TRANSCRIPT OF PROCEEDINGS

IN THE MATTER OF:

PUBLIC HEARING ON PROXIMITY DETECTION SYSTEMS FOR CONTINUOUS MINING MACHINES IN UNDERGROUND COAL MINES

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AB65-HEAR-2
IN THE MINE SAFETY AND HEALTH ADMINISTRATION

IN THE MATTER OF:

PUBLIC HEARING ON PROXIMITY DETECTION SYSTEMS FOR CONTINUOUS MINING MACHINES IN UNDERGROUND COAL MINES

Charleston, West Virginia
Thursday
October 20, 2011

APPEARANCES

MSHA Panel:
GREGORY WAGNER, DAVE CHIRDON, MATT WARD

Speakers:

CHRIS HAMILTON, Senior Vice President, West Virginia Coal Association
BRIAN THOMPSON, Local Representative, Joy Mining Equipment
DENNIS O'DELL, Administrator of Occupational Health & Safety, United Mine Workers

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MODERATOR WAGNER: Good morning. My name is Gregory Wagner. I'm the Deputy Assistant Secretary for Policy for the Mine Safety & Health Administration. I'm going to be the moderator for this public hearing on MSHA's Proposed Rule on Proximity Detention Systems for Continuous Mining Machines in Underground Coal Mines.

On behalf of Assistant Secretary of Labor for Mine Safety & Health, Joseph A. Main, I want to welcome all of you here today.

I'd like to introduce the members of the MSHA panel. To my right is Dave Chirdon from the Approval and Certification Center, MSHA's Tech Support, and Matt Ward from the Office of the Solicitor.

In response to requests from the public, MSHA is holding public hearings on its Proposed Rule for Proximity Detection Systems for Continuous Mining Machines in Underground Coal Mines.

This is the second public hearing on this proposal. The next hearings will be held in Washington, Pennsylvania, on October 25th, and in Evansville, Indiana on October 27th.

The purpose of this hearing is to receive information from the public that will help MSHA evaluate
the requirements of the proposal and produce a final rule
that will improve safety conditions at mines.
As most of you know, the hearings will be
carried out in an informal manner. Formal Rules of
Evidence will not apply. The hearing panel may ask
questions of speakers and speakers may ask questions of
the panel.
Speakers and other attendees may present
information to the court reporter, sitting over here --
want to wave -- for inclusion in the rule making record.
MSHA will accept written comments and other appropriate
information for the record from any interested party,
including those not presenting oral statements.
We ask that everyone in attendance sign in on
the attendance sheet that's on the table just before you
enter the room.
MSHA is proposing to require the use of
proximity detection systems on continuous mining machines
in underground coal mines according to a phased-in
schedule. This rule would help protect miners from the
pinning, crushing and striking hazards that result from
working too close to continuous mining machines in
underground coal mines.
The proposal would also establish performance
and maintenance requirements for proximity detection
systems and require training for miners conducting
installation and maintenance of these systems. The
proposed rule is an important part of the Department of
Labor's "Plan, Prevent and Protect" strategy.

MSHA requests comments from the mining
community on all aspects of the proposed rule and is
particularly interested in comments that address
alternatives to keep provisions in the proposal.
Commenters are requested to be specific in their comments
and submit detailed rationale and supporting
documentation for suggested alternatives.

At this point, I'd like to reiterate some of
the requests for comment and information that were
included in the preamble to the proposed rule. And let
me say, if you haven't seen the proposed rule, there are
a limited number of copies on the desk where you signed
in.

So some things that were asked for in the
preamble would include the following.

**Number 1.** MSHA proposes to phase in the use of
proximity detection systems over an 18-month period.
Continuous mining machines manufactured after the date of
publication of a final rule would be required to be
equipped with proximity detection system three months
after the date of publication of a final rule.
Continuous mining machines manufactured on or before the date of publication of the final rule would be required to be equipped with proximity detection system 18 months after the date of publication of a final rule.

The Agency requests comments on the proposed compliance dates considering the availability of systems, the time necessary to process approvals for proximity detection systems, and projected time needed to install the systems.

Number 2. MSHA proposes to require the use of proximity detection systems that cause machines to stop no closer than 3 feet from the miner. The continuous mining machine operator would be allowed to be closer than 3 feet only when the machine is cutting coal or rock. However, the proximity detection system would be required to prevent contact with the machine operator.

MSHA considered proposing other specific stopping distances and considered a performance-oriented requirement that would not have included a specific distance. MSHA requests comments on this proposed provision, including whether a greater distance or a performance-based approach would be effective alternatives to the proposed 3-foot stopping distance requirement.

Number 3. Some 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 requests comments on whether all movement
should be stopped or under what, if any, circumstances
would it be acceptable for continuous mining machines to
continue mining -- excuse me -- to continue moving.

