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The following are comments concerning the current MSHA proposed rule RIN 1219-AB65
"Proximity Detection Systems for Continuous Mining Machines in Under Ground Coal Mines."

- A. Page 21 Full face continuous miners should be exempt from the Proximity Requirement, with the possible exception of when the miner is being actively trammed from place to place.

Our full face continuous miners equipped with integral bolters and rib bolters require 6-7 employees to be in direct contact with the machine during the mining process: 2 roof bolters, 2 rib bolters, 1 miner op, 1 ventilation man and at times, 1 foreman. There is no feasible method to provide proximity detection for employees while allowing the aforementioned employees to be at their work location.

- B. Page 22 – The statement "A proximity detection system manufacturer stated that a proximity detection system can be installed and calibrated on a remote controlled continuous miner in one shift." Reported in the proposed rule is not feasible.

While this statement may be true for a make shift, poorly installed and unmaintainable system, we believe that the system must be installed prior to new machine delivery or during the scheduled rebuild process at a surface location. All generators must be adequately protected and mine hardened. The cables must properly be routed and protected to prevent repeated and long term damage during normal mining procedures. For example: on a Joy 14CM15 miner which has been in service for any period of time, it can easily take more than a shift to install cables across the machine frame if this can be accomplished at all. There is one tunnel on the bottom of the frame which is totally filled with cables and hoses when the machine is new or rebuilt. When this becomes packed with dirt, the addition of any cables becomes nearly impossible. The result will be that proximity system related cables will be routed where they are exposed to ongoing damage.

A poorly or quickly installed system cannot perform reliably and will result in employee non-acceptance.

- B. Page 25 – 1,150 machines in 18 months (78 weeks)
383 machines per current proximity detection system manufacturer. (assuming 3 manufacturers)
 $383/78 = 5$ systems week per manufacturer

While it might be possible to throw the proximity equipment onto an UG machine in this amount of time, we have found in our installations that it required approximately 2 weeks to bring a proximity system to full operational capability. This 2 week period is needed to provide for proper, reliable and maintainable installation of the system, for equipment operator training, maintenance employee training, establishment of system examination and record keeping ("c" and "d" of Proposed Rule), parts management, trouble shooting, written system documentation, cold start familiarization period, component infant mortality failures and employee acceptance.

In addition to the items listed above, it remains questionable as to the ability of the current proximity detection manufacturer to provide all equipment, training, documentation, delivery and on-going support required to allow for success of this undertaking in 18 months.

- C. Page 28 – Prox. Detection Training should include classroom discussion and explanation of the system. This training must include system limitations, characteristics, basic functions, operation, machine responses and basic interpretation of system status.

This initial training should be followed by a “Cold Start” period during which the employees wear active PWDs and the machine generators both function normally, however, machine override is not yet active. This facilitates employee interpretation and exploration of the system and to identify possible variations to normal safe operating procedures.

In regards to “which miners should be trained”, the application of proximity detection and training should be for all miners who can potentially be in physical contact with the continuous miner.

- D. Page 32 – MSHA incorrectly intermingles the terms “miner wearable component” and “miner” when describing the 3 feet stopping distance. All references to separation distances should be from machine surfaces to the miner wearable component.
- E. Page 33 – The three feet stopping distance is too restrictive to apply to all mining situations and we believe that the more performance based requirement of stopping movement before the machine “accidentally contacts the employee” is more realistic. In either case, “Silent Zones” must be provided in certain locations along the machine to allow access. Per Figure 1, the areas outby the machine bumper and in the middle of the machine have not been areas which have resulted in fatalities and are critical to safe positioning for the miner operator when considering the haulage vehicle interactions and in place geometries. Also, MSHA must be aware that the zone geometries do not exactly trace the machine profile horizontally and vertically with current technology and allowances need to be made for these deficiencies.

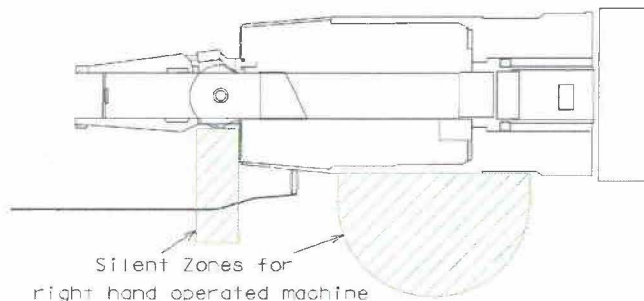


Figure 1: Zone Exclusions

- E. Page 34 – In regards to “which miners working around continuous mining machines should be required to have a miner-wearable component”, this should include any person who comes onto the working section. For example, all the assigned crew, any miner who comes onto the section to work, mine supervisors, visitors, contractors, etc would be included. The Data confirms that harm has come to other people besides the miner operator from physical contact with the continuous miner.
- F. Page 35 – The term “Cutting Coal or Rock” is too restrictive and indefinable. This term would apply to the time that the miner cutter head is actually in the process of penetrating the face. The mining machine, when in the place, is constantly in the process of conveying coal, setting over, cleaning up or waiting to load-out. Under the term ‘Cutting Coal or Rock’ scenario each of these functions would require the operator to leave the safety barrier provided by the mining machine and enter outby into the much more hazardous zone where the shuttle car, ram car or scoop is arriving to be loaded, being loaded or exiting the mining place. Further, another difficulty is determining when the machine is “actually cutting coal or rock” based on the state of the machine.

With the cutter mechanism running, this state is not confirmed. The cutter mechanism could be operating without cutting. If cutter motor amperage was applied, this is not reliable because the motor will temporarily unload in the process of sumping and shearing in "actually cutting coal and rock". Also, cut coal can be stored under the cutter assembly and loaded into the haulage vehicle without the cutter mechanism operating.

In the Proposed Rule b.1.ii, an exception to the 3 foot stopping distance is allowed for cutting coal or rock, but still requires the "machine to stop before contacting the machine operator". With the requirement that the machine stop before contacting the machine operator, it would have to utilize the 3 foot stopping distance to a miner wearable component which is the minimum allowable. Thus, the way b.1.ii. is written there is no exception and the 3 foot stopping distance applies at all times making it impossible to safely operate the continuous miner when in the cutting and loading operation. The "machine to stop before contacting the machine operator" statement must be removed in order to have an exception. Also, an exception is required for maintenance functions to trouble shoot a machine. Further on page 37, "MSHA proposes to allow a continuous mining machine operator to be closer than three feet from the machine" which is a static situation and using an inconsistent reference. All previous references to the 3 foot rule are dynamic. Again, all references to the separation distances must be consistent and that is not the case.

- G. Page 38 - Warning Signals – The warning signal should activate at some distance greater than the stopping distance and should only remain active for a short duration or warning period. The warning zone alarm should then turn off and remain off until the miner enters the stop zone or until he exits and re-enters the warning zone. The warning zone alarm must not remain alarming continuously to prevent the miner from becoming accustomed to the alarm and subsequently ignoring the alarm.

Thank you for your time and consideration of my comments. Please feel free to call me if you have any questions or concerns.

Sincerely,

J. Todd Moore

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Director of Safety- Coal Operations
304-281-9721 cell