

DIVISION OF MINES GUIDELINES FOR APPLICATION OF REGULATORY STANDARDS MANUAL	
COAL MINE SAFETY ACT	CHAPTER 14.3
ARTICLE 14	VENTILATION, MINE GASES, AND OTHER HAZARDOUS CONDITIONS
Issue Date: 4/10/00 Revised Date: 4/15/04	Page 1 of 2

Section 45.1-161.222.

Actions for Excessive Methane

Methane levels of one percent or greater when detected require that work cease, power to the face equipment be cut off at the equipment and production ceases in the affected area until ventilation is improved. Only work to improve ventilation under the direction of certified persons is permitted in the affected area.

When methane bleeders are encountered in the floor, roof or coal bed, liberation rates can be high for varying periods of time. So long as adequate ventilation is available and directed to effectively dilute, render harmless and carry away the methane, the issue of accumulation of methane does not exist. However, when the location or volume of the liberating bleeder is such that available ventilation does not control the bleeder and one percent or greater methane is detected, then methane has accumulated in active workings of the mine.

An imminent danger is the existence of any condition or practice in a mine which could reasonably be expected to cause death or serious personal injury before such condition or practice can be abated. Assessing an imminent danger is not predicated on the percentage of probability of occurrence. Rather, it is based on the seriousness of the event which could result if the condition or practice were allowed to continue. An imminent danger condition exists when methane accumulations are in the explosive range of five to fifteen percent. The presence of an explosive mixture of methane at any location in a coal mine is an imminent danger condition that warrants immediate corrective action.

It is the responsibility of the mine foreman to give attention to the removal of all dangers reported to him by any person working in the mine as stipulated by Section 45.1-151.214. If it is impracticable to remove the danger at once, he shall notify every person whose safety is menaced thereby, to remain away from the portion of the mine where a dangerous condition exists. When an imminent danger could effect the entire mine, all personnel must be withdrawn to the surface immediately.

The affected area of withdrawal of miners must be determined based on the potential risk factors associated with the dangerous condition. In the case of an imminent danger related to an explosive concentration of methane, the location in the mine where the high

concentration of methane is detected, the ability to promptly correct the problem, the past experience with similar problems in the affected mine or area of the mine, and other existing characteristics of the particular incident must be considered by the mine foreman and the mine inspector in determining the affected area for withdrawal of personnel.

Affected Area – Double Split Face Ventilation

On a working section where a methane level of 1.5% is found in one split of a double split face ventilation the affected area begins at the point where the intake air splits and extends to the point where the section return meets another return split.

Affected Area – Two Percent Standard

A concentration of methane which exceeds 2% 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 an immediate section return, is a violation of the MSA. Failure to correct the condition within a reasonable time will result in an order of closure for the affected area.

When another split of air, other than bleeder or gob air, is directed into the bleeder entries, then the bleeder entries become, in effect, return entries for their entire length. In this case the 2% criteria applies to the check points where gob air is regulated into the bleeder entries and a maximum of 2% methane is allowed for the entire length of the bleeder entries (see Example 1). If the other split of air is first coursed into the gob, then this split becomes gob air and the 2% criteria does not apply to the bleeder check points or to the bleeder entries (*Example 2*). The 2% then only applies where the bleeder split joins another split of air. *The air returning off the section would be considered immediate return to the point it enters the gob. The bleeder air would be treated just as it is normally to the point it meets another split.*

The cessation of coal production will be necessary at inby working places where activities affect an area in violation of the 2% standard. However, necessary and appropriate maintenance work on a longwall or miner unit inby the affected area may be performed during this idled time while corrective actions are being performed. Examinations for methane and all other applicable standards apply while maintenance work is being performed on the affected idled section(s).

Test for Methane

A test for methane concentrations under this section shall be made by certified or qualified persons trained in the use of an approved, properly maintained and calibrated detecting device. Tests shall be made at least twelve inches from the roof, face, ribs, and floor.

Use of the machine mounted methane monitor on the continuous miner, longwall, or other face equipment is not to be considered as a substitute for tests required by a qualified or certified person.