

(d)(1) When ventilation is restored—

(i) No one other than designated certified examiners shall enter any underground area of the mine until an examination is conducted as described in §75.360(b) through (e) and the area has been determined to be safe. Designated certified examiners shall enter the underground area of the mine from which miners have been withdrawn only after the fan has operated for at least 15 minutes unless a longer period of time is specified in the approved ventilation plan.

(ii) Underground power circuits shall not be energized and nonpermissible mechanized equipment shall not be started or operated in an area until an examination is conducted as described in §75.360(b) through (e) and the area has been determined to be safe, except that designated certified examiners may use nonpermissible transportation equipment in intake airways to facilitate the making of the required examination.

(2) If ventilation is restored to the mine before miners reach the surface, the miners may return to underground working areas only after an examination of the areas is made by a certified person and the areas are determined to be safe.

(e) Any atmospheric monitoring system operated during fan stoppages shall be intrinsically safe.

(f) Any electrical refuge alternative components exposed to the mine atmosphere shall be approved as intrinsically safe for use during fan stoppages. Any electrical refuge alternative components located inside the refuge alternative shall be either approved as intrinsically safe or approved as permissible for use during fan stoppages.

[61 FR 9829, Mar. 11, 1996, as amended at 73 FR 80697, Dec. 31, 2008]

§ 75.320 Air quality detectors and measurement devices.

(a) Tests for methane shall be made by a qualified person with MSHA approved detectors that are maintained in permissible and proper operating condition and calibrated with a known methane-air mixture at least once every 31 days.

(b) Tests for oxygen deficiency shall be made by a qualified person with

MSHA approved oxygen detectors that are maintained in permissible and proper operating condition and that can detect 19.5 percent oxygen with an accuracy of ±0.5 percent. The oxygen detectors shall be calibrated at the start of each shift that the detectors will be used.

(c) Handheld devices that contain electrical components and that are used for measuring air velocity, carbon monoxide, oxides of nitrogen, and other gases shall be approved and maintained in permissible and proper operating condition.

(d) An oxygen detector approved by MSHA shall be used to make tests for oxygen deficiency required by the regulations in this part. Permissible flame safety lamps may only be used as a supplementary testing device.

(e) Maintenance of instruments required by paragraphs (a) through (d) of this section shall be done by persons trained in such maintenance.

§ 75.321 Air quality.

(a)(1) The air in areas where persons work or travel, except as specified in paragraph (a)(2) of this section, shall contain at least 19.5 percent oxygen and not more than 0.5 percent carbon dioxide, and the volume and velocity of the air current in these areas shall be sufficient to dilute, render harmless, and carry away flammable, explosive, noxious, and harmful gases, dusts, smoke, and fumes.

(2) The air in areas of bleeder entries and worked-out areas where persons work or travel shall contain at least 19.5 percent oxygen, and carbon dioxide levels shall not exceed 0.5 percent time weighted average and 3.0 percent short term exposure limit.

(b) Notwithstanding the provisions of §75.322, for the purpose of preventing explosions from gases other than methane, the following gases shall not be permitted to accumulate in excess of the concentrations listed below:

- (1) Carbon monoxide (CO)—2.5 percent
- (2) Hydrogen (H₂)—.80 percent
- (3) Hydrogen sulfide (H₂ S)—.80 percent
- (4) Acetylene (C₂ H₂)—.40 percent
- (5) Propane (C₃ H₈)—.40 percent

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(6) MAPP (methyl-acetylene-propylene-propodiene)—.30 percent

§ 75.322 Harmful quantities of noxious gases.

Concentrations of noxious or poisonous gases, other than carbon dioxide, shall not exceed the threshold limit values (TLV) as specified and applied by the American Conference of Governmental Industrial Hygienists in “Threshold Limit Values for Substance in Workroom Air” (1972). Detectors or laboratory analysis of mine air samples shall be used to determine the concentrations of harmful, noxious, or poisonous gases. This incorporation by reference has been approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies are available from the Mine Safety and Health Administration, Department of Labor, 1100 Wilson Blvd., Room 2424, Arlington, Virginia 22209–3939 and at every MSHA Coal Mine Safety and Health district office. The material is available for examination at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

[61 FR 26442, May 28, 1996, as amended at 67 FR 38386, June 4, 2002; 71 FR 16668, Apr. 3, 2006]

§ 75.323 Actions for excessive methane.

(a) *Location of tests.* Tests for methane concentrations under this section shall be made at least 12 inches from the roof, face, ribs, and floor.

(b) *Working places and intake air courses.* (1) When 1.0 percent or more methane is present in a working place or an intake air course, including an air course in which a belt conveyor is located, or in an area where mechanized mining equipment is being installed or removed—

(i) Except for intrinsically safe atmospheric monitoring systems (AMS), electrically powered equipment in the affected area shall be deenergized, and other mechanized equipment shall be shut off;

(ii) Changes or adjustments shall be made at once to the ventilation system to reduce the concentration of methane to less than 1.0 percent; and

(iii) No other work shall be permitted in the affected area until the methane concentration is less than 1.0 percent.

(2) When 1.5 percent or more methane is present in a working place or an intake air course, including an air course in which a belt conveyor is located, or in an area where mechanized mining equipment is being installed or removed—

(i) Everyone except those persons referred to in §104(c) of the Act shall be withdrawn from the affected area; and

(ii) Except for intrinsically safe AMS, electrically powered equipment in the affected area shall be disconnected at the power source.

(c) *Return air split.* (1) When 1.0 percent or more methane is present in a return air split between the last working place on a working section and where that split of air meets another split of air, or the location at which the split is used to ventilate seals or worked-out areas changes or adjustments shall be made at once to the ventilation system to reduce the concentration of methane in the return air to less than 1.0 percent.

(2) When 1.5 percent or more methane is present in a return air split between the last working place on a working section and where that split of air meets another split of air, or the location where the split is used to ventilate seals or worked-out areas—

(i) Everyone except those persons referred to in §104(c) of the Act shall be withdrawn from the affected area;

(ii) Other than intrinsically safe AMS, equipment in the affected area shall be deenergized, electric power shall be disconnected at the power source, and other mechanized equipment shall be shut off; and

(iii) No other work shall be permitted in the affected area until the methane concentration in the return air is less than 1.0 percent.

(d) *Return air split alternative.* (1) The provisions of this paragraph apply if—

(i) The quantity of air in the split ventilating the active workings is at least 27,000 cubic feet per minute in the