

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.

(f) *Roads.* In lieu of the requirements of §817.150(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 grade 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, and 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 inter-

secting 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 condition, 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.

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

§ 942.819 Special performance standards—Auger mining.

Part 819 of this chapter, *Special Permanent Program Performance Standards—Auger Mining*, shall apply to any person who conducts surface coal mining operations which include auger mining.

§ 942.823 Special performance standards—Operations on prime farmland.

Part 823 of this chapter, *Special Permanent Program Performance Standards—Operations on Prime Farmland*, shall apply to any person who conducts surface coal mining operations on prime farmland.

§ 942.824 Special performance standards—Mountaintop removal.

Part 824 of this chapter, *Special Permanent Program Performance Standards—Mountaintop Removal*, shall apply to any person who conducts surface