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November 22, 2011

Ms. Roslyn B. Fontaine
Acting Director
Office of Standards, Regulations, and Variances
Mine Safety and Health Administration
U.S. Department of Labor
1100 Wilson Boulevard
Arlington, VA 22209-3939

Re: Comments of Peabody Energy Corporation on MSHA's Proposed Rule on Proximity Detection Systems on Continuous Mining Machines in Underground Coal Mines: RIN 1219--AB65

Dear Ms. Fontaine:

Pursuant to the notice published in the Federal Register for August 31, 2011 (76 Fed. Reg. 54,163) announcing public hearings and requesting post-hearing comments prior to November 14, 2011 as extended until November 28, 2011 in the notice published in the Federal Register for November 10, 2011 (76 Fed. Reg. 70,075), attached are the comments of Peabody Energy Corporation ("Peabody") to MSHA's Proposed Rule on Proximity Detection Systems on Continuous Mining Machines in Underground Coal Mines (the "Proposed Rule").

Peabody is in the unique position of having spent the past year installing and testing a proximity detection system. We believe that proximity detection can be a valuable tool to protect miners if applied in a practical and effective way. Based on our experience, as is made clear in the attached comments, Peabody opposes the Proposed Rule in its current form and urges MSHA to re-examine its approach to the implementation of this promising technology. Peabody, therefore, urges MSHA to re-propose a new rule for additional public comment, consistent with our comments, which will set forth a technologically sound and economically feasible solution to the problem that it intends to address.

Additionally, based on our examination of the Agency's Preliminary Regulatory Economic Analysis, we are sending a copy of these comments to the Honorable Cass R. Sunstein, Administrator, Office of Information and Regulatory Affairs for his review.

Please feel free to contact me with any questions you may have with regards to the attached comments.

Sincerely,

Charles Burggraf

Charles Burggraf
Senior Vice President Global Safety

cc: Honorable Cass R. Sunstein

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AB65-2COMM-21

Peabody Energy comments on MSHA's Proximity Detection Systems for Continuous Mining Machines in Underground Coal Mines.

RIN 1219-AB65

Peabody Energy has long been one of the leading coal companies in the world and our safety processes have developed over our history to where we are recognized as leaders in safety performance and innovation. We agree with the agency that proximity detection is a promising technology. We have been working with one of the leading manufacturers of proximity detection systems for the past year in helping develop and test a holistic approach that provides protection to all miners on an active coal producing section. This work began last year in a surface shop at our Willow Lake Mine in Southern Illinois. We installed proximity detection systems on a continuous mining machine and a battery powered coal hauler, and then spent several months simulating the various interactions between the two pieces of face equipment in a mock operating system. Once our shop trials were completed, we decided to test our outcomes on a full section of coal haulers and a continuous mining machine in our Gateway Mine near Coulterville, IL. That test is currently underway and we are encouraged with the early results.

These comments concerning MSHA's proposed rule reflect our experience with systems in the actual working section and provide reasoned alternatives to the agency's approach to this important issue.

Installation, Training and Commissioning

The eighteen month time limit requiring all continuous mining machines to be equipped with proximity detection systems is unrealistic, and MSHA's assumptions concerning the availability of systems and the time to install them is incorrect. We have spoken with the system manufacturers, and though they are preparing to ramp up production to meet the anticipated demand, the current lead time on systems ordered today is 4-6 weeks and the demand is very small compared to what it will be when the rule is finalized. The manufacturers must be given a more reasonable time to hire qualified installers and trainers to meet their own needs as well as the needs of the industry. In most cases, the proximity detection system manufacturers will be responsible for training the end users, since they are the subject matter experts. As a result, the time they are required to spend teaching in the classroom will be subtracted from their availability to be used to install new systems.

Regardless of any artificial date set by the agency, proximity detection units can only be installed as quickly as the capacity of the interdependent systems allow it to be done. One major mining equipment manufacturer, who controls a large portion of the continuous mining machine market in the US, only has the capability to rebuild about 90 mining machines per year and can produce about 144 new continuous miners per year. If the industry is permitted to install the proximity detection systems in an original equipment manufacturer shop setting, the system components can be better protected by guards, conduit and armor plating that can be built specifically into the design of the machine frame. This will reduce errors and system downtime resulting from component damage from falling rocks and vibration. It also assures a more robust and maintainable electrical system for all of the components while reducing the need for MSHA technical services and field personnel to respond to requests for RAMP approvals on site. Given our belief that these systems need to be installed in a shop setting, it will take much longer than 18 months to get all of the nearly 1,150 continuous mining machines outfitted in an orderly manner.

It makes more sense to require operators to obtain bona fide purchase orders and to install the systems as quickly as their continuous mining machines can be scheduled for rebuild or be replaced by new machines through normal attrition. An imposed deadline forces manufacturers and end users to make bad decisions by rushing to cover all of their continuous mining machines before they can realistically and effectively be done. Component quality and miner training will be degraded as a result and acceptance of the proximity detection systems will likely suffer. It can also deter those companies who wish to install proximity detection on other underground mobile face equipment from doing so until all of their continuous mining machines are completed. Peabody would prefer to outfit an entire section, including the continuous mining machine, coal haulers and scoops, with proximity detection systems before moving on to the next section.

All miners, who are affected by the new proximity detection systems, should be trained in the applicable functions as required by 30 CFR Part 48 task training. There should be no additional training requirements in this proposed rulemaking, as this would apply a redundant layer of training to what is already required.

