§ 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, recreational or forest products, the ground cover shall be at least eighty percent (80%) and the stocking of woody plants shall be at least equal the rate specified in the approved mining and reclamation plan.

(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.

(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 lv:10h (10 percent); the maximum pitch grade shall not exceed lv: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 by 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 lv:10h (10 percent). Pitch grade shall not exceed lv: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]

§ 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, recreational or forest products, the ground cover shall be at least 80 percent (80%) and the stocking of woody plants shall be at least equal to the rate specified in the approved mining and reclamation plan.

(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