
From: Chris R Hamilton [mailto:chamilton@wvcoal.com]
Sent: Monday, September 08, 2008 5:56 PM
To: zzMSHA-Standards - Comments to Fed Reg Group
Subject: RIN 1219-AB59.

Comments and Submittal of the West Virginia Coal Association to MSHA's Proposed Safety Standards regarding the Recommendations of the Technical Study Panel on the Utilization of Belt Air and the Composition and Fire Retardant Properties of Belt Materials in Underground Coal Mines. September 8, 2006.

The West Virginia Coal Association is a trade association comprised of coal producing companies that collectively account for nearly eighty percent (80%) of the states coal production.

Our membership also includes equipment manufacturers, a variety of mine vendors and supply companies, land companies, mine reclamation and explosive companies, mine maintenance and general service companies.

Attached please find the comments and submittal of the West Virginia Coal Association to MSHA's Proposed Safety Standards regarding the Recommendations of the Technical Study Panel on the Utilization of Belt Air and the Composition and Fire Retardant Properties of Belt Materials in Underground Coal Mines.

We also wholeheartedly embrace and support the comments previously made by Allen Dupree on behalf of Alpha Natural Resources at the public hearing held in Charleston on August 26 and the written comments submitted by Alpha Engineering Services, Inc. which are contained herein.

WVCA Comments:

Section 75.323 – Actions for excessive methane

Under the preamble to 75.323 on page 35035, it speaks to lowering the methane level to 0.5%. We feel the allowable limit for methane in the belt entry should remain at 1%. Operators should be required to take action when the methane level is 1%. Operators are allowed 0.8% on the intake, so why reduce it in the belt entry. There are other provisions to handle this. MSHA simply has not give strong enough reasons to lower the methane percentage. We feel the

methane level should be left as it is. There's no reason under the current law to deviate.

Section 75.333 (c) (4) – Ventilation controls

Under Section 75.333 (c) (4) operators should be allowed options such as reducing mandoor size, providing a flap or sliding door to reduce the static pressure below 125 pounds in lieu of installing an airlock.

There could be a substantial number of airlocks required to be installed along main ventilation and close to fans. Why is MSHA even using the 125 pound limit? It can be expensive and there are many doors that would have to be installed. Many doors are located in very remote locations. We feel this should be addressed on a plan basis.

Section 75.350(a)(2) – Belt air course ventilation

In the preamble on page 35036, Section 75.350(a)(2) states, "Where the District Manager approves such a plan, carbon monoxide sensor spacing would have to be reduced to no greater than 350 feet." We feel that 500 feet would be a more appropriate spacing for CO sensors if the velocity along the belt is less than 50 fpm. We're not sure how the 350 feet figure was justified. We also question how to interpret where the measurement point of 50 cfm is tested.

Section 75.351(q)(1) – Atmospheric monitoring systems

Section 75.351(q)(1) requires the AMS operator to receive much the same training as the responsible person. Why is the duplication necessary and why would this training be needed for personnel who monitor the AMS system when the mine is idle? We do not feel it is necessary for the AMS operator to travel underground every six months. Nothing requires the operator to be trained or certified as an underground miner and there is no explanation as to what the underground trip is to accomplish and it doubtful this would provide useful info if the operator is not an experienced underground miner. There is a lot of training for the AMS operator. The AMS operators may not be experienced as others in the mine when traveling through the mine. Should the AMS operator be certified? The responsible person is on site at all times. There are many situations where the AMS operator simply won't understand the situation around him. Who will develop the training program for the AMS operator? Will testing be required in the final regulation? In Section 11.03, MSHA tests and quizzes people on their jobs.

Section 75.351(q)(3) -- Atmospheric monitoring systems

Under Section 75.351(q)(3), why is the training record required to be maintained for 2 years when other record retention except for seals is only

required to be retained for 1 year? This section needs to be consistent with other training records.

Section 75.352(f) – Actions in response to AMS malfunction, alert, or alarm signals

Under Section 75.352(f), does this apply to all mines or only to those that use belt air to ventilate the face?

