

**PROPOSED RULEMAKING
BOARD OF COAL MINE SAFETY
25 PA. CODE CH. 208
SENSITIVE GROUND FAULT**

The Board of Coal Mine Safety (Board) amends Chapter 208 (relating to underground coal mine safety) to read as set forth in Annex A. The proposed rulemaking adds a provision to require operators to equip certain circuits with sensitive ground fault protection, as well as related definitions. This protection will enhance miner safety with respect to electric cables.

This proposed rulemaking was adopted by the Board at its meeting of _____, 2016.

A. Effective Date

This proposed rulemaking will be effective upon final-form publication in the *Pennsylvania Bulletin*.

B. Contact Persons

For further information, contact Craig Carson, Director, Bureau of Mine Safety, 131 Broadview Road, New Stanton, PA 15672, (724) 404-3154, or by e-mail to cocarson@pa.gov; or Joseph Iole, Assistant Counsel, Bureau of Regulatory Counsel, Rachel Carson State Office Building, P. O. Box 8464, Harrisburg, PA 17105-8464, (717) 787-9376, jiole@pa.gov.

C. Statutory Authority

Sections 106 and 106.1 of the Bituminous Coal Mine Safety Act (BCMSA) (52 P. S. §§ 690-106 and 690-106.1) authorize the adoption of regulations to implement the BCMSA. The BCMSA further authorizes the Board to promulgate necessary or appropriate regulations to implement the requirements of the BCMSA and to protect the health, safety and welfare of miners and other individuals in and about mines.

D. Background and Purpose

On July 7, 2008, the General Assembly enacted the BCMSA, which was the first significant update of the Commonwealth's underground bituminous coal mine safety laws since 1961. See 52 P. S. § 690-103(a). The BCMSA provides broad authority to promulgate regulations that are necessary or appropriate to implement the BCMSA and to protect the health, safety and welfare of miners and other individuals in and about mines. See 52 P. S. § 690-106.1(a). Under section 106 of the BCMSA, the Board consists of three members representing mine workers, three members representing underground bituminous coal mine operators and the Secretary of the Department of Environmental Protection (Department) who serves as the Board's chairperson.

This proposed rulemaking adds a provision to Chapter 208 to enhance cable safety. Specifically, Section 334(c) of the BCMSA (52 P.S. § 690-334(c)) directed the mining industry to initiate

studies into possible means of enhancing safety of underground cables, including through, among other things, “more sensitive ground fault limiting and detection.” The statute further required both laboratory and underground testing of such systems, and that the Board will take action on the industry’s reports and recommendations.

To that end, the Pennsylvania Coal Alliance (PCA) formed a committee with representatives from several coal mine operators to convene, manage the studies, and ultimately produce a report and recommendations to the Board. The committee produced a report in March of 2012, titled “Pennsylvania Coal Association Bituminous Coal Mine Safety Act Section 334 Industry Studies Final Report” (Final Report). This proposed rulemaking is the product of the Final Report, which was followed by extensive deliberations by the Board over the course of three years.

This proposed rulemaking enhances miner safety from electrocution by improving the sensitive ground fault mechanisms on certain electrical circuits powering machinery within the mines. This proposed rulemaking will require operators to ensure that certain new and rebuilt power centers are equipped with this more sensitive ground fault protection devices (these including sensing relays, limiting resistors, and interrupting devices) thus enhancing the safety of persons working with or around the electric cables supplying power to certain machinery.

This proposed rulemaking is more stringent than federal regulations, but is less stringent than recent federal best practice recommendations. The federal Mine Safety and Health Administration (MSHA) regulation at 30 CFR 75.901(a) requires a ground fault current limit (trip setting) of 25 Amperes or less, and a MSHA policy manual recommends that the device be adjusted to operate at not more than 50 percent of the current rating of the grounding resistor. However, a recent MSHA Safety Alert (published on February 4, 2015) recommended sensitive ground fault relays with instantaneous trip setting of 125 milli-amperes or less.