Number 4. The proposed rule does not cover
full-face continuous mining machines. A full-face
continuous mining machine includes integral roof bolting
equipment and develops the full width of the mine entry
in a single cut, generally without having to change its
location.

The Agency is interested in whether full-face
continuous mining machines should be equipped with a
proximity detection system, and, if so, why.

Number 5. Each of the three proximity
detection systems approved for underground coalmines in
the United States require use of a miner-wearable
component. These systems cannot detect a miner who is
not wearing the component.

MSHA solicits comments on which miners working
around continuous mining machines should be required to
have a miner-wearable component.

Number 6. Most proximity detection systems alert miners who get within a certain distance of a machine before causing machine movement to stop. This provides an added margin of safety that's consistent with most standard safety practices. The Agency recognizes that the use of a proximity detection system that causes frequent machine stops can result in frustration to miners, miners ignoring warnings, and can possibly lead to unsafe work practices.

MSHA believes that an appropriate warning signal is necessary to optimize safety of miners when a proximity detection system is used. MSHA requests comments on this provision, including whether a greater distance or performance-based approach would be effective alternatives to the proposed five-foot warning distance requirement.

Number 7. MSHA's estimates of the benefits and costs of the proposal are given in detail in the Preliminary Regulatory Economic Analysis and are summarized in the preamble. MSHA requests comments on the proposed estimated benefits and costs.

As you address the proposed provisions either in your testimony today or in written comments, please be as specific as possible. We cannot sufficiently evaluate

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general comments. As I said earlier, please include
suggested alternatives, including those of a performance-
based nature, your rationale, the benefits to miners, any
technological and economic feasibility considerations,
and any data that support your comments. The more
specific your information is, the better it will be for
MSHA to evaluate and produce a final rule that's
responsive to the needs and concerns of the mining
community.

You may submit comments following this public
hearing. Comments may be submitted by any method
identified in the proposed rule and must be received or
postmarked by November 14th, 2011. MSHA will make
available a verbatim transcript of this public hearing
approximately two weeks after the completion of the
hearing.

You may view the transcripts of all the public
hearings and comments on MSHA's website at www.msha.gov
and on www.regulations.gov.

We will now begin hearing testimony. If you
have a copy of your presentation, please provide it to
the court reporter. I'm going to ask each person who
speaks to please begin by clearly stating your name and
your organization, and spell your name for court reporter
to make certain that we obtain an accurate record.
Our first speaker today is Chris Hamilton.

MR. HAMILTON: Good morning.

Moderator Wagner: Good morning.

MR. HAMILTON: I hope your travel here was uneventful.

Moderator Wagner: It was quite eventful, thank you.

MR. HAMILTON: My name is Chris Hamilton, Senior Vice-President, West Virginia Coal Association.

Our association is comprised of coal producing companies that collectively account for over 95 percent of the state's coal production. The State of West Virginia is the nation's leading underground coal producing state, consistently averaging over 150 million tons of annual coal production over the past decade.

Arguably, our industry here in West Virginia, our members, are more directly impacted by this rule than most others. As an industry, we wholeheartedly support the development of proximity detection technology and its eventual widespread deployment and use in underground mining applications.

As evidence of this position, our association has been part of a pilot project with the West Virginia Mine Safety Technology Task Force and other industry partners since 2008, in an effort to evaluate and advance...
this technology forward. Other partners in this important endeavor include the State of West Virginia through the Mine Safety Technology Task Force, the Office of Miners' Health Safety and Training, representatives of labor, the United Mine Workers, manufacturers of proximity devices, individual coal companies, NIOSH, and even MSHA.

As I indicated, this project began in late 2008 and continues today. The idea, then and now, was to have several control mines that would agree to install proximity detectors on continuous miners in order to monitor and evaluate the available technologies in a number of underground applications. It was originally anticipated that the control mines would vary in seam heights and have different layouts and design.

My purpose of mentioning this today is so that you are at least aware of the work that has been done here in West Virginia by the Mine Safety Technology Task Force, which you should find useful in your current role with this rule making, and to encourage MSHA to coordinate its work in rule development with the State of West Virginia to avoid the issues we experienced with underground safety shelters where the State had different criteria and standards, or MSHA for that matter, for approving underground -- and for the design of

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underground shelters.

Accordingly, I will submit for your review a copy of the work plan and protocol developed by the task force to provide guidance and oversight to the pilot project. This document was recently circulated by the Office of Miners' Health Safety and Training and was accompanied by a memorandum, which, in part, stated that all proximity detection equipment must be tested and approved by the Director of the Office of Miners' Health Safety and Training.

In essence, we hope to avoid a situation where the State and MSHA are on two separate paths and ultimately end up with two separate rules and requirements for the operation and installation of proximity detection devices. We simply urge the two agencies to work closely together to share information and resources towards that end.

