

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 Coal Mine Health and Safety District and Subdistrict Office, or at MSHA's Office of Standards, 4015 Wilson Boulevard, Arlington, VA, and at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. In addition, copies of the document can be purchased from the American Society for Testing (ASTM), 1916 Race Street, Philadelphia, Pennsylvania 19103. 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 Coal Mine Health and Safety District and Subdistrict Office, or at MSHA's Office of Standards, 4015 Wilson Boulevard, Arlington, VA, and at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. In addition, copies of the document can be purchased from the American Society for Testing (ASTM), 1916 Race Street, Philadelphia, Pennsylvania 19103. 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.

(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.

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§ 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