WEST VIRGINIA CODE: §22A-2-43

§22A-2-43. Actions to detect and respond to excess methane.

The following actions are required to detect and respond to excess methane. Subsections (a) through (f) of this section pertain to methane testing with hand-held devices:

(a) Hand-held testing required. -- In any mine, no electrical equipment or permissible diesel-powered equipment may be brought in by the last open crosscut until a qualified person tests for methane. If one percent or more methane is present, the equipment may not be taken into the area until the methane concentration is reduced to less than one percent. Thereafter, subsequent methane examinations shall be made at least every twenty minutes while any electrical or diesel-powered equipment is present and energized.

(b) Location of tests. –- Tests for methane concentrations under this section shall be made at least twelve inches from the roof, face, ribs and floor.

(c) Working places and intake air courses. --

(1) When one 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:

(A) Except intrinsically safe atmospheric monitoring systems (AMS), electrically powered equipment in the affected area shall be de-energized and other mechanized equipment shall be shut off.

(B) Changes or adjustments shall be made at once to the ventilation system to reduce the concentration of methane to less than one percent.

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

(2) When one and five-tenths 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: (A) Except for the mine foreman, assistant mine foreman or individuals authorized by the mine foreman or assistant mine foreman, all individuals shall be withdrawn from the affected area. If a federal or state mine inspector is present in the area of the mine where one and five-tenths percent or more of methane is detected, the federal or state mine inspector and the miners' representative, if any, may remain in the area with the mine foreman, assistant mine foreman or other individuals authorized by the mine foreman or assistant mine foreman.

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

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(d) Return air split.--

(1) When one 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 one percent.

(2) When one and five-tenths 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, except for the mine foreman, assistant mine foreman or individuals authorized by the mine or assistant mine foreman, all individuals shall be withdrawn from the affected area. If a federal or state mine inspector is present in the area of the mine where one and five-tenths percent or more of methane is detected, the federal or state mine inspector and the miners' representative, if any, may remain in the area with the mine foreman, assistant mine foreman or other individuals authorized by the mine foreman or assistant mine foreman.

(3) Other than intrinsically safe AMS, equipment in the affected area shall be de-energized, electric power shall be disconnected at the power source and other mechanized equipment shall be shut off.

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

(e) Return air split alternative. --

(1) The provisions of this paragraph may apply if:

(A) The quantity of air in the split ventilating the active workings is at least twenty-seven thousand cubic feet per minute in the last open crosscut or the quantity specified in the approved ventilation plan, whichever is greater.

(B) The methane content of the air in the split is continuously monitored during mining operations by an AMS that gives a visual and audible signal on the working section when the methane in the return air reaches one and five-tenths percent and the methane content is monitored as specified in the approved ventilation plan.

(C) Rock dust is continuously applied with a mechanical duster to the return air course during coal production at a location in the air course immediately outby the most inby monitoring point.

(2) When one and five-tenths percent or more methane is present in a return air split between a point in the return opposite the section loading point and where that split of air meets another split of air or where the split of air is used to ventilate seals or worked-out areas:

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(A) Changes or adjustments shall be made at once to the ventilation system to reduce the concentration of methane in the return air below one and five-tenths percent.

(B) Except for the mine foreman, assistant mine foreman or individuals authorized by the mine foreman or assistant mine foreman, all individuals shall be withdrawn from the affected area. If a federal or state mine inspector is present in the area of the mine where one and five-tenths percent or more of methane is detected, the federal or state mine inspector and the miners' representative, if any, may remain in the area with the mine foreman, assistant mine foreman or other individuals authorized by the mine foreman or assistant mine foreman.

(C) Except for intrinsically safe AMS, equipment in the affected area shall be de-energized, electric power shall be disconnected at the power source and other mechanized equipment shall be shut off.

(D) No other work shall be permitted in the affected area until the methane concentration in the return air is less than one and five-tenths percent.

(f) Bleeders and other return air courses.--

The concentration of methane in a bleeder split of air immediately before the air in the split joins another split of air, or in a return air course other than as described in subsections (d) and (e) of this section, shall not exceed two percent.

(g) Machine-mounted methane monitors. --

(1) Approved methane monitors shall be installed and maintained on all face cutting machines, continuous miners, longwall face equipment and other mechanized equipment used to extract coal or load coal within the working place.

(2) The sensing device for methane monitors on longwall shearing machines shall be installed at the return air end of the longwall face. An additional sensing device also shall be installed on the longwall shearing machine, downwind and as close to the cutting head as practicable. An alternative location or locations for the sensing device required on the longwall shearing machine may be approved in the ventilation plan.

(3) The sensing devices of methane monitors shall be installed as close to the working face as practicable.

(4) Methane monitors shall be maintained in permissible and proper operating condition and shall be calibrated with a known air-methane mixture at least once every fifteen days and a record of the calibration shall be recorded with ink or indelible pencil by the person performing the calibration in a book prescribed by the director and maintained on the surface. Calibration records shall be retained for inspection for at least one year from the date of the test. To assure that methane monitors are properly maintained and calibrated, the operator shall use persons properly trained in the maintenance, calibration and

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permissibility of methane monitors to calibrate and maintain the devices.

(h) Automatic deenergization of electrical equipment or shut down of diesel equipment. --

When the methane concentration at any machine-mounted methane monitor reaches one percent, the monitor shall give a warning signal. The warning signal device of the methane monitor shall be visible to a person operating the equipment on which the monitor is mounted. The methane monitor shall automatically deenergize electric equipment or shut down diesel-powered equipment on which it is mounted when:

(1) The methane concentration at any machine-mounted methane monitor reaches one and five-tenths percent; or

(2) The monitor is not operating properly.

The machine may not again be started in that place until the methane concentration measured by the methane monitor is less than one percent.

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