Peabody believes that once the system is installed on the continuous mining machine, a two week commissioning period should be allowed. During this time, the proximity detection system would only give an audible and/or visible alert to the miners until they become familiar with the system capabilities. Red zone restrictions must be followed as before, and we believe that they must remain regardless of what the final rule requires.

This commissioning period will help in the acceptance of the proximity detection system, assist in the adequate training of all persons affected and assure operators that the system is working properly before activating the function shut down mode.

Any documentation of training should be consistent with 30 CFR Part 48 to avoid confusion. There is no need to include any duplicate record keeping in this rule.

Proximity Detection System Operation

Who should be covered?

All persons working on or expected to be working on an active working section where the continuous mining machine is equipped with an operating proximity detection system should be required to have a miner-wearable component. This includes examiners, contractors, visitors, inspectors or any other persons who enter the working section, regardless of how long they intend to stay in the section.

Proximity detection performance standards.

The proposed three foot rule is an arbitrary distance, and the agency has not tested each approved system to determine if each system is capable of achieving it. By its own admission on page 54165 of the preamble, it states, "The MSHA approval regulations under 30 CFR Part 18 do not address how systems will perform in reducing pinning, crushing, or striking hazards." Since only 3% of the machines in the US are currently equipped with some form of proximity protection, and since we do not know if they in fact meet the requirements of this proposed rule, it is presumptuous to mandate a finite standard when a performance standard would be of greater value. Peabody agrees with NIOSH which commented that "the goal of a proximity detection system should be to prevent machine actions or situations that injure workers while not placing restrictions on how the workers do their jobs." At this point in the development of the proximity detection systems, there are far too many variables to warrant that a specific distance be mandated. The geometry of the protection zones around the continuous miners is variable in size and intensity and can be affected by many factors present in the mining environment. No proximity detection system manufacturer is willing to guarantee that their system can provide the pinpoint accuracy that the proposed rule requires. The regulation should simply specify that a machine must stop before contacting any person during the normal place change operation of a continuous mining machine. This approach would also avoid the possibility of a citation being issued if a machine stopped 2'11" from a miner during a regular inspection. This could place the operator and the

agency in a difficult position when trying to determine an action necessary to abate the citation.

A continuous mining machine tramming from one working place to another.

All functionality of the proximity detection system should be in place when a continuous mining machine is being trammed from one working place to another. This should apply to full face continuous mining machines as well. MSHA states on page 54170 of the preamble, "In all the 30 continuous mining machine fatal accidents from 1984 to 2010 which could have been prevented by proximity detection systems, the continuous mining machine was in the process of being moved (trammed) when the accident occurred." Therefore, any continuous mining machine that is being trammed from one working place to another should afford miners the protection provided by a proximity detection system.

Peabody feels very strongly that any regulation requiring proximity detection must reassert the importance of maintaining the current red zone exclusion for miners working around mobile face equipment. There is no electrical/mechanical system that is completely failsafe and the red zone rules will further assure the protection of miners during the relocation process.

Continuous mining machine cutting operations.

Once a continuous mining machine is in the working face, Peabody's experience in our field trials shows that the proximity detection system should be disabled as long as the machine is in the process of cutting or loading coal or rock. This is particularly true when other mobile face equipment, such as battery powered coal haulers, shuttle cars and scoops, are likewise provided with proximity detection systems. This is necessary for the normal operation of mining a cut of coal when two proximity fields have the potential to overlap each other. On page 54170 of the preamble, MSHA states that they are "not aware of a continuous mining machine fatal accident that occurred while the machine was cutting coal or rock." Therefore, Peabody believes that turning off the proximity detection system during cutting and loading operations will not result in a lesser degree of safety for the miner. We stringently enforce the red zone exclusions and have demonstrated our ability to protect our miners using this process.

In the proposed rule, the agency recognized that the risks associated with cutting coal and rock are less when compared to tramming from one working place to another. In proposed paragraph 75.1732 (b)(1)(ii) an exemption from the three foot rule is allowed for a miner who is remotely operating a continuous mining machine while cutting coal or rock. But the agency goes on further to define in the preamble on page 54170 that,

"The use of the term, cutting coal or rock, would not include situations where the cutter head is rotating but not removing coal or rock from the face." This is a totally impractical distinction. The proximity detection system can recognize electrically when the cutter head is engaged, but it cannot determine if coal or rock is being cut from the face. If this is enforced as proposed, the exemption from the three foot rule would not apply if the cutter head was rotated to clean up previously mined coal and rock spillage. The only way to deal with this is to allow the proximity detection system to be disabled any time the machine is in the process of cutting or loading coal or rock. Since the continuous mining machine will only tram in creep mode when the cutter head is engaged, the agency should not be concerned that an operator would tram the machine from one working place to another with the cutter head engaged to bypass the safeguards provided by the proximity detection system.

If the agency insists on keeping the proximity detection system activated during the cutting and loading of coal or rock, this could place the machine operator in a more hazardous position than they would be under our proposal. During the first slab cut, the operator would have to be outby the rear of the proximity enabled coal hauler to keep from shutting down the machines because of the activated detection fields. This means that the coal hauler would have to tram past the miner operator, which would violate our no-go zone policy, and would place him/her on the return side of the curtain in a blowing ventilation system. This would result in higher exposure to respirable coal mine dust for the continuous miner operator and would reverse Peabody's progress over the years in developing successful systems to reduce those exposures. It would also make it very difficult, if not impossible, for a continuous miner operator to turn a side cut if they were positioned so far back from the face. The other situation that we are concerned about would be if a coal hauler had the path of egress blocked for the continuous miner operator while the car is being loaded, and the miner operator's tag accidentally disabled the coal hauler. The only way that the car could be restarted would be for the continuous miner operator to climb over the coal hauler, or more likely, the operator would walk inby towards the face to get out of the coal haulers activated field. This is not the safest place for the miner operator to be, especially if the cut is almost fully extracted. This circumstance is even more critical if the roof in the immediate area begins to deteriorate. For the above stated reasons, we reassert our belief that the continuous mining machine proximity detection system should be disabled when the machine is in the process of cutting or loading coal or rock.