In light of the Final Report, which indicated that a setting of 125 milli-amperes would be too low to functionally operate equipment at the mine, but that 300 milli-amperes was more protective than the current regulatory requirement of 25 Amperes, the proposed rulemaking requires a trip setting of 300 milli-amperes or less nominally, except in the case of circuits powering equipment using variable speed drives, in which case, if nuisance tripping occurs at 300 milli-amperes, the operator may adjust the setting no greater than the lower value of 500 milli-amperes or one half of the neutral ground resistor’s current rating. These settings improve safety while maintaining mining operations.

There is a compelling public interest in ensuring that miners are safe in the workplace. Miners, their families, mining companies, and others will benefit from electrical safety in underground mines. As a result of this proposed rulemaking, the risk of workplace injuries and deaths related to these electric cables will decline. Adopting this regulation ensures that operations at underground bituminous coal mine sites are safely conducted and maintained.

E. Summary of Proposed Regulatory Requirements

§ 208.1. Definitions

This section adds definitions of the terms “crosscut”, “inby”, and “working section”, which are used in the proposed § 208.600. *Sensitive Ground Fault*, and a definition of the term “working face”, which is used in the proposed definition of “inby”.

§ 208.600. Sensitive Ground Fault

This section requires that operators utilize sensitive ground fault devices on circuits that operate three-phase electrically operated equipment operated on a working section inby the last open crosscut; specifies the settings of the sensitive ground fault devices powering various machines; and sets an implementation schedule for utilizing these devices on new, rebuilt, and existing power centers.

F. Benefits, Costs and Compliance

Benefits

The proposed rulemaking enhances cable safety by requiring on certain circuits a sensitive ground fault protective device. Sensitive ground fault protective devices improve cable safety by shutting off electrical power through the circuit when it detects that a current is flowing along an unintended path, thereby reducing the risk of bodily harm from electrocution.

Compliance costs

The proposed rulemaking will cost the nine operators approximately \$500,000.00 over five years. This cost reflects the purchase of new power centers equipped with the sensitive ground fault devices and the rebuilding of existing machines to include such devices.

Paperwork requirements

The proposed rulemaking does not generate additional paperwork.

G. Pollution Prevention

The Federal Pollution Prevention Act of 1990 (42 U.S.C.A. §§ 13101—13109) establishes a National policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally friendly materials, more efficient use of raw materials and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance. This proposed rulemaking has minimal impact on pollution prevention since it is focused on mine safety.

H. *Sunset Review*

The regulations will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulations effectively fulfill the goals for which they were intended.

I. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on DATE, the Department submitted a copy of this proposed rulemaking and a copy of a Regulatory Analysis Form to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the House and Senate Environmental Resources and Energy Committees. A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, IRRC may convey any comments, recommendations or objections to the proposed rulemaking within 30 days of the close of the public comment period. The comments, recommendations or objections must specify the regulatory review criteria in section 5.2 of the Regulatory Review Act (71 P.S. § 745.5b) which have not been met. The Regulatory Review Act specifies detailed procedures for review, prior to final publication of the rulemaking, by the Department, the General Assembly and the Governor.

J. *Public Comments*

Interested persons are invited to submit to the Board written comments, suggestions, support or objections regarding the proposed rulemaking. Comments, suggestions, support or objections must be received by the Board by DATE. In addition to the submission of comments, interested persons may also submit a summary of their comments to the Board. The summary may not exceed one page in length and must also be received by the Board by DATE. The one-page summary will be distributed to the Board and available publicly prior to the meeting when the final-form rulemaking will be considered.

Comments including the submission of a one-page summary of comments may be submitted to the Board online, by e-mail, by mail or express mail as follows.

Comments may be submitted to the Board by accessing eComment at <http://www.ahs.dep.pa.gov/eComment>.

Comments may be submitted to the Board by e-mail at RegComments@pa.gov. A subject heading of the proposed rulemaking and a return name and address must be included in each transmission.

If an acknowledgement of comments submitted online or by e-mail is not received by the sender within 2 working days, the comments should be retransmitted to the Board to ensure receipt. Comments submitted by facsimile will not be accepted.

Written comments should be mailed to the Board of Coal Mine Safety, P. O. Box 8477, Harrisburg, PA 17105-8477. Express mail should be sent to the Board of Coal Mine Safety, Rachel Carson State Office Building, 16th Floor, 400 Market Street, Harrisburg, PA 17101-2301.

Patrick McDonnell
Acting Chairman,
Board of Coal Mine Safety