

(ii) Provide an executed assignment of the required acceptable bond made payable to "The United States or The State of Tennessee."

(c) *Special consideration for sites with long-term postmining pollutional discharges.* With the approval of the Office, the permittee may establish a trust fund, annuity or both to guarantee treatment of long-term postmining pollutional discharges in lieu of posting one of the bond forms listed in §800.12 of this chapter for that purpose. The trust fund or annuity will be subject to the following conditions:

(1) The Office will determine the amount of the trust fund or annuity, which must be adequate to meet all anticipated treatment needs, including both capital and operational expenses.

(2) The trust fund or annuity must be in a form approved by the Office and contain all terms and conditions required by the Office.

(3) The trust fund or annuity must provide that the United States or the State of Tennessee is irrevocably established as the beneficiary of the trust fund or of the proceeds from the annuity.

(4) The Office will specify the investment objectives of the trust fund or annuity.

(5) Termination of the trust fund or annuity may occur only as specified by the Office upon a determination that no further treatment or other reclamation measures are necessary, that a replacement bond or another financial instrument has been posted, or that the administration of the trust fund or annuity in accordance with its purpose requires termination.

(6) Release of money from the trust fund or annuity may be made only upon written authorization of the Office or according to a schedule established in the agreement accompanying the trust fund or annuity.

(7) A financial institution or company serving as a trustee or issuing an annuity must be one of the following:

(i) A bank or trust company chartered by the Tennessee Department of Financial Institutions;

(ii) A national bank chartered by the Office of the Comptroller of the Currency;

(iii) An operating subsidiary of a national bank chartered by the Office of the Comptroller of the Currency;

(iv) An insurance company licensed or authorized to do business in Tennessee by the Tennessee Department of Commerce and Insurance or designated by the Commissioner of that Department as an eligible surplus lines insurer; or

(v) Any other financial institution or company with trust powers and with offices located in Tennessee, provided that the institution's or company's activities are examined or regulated by a State or Federal agency.

(8) Trust funds and annuities, as described in this paragraph, must be established in a manner that guarantees that sufficient moneys will be available to pay for treatment of postmining pollutional discharges (including maintenance, renovation, and replacement of treatment and support facilities as needed), the reclamation of the sites upon which treatment facilities are located and areas used in support of those facilities.

(9) When a trust fund or annuity is in place and fully funded, the Office may approve release under §800.40(c)(3) of this chapter of conventional bonds posted for a permit or permit increment, provided that, apart from the pollutional discharge and associated treatment facilities, the area fully meets all applicable reclamation requirements and the trust fund or annuity is sufficient for treatment of pollutional discharges and reclamation of all areas involved in such treatment. The portion of the permit required for postmining water treatment must remain bonded. However, the trust fund or annuity may serve as that bond.

[49 FR 38892, Oct. 1, 1984, as amended at 72 FR 9636, Mar. 2, 2007]

§ 942.815 Performance standards—Coal exploration.

Part 815 of this chapter, *Permanent Program Performance Standards—Coal Exploration*, shall apply to any person who conducts coal exploration.

§ 942.816 Performance standards—Surface mining activities.

(a) Except as modified by paragraphs (b) through (h) of this section, part 816

of this chapter, Permanent Program Performance Standards—Surface Mining Activities, shall apply to any person who conducts surface mining activities in the State of Tennessee.

(b) The permittee shall comply with the site-specific terms of the permit except that references to provisions of the Tennessee State program shall be read to require compliance with the relevant provisions of this part. Where the permit does not specify site-specific standards with which compliance is required, the permittee shall comply with the standards of this part.

(c) *Diversions.* In lieu of the requirements of §816.43(a)(4) of this chapter, diversion design shall incorporate the following requirements:

(1) Channel lining shall be designed using standard engineering practices to pass safely the design velocities. Riprap shall comply with the requirement of §816.71(f)(3) of this chapter, except for sand and gravel.

(2) Freeboard shall be no less than 0.3 feet. Protection shall be provided for transition of flows and for critical areas such as swales and curves. Where the area protected is a critical area as determined by the Office, the design freeboard may be increased.

(3) Energy dissipators shall be installed when necessary at discharge points, where diversions intersect with natural streams and exit velocity of the diversion ditch flow is greater than that of the receiving stream.

(4) Excess excavated material not utilized in diversion channel geometry or regrading of the channel shall be disposed of in accordance with §§816.71 through 816.74 of this chapter.