Bypassing the proximity detection system

At times, the proximity detection system may become inoperable due to damage or component malfunction. If that occurs, there must be a means by which the operator can bypass the proximity detection system for the purpose of moving the continuous mining machine to a safe location for the repair of the system. Since we are advocating that the system be turned off when the continuous mining machine is in the process of cutting or loading coal or rock, if the system is damaged or malfunctions during this process, we believe that the operator should be allowed to finish the cut that has been started before the machine is pulled back for repairs. When the cut has been completed and the cutter head has been disengaged, the proximity detection system can then be bypassed and the continuous mining machine removed to the safest practical location for repairs.

Inspection of the Systems

The proximity detection electrical inspections should take place on a weekly basis at the same time as the other electrical examinations, required in 75.512. The recording of those inspections should mimic the current requirements. These examinations would assure that the electrical equipment has not deteriorated into an unsafe condition and that the equipment operates properly. This would include an examination of the system for the requirements in proposed paragraphs (b)(1) through (b)(5), except that (b)(1) must be changed to specify that "a machine must stop before contacting any person during the normal place change operation of a continuous mining machine", rather than the proposed three foot rule. Peabody also believes that proposed paragraph (b)(2) should be removed entirely. Since the proximity detection system will cause the machine to stop before contacting any person during the normal place change operation of a continuous mining machine, the only purpose of the five foot rule is to alert another miner that they are getting close enough to shut the machine down. While some operators may consider this to be a desirable feature, others may find it to be unnecessary. Everything we have already said in opposition to a prescriptive approach to the three foot rule would also apply to this unnecessary five foot rule.

Daily inspection requirements in proposed paragraph (c) are acceptable, however, we believe there is an error in the proposed language as it refers to (c)(2). Immediately above proposed paragraph (c)(1), the proposed rule states "Operators must:", and then proposed paragraph (c)(1) allows operators to designate a person to perform the required visual checks. By extension, the "Operators must:" phrase also applies to proposed paragraph (c)(2), however there is no similar language which allows the

operator to designate a person to check the person wearable component. We believe this is an easily corrected oversight and each person carrying a miner-wearable component should be designated to visually inspect their device before proceeding underground. Defective miner-wearable components should be replaced before that person goes underground.

Certifications and Records

Peabody agrees with the first part of proposed paragraph (d)(1), "At the completion of the check required under paragraph (c)(1) of this section, a certified person under 30 CFR 75.100 must certify by initials, date and time, that the check was conducted." This would be done in the same way the dust control parameter checks are currently certified, on a date board located on the working section. There is absolutely no safety benefit for the proposed requirement to record defects found and corrective actions taken during the visual examinations mandated in proposed paragraphs (c)(1) or (c)(2).

The electrical examination required by (c)(3) should be recorded just like all of the other electrical examinations required in 30 CFR 75.512, without the unnecessary recording of defects and corrective actions. This time consuming step will not improve miner safety and sets a trap for overwhelmed supervisors who already have a massive reporting load.

Proposed paragraph (d)(4) is redundant and should be removed, since this is already required in 30 CFR 75.159 which states, "The operator of each coal mine shall maintain a list of all certified and qualified persons designated to perform duties under this Part 75." Additionally, a 5000-23 form is already required by 30 CFR 48.9(a) to be completed for each person trained in the installation and maintenance of the proximity detection systems. This is sufficient documentation of the training. As a result, the recordkeeping proposed in paragraph (d)(5) should be removed in its entirety. These 5000-23 forms are required to be maintained at the mine for two years, which is greater than the one year requirement proposed in paragraph (d)(6). Therefore, paragraph (d)(6) should also be removed.

Preliminary Regulatory Economic Analysis

MSHA's detailed Preliminary Regulatory Economic Analysis makes several assumptions that overestimate the benefits and underestimate the costs of the proximity detection rule. The agency has taken the initial cost of the capital needed to purchase the systems and annualized that cost over the assumed 10 year life of the systems. That would be proper if the industry was making equal payments spread out over the life of the units,

but that is not the way these systems will be paid for by operators. This will be a direct cash cost over the proposed 18 month phase-in window.

Hardware Costs

Peabody has assumed that Strata and Matrix are the only viable providers of proximity detection systems, and we further assume that these two companies will equally split the available business. We have obtained the most current quoted prices for the two Proximity Detection Systems (PDS), and these figures are quite different than those used by the agency. MSHA used a capital cost of $27,000 per machine, compared to the Matrix cost of $75,000 and the Strata cost of $50,000 each.

MSHA also used a cost of $400 for each miner-wearable component (MWC), when the actual Matrix and Strata cost is about $800 each. When determining the number of miner-wearable components needed, MSHA underestimated that only seven MWCs would be needed for each section. In most production units today, it is more typical to have 13 miners on each MMU (1-continuous miner operator, 4-roof bolter operators, 4-coal hauler operators, 1-scoop operator, 1- brattice/utility man, 1-mechanic and 1-supervisor). We also anticipate that each unit will need to have at least two spare MWCs on the section for examiners or other outby people who come into the working section. If you accept MSHA's breakdown of the number of operating shifts per mine by size, Peabody estimates that the industry will need at least 25,000 MWCs per the calculations below;

1,215 MWCs for mines with 1-19 employees (81 CMs x 1 shift/day x 15MWCs/unit)

20,580 MWCs for mines with 20-500 employees (686 CMs x 2shifts/day x 15MWCs/unit)

3,240 MWCs for mines with >500 employees (72 CMs x 3shifts/day x 15MWCs/unit)

Peabody believes that this may even be understated, because most of the mines in the 20-500 employee range are working three shifts per day.

