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same working section, each set of mining equipment shall be on a separate split of intake air.

(3) For purposes of this section, a set of mining equipment includes a single loading machine, a single continuous mining machine, or a single longwall or shortwall mining machine.

(b)(1) Air that has passed through any area that is not examined under §§75.360, 75.361 or 75.364 of this subpart, or through an area where second mining has been done shall not be used to ventilate any working place. Second mining is intentional retreat mining where pillars have been wholly or partially removed, regardless of the amount of recovery obtained.

(2) Air that has passed by any opening of any unsealed area that is not examined under §§ 75.360, 75.361 or 75.364 of this subpart, shall not be used to ventilate any working place.

## §75.333 Ventilation controls.

(a) For purposes of this section, "doors" include any door frames.

(b) Permanent stoppings or other permanent ventilation control devices constructed after November 15, 1992, shall be built and maintained—

(1) Between intake and return air courses, except temporary controls may be used in rooms that are 600 feet or less from the centerline of the entry from which the room was developed including where continuous face haulage systems are used in such rooms. Unless otherwise approved in the ventilation plan, these stoppings or controls shall be maintained to and including the third connecting crosscut outby the working face;

(2) To separate belt conveyor haulageways from return air courses, except where belt entries in areas of mines developed before March 30, 1970, are used as return air courses;

(3) To separate belt conveyor haulageways from intake air courses when the air in the intake air courses is used to provide air to active working places. Temporary ventilation controls may be used in rooms that are 600 feet or less from the centerline of the entry from which the rooms were developed including where continuous face haulage systems are used in such rooms. When continuous face haulage systems are used, permanent stoppings or other permanent ventilation control devices shall be built and maintained to the outby most point of travel of the dolly or 600 feet from the point of deepest penetration in the conveyor belt entry, whichever distance is closer to the point of deepest penetration, to separate the continuous haulage entry from the intake entries;

(4) To separate the primary escapeway from belt and trolley haulage entries, as required by §75.380(g). For the purposes of §75.380(g), the loading point for a continuous haulage system shall be the outby most point of travel of the dolly or 600 feet from the point of deepest penetration, whichever distance is less; and

(5) In return air courses to direct air into adjacent worked-out areas.

(c) Personnel doors shall be constructed of noncombustible material and shall be of sufficient strength to serve their intended purpose of maintaining separation and permitting travel between air courses, and shall be installed as follows in permanent stoppings constructed after November 15, 1992:

(1) The distance between personnel doors shall be no more than 300 feet in seam heights below 48 inches and 600 feet in seam heights 48 inches or higher.

(2) The location of all personnel doors in stoppings along escapeways shall be clearly marked so that the doors may be easily identified by anyone traveling in the escapeway and in the entries on either side of the doors.

(3) When not in use, personnel doors shall be closed.

(4) An airlock shall be established where the air pressure differential between air courses creates a static force exceeding 125 pounds on closed personnel doors along escapeways.

(d) Doors, other than personnel doors, constructed after November 15, 1992, that are used in lieu of permanent stoppings or to control ventilation within an air course shall be:

(1) Made of noncombustible material or coated on all accessible surfaces with flame-retardant materials 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 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/ go federal register/

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*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) Of sufficient strength to serve their intended purpose of maintaining separation and permitting travel between or within air courses or entries.

(3) Installed in pairs to form an airlock. When an airlock is used, one side of the airlock shall remain closed. When not in use, both sides shall be closed.

(e)(1)(i) Except as provided in paragraphs (e)(2), (e)(3) and (e)(4) of this section all overcasts, undercasts, shaft partitions, permanent stoppings, and regulators, installed after June 10, 1996, shall be constructed in a traditionally accepted method and of materials that have been demonstrated to perform adequately or in a method and of materials that have been tested and shown to have a minimum strength equal to or greater than the traditionally accepted in-mine controls. Tests may be ASTM E72-80, performed under Methods of Conducting "Standard Strength Tests of Panels for Building Construction" (Section 12-Transverse Load—Specimen Vertical, load, only), or the operator may conduct comparative in-mine tests. In-mine tests shall be designed to demonstrate the comparative strength of the proposed construction and a traditionally accepted in-mine control. The publication ASTM E72-80, "Standard Methods of

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Conducting Strength Tests of Panels for Building Construction" 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/ go federal register/

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(ii) All overcasts, undercasts, shaft partitions, permanent stoppings, and regulators, installed after November 15, 1992, shall be constructed of noncombustible material. Materials that are suitable for the construction of overcasts, undercasts, shaft partitions, permanent stoppings, and regulators include concrete, concrete block, brick, cinder block, tile, or steel. No ventilation controls installed after November 15, 1992, shall be constructed of aluminum.

(2) In anthracite mines, permanent stoppings may be constructed of overlapping layers of hardwood mine boards, if the stoppings are a minimum 2 inches thick.

(3) When timbers are used to create permanent stoppings in heaving or caving areas, the stoppings shall be coated on all accessible surfaces with a flameretardant material having a flamespread 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-

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(4) In anthracite mines, doors and regulators may be constructed of overlapping layers of hardwood boards, if the doors, door frames, and regulators are a minimum 2 inches thick.

(f) When sealants are applied to ventilation controls, the sealant shall have a flame-spread index of 25 or less 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 http://www.archives.gov/ go to: federal register/

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(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; 73 FR 80612, Dec. 31, 2008]

#### §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 workedout areas into a return air course or to