Section 75.1103-4(a)(1)(i) – Automatic fire sensor and warning device systems; installation; minimum requirements

Under Section 75.1103-4(a)(1)(i), one sensor should be allowed to monitor a belt exchange consisting of a drive a take-up and a tailpiece if all are in the same ventilation stream including a turn. Mining plans and conditions could require that there be more than 100 feet between the units. Additional sensors would be unnecessary duplication and would require additional maintenance and could be the source of false alarms.

Section 75.1103-4(a)(1)(iii) – Automatic fire sensor and warning device systems; installation; minimum requirements

Under Section 75.1103-4(a)(1)(iii), there is no guidance as to the length of the belt where ventilation is less than 50 fpm before sensors are required to be spaced 350feet. Items such as these should be addressed in the ventilation plan approval process.

Section 75.1103-4(a)(1)(iv) – Automatic fire sensor and warning device systems; installation; minimum requirements

Section 75.1103-4(a)(1)(iv) would require unnecessary sensors for little information return. This should be handled in the plan approval.

Section 75.1103-5(a)(2) – Automatic fire warning devices; actions and response

Section 75.1103-5(a)(2) of the proposed rule uses the term “assigned post of duty,” which is not defined and needs to be defined to eliminate conflicts in interpretation.

Section 75.1103(a)(2)(iii) – Automatic fire warning devices; actions and response

Section 75.1105(a)(2)(iii) in the preamble uses the term “at the manned surface location”. This needs clarification.

Section 75.1103-5(d) & (e) – Automatic fire warning devices; actions and response

Section 75.1103-5(d) & (e) both use the term “immediately” in regards to action that could take longer to accomplish than 15 minutes and could result in enforcement action. This needs to be taken into consideration for the final rule.

Section 75.1103-5(f)(1) – Automatic fire warning devices; actions and response

Section 75.1103-5(f)(1) would require the verbal notification of personnel in addition to the automatic warning by the system. Is duplication necessary?

Section 75.1103-5(f)(1) – Automatic fire warning devices; actions and response

Section 75.1103-5(f)(1) requires withdrawing affected personnel to a safe location immediately with the receipt of a system warning. This would be a problem with false alarms and currently is only done with an alarm with a warning being investigated.

Section 75.1103-8(a) – Automatic fire warning devices; actions and response

Section 75.1103-8(a) requires sensor and warning device systems to be examined each shift. The proposal states inspection and maintenance are to be done by qualified person. Is shift exam to be done by qualified person? Are belt examiners qualified? Both terms “examined” and “inspection” are used with no distinction.

Section 75.1731 – Maintenance of belt conveyors and belt conveyor entries

Section 75.1731 is a full of issues. Many terms are undefined and many requirement are very impractical. What does “damaged” mean? “Immediately repaired and replaced” may be practically impossible. Why does it have to be “immediately?” It is impossible to keep conveyor belts properly aligned all the time. Surely this was not the intent of this subsection. The term “noncombustible materials” can mean many items which have to bearing on safety. Rock dust would qualify as a “noncombustible material”, as well as a host of other items. Requiring “splicing of any approved conveyor belt” to maintain flame-resistant properties may be impossible at this time. When splicing materials which function properly are available, then this requirement could be feasible. Splices must be durable and they constitute only a fraction of the length of the conveyor belt.

September 8, 2008

Page 1 of 6

§ 75.333 Ventilation controls.

* * * * *

(c) * * *

(4) An airlock shall be established where the air pressure differential between air courses creates a static force exceeding 125 pounds on closed personnel doors along escapeways.