All together, the initial capital costs for the proximity detection systems and the miner wearable components would result in an undiscounted cost of nearly $92 million to the industry over the proposed 18 month phase-in period as seen in the following table.

Total Capital Costs;

1150 Machines/2 suppliers= 575 systems from each manufacturer

575 systems x $75,000/Matrix PDS=	$43,125,000
575 systems x $50,000/Strata PDS=	$28,750,000
12,500 Matrix MWC's x $800/MWC=	$10,000,000
12,500 Strata MWC's x $800/MWC=	$10,000,000
Hardware total=	$91,875,000

Labor Costs

We have spoken with the two major continuous mining machine manufacturers in the US and we have determined that their shop capacity to rebuild units or produce new units is as follows;

Rebuild shop capacity=	172 machines/18 months
New machine capacity=	270 machines/18 months
Existing Shop capacity=	442 machines/18months

This then requires that 1,150-442= 708 machines would be required to be outfitted in the field.

Assuming that the proximity detection system manufacturers would be able to have certified and qualified technicians and trainers on staff at the beginning of the 18 month period, which is highly unlikely, we estimate that it will conservatively take eight shifts to install the detection systems on each continuous mining machine in the field. Also, the operator will be required to assign two mechanics to assist the installer. MSHA made no provision for operator labor for these installations. MSHA elsewhere assumes that the hourly wage for a miner, including benefits is $35.30/ hour. That is well below our estimated cost of nearly $60/hour when all benefits are included. Field installations will require 11,328 manshifts of operator resources, at an undiscounted cost of $5,890,560;

708 field installations x 8 shifts x 2 mechanics x $520/manshift= $5,890,560

Cost of production lost

MSHA has not accounted for any lost production due to downtime for proximity detection system installation. Since most operators are running around the clock to better utilize their assets and to meet market demand, we assume that the time to install each PDS would directly impact coal production and cost the industry nearly $316 million.

708 machines x 8 shifts/machine=	5,664 lost production shifts
5,664 shifts x 1000 tons/shift=	5,664,000 tons lost

Based on MSHA's estimate of average revenues at $55.77/ton;

5,664,000 tons lost x $55.77/ton=	$315,881,280

Summary of total, one time installation costs to the industry

All of our assumptions are open to discussion, but the point to be made is that MSHA has not taken into account all of the costs associated with this proposed rule. You can argue about the details, but Peabody believes that our figures represent a conservative estimate of the true cost impact to the industry. MSHA estimates that the capital costs of the proposed rule will be only $36.3 million over the phase-in period discounted at a 7% rate. By our figures, the capital cost will be nearly twelve times higher than the MSHA estimate. When you add the on-site labor and lost coal revenue costs while the systems are being installed, the total installed cost of the proximity detection systems is nearly $432 million.

One time installation costs (undiscounted) over the 18 month phase-in period

Hardware costs	$91,875,000
Labor costs to install in the field	$5,890,560
Lost revenue during installation	$315,881,280
Total industry costs to install systems	$431,646,840

Recurring annual costs

By any measure, the agency's assumptions concerning the annual recurring costs of the proximity detection systems border on the ridiculous. MSHA estimates that the annual maintenance costs per unit will only be $675/year including labor and materials. There is not a single major component in any of the systems we have reviewed that costs less

than $900. Each generator, and there are four per machine, costs between $5,000-$6,000 each. To assume that the systems will perform at this level is not warranted by any documentation and ignores the fact that these are highly technical, electronic systems. Since the mining environment is hard on robust mechanical systems, there is every reason to expect sensitive electronics to be adversely affected. MSHA also failed to account for the tonnage lost due to equipment downtime. For our calculations, we have assumed a very conservative availability rate of 99% for the proximity detection systems.

Annual revenue lost due to system downtime and maintenance costs

The agency has also failed to take into account the cost of production lost due to system downtime. This is a difficult variable to estimate since we have very little experience with the systems. If we assume that the systems will be available 99% of the time, and it could actually be worse by several orders of magnitude, we find the following;

Annual lost revenue based on MSHA's estimate of average revenues at $55.77/ton;

1,000 tons/shift x 520 shifts/year x .01 downtime= 5,200 tons/machine/year

5,200 tons/yr. x 1,150 machines x $55.77/ton= $333,504,600/yr.

Estimated annual maintenance costs (parts and labor)

1,150 machines x $50,000/machine/Yr. = $57,500,000/yr.

Industry total recurring revenue lost due to 1% downtime $391,004,600/yr.

The more realistic annual recurring cost of $391 million represents about 2.1% of the annual industry revenue of $18.5 billion. This would exceed the 1% revenue screening test traditionally used by the agency to determine the economic feasibility of the proposed rule. Therefore, Peabody requests that the agency reconsider the economic feasibility section of the proposed rule.