We are aware that a relatively small sample of mine operators have purchased and implemented proximity detectors on a limited and small-scale basis. We understand that issues of availability and reliability were prevalent in each instance. Hence, a major concern shared by our industry today is over how this technology has evolved over the past couple of years and whether it is ready for widespread or industry-wide implementation.
It would appear that the timeline proposed in the Agency rule is not sufficient to accommodate manufacturing production and delivering capabilities, operational demands, and existent equipment refit or replacement schedules. Questions also flow concerning the availability of technical resources within the industry to complete installation demands. Frankly, there are several mining firms with large inventories of continuous mining machines, which would require substantially more time than the timeline proposed by MSHA. I believe you will be hearing from those companies throughout this public comment period, and we'll be more specific to that point in our written comments.

One of the major problems in safety issues that this rule purports to address is miners being struck by moving equipment or moving parts thereof. As with most safety concerns, there are a number of ways to effectively address this underlying concern. Training and education, effective supervision, the use of technologies, operational controls and safeguards, individual alertness, enhanced communications and coordination among team members are all important tools in the world of accident prevention and often employed concurrently and used in concert with one another. A discussion of the rule and rationale for the rule within
MSHA's proposal addresses some of these issues.

Another important tool under professional safety management and accident control involves engineering process or administering the process, so the frequency or exposure that one has to accident-producing situations is decreased or eliminated. Towards that end, and as it relates to the hazards or underlying safety concern, which this proposed rule purports to address, MSHA has the authority and power to immediately reduce the exposure or frequency that miners have to moving underground equipment by encouraging and expediting the approval of extended cut mining systems. But for some inexplicable reason, MSHA continues to be reluctant to approve extended cut mining plans here in West Virginia. In fact, there have only been a relatively small number of extended cut plans or plans allowing dust rubbers to be used that have been approved over the past several years.

Extended cut remote controlled mining is one of the many technological advances used in mining today that has allowed West Virginia's underground mining industry to achieve and improve mine safety performance and gains in overall mine efficiency. As we know, this method of mining is designed to optimize individual miner safety by providing the continuous miner machine operators an
operating position a safe distance from the face, away from respirable dust and gas as coal is extracted, and to minimize the number of times the machine must be moved, relocated, and repositioned for mining.

Mine safety is further enhanced by this method of mining by cutting down the number of times that continuous mining machines and all other section equipment are moved around in tightly confined underground areas limiting miner exposure to accident-producing situations by as much as 78 percent. The use of deep cut mining and machine-mounted dust rubbers have improved the level of health and safety of coal miners by reducing explosive and respirable dust by reducing unnecessary equipment moves and eliminating a multitude of accident-producing situations every single day. When this equipment is approved by MSHA for use, as it was developed and designed, it is a win-win situation for the miner and for the industry.

The majority of extended remote controlled mining machines in operation today have been in place for years and operate at high levels of safety and overall efficiency. Without exception, report after report published by mining and mine safety professionals, NIOSH and the former Bureau of Mines attest to the safety advantages and overall accomplishment of this method.
Even a cursory review of this published mine safety research leaves little doubt over the safeness and superiority of this method of mining. We'll submit a list of these reports we've referenced in support of extended cut remote control mining with our testimony.

However, when new operations commence, or when existing mine operations attempt to expand current capacity, the approval of these machines is arbitrarily and inexplicably withheld by the Mine Safety & Health Administration. In fact, there have only been a relatively small number of extended cut plans, or plans allowing dust rubbers to be used, that have been approved over the past several years. We believe this is simply unacceptable.

MSHA's reluctance to approve this method of mining places hundreds of miners in harms way at an alarming rate on a daily basis in West Virginia's underground coalmines. Obviously, the deeper the face penetration, the fewer times that continuous mining machines and other supportive equipment is moved and confined in underground spaces and less disruption to the mining cycle in the miner's daily routine.

It is also true that when the continuous mining machine is forced to move and relocate underground, every other piece of mining equipment that follows the
A continuous miner in the mining sequence must also move and be relocated or repositioned. This would typically involve two or three shuttle cars, one or two roof bolter machines, and a scoop car. This point is so compelling, it frames the unchallenged conclusion that requests to use this form or method of mining should be approved without delay. In fact, unless there are demonstrated geological issues that may affect roof stability or exceptionally high methane liberation, these requests should carry, in our view, a rebuttable presumption that their approval be expedited by regulators charged with safety, particularly when we want to eliminate accident-producing situations from moving underground equipment.

Based on a survey conducted by our association earlier this year, there are approximately 345 continuous miners that can use extended cut remote controlled mining systems in operation today. There are 230 mine plans purporting to use extended cut remote controlled mining systems. At one point this year, there were 90 plans awaiting approval for extended cut mining. Some have been waiting for over a year.

Also earlier this year, NIOSH released a comparable study of respirable dust control