

**§ 75.350**

**30 CFR Ch. I (7-1-00 Edition)**

structure or area when either of the following occurs:

(i) The temperature in the non-combustible structure or area reaches 165 °F.

(ii) The carbon monoxide concentration reaches 10 parts per million above the ambient level for the area, or the optical density of smoke reaches 0.022 per meter. At least once every 31 days, sensors installed to monitor for carbon monoxide shall be calibrated with a known concentration of carbon monoxide and air sufficient to activate the closing door, and each smoke sensor shall be tested to determine that it functions correctly.

(b) Compressors, except those exempted in paragraph (a), shall be equipped with a heat activated fire suppression system meeting the requirements of 75.1107-3 through 75.1107-16.

(c) Two portable fire extinguishers or one extinguisher having at least twice the minimum capacity specified for a portable fire extinguisher in § 75.1100-1(e) shall be provided for each compressor.

(d) Notwithstanding the requirements of § 75.1107-4, upon activation of any fire suppression system used under paragraph (b) of this section, the compressor shall be automatically deenergized or automatically shut off.

[61 FR 9829, Mar. 11, 1996, as amended at 61 FR 55527, Oct. 25, 1996]

**§ 75.350 Air courses and belt haulage entries.**

In any coal mine opened after March 30, 1970, the entries used as intake and return air courses shall be separated from belt haulage entries, and each operator of such mine shall limit the velocity of the air coursed through belt haulage entries to the amount necessary to provide an adequate supply of oxygen in such entries, and to insure that the air therein shall contain less than 1.0 volume per centum of methane, and such air shall not be used to ventilate active working places. Whenever an authorized representative of the Secretary finds, in the case of any coal mine opened on or prior to March 30, 1970, that has been developed with more than two entries, that the conditions in the entries, other than belt haulage entries, are such as to permit

adequately the coursing of intake or return air through such entries:

(a) The belt haulage entries shall not be used to ventilate, unless such entries are necessary to ventilate, active working places, and

(b) When the belt haulage entries are not necessary to ventilate the active working places, the operator of such mine shall limit the velocity of the air coursed through the belt haulage entries to the amount necessary to provide an adequate supply of oxygen in such entries, and to assure that air therein shall contain less than 1.0 volume per centum of methane.

**§ 75.351 Atmospheric monitoring system (AMS).**

(a) *Minimum requirements.* An AMS shall consist of sensors to monitor the mine atmosphere and instruments at a surface location designated by the operator to receive information from the monitoring sensors. Each AMS installed in accordance with §§ 75.323(d)(1)(ii), 75.340(a)(2) and 75.362(f) shall do the following:

(1) Monitor for circuit continuity and sensor function, and identify at the designated surface location any activated or malfunctioning sensor.

(2) Signal a designated surface location at the mine when any interruption of circuit continuity occurs or any sensor malfunctions.

(3) Signal affected working sections and the designated surface location when—

(i) The carbon monoxide concentration at any carbon monoxide sensor reaches 5 parts per million above the established ambient level for that area; or

(ii) The methane concentration at any methane monitoring station exceeds the maximum allowable concentration as specified for that location in § 75.323.

(4) Activate alarms at a designated surface location and affected working sections when the carbon monoxide concentration at any carbon monoxide sensor reaches 10 parts per million above the established ambient level for the area or when the optical density of smoke at any smoke sensor reaches 0.05 per meter.

(b) *Return splits.* (1) If used to monitor return air splits under §75.362(f), AMS sensors shall monitor the mine atmosphere for percentage of methane in each return split of air from each working section between the last working place, or longwall or shortwall face, ventilated by that air split and the junction of that return air split with another air split, seal, or worked-out area. If auxiliary fans and tubing are used, the sensor also shall be located outby the auxiliary fan discharge.

(2) If used to monitor air splits under §75.323(d)(1)(ii), AMS sensors shall monitor the mine atmosphere at the following locations:

(i) In the return air course opposite the section loading point or, if auxiliary fans and tubing are used, in the return air course outby the auxiliary fans and a point opposite the section loading point.

(ii) Immediately inby the location where the split of air meets another split of air, or inby the location where the split of air is used to ventilate seals or worked-out areas.

(c) *Electrical installations.* If used to monitor the intake air ventilating underground transformer stations, battery charging stations, substations, rectifiers, or water pumps under §75.340(a)(2), at least one sensor shall be installed to monitor the mine atmosphere for carbon monoxide or smoke at least 50 feet and no more than 100 feet downstream in the direction of air flow.

(d) *Signals and alarms.* (1) A person designated by the operator shall be at a surface location where the signals and alarms from the AMS can always be seen or heard while anyone is underground. This person shall have access to two-way communication with working sections and with other identifiable duty stations underground. A mine map showing the underground monitoring system shall be posted at the surface location.

(2) If a signal from any AMS sensor is activated, the monitor producing the signal shall be identified, an examination shall be made to determine the cause of the activation, and appropriate action shall be taken.

(e) *Sensors.* (1) Each carbon monoxide sensor shall be capable of detecting

carbon monoxide in air at a level of  $\pm 1$  part per million throughout the operating range.

(2) Each methane sensor shall be capable of detecting 1.0 percent methane in air with an accuracy of  $\pm 0.2$  percent methane.

(3) Each smoke sensor shall be capable of detecting the optical density of smoke with an accuracy of  $\pm 0.005$  per meter.

(f) *Testing and calibration.* At least once every 31 days—

(1) Each carbon monoxide sensor shall be calibrated with a known concentration of carbon monoxide and air sufficient to activate an alarm;

(2) Each smoke sensor shall be functionally tested;

(3) Each methane sensor shall be calibrated with a known methane-air mixture; and

(4) Each oxygen sensor shall be calibrated with air having a known oxygen concentration.

(g) *Intrinsic Safety.* Components of AMS installed in areas where permissible equipment is required shall be intrinsically safe.

(h) *Recordkeeping.* If a signal device or alarm is activated, a record shall be made of the date, time, type of sensor, and the reason for its activation. Also the maximum concentration detected at the sensor producing the signal shall be recorded.

(i) *Retention period.* Records shall be retained for at least 1 year at a surface location at the mine and made available for inspection by authorized representatives of the Secretary and representatives of miners.

**§ 75.352 Return air courses.**

Entries used as return air courses shall be separated from belt haulage entries by permanent ventilation controls.

**§ 75.360 Preshift examination at fixed intervals.**

(a)(1) Except as provided in paragraph (a)(2) of this section, a certified person designated by the operator must make a preshift examination within 3 hours preceding the beginning of any 8-hour interval during which any person is scheduled to work or travel underground. No person other than certified