Expected Benefits

The willingness-to-pay methodology used to estimate the imputed value of life saving programs infers that miners working in a safer environment would not be paid as much as miners working in less safe mines. This in fact is not the industry experience. Other factors, such as proximity to their home or association with family members and friends have a much greater impact on why miners choose to work where they do. In practice, some miners will actually take a pay cut to work in a mine closer to home, even if it is not as safe. The mining industry must pay competitive wages when compared to other

industries around them and many mines must pay union scale or above to attract skilled and certified miners. The prevailing pay scale has little or nothing to do with risk and more to do with competitive forces in the marketplace. We agree with the agency "that monetizing the value of a statistical life is difficult and involves uncertainty and imprecision." However, the injury costs used in the PREA are several orders of magnitude higher than what we experience in our mines, and the resulting avoidance benefit is dramatically overstated. The average cost of a permanently disabling injury would be about $500,000-$600,000, not the $3.5 million supposed in the proposed rule.

Conclusion

The currently proposed rule, though a step in the right direction, will hamper the further development of this promising technology and will make it more difficult for operators to provide proximity detection protection for all miners on the working section. Peabody feels very strongly that the agency is proposing a partial solution to the stated problem which we believe fails to take into account the important factors that need to be considered if proximity detection is to be successful in the general mining community. If it is MSHA's long term goal to require proximity detection on all section mobile equipment, including coal haulers, shuttle cars and scoops, then the agency has started the process under the mistaken premise that a section is a collection of independent pieces of equipment. It is our belief that the equipment on a section is a system of interdependent parts. We recommend that the agency stop this piecemeal approach and join us in the development of a holistic solution, consistent with our comments above.

To that end, we recommend the following;

1. Proximity detection systems must be installed in an original equipment manufacturer shop setting. The system components can be protected by guards, conduit and armor plating built specifically into the design of the machine frame. This will reduce errors and system downtime resulting from component damage from falling rocks and vibration. It also assures a more robust and maintainable electrical connection for all of the components while reducing the need for MSHA personnel to respond to requests for RAMP approvals on site.
2. Any proposed system must be judged from a performance standpoint rather than the prescriptive approach taken in this proposed rule. No proximity detection system manufacturer can guarantee that their system will provide the pinpoint accuracy that the proposed rule demands. The regulation should simply specify that a machine must stop before contacting any person during the normal place change operation of a continuous mining machine.

3. A rule requiring proximity detection systems on continuous mining machines must be mindful of how the machine interacts with other pieces of mobile equipment on the section.
4. For proximity detection to work properly and be readily accepted by miners and operators alike, the system operation must be flexible, easy to understand and reliable, while employing the latest technology.
5. The agency must give operators, miners and manufacturers the freedom to meet the stated goal of the rule, "to strengthen the protections for miners by reducing the potential for pinning, crushing or striking accidents in underground coal mines". Mandating redundant training and record keeping burdens will only generate unnecessary enforcement actions without furthering the cause of safety.
6. The agency must maintain the integrity of the "red zone" restrictions currently in place, regardless of what they propose for proximity detection, because no electrical/mechanical system is completely failsafe.
7. We agree with the WV Coal Association and others, which commented that extended cuts will reduce miner exposure to the risks associated with more frequent place changes. We encourage the agency to expedite the approval of extended cuts to enhance the protections afforded to miners by proximity detection systems.

MSHA specifically requested comments on several sections of the proposed rule. We have broken these out and attached our responses below for ease of reference.

Peabody Energy would like to thank MSHA for the opportunity to comment on the proposed rule and stands ready to assist the agency in the development of reasonable measures to strengthen protections for miners on working sections.

Attachment #1

Questions

- MSHA solicits comments on how full face continuous mining machines should be addressed. Comment should be specific and include alternatives, rationale for suggested alternatives, safety benefits to miners, technological and economic feasibility considerations and supporting data.
    - MSHA states that the reason they have exempted full face continuous mining machines is because of the difficulty in accommodating the miners who operate the onboard roof and rib bolting equipment. MSHA further states on page 54170, "In all the 30 continuous mining machine fatal accidents from 1984 to 2010 which could have been prevented by proximity detection systems, the continuous mining machine was in the process of being moved (trammed) when the accident occurred." Therefore, any continuous mining machine that is being trammed from one working place to another should afford the miners the protection provided by a proximity detection system.

- MSHA solicits comments on the proposed compliance dates. Comment should be specific and include alternatives, rationale for suggested alternatives, safety benefits to miners, technological and economic feasibility considerations and supporting data.
    - The 18 months allowed to refit the entire US fleet of approximately 1,150 continuous mining machines is totally unrealistic and does not take into consideration the market demand for each type of system. In the preamble, on page 54168, MSHA indicates that there are three approved systems available. The agency then lumps them all together to say that they can produce 350 units per month and could increase production to about 400-600 units per month within 3-6 months. This assumes that each entity receives an equal number of orders and that they can equally ramp up production to meet the needs of the industry. It is more likely that one or two of the providers will receive the bulk of the orders, based on current experience with tests in the field. One such supplier is now quoting a 4-6 week delivery time on any orders placed right now, and the rush by all operators following the finalization of this rule has not yet begun. It also does not consider the additional demand from operators who intend to provide proximity detection on other underground mobile face equipment. The demand from other operators outside of the continental US has not been factored into the equation either, and we are aware that South Africa, China and Australia to name a few, are very interested in the systems. Therefore, we believe that the system manufacturers will have difficulty, particularly at first,

meeting the market demand. This will adversely affect the industry's ability to meet the 18 month phase-in period.

