## § 780.35

## § 780.35 Disposal of excess spoil.

- (a) Each application shall contain descriptions, including appropriate maps and cross section drawings, of the proposed disposal site and design of the spoil disposal structures according to 30 CFR 816.71-816.74. These plans shall describe the geotechnical investigation, design, construction, operation, maintenance, and removal, if appropriate, of the site and structures.
- (b) Except for the disposal of excess spoil on pre existing benches, each application shall contain the results of a geotechnical investigation of the proposed disposal site, including the following:
- (1) The character of bedrock and any adverse geologic conditions in the disposal area.
- (2) A survey identifying all springs, seepage, and ground water flow observed or anticipated during wet periods in the area of the disposal site;
- (3) A survey of the potential effects of subsidence of the subsurface strata due to past and future mining operations;
- (4) A technical description of the rock materials to be utilized in the construction of those disposal structures containing rock chimney cores or underlain by a rock drainage blanket; and
- (5) A stability analysis including, but not limited to, strength parameters, pore pressures and long-term seepage conditions. These data shall be accompanied by a description of all engineering design assumptions and calculations and the alternatives considered in selecting the specific design specifications and methods.
- (c) If, under 30 CFR 816.71(d), rock-toe buttresses or key-way cuts are required, the application shall include the following:
- (1) The number, location, and depth of borings or test pits which shall be determined with respect to the size of the spoil disposal structure and subsurface conditions; and
- (2) Engineering specifications utilized to design the rock-toe buttress or key-way cuts which shall be deter-

mined in accordance with paragraph (b)(5) of this section.

[79 FR 76229, Dec. 22, 2014, as amended at 81 FR 93330, Dec. 20, 2016; 82 FR 54949, Nov. 17, 2017]

## § 780.37 Road systems.

- (a) Plans and drawings. Each applicant for a surface coal mining and reclamation permit shall submit plans and drawings for each road, as defined in \$701.5 of this chapter, to be constructed, used, or maintained within the proposed permit area. The plans and drawings shall—
- (1) Include a map, appropriate cross sections, design drawings and specifications for road widths, gradients, surfacing materials, cuts, fill embankments, culverts, bridges, drainage ditches, low-water crossings, and drainage structures;
- (2) Contain the drawings and specifications of each proposed road that is located in the channel of an intermittent or perennial stream, as necessary for approval of the road by the regulatory authority in accordance with §816.150(d)(1) of this chapter;
- (3) Contain the drawings and specifications for each proposed ford of perennial or intermittent streams that is used as a temporary route, as necessary for approval of the ford by the regulatory authority in accordance with §816.151(c)(2) of this chapter;
- (4) Contain a description of measures to be taken to obtain approval of the regulatory authority for alteration or relocation of a natural stream channel under §816.151(d)(5) of this chapter;
- (5) Contain the drawings and specifications for each low-water crossing of perennial or intermittent stream channels so that the regulatory authority can maximize the protection of the stream in accordance with §816.151(d)(6) of this chapter; and
- (6) Describe the plans to remove and reclaim each road that would not be retained under an approved postmining land use, and the schedule for this removal and reclamation.
- (b) Primary road certification. The plans and drawings for each primary road shall be prepared by, or under the direction of, and certified by a qualified registered professional engineer, or