

§ 57.22227 Approved testing devices (I-A, I-B, I-C, II-A, II-B, III, IV, V-A, and V-B mines).

(a) Methane monitoring devices and portable, battery-powered, self-contained devices used for measuring methane, other gases, and contaminants in mine air shall be approved by MSHA under the applicable requirements of 30 CFR parts 18, 21, 22, 23, 27, and 29. Such devices shall be maintained in accordance with manufacturers' instructions, or an equivalent maintenance and calibration procedure.

(b)(1) Flame safety lamps shall not be used to test for methane except as supplementary devices.

(2) Flame safety lamps shall not be used in Subcategory I-C mines.

(c)(1) If electrically powered, remote sensing devices are used, that portion of the instrument located in return air or other places where combustible gases may be present shall be approved by MSHA under the applicable requirements of 30 CFR parts 18, 22, 23, 27, and 29.

(2) If air samples are delivered to remote analytical devices through sampling tubes, such tubes shall be provided with in-line flame arrestors. Pumping equipment and analytical instruments shall be located in intake air.

§ 57.22228 Preshift examination (I-A, I-C, II-A, III, and V-A mines).

(a) Preshift examinations shall be conducted within three hours prior to the start of the shift for which the examination is being made.

(b) Prior to the beginning of a shift following an idle shift, a competent person shall test the mine atmosphere for methane at all work places before persons other than examiners enter the mine.

(c) When one shift immediately follows another, a competent person shall test the mine atmosphere at each active working face for methane before work is started on that shift.

(d) A competent person shall test the mine atmosphere at each face blasted before work is started.

(e) Except in Subcategory I-C or Category III mines, vehicles used for transportation when examining the

mine shall be approved by MSHA under the applicable requirements of 30 CFR parts 18 through 36.

[52 FR 24941, July 1, 1987, as amended at 53 FR 9615, Mar. 24, 1988]

§ 57.22229 Weekly testing (I-A, III, and V-A mines).

(a) The mine atmosphere shall be tested for methane and carbon monoxide at least once every seven days by a competent person or an atmospheric monitoring system, or a combination of the two. Such testing shall be done at the following locations:

(1) The return of each split where it enters the main return;

(2) Adjacent to retreat areas, if accessible;

(3) At least one seal of each sealed area, if accessible;

(4) Main returns;

(5) At least one entry of each intake and return;

(6) Idle workings; and

(7) Return air from unsealed abandoned workings.

(b) The volume of air (velocity in Subcategory I-A mines) shall be measured at least once every seven days by a competent person. Such measurement shall be done at the following locations:

(1) Entering main intakes;

(2) Leaving main returns;

(3) Entering each main split;

(4) Returning from each main split; and

(5) In the last open crosscuts or other ventilation openings nearest the active faces where the air enters the return.

(c) Where such examinations disclose hazardous conditions, affected persons shall be informed and corrective action shall be taken.

(d) Certification of examinations shall be made by signature and date. Certifications shall be retained for at least one year and made available to authorized representatives of the Secretary.

[52 FR 24941, July 1, 1987, as amended at 52 FR 41397, Oct. 27, 1987]

§ 57.22230 Weekly testing (II-A mines).

(a) The mine atmosphere shall be tested for methane at least once every seven days by a competent person or an atmospheric monitoring system, or a

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combination of the two. Such testing shall be done at the following locations:

- (1) Active mining faces and benches;
- (2) Main returns;
- (3) Returns from idle workings;
- (4) Returns from abandoned workings; and
- (5) Seals.

(b) Where such examinations disclose hazardous conditions, affected persons shall be informed and corrective action shall be taken.

(c) Certification of examinations shall be made by signature and date. Certifications shall be kept for at least one year and made available to authorized representatives of the Secretary.

[52 FR 24941, July 1, 1987, as amended at 52 FR 41397, Oct. 27, 1987; 60 FR 33723, June 29, 1995]

§ 57.22231 Actions at 0.25 percent methane (I-B, II-B, V-B, and VI mines).

If methane reaches 0.25 percent in the mine atmosphere, changes shall be made to improve ventilation, and MSHA shall be notified immediately.

§ 57.22232 Actions at 0.5 percent methane (I-B, II-A, II-B, IV, V-B, and VI mines).

If methane reaches 0.5 percent in the mine atmosphere, ventilation changes shall be made to reduce the level of methane. Until methane is reduced to less than 0.5 percent, electrical power shall be deenergized in affected areas, except power to monitoring equipment determined by MSHA to be intrinsically safe under 30 CFR part 18. Diesel equipment shall be shut off or immediately removed from the area and no other work shall be permitted in affected areas.

[52 FR 24941, July 1, 1987; 52 FR 27903, July 24, 1987]

§ 57.22233 Actions at 0.5 percent methane (I-C mines).

If methane reaches 0.5 percent in the mine atmosphere, ventilation changes shall be made to reduce the level of methane. Until methane is reduced to less than 0.5 percent, no other work shall be permitted in affected areas.

[52 FR 24941, July 1, 1987; 52 FR 27903, July 24, 1987]

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§ 57.22234 Actions at 1.0 percent methane (I-A, I-B, III, V-A, and V-B mines).

(a) If methane reaches 1.0 percent in the mine atmosphere, ventilation changes shall be made to reduce the methane. Until such changes are achieved—

(1) All persons other than competent persons necessary to make the ventilation changes shall be withdrawn from affected areas;

(2) Electrical power shall be deenergized in affected areas, except power to monitoring equipment determined by MSHA to be intrinsically safe under 30 CFR part 18; and

(3) Diesel equipment shall be shut off or immediately removed from the area.

(b) If methane reaches 1.0 percent at a main exhaust fan, electrical power underground shall be deenergized, except power to monitoring equipment determined by MSHA to be intrinsically safe under 30 CFR part 18, and all persons shall be withdrawn from the mine.

(c) If methane reaches 1.0 percent at a work place and there has been a failure of the main ventilation system, all persons shall be withdrawn from the mine.

[52 FR 24941, July 1, 1987, as amended at 53 FR 9615, Mar. 24, 1988]

§ 57.22235 Actions at 1.0 percent methane (I-C, II-A, II-B, and IV mines).

(a) If methane reaches 1.0 percent in the mine atmosphere, all persons other than competent persons necessary to make ventilation changes shall be withdrawn from affected areas until methane is reduced to less than 0.5 percent.

(b) If methane reaches 1.0 percent at a work place and there has been a failure of the main ventilation system, all persons shall be withdrawn from the mine.

§ 57.22236 Actions at 1.0 percent methane (VI mines).

If methane reaches 1.0 percent in the mine atmosphere, all persons other than competent persons necessary to make ventilation changes shall be withdrawn from affected areas until methane is reduced to less than 0.5 percent.