

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

The Department of Environmental Protection (Department) announces the bond rate guidelines for 2006 for anthracite and bituminous coal mining operations. 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 disposal sites, 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 563-2504-001, "Conventional Bonding for Land Reclamation – Coal," which is available on the Department's website (www.dep.state.pa.gov), at the Public Participation Center page.

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

The bond rate guidelines do not apply to bonds assuring 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:

The Department developed the bond rate guidelines for 2006 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 - 2004. For most categories, a three-year (2002-2004) average was used to calculate the guidelines. Some categories required another approach due to limited data. For example there were no contracts in 2004 that included R-3 rock used for channel lining. Therefore the previously calculated guideline was used.

In general, the bond rate for a given unit operation is the weighted average of the three lowest total bids for each contract. However, grading costs are calculated using a weighted frequency distribution in combination with the averages and trend analysis.

In the event that a unit operation necessary to calculate a reclamation bond is not listed in Table 1, then any additional cost information available will be used. If enough data is still 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.*"

Recent mine reclamation projects have included the removal and disposal of large equipment tires and electrical transformers. The tires were removed by "piggy-backing" with an existing contract with the Bureau of Waste Management. The cost under this contract is \$300 per tire.

The removal of the electrical transformers was competitively bid. These bids were quite complicated based on the size and age of the transformer and the travel distance to an approved disposal location. Therefore a bond rate guideline for transformers has not been calculated. However, the calculated bond for a mine site with transformers will be determined by a site-specific calculation.

The fees associated with the Land Maintenance Bond Program are presented in Table 2. There has been no change in these rates for 2006.

The bond rate guidelines are available electronically at <http://www.dep.state.pa.us/dep/deputate/minres/BMR/BMRhome.htm>. For background information and supporting documentation regarding bonding rate guidelines, contact the Bureau of Mining and Reclamation, Division of Monitoring and Compliance, P.O. Box 8461, Harrisburg, PA 17105-8461, (717) 787-5103.

Effective Date:

The bond rate guidelines in this notice become effective January 1, 2006.

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TABLE 1
Bond Rate Guidelines
For Year 2006

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	0.60
Grading (≥500-foot push)	cubic yard	0.90
Selective Grading	Acre	1,100.00
Revegetation	Acre	1,300.00
Tree Planting	Tree	0.15
Ditch Excavation	cubic yard	4.50
Jute Matting	square yard	2.20
High Velocity Erosion Control	square yard	2.00
R3 Rock Lining	square yard	18.00
R4 Rock Lining	square yard	23.75
R5 Rock Lining	square yard	17.00
Geotextile/Filter Fabric	square yard	2.00
PVC Lining ¹	square yard	9.50
Subsurface Drain	lineal foot	10.00
Erosion and Sedimentation Control (Temporary Installation)	Job	Lump sum (5% of direct costs for site)
Pond Removal Active Phase ²	Pond	3,500.00
Erosion and Sedimentation Control (Temporary Installation)	Job	Lump sum (5% of direct costs for site)

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	500.00
Stage 3 Maintenance Bond Cropland Area-Row Crops (includes seed cost)	Acre	700.00
Stage 3 Mobilization	Job	2,500.00
Pond Removal-Stage 3	Cubic yards (Embankment volume) Plus Topsoiling & Revegetation Cost	Use <500 grading for pond embankment volume plus Topsoiling & Revegetation cost for the area disturbed
Ditch Removal-Stage 3	Lineal Foot	0.60
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> .	
	shaft (10 ft. or less diameter)	1,400.00
Mine Sealing ³ Non-hydraulic shaft seal – inert fill	shaft (11 to 15 ft. diameter)	3,000.00
	shaft (16 to 20 ft. diameter)	4,500.00
	shaft (21 to 25 ft. diameter)	8,000.00
	shaft (10 ft. or less diameter)	7,600.00
Mine Sealing ³ Hydraulic shaft seal w/ bulkhead	shaft (11 to 15 ft. diameter)	9,200.00
	shaft (16 to 20 ft. diameter)	10,700.00
	shaft (21 to 25 ft. diameter)	14,200.00
	shaft (10 ft. or less diameter)	7,600.00
Mine Sealing ³ Non-hydraulic drift / slope seal	drift / slope	3,900.00
Mine Sealing ³ Hydraulic drift / slope seal w/ bulkhead	drift / slope	6,200.00

- 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 publications, e.g.,
Means Estimating Handbook or *Walker's Building Estimator's Reference Book*.

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TABLE 2
Land Maintenance Financial Guarantee Fees
For Year 2006

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

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