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of the document can be purchased from the American Society for Testing (ASTM), 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428–2959; http://www.astm.org. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

- (g) Before mining is discontinued in an entry or room that is advanced more than 20 feet from the inby rib, a crosscut shall be made or line brattice shall be installed and maintained to provide adequate ventilation. When conditions such as methane liberation warrant a distance less than 20 feet, the approved ventilation plan shall specify the location of such rooms or entries and the maximum distance they will be developed before a crosscut is made or line brattice is installed.
- (h) All ventilation controls, including seals, shall be maintained to serve the purpose for which they were built.

[61 FR 9829, Mar. 11, 1996; 61 FR 20877, May 8, 1996; 61 FR 26442, May 28, 1996; 61 FR 29288, 29289, June 10, 1996, as amended at 67 FR 38386, June 4, 2002; 71 FR 16668, Apr. 3, 2006]

§75.334 Worked-out areas and areas where pillars are being recovered.

- (a) Worked-out areas where no pillars have been recovered shall be—
- (1) Ventilated so that methane-air mixtures and other gases, dusts, and fumes from throughout the worked-out areas are continuously diluted and routed into a return air course or to the surface of the mine; or
 - (2) Sealed.
- (b)(1) During pillar recovery a bleeder system shall be used to control the air passing through the area and to continuously dilute and move methane-air mixtures and other gases, dusts, and fumes from the worked-out area away from active workings and into a return air course or to the surface of the mine.
- (2) After pillar recovery a bleeder system shall be maintained to provide ventilation to the worked-out area, or the area shall be sealed.
- (c) The approved ventilation plan shall specify the following:
- (1) The design and use of bleeder systems:

- (2) The means to determine the effectiveness of bleeder systems;
- (3) The means for adequately maintaining bleeder entries free of obstructions such as roof falls and standing water; and
- (4) The location of ventilating devices such as regulators, stoppings and bleeder connectors used to control air movement through the worked-out area.
- (d) If the bleeder system used does not continuously dilute and move methane-air mixtures and other gases, dusts, and fumes away from worked-out areas into a return air course or to the surface of the mine, or it cannot be determined by examinations or evaluations under §75.364 that the bleeder system is working effectively, the worked-out area shall be sealed.
- (e) Each mining system shall be designed so that each worked-out area can be sealed. The approved ventilation plan shall specify the location and the sequence of construction of proposed seals
- (f) In place of the requirements of paragraphs (a) and (b) of this section, for mines with a demonstrated history of spontaneous combustion, or that are located in a coal seam determined to be susceptible to spontaneous combustion, the approved ventilation plan shall specify the following:
- (1) Measures to detect methane, carbon monoxide, and oxygen concentrations during and after pillar recovery, and in worked-out areas where no pillars have been recovered, to determine if the areas must be ventilated or sealed.
- (2) Actions that will be taken to protect miners from the hazards of spontaneous combustion.
- (3) If a bleeder system will not be used, the methods that will be used to control spontaneous combustion, accumulations of methane-air mixtures, and other gases, dusts, and fumes in the worked-out area.

§ 75.335 Construction of seals.

- (a)(1) Each seal constructed after November 15, 1992, shall be—
- (i) Constructed of solid concrete blocks at least 6 by 8 by 16 inches, laid in a transverse pattern with mortar between all joints;

- (ii) Hitched into solid ribs to a depth of at least 4 inches and hitched at least 4 inches into the floor;
- (iii) At least 16 inches thick. When the thickness of the seal is less than 24 inches and the width is greater than 16 feet or the height is greater than 10 feet, a pilaster shall be interlocked near the center of the seal. The pilaster shall be at least 16 inches by 32 inches; and
- (iv) Coated on all accessible surfaces with flame-retardant material that will minimize leakage and that has a flame-spread index of 25 or less, as tested under ASTM E162-87, "Standard Test Method for Surface Flammability of Materials Using A Radiant Heat Energy Source." This publication is incorporated by reference and may be inspected at any MSHA Coal Mine Safety and Health district office, or at MSHA's Office of Standards, Regulations, and Variances, 1100 Wilson Blvd., Room 2352, Arlington, Virginia 22209-3939, and at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or to: http://www.archives.gov/ federal register/

code_of_federal_regulations/

- ibr locations.html. In addition, copies of the document can be purchased from the American Society for Testing (ASTM), 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428—2959; http://www.astm.org. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.
- (2) Alternative methods or materials may be used to create a seal if they can withstand a static horizontal pressure of 20 pounds per square inch provided the method of installation and the material used are approved in the ventilation plan. If the alternative methods or materials include the use of timbers, the timbers also shall be coated on all accessible surfaces with flame-retardant material having a flame-spread index of 25 or less, as tested under ASTM E162-87, "Standard Test Method for Surface Flammability of Materials Using A Radiant Heat Energy Source.' This publication is incorporated by reference and may be inspected at any

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- (b) A sampling pipe or pipes shall be installed in each set of seals for a worked-out area. Each pipe shall—
- (1) Extend into the sealed area a sufficient distance (at least 15 feet) to obtain a representative sample from behind the seal;
- (2) Be equipped with a cap or shut-off valve; and
- (3) Be installed with the sampling end of the pipe about 12 inches from the roof.
- (c)(1) A corrosion-resistant water pipe or pipes shall be installed in seals at the low points of the area being sealed and at all other locations necessary when water accumulation within the sealed area is possible; and
- (2) Each water pipe shall have a water trap installed on the outby side of the seal.
- [61 FR 9828, Mar. 11, 1996; 61 FR 29289, June 10, 1996, as amended at 67 FR 38386, June 4, 2002; 71 FR 16668, Apr. 3, 2006]

§ 75.340 Underground electrical installations.

- (a) Underground transformer stations, battery charging stations, substations, rectifiers, and water pumps shall be housed in noncombustible structures or areas or be equipped with a fire suppression system meeting the requirements of §75.1107–3 through §75.1107–16.
- (1) When a noncombustible structure or area is used, these installations shall be—