The best time to install the proximity detection systems is during initial manufacture or during a major rebuild. One of the major manufacturers only has the capacity to manufacture 144 machines per year and can rebuild 90 machines per year. Peabody recently retrofitted a continuous mining machine with proximity detection while it was still underground on the section. Due to the lack of overhead shop equipment, space and visibility, it took us almost a week to get the system installed and commissioned. The effect on the industry of shutting down all of the machines currently in the field that are not scheduled to be rebuilt within the 18 month window would be devastating. If the industry is permitted to install the proximity detection systems in an original equipment manufacturer shop setting, the system components can be protected by guards, conduit and armor plating that can be built specifically into the design of the machine frame. This will reduce errors and system downtime resulting from component damage from falling rocks and vibration. It also assures a more robust and maintainable electrical system for all of the components. The 18 month window also places an undue burden on the system manufacturers. They will have to employ a large cadre of properly trained field installation and service personnel in a short time, which will be difficult considering there is currently a shortage of MSHA certified mechanics and electricians.

It makes more sense to require operators to have, in their possession, a valid purchase order for the proximity detection systems and allow manufacturers and operators to install them in an orderly fashion without the impending enforcement action resulting from an artificial deadline. Regardless of what the agency mandates, the units can only be installed as fast as the system allows. We should have learned our lesson from the problems associated with the Communication and Tracking systems which in part resulted from the agency listening to the unrealistic boasts of the manufacturers who were trying to gain advantage in the untested market.

The agency discounts the delays which will likely occur from the lengthy approval process. There will be a large number of requests for RAMP modifications and field changes if machines in the field have to be retrofitted with proximity detection systems. The strain on MSHA's already overloaded technical staffs will result in long delays which will again make the 18 month window unattainable.

- MSHA requests comments on the training of miners who use proximity detection systems or work near machines equipped with these systems. Comments should address the type of training, frequency of training, content of training, and which miners should be trained. Comment should be specific and include alternatives, rationale for suggested alternatives, safety benefits to miners, technological and economic feasibility considerations and supporting data.
    - This entire section is unnecessary, because 30 CFR Part 48 applies to the training requirements for any new task or process. Specifically, 48.7(a)(3) states that "equipment and machine operators shall be instructed in safe operating procedures applicable to new or modified machines or equipment to be installed or put into operation in the mine, which require new or different operating procedures". The industry is well aware of the requirement that all miners affected by the installation and use of proximity detection systems must be trained before the equipment can be placed into operation.

      Peabody believes that once the system is installed on the continuous mining machine, a two week commissioning period should be allowed. During this time, the proximity detection system would only give an audible and/or visible alert to the miners until they become familiar with the system capabilities. Red zone restrictions must be followed as before, and we believe that they must remain regardless of what the final rule requires. This two week commissioning period will help in the acceptance of the proximity detection systems, provide for the adequate training of all persons affected by the systems and assure operators that the system is working properly before activating function shut down mode. Any documentation of training should be consistent with 30 CFR Part 48, to avoid confusion. There is no need to include any additional record keeping in this rule.

- MSHA solicits comments on the proposed three-foot stopping distance requirement and on other alternatives to the proposed provision. Comments should be specific and address how the requirement impacts miner safety. Comment should be specific and include alternatives, rationale for suggested alternatives, safety benefits to miners, technological and economic feasibility considerations and supporting data.
    - The three foot rule is an arbitrary distance, and the agency has not tested each approved system to determine what they are capable of achieving. By its own admission on page 54165 of the preamble, it states, "The MSHA approval regulations under 30 CFR Part 18 do not address how systems will perform in reducing pinning, crushing, or striking hazards." Since approximately 3% of the machines in the US are currently equipped with some form of proximity

protection, and since we do not know if they in fact meet the requirements of the proposed rule, it is ill-advised to mandate a prescriptive standard when a performance standard would suffice. We agree with NIOSH which commented that "the goal of a proximity detection system should be to prevent machine actions or situations that injure workers while not placing restrictions on how the workers do their jobs." The regulation should not specify that a machine must stop in a finite distance, but rather provide that it must stop before contacting a miner when being trammed from one working place to another. At this point in the development of the proximity detection systems, there are far too many variables to warrant that a specific distance be mandated. The geometry of the protection zones around the continuous mining machines is variable in size and intensity and can be affected by many factors present in the mining environment. No proximity detection system manufacturer is willing to guarantee that their system can provide the pinpoint accuracy that the proposed rule requires. This approach would also prevent the possibility of a citation being issued if a machine stopped 2'11" from a miner during a regular inspection. This is a very real possibility and it places the operator and the agency in a difficult position when trying to determine an action necessary to abate the citation.

- MSHA recognizes that there are different points that could be used to measure the proposed three-foot distance from a machine to a miner when the proximity detection system requires the miner to wear a component and solicits comments on the point at which the three-foot stopping distance should be measured. Comment should be specific and include alternatives, rationale for suggested alternatives, safety benefits to miners, technological and economic feasibility considerations and supporting data.
    - Per our comments above, this section is unnecessary if a performance standard is adopted. Therefore, we strongly support the adoption of a performance standard that states that, "the continuous mining machine must stop before contacting a miner when being moved from one working place to another," eliminating the three foot and five foot requirements.

- Some current proximity detection systems on continuous mining machines are installed to stop machine tram movement and the conveyor swing function when the system is activated while permitting other machine movement, such as rotation of the cutter head and movement of the gathering arms. MSHA solicits comments on whether all movement should be stopped. Comment should be specific and include alternatives, rationale for suggested alternatives, safety benefits to miners, technological and economic feasibility considerations and supporting data.

- There are some very good reasons to have the proximity detection system affect only the continuous mining machine tram and conveyor swing circuits. Currently, if the proximity detection system senses a miner who gets too close to the machine, the conveyor swing solenoid valve opens, disabling the swing function on the continuous miner conveyor boom, and the tram enable circuit is tripped, making it impossible to tram the continuous mining machine. In order for the continuous mining machine to resume operation, all that is required is for the miner-wearable component to be removed from the field. If there are inadvertent trips because a miner gets too close to the machine, it is relatively easy to get back into operation. All he/she needs to do is back away, and the machine could resume operation.

