms/Bonding/Pages/BondRates.aspx> . For background information and supporting documentation regarding bonding rate guidelines, contact the Bureau of Mining Programs, Division of Permitting and Compliance, P.O. Box 8461, Harrisburg, PA 17105-8461, (717) 787-5103.

Mine Sealing Costs:

The mine sealing bond rate guidelines are presented in Table 2. Mine sealing and borehole sealing bond rate guidelines remain the same for 2019.

Effective Date:

The bond rate guidelines in this notice become effective April 1, 2019.

TABLE 1
Standard Bond Rate Guidelines
For Year 2019

Unit Operation	Unit Measure	Unit Costs (\$)
Mobilization/Demobilization	Job	4% of direct costs or \$40,000, whichever is less
Grading (< 500-foot push)	Cubic Yard	0.85
Grading (≥500-foot push/haul)	Cubic Yard	1.50
Selective Grading	Acre	1,700.00
Revegetation	Acre	2,000.00
Tree Planting	Tree	0.75

Ditch Excavation	Cubic Yard	6.70
Jute Matting	Square Yard	2.50
High Velocity Erosion Control	Square Yard	3.00
AASHTO No. 1	Ton	27.00
AASHTO No. 57	Ton	33.00
R3 Rock Lining	Square Yard	31.00
R4 Rock Lining	Square Yard	40.00
R5 Rock Lining	Square Yard	31.00
Geotextile/Filter Fabric	Square Yard	2.80
Subsurface Drain	Lineal Foot	25.00
Erosion and Sedimentation Control (Temporary Installation)	Job	Lump sum (5% of direct costs for site)
Pond Removal Active Phase ²	Pond	3,800.00
Stage 3 Maintenance Bond Non-Cropland Areas (Land Uses Where Crop Yields Are Not Required)	Acre	100.00
Stage 3 Maintenance Bond Cropland (Not Row Crops) Pastureland or Land Occasional Cut for Hay (Excludes Seed Cost)	Acre	550.00
Stage 3 Maintenance Bond Cropland Area-Row Crops (includes seed cost)	Acre	830.00
Stage 3 Mobilization	Job	2,500.00
Pond Removal-Stage 3	Cubic Yards (Embankment Volume) Plus Top Soiling & Revegetation Cost	Use <500 Grading for Pond Embankment Volume Plus Top Soiling & Revegetation Cost for The Area Disturbed
Ditch Removal-Stage 3	Lineal Foot	0.75
Equipment Tire Removal and Disposal	Tire	300.00

Structure Demolition	Costs Will Be Calculated Using Costs Listed in The Construction Industry's Latest Annual Cost Publications, such as <i>Means Building Construction Cost Data</i> .
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TABLE 2
Mine Sealing Bond Rate Guidelines
For Year 2019

Sealing Bituminous 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 & Earthwork ³	Cubic yard	23.00
Security Fencing	Lineal foot	29.00
Mobilization Cost	Job	5% of Total Amount

Sealing Bituminous Underground Mine Shaft Openings		
Concrete Material	Cubic Yard	96.00
Aggregate Material	Cubic Yard	27.00
Fill material and Earthwork ³	Cubic Yard	4.00
Security Fencing	Lineal Foot	29.00
Mobilization Cost	Job	5% of Total Amount

Sealing Boreholes at Bituminous 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

1 Typically used for lining of ponds or ditches crossing fill material.

- 2 Unit cost not from BAMR bids; includes dewatering, grading, topsoil placement and revegetation.
- 3 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 publication, e.g., *Means Estimating Handbook* or *Walker's Building Estimator's Reference Book*.

TABLE 3
Land Maintenance Financial Guarantee Fees
For Year 2019

Fee Category	Fee (\$)
Publication	1,000.00
Administrative	300.00

PATRICK MCDONNELL,
Secretary