(d) *Hydrologic Balance: Siltation Structures.* In lieu of the requirements of §816.46(c)(1)(iii)(A) of this chapter, sedimentation ponds shall provide a storage volume of no less than 0.2 acre feet per disturbed acre draining into the basin. The Office may approve lesser sediment storage volumes equal to the sediment calculated to enter the pond between planned cleanout intervals upon submission and approval of a plan for removing sedimentation from the pond which includes a description of the equipment to be used. The minimum sediment storage volume shall

be equal to 0.1 acre feet per disturbed acre.

(e) *Backfilling and grading: General requirements.* In addition to the requirements of §816.102 of this chapter, backfilling and grading shall proceed in accordance with the following timing requirements:

(1) *Contour mining.* Rough backfilling and grading shall follow coal removal by not more than 60 days or 1,500 linear feet.

(2) *Area mining.* Rough backfilling and grading shall be completed within 180 days following coal removal and shall not be more than four spoil ridges behind the pit being worked, the spoil from the active pit being considered the first ridge.

(3) The Office may grant additional time for rough backfilling and grading if the permittee can demonstrate, through the detailed written analysis under §780.18(b)(3) of this chapter, that additional time is necessary.

(f) In lieu of the requirements of §816.116 (b)(1) through (b)(3) of this chapter, the following revegetation success standards and sampling techniques shall be used by this Office.

(1) For areas developed for use as pasture or hay production, the ground cover shall be at least ninety percent (90%) and crop production shall be equal to or greater than the average county yield as stated by the Tennessee Crop Reporting Service for the county in which the permit area is located.

(2) For areas developed for use as cropland, crop production shall be equal to or greater than the average county yield as stated by the Tennessee Crop Reporting Service for the county in which the permit area is located. Adjustment for local yield variation within the county may be made for disease, pests, weather-induced variations, and differences in crop management practices.

(3) For areas developed for wildlife habitat, undeveloped land, recreation, or forestry, the stocking of woody plants must be at least equal to the rates specified in the approved reclamation plan. To minimize competition with woody plants, herbaceous ground cover should be limited to that

necessary to control erosion and support the postmining land use. Seed mixes and seeding rates will be specified in the permit.

(i) Minimum stocking levels and planting arrangements shall be specified by the Office on the basis of local and regional conditions and after consultation with the State agencies responsible for the administration of forestry and wildlife programs.

(ii) Trees and shrubs that will be used in determining the success of stocking and the adequacy of plant arrangement shall have utility for the approved postmining land use. At the time of bond release, such trees and shrubs shall be healthy, and at least eighty percent (80%) shall have been in place for at least three growing seasons. No trees and shrubs in place for less than two growing seasons shall be counted in determining stocking adequacy.

(iii) Vegetative ground cover shall not be less than that required to achieve the approved postmining land use.

(4) Bare areas shall not exceed one-sixteenth (1/16) acre in size and total not more than ten percent (10%) of the area seeded, except for areas developed for wildlife habitat, undeveloped land, recreation, or forestry.

(5) Distribution of woody plants within the permit area shall be consistent with the post-mining land use.

(6) Sampling techniques for measuring woody plant stocking and ground cover shall be in accordance with techniques approved by the Office. Actual crop yields shall be used to determine production.

(g) *Roads*. In lieu of the requirements of section 816.150(c) of this chapter, roads shall be designed and constructed or reconstructed in compliance with the following standards in order to control subsequent erosion and disturbance of the hydrologic balance.

(1) *Primary Roads*. (i) Except for existing roads and where lesser grades are necessary to control site-specific conditions, the overall grades shall not exceed 1v:10h (10 percent); the maximum pitch grade shall not exceed 1v:6.5h (15 percent); and there shall be not more than three hundred (300) feet of pitch grade exceeding ten (10) percent within any consecutive one thousand (1,000)

feet of primary roads. In no case shall there be any pitch grade over fifteen (15) percent.

(ii) Culvert spacing shall not exceed one thousand (1,000) feet on grades of zero (0) to three (3) percent, eight hundred (800) feet on grades of three (3) to six (6) percent, five hundred (500) feet on grades of six (6) to ten (10) percent, and three hundred (300) feet on grades of ten (10) percent or greater. Culverts shall be installed at closer intervals than the maximum in this part if required by the Office as appropriate for the erosive properties of the soil or to accommodate flow from small intersecting drainages. Culverts may be constructed at greater intervals than the maximum indicated in this part if approved by the Office upon a finding that greater spacing will not increase erosion.