  However, if the rule requires the system to drop the total machine power, the continuous mining machine visible disconnect breaker would have to be re-set, the computer must recycle itself, which can take up to 30 seconds or more, and then the pump motor must be restarted. If a continuous mining machine is disabled in a cut, it could expose miners unnecessarily to hazards in the working face. The whole process can take several minutes. The goal should be to gain acceptance of the proximity detection systems by reducing the number of nuisance trips and by making restarting the mining process easier.

  Once a continuous mining machine is in the working face, Peabody's experience in our field trials shows that the proximity detection system should be disabled as long as the machine is in the process of cutting or loading coal or rock. This is particularly true when other mobile face equipment, such as battery powered coal haulers, shuttle cars and scoops, are likewise provided with proximity detection systems. This is necessary for the normal operation of mining a cut of coal when two proximity fields have the potential to overlap each other. On page 54170 of the preamble, MSHA states that they are "not aware of a continuous mining machine fatal accident that occurred while the machine was cutting coal or rock." Therefore, Peabody believes that turning off the proximity detection system during cutting and loading operations will not result in a lesser degree of safety for the miner. We stringently enforce the red zone exclusions and have demonstrated our ability to protect our miners using this process.

  In the proposed rule, the agency recognized that the risks associated with cutting coal and rock are less when compared to tramming from one working place to another. In proposed paragraph 75.1732 (b)(1)(ii) an exemption from the three foot rule is allowed for a miner who is remotely operating a continuous mining

machine while cutting coal or rock. But the agency goes on further to define in the preamble on page 54170 that, "The use of the term, cutting coal or rock, would not include situations where the cutter head is rotating but not removing coal or rock from the face." This is a totally impractical distinction. The proximity detection system can recognize electrically when the cutter head is engaged, but it cannot determine if coal or rock is being cut from the face. If this is enforced as proposed, the exemption from the three foot rule would not apply if the cutter head was rotated to clean up previously mined coal and rock spillage. The only way to deal with this is to allow the proximity detection system to be disabled any time the machine is in the process of cutting or loading coal or rock. Since the continuous mining machine will only tram in creep mode when the cutter head is engaged, the agency should not be concerned that an operator would tram the machine from one working place to another with the cutter head engaged to bypass the safeguards provided by the proximity detection system.

If the agency insists on keeping the proximity detection system activated during the cutting and loading of coal or rock, this could place the machine operator in a more hazardous position than they would be under our proposal. During the first slab cut, the operator would have to be outby the rear of the proximity enabled coal hauler to keep from shutting down the machines because of the activated detection fields. This means that the coal hauler would have to tram past the miner operator, which would violate our no-go zone policy, and would place him/her on the return side of the curtain in a blowing ventilation system. This would result in higher exposure to respirable coal mine dust for the continuous miner operator and would reverse Peabody's progress over the years in developing successful systems to reduce those exposures. It would also make it very difficult, if not impossible, for a continuous miner operator to turn a side cut if they were positioned so far back from the face. The other situation that we are concerned about would be if a coal hauler had the path of egress blocked for the continuous miner operator while the car is being loaded, and the miner operator's tag accidentally disabled the coal hauler. The only way that the car could be restarted would be for the continuous miner operator to climb over the coal hauler, or more likely, the operator would walk inby towards the face to get out of the coal haulers activated field. This is not the safest place for the miner operator to be, especially if the cut is almost fully extracted. This circumstance is even more critical if the roof in the immediate area begins to deteriorate. For the above stated reasons, we reassert our belief that the continuous mining machine proximity detection system should be disabled when the machine is in the process of cutting or loading coal or rock.

- MSHA solicits comments on which miners working around continuous mining machines should be required to have a miner-wearable component. Comment should be specific and include alternatives, rationale for suggested alternatives, safety benefits to miners, technological and economic feasibility considerations and supporting data.
    - All persons working on or expected to be working on an active working section where the continuous mining machine is equipped with an operating proximity detection system, should be required to have a miner-wearable component. This includes examiners, contractors, visitors, inspectors or any other persons who enter the working section, regardless of how long they intend to stay in the section.

- The proposed rule would require that a proximity detection system be installed and maintained by a person trained in the installation and maintenance of the system. MSHA solicits comments on this proposed provision. Comment should be specific and include alternatives, rationale for suggested alternatives, safety benefits to miners, technological and economic feasibility considerations and supporting data.
    - This provision is not necessary, since existing 30 CFR Part 48 already requires that miners be trained to perform any work which they are assigned to do. Miners who are not involved in the installation do not need to be trained in how to install the systems in order to maintain them. In other words, train miners for the work they are expected to perform.

      Since this is a new technology, it will take time to get everyone trained in an orderly manner before the installations begin. The manufacturer will likely be the ones conducting the training and this will take away from their ability to get systems installed as quickly as the agency would like. This will further interfere with the industry's ability to meet the 18 month phase-in deadline.

- Defects in the proximity detection system would be required to be corrected before the machine is returned to service. MSHA solicits comments on the requirements in proposed paragraph (c) of this section. Comment should be specific and include alternatives, rationale for suggested alternatives, safety benefits to miners, technological and economic feasibility considerations and supporting data.
    - We have no real issue with this provision, with the following qualification. At times, the proximity detection system may become inoperable due to damage or component malfunction. If that occurs, there must be a means by which the operator can bypass the proximity detection system for the purpose of moving the continuous mining machine to a safe location for the repair of the system.

