

*Pennsylvania Bureau of Mine Safety Equipment Guidelines for use of a methane monitor and circuit breaker to interrupt power to permissible pumps in a return air course*

Prepared by: The BMS Equipment Task Force

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Revision: final

**Purpose:**

This document specifies the requirements to use a methane monitor and circuit breaker to interrupt power to a permissible electrically powered pump in a return air course.

**Basic Conditions:**

- MSHA and Pennsylvania approved Bituminous Face Equipment (BFE) permissible pumps must be used.
- Pumps shall be maintained permissible according to their approval, if the weekly electrical permissibility checks are not completed, then the pump shall be suitably locked and tagged "out-of-service".
- A mine specific plan providing details of the system to be used to monitor methane and to trip the circuit supplying power to the permissible pump-must be submitted to, and approved by, the Department prior to the system being placed into operation.
- Once approved, the system may be installed on pumps in a return air course; the locations shall be shown on the Mine's electrical map.
- All pumps used in a return which are to be energized during the oncoming shift are to be examined according to Section 218 of Act 55, Safety Laws of Pennsylvania for Underground Bituminous Coal Mines.
- Examination date board shall be located at the pump location in the return.
- Where pump cables must go through stoppings, additional cable protection is required.
  
- Cable repairs shall NOT be in the portion of cable in the return entry.
- Cable shall be hung in its entire length.
- Cable shall comply with cable requirements in Section 316 Act 55, Safety Laws of Pennsylvania for Underground Bituminous Coal Mines.
- All pump locations in return must include a point methane sensor, that will trip the source breaker in the non-return air course, when methane levels are reached in the return, sensor setpoints conformance to Section 230(d)(3)(ii) Act 55, Safety Laws of Pennsylvania for Underground Bituminous Coal Mines.
- Calibrate the CH<sub>4</sub> sensor according to manufacturer's recommendations not to exceed a 31-day interval: Reference Section 316(i)1 Act 55, Safety Laws of Pennsylvania for Underground Bituminous Coal Mines.

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*Submitted by the Task Force [Established by authority of ACT 55 Section 350 (d)]*

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