Pages 35035 and 35036 state: Section 75.333(c)(4)—Ventilation Controls Proposed § 75.333(c)(4) is a new provision that addresses Panel Recommendation 14

dealing with airlock doors. High pressure differentials on doors can lead to serious injuries to miners opening and closing these doors. Providing an airlock between entries provides a safe means for miners to travel between two air courses. An airlock consists of a pair of doors installed in ventilation controls between two air courses, which form a pressure equalizing chamber. A miner would open the first door, enter the airlock, and close the door. After equalizing the pressure, the miner can then open the second door and move into the adjacent entry. The Panel stated that personnel doors along escapeways should be installed to establish an airlock when the static force created by the pressure differential exceeds 125 pounds. MSHA agrees that there may be instances where the installation of an airlock is needed due to hazards associated with safely opening and closing personnel doors where high pressure differentials exist. The need for safe access is critical during a mine emergency evacuation when miners must move quickly to adjacent entries.

Proposed § 75.333(c)(4) would require an airlock be established where the air pressure differential between air courses creates a static force exceeding 125 pounds on closed personnel doors along escapeways. MSHA specifically solicits comments on other suitable pressures.

The Panel recommended a standard based upon the force on the personnel door of 125 pounds. This force on any specific door is dependent upon the pressure differential across the ventilation control, and the surface area of the personnel door. For the same pressure differential, the force required to open a personnel door increases proportionately with surface area. Mine operators may have alternatives to establishing airlocks, including reducing the size of a personnel door, providing a flap, or sliding door, which may reduce the static pressure to below 125 pounds. Reducing the size of a personnel door may lower the static pressure to below 125 pounds. In order to calculate the force exerted by a pressure differential, the pressure differential and door dimensions must first be determined. As reflected in the Panel's example, a 125 pound force limitation on a 3-foot by 4-foot door would be created by a pressure differential of 2.0 inches of water. A 3-foot by 4-foot personnel door has an area of 1728 square inches ($3' \times 4' = 12 \text{ square feet} \times 144 \text{ in}^2/\text{ft}^2 = 1728 \text{ square inches}$). For a force of 125 pounds, the distribution is 0.0725 pounds per square inch ($125 \text{ lb}/1728 \text{ in}^2 = 0.0725 \text{ psi}$). Using the conversion factor, $1 \text{ psi} = 2.768 \text{ inches of water}$, the

equivalent differential can be calculated to be 2.0 inches of water (0.0725 psi × 27.68 in. H₂O/psi = 2.0 inches of water).

The following table shows the door sizes and associated pressure differentials which create a 125 pound force: Door area, Pressure differential

Square feet, inches H₂O

4	6.0
6	4.0
9	2.7
10	2.4
12	2.0

The Agency solicits comments on the number of airlocks that would be required under this provision and the associated cost.

From Page 83 of the Final Report of the *Technical Study Panel on the Utilization of Belt Air and the Composition and Fire Retardant Properties of Belt Materials in Underground Coal Mining*, Recommendation 14: Stoppings and doors (including personnel doors) along the escapeways should be clearly marked so that they can easily be identified. Consideration should be given to requiring that personnel doors along escapeways be structured to form an air lock when exceeding a certain force to open due to a pressure differential. For example when the pressure force on 3 ft x 4 ft personnel doors is greater than 125 lb, for safety reasons, these doors should be installed in pairs to form an airlock door (30 CFR § 75.333(d)(3)). Further, these should be clearly marked and posted on the ventilation maps.

Comments:

The proposed changes to 75.333 leave certain aspects of the requirement open to interpretation.

First: This will be a requirement for all mines irregardless of their use of belt air in the working faces. As such it is outside the stated purpose of the revisions to Part 75 (i.e. the use of belt air in the working faces). Many persons will not realize this proposal has been made until it becomes law because they expect these revisions to apply only to those mines using belt air in the working faces.

Recommendation: Make this requirement apply only to those mines using belt air in the working faces and the subject of future rulemaking where it is clear that the requirement will apply to every mine.

Second: The Belt Air Panel, Federal Register Commentary and the Final Rule all use the verbiage “along escapeways”. The strict interpretation of the proposed rule requires that all personnel doors which allow egress from or access to an escapeway (both primary and alternate) must have an airlock installed where the air pressure differential causes the opening force to be greater than 125 pounds even if the door leads into a return or other less desirable airway for escape.