(iii) Culverts shall be covered by compacted fill to a minimum depth of one foot.

(2) *Ancillary Roads*. (i) Field design methods may be utilized for ancillary roads.

(ii) Where lesser grades are necessary to control site-specific conditions overall grade shall not exceed 1v:10h (10 percent). Pitch grade shall not exceed 1v:5h (20 percent). There shall not be more than one thousand (1,000) consecutive feet of maximum pitch grade.

(iii) Ancillary roads may meander so as to avoid large growths of vegetation and other natural obstructions.

(iv) Compaction on road embankments shall be only to the extent necessary to control erosion and maintain the road.

(v) Temporary culverts and bridges shall be sized to safely pass the one (1) year, six (6) hour precipitation event.

(h) *Use of Explosives*. In lieu of the requirements of § 816.64(a)(2) of this chapter, all blasting shall be conducted between sunrise and sunset. Blasting may not be conducted at times different from those announced in the blasting schedule except in emergency situations where rain, lightning, or other atmospheric conditions, or operator or public safety requires unscheduled

blasts. The Office may specify more restrictive time periods for blasting.

[49 FR 38892, Oct. 1, 1984, as amended at 52 FR 47717, Dec. 16, 1987; 55 FR 20600, May 18, 1990; 72 FR 9637, Mar. 2, 2007]

§942.817 Performance standards—Underground mining activities.

(a) Part 817 of this chapter, *Permanent Program Performance Standards—Underground Mining Activities*, as modified by paragraphs (b)–(f) of this section, shall apply to any person who conducts underground mining activities in the State of Tennessee.

(b) The permittee shall comply with the site-specific terms of the permit except that references to provisions of the Tennessee State program shall be read to require compliance with the relevant provisions of this part. Where the permit does not specify site-specific standards with which compliance is required, the permittee shall comply with the standards of this part.

(c) *Diversions*. In lieu of the requirements of §817.43(a)(4) of this chapter diversion design shall incorporate the following requirements:

(1) Channel lining shall be designed using standards engineering practices to pass safely the design velocities. Riprap shall comply with the requirements of §817.71(f)(3) of this chapter, except for sand and gravel.

(2) Freeboard shall be no less than 0.3 feet. Protection shall be provided for transition of flows and for critical areas such as swales and curves. Where the area protected is a critical area as determined by the Office, the design freeboard may be increased.

(3) Energy dissipators shall be installed when necessary at discharge points, where diversions intersect with natural streams and exit velocity of the diversion ditch flow is greater than that of the receiving stream.

(4) Excess excavated material not utilized in diversion channel geometry or regrading of the channel shall be disposed of in accordance with §§817.71 through 817.74 of this chapter.

(d) *Hydrologic balance: Siltation structures*. In lieu of the requirements of §817.46(c)(1)(ii)(A) of this chapter, sedimentation ponds shall provide a storage volume of no less than 0.2 acre feet per distributed acre draining into the

basin. The Office may approve less sediment storage volumes equal to the sediment calculated to enter the pond between planned cleanout intervals upon submission and approval of a plan for removing sediment from the pond which includes a description of the equipment to be used. The minimum sediment storage volume shall be equal to 0.1 acre feet per disturbed acre.

(e) In lieu of the requirements of §817.116 (b)(1) through (b)(3) of this chapter, the following revegetation success standards and sampling techniques shall be used by this Office.

(1) For areas developed for use as pasture or hay production, the ground cover shall be at least ninety percent (90%) and crop production shall be equal to or greater than the average county yield as stated by the Tennessee Crop Reporting Service for the county in which the permit area is located.

(2) For areas developed for use as cropland, crop production shall be equal to or greater than the average county yield as stated by the Tennessee Crop Reporting Service for the county in which the permit area is located. Adjustment for local yield variation within the county may be made for disease, pests, weather-induced variations, and differences in crop management practices.

(3) For areas developed for wildlife habitat, undeveloped land, recreation, or forestry, the stocking of woody plants must be at least equal to the rates specified in the approved reclamation plan. To minimize competition with woody plants, herbaceous ground cover should be limited to that necessary to control erosion and support the postmining land use. Seed mixes and seeding rates will be specified in the permit.

(i) Minimum stocking levels and planting arrangements shall be specified by the Office on the basis of local and regional conditions and after consultation with the State agencies responsible for the administration of forestry and wildlife programs.

(ii) Trees and shrubs that will be used in determining the success of stocking and the adequacy of plant arrangement shall have utility for the approved postmining land use. At the time of