Since we are advocating that the system be turned off when the continuous mining machine is in the process of cutting or loading coal or rock, if the system is damaged or malfunctions during the mining process, we believe that the operator should be allowed to finish the cut that has been started before the machine is pulled back for repairs. When the cut has been completed and the cutter head has been disengaged, the proximity detection system can then be bypassed and the continuous mining machine removed to the safest practical location for repairs.

- MSHA solicits comments on whether the defects and corrective actions in proposed paragraphs (d) (1) and (d)(2) should be recorded. Comments are requested on whether the check for the miner-wearable component that would be required in proposed paragraph (c)(2) should be certified. Comment should be specific and include alternatives, rationale for suggested alternatives, safety benefits to miners, technological and economic feasibility considerations and supporting data.
    - Firstly, the requirement to record defects and actions taken is overly burdensome for the operator. This is not mandated in 30 CFR 75.512 for other electrical equipment checks, and exposes the operator and miners to the negative consequences resulting from minor paperwork errors. If repairs extend from one shift to another, the person who corrects the defect may not even be the one who started the work. This does not improve miner safety and only creates busy work for little or no benefit. Operators should be allowed to develop their own maintenance reporting systems without the fear of the agency getting involved in their business. The bottom line should be, does the system work or not. If it is not functioning properly, fix it and return it to its intended purpose.

      Secondly, daily inspection requirements in proposed paragraph (c) are acceptable, however, we believe there is an error in the proposed language as it refers to (c)(2). Immediately above proposed paragraph (c)(1), the proposed rule states "Operators must:", and then proposed paragraph (c)(1) allows operators to designate a person to perform the required visual checks. By extension, the "Operators must:" phrase also applies to proposed paragraph (c)(2), however there is no similar language which allows the operator to designate a person to check the person wearable component. We believe this is an easily corrected oversight and each person carrying a miner-wearable component should be designated to visually inspect their device before proceeding underground.

Defective miner-wearable components should be replaced before that person goes underground.

- MSHA solicits comments on the requirements in proposed paragraph (d) of this section. Comment should be specific and include alternatives, rationale for suggested alternatives, safety benefits to miners, technological and economic feasibility considerations and supporting data.
    - Peabody agrees with the first part of proposed paragraph (d)(1), "At the completion of the check required under paragraph (c)(1) of this section, a certified person under 30 CFR 75.100 must certify by initials, date and time, that the check was conducted." This would be done in the same way the dust control parameter checks are currently certified, on a date board located on the working section. There is absolutely no safety benefit for the proposed requirement to record defects found and corrective actions taken during the visual examinations mandated in proposed paragraphs (c)(1) or (c)(2). The electrical examination required by (c)(3) should be recorded just like all of the other electrical examinations required in 30 CFR 75.512, without the unnecessary recording of defects and corrective actions. This time consuming step will not improve miner safety and sets a trap for overwhelmed supervisors who already have a massive reporting load. Proposed paragraph (d)(4) is redundant and should be removed, since this is already required in 30 CFR 75.159 which states, "The operator of each coal mine shall maintain a list of all certified and qualified persons designated to perform duties under this Part 75." Additionally, a 5000-23 form is already required by 30 CFR 48.9(a) to be completed for each person trained in the installation and maintenance of the proximity detection systems. This is sufficient documentation of the training. As a result, the recordkeeping proposed in paragraph (d)(5) should be removed in its entirety. These 5000-23 forms are required to be maintained at the mine for two years, which is greater than the one year requirement proposed in paragraph (d)(6). Therefore, paragraph (d)(6) should also be removed.

- Mine operators or manufacturers may apply to MSHA for acceptance of a proximity detection system that incorporates new technology. It would provide that MSHA may accept a proximity detection system if it is as safe as those which meet the requirements of this proposed rule. MSHA solicits comments on this proposed provision. Comment should be specific and include alternatives, rationale for suggested alternatives, safety benefits to miners, technological and economic feasibility considerations and supporting data.

- We are unclear as to whether this refers to approval of a petition for modification, or if this is a streamlined way to get systems approved through the normal A&CC channels. Please clarify.
- We also believe that the language should state that MSHA "shall" accept new technology if it is as safe as those which meet the requirements of this proposed rule, rather than "may".

- MSHA requests comments on all estimates of costs and benefits presented in the preamble and in the PREA, and on the data and assumptions the Agency used to develop estimates.
  - Please see our comments and assumptions on the PREA in the body of our comments above. Without reservation, we believe that the agency has grossly underestimated the effect of the proposed rule on the industry and overestimated the benefits.

- MSHA solicits comments on its monetized value for permanent disability injuries.
  - The willingness-to-pay methodology used to estimate the imputed value of life saving programs infers that miners working in a safer environment would not be paid as much as miners working in less safe mines. This in fact is not the industry experience. Other factors, such as proximity to their home or association with family members and friends have a much greater impact on why miners choose to work where they do. In practice, some miners will actually take a pay cut to work in a mine closer to home, even if it is not as safe. The mining industry must pay competitive wages when compared to other industries around them and many mines must pay union scale or above to attract skilled and certified miners. The prevailing pay scale has little or nothing to do with risk and more to do with competitive forces in the marketplace. We agree with the agency "that monetizing the value of a statistical life is difficult and involves uncertainty and imprecision." However, the injury costs used in the PREA are several orders of magnitude higher than what we experience in our mines, and the resulting avoidance benefit is dramatically overstated. The average cost of a permanently disabling injury would be about $500,000-$600,000, not the $3.5 million supposed in the proposed rule.