Recommendation: If this is the intension – not just to have such airlocks between

escapeways but also on all applicable personnel doors into/ out of every escapeway – the regulation should be more explicit. For example, instead of “on closed personnel doors along escapeways”, use “on closed personnel doors providing access to or from escapeways”.

Third: Is this door/ airlock is intended to be a part of the escapeway system? For example, must it facilitate the passage of injured or disabled persons? Must the crosscut where the airlock is located be clear of obstructions like an escapeway? If the airlock leads to a belt heading, must there be a constructed belt crossing at the airlock over the belt?

Recommendation: There should be more guidance in the enforcement intentions instead of leaving this to local inspector’s or district’s policy. For example, instead of “on closed personnel doors along escapeways”, use “on closed personnel doors providing access to or from escapeways and are not a part of the escapeway”.

Fourth: A reading of the commentary indicates that the rule may be complied with by reducing the size of the door to as small as 24 inches x 24 inches, which would not allow many of today’s miners in their normal dress to pass, much less an injured person on a stretcher or back-board. It should be noted that West Virginia Mining Law as contained in WV Code: **§22A-2-8. Duties; ventilation; loose coal, slate or rocks; props; drainage of water; man doors; instruction of apprentice miners.**

(a)

(b) *After the first day of July, one thousand nine hundred seventy-one, hinged man doors, at least thirty inches square or the height of the coal seam, shall be installed*

Recommendation: MSHA may want to consider requiring a similar minimum size for personnel doors.

Fifth: The installation of air locks in older portions of a mine may be a very difficult task where roof support structures (e.g. posts, cribs) preclude using mechanical equipment to deliver material for building the airlock. Since the purpose involves higher pressures, the commonly used lighter and easier to handle material for stoppings (e.g. metal panels, Omega blocks, hollow core block) may not be adequate to the pressure and the stopping will require solid concrete blocks. There also may be remedial work (e.g. cleaning ribs, removing extraneous material (gob) supporting roof and/ or ribs, rehabilitating access or walk-ways) required before such airlock can be constructed.

Recommendation: The best case would be to allow a period of time (e.g. one year) from the effective date of the Rule before this provision is placed in force to allow an orderly evaluation and construction period for the work and to allow the District Manager to temporarily or permanently exempt certain personnel doors from compliance with this new rule when local conditions and mine circumstances support such exemption.

Sixth: MSHA requested information on the number of airlocks that would be required in existing mines. A survey of 14 mines located in several MSHA districts where airlock doors would be required under the proposed regulation are described below.

Analysis of Pressure Differentials -- Estimated No. of Airlocks or Mitigating Devices Required

Under Proposed Regulation

30" x 30" door 36" x 36" door 42" x 42" door

Mine

Age <5 yr

Age 5-10 yr

Age >10 yr

CM Units

LW present

> 3.8"

Pressure

> 2.6"

Pressure

> 2.0"

Pressure

1 x 6 2 3 5

2 x 2 0 0 0

3 x 2 0 0 0

4 x 3 5 8 11

5 x 4 0 0 0

6 x 5 x 5 31 51

7 x 6 19 23 27

8 x 8 9 11 27

9 x 6 0 0 3

10 x 3 x 0 0 0

11 x 6 9 15 20

12 x 6 0 0 0

13 x 4 0 0 0

14 x 3 0 0 0

The table above lists the results of an informal survey of 14 underground mines of various ages, sizes and conditions. The mines are described by age and units operating. Three door sizes are listed: 30-inch square, 36-inch square and 42-inch square. The 30-inch square and 36-inch square represent a large portion of the standard personnel doors in service. The differential pressures listed underneath the door sizes represent the minimum pressure for that size door that requires an airlock or similar mitigating structure/ device under the proposed regulation.

Section 75.323—Actions for Excessive Methane

In Recommendation 18, the Panel stated that methane liberated from ribs along the belt, or from the broken coal on the belt, can present significant safety hazards. The Panel stated that if methane levels in the belt air course are too high to provide dilution of methane liberated at the working sections, then the use of the air from the belt entry to ventilate a working section should be discontinued. To address the Panel's concern, MSHA is considering adding a new provision concerning methane levels in the belt entry.

Comment: These concerns are already addressed in the existing regulations. There is a maximum (<1.0% CH₄) methane level already in place and applicable to the working section and is not affected by this proposal. There are already limits on the level of methane allowed in the conveyor belt entry (<1.0% CH₄) and in the intake air (<1.0% CH₄). Keeping the airflow below the concentrations is already a part of managing the section and the mine. Finally, there is constant and multiple sampling of the atmosphere in the working section at multiple locations by multiple miners and devices that will immediately take action should concentrations greater than 1.0% be detected anywhere. Methane concentrations and flows entering the working section from the belt and intake aircourses may change significantly in a short period of time and at times be controlled in part by administrative controls. There are also times when the belt air must be used in the working sections for reasons other than just increased flow – such as length of aircourses, proximity to pressure sources – and the concentration of methane in the belt must be dealt with using dilution from the intake air courses. In an example, if there was 20,000 CFM at 0.7% CH₄ from the belt entry and 75,000 CFM at 0.2% CH₄ from the belt entry, the intake air to the working faces would be 0.3% CH₄. This is not an unreasonable concentration in a mine with high methane liberation. One should recall that the maximum allowable methane at 1.0% is 1/5th the explosive level of methane and was set not by considered scientific thought but by the capabilities of the flame safety lamp.

Recommendation: This additional control is unnecessary and constitutes additional, unneeded administrative and bureaucratic controls on a system that is constantly changing, constantly monitored and is already highly regulated by MSHA.

§ 75.350 Belt air course ventilation.

(d) (7) Where point-feeding air from a primary escapeway to a belt entry designated as an alternate escapeway, point-feed regulators must be equipped with a means to remotely close the regulator or any other means to isolate the two escapeways. The AMS operator, after consultation with the responsible person and section foreman, must be capable of performing this function from the designated surface location.

Comments: The ability to manually close point feed regulators is already a part of the existing regulations except that the action must be performed at a location near the point feed regulator but outside of portions of the airflow through the regulator. The expansion of this ability to close and/or open the regulator from the surface by a computer or similar method is fraught with several potential problems.

First: In some mines, as noted in the Commentary, there may be significant methane liberation at the faces when intake air is removed. This does not take into consideration the potential for significant accumulations of methane in belt entries when the airflow is removed. This may be from not only the broken coal on the belt but also from the coal ribs. Simulations of ventilation systems and experience shows that the methane may layer in the exceptionally low velocities, reverse in random directions due to leakage and potentially create bodies of explosive mixtures. Then, if the point feed is reopened, the bodies of explosive mixture may travel toward the face. If the reason for the point-feed regulator is to be closed in the first place is a fire or “hot-spot”, the explosive mixture may cross that zone with disastrous results.

Second: Many of the ventilation systems where belt air is used in the working faces are the more complicated systems. Closing or opening a point feed may well affect more than just one working section. It may affect gob areas, bleeders, other working sections, etc., and result in far reaching ventilation changes. In addition, experience is that in such mines only a very small group of persons – maybe 2 or 3 – will actually know and understand the anticipated results of such a change. Therefore more than just the responsible person, AMS operator and a section foreman should be involved in the decision of when to make such a change. And moreover, these three persons may not have the contemporaneous information and knowledge of the system to make such a decision in an emergency.

Third: During many emergencies, one of the concerns is always everyone’s location, current regulations and modern technology notwithstanding. Making air changes with persons underground who may be in the affected area of the changes may result in injury, incapacitation or death.

Recommendation: The provisions for remotely closing and/or opening the point feed regulator should be removed entirely from the regulations.

We appreciate the opportunity to comment on MSHA’s proposed rule. If you have any questions or need more information please give a call at 304-342-4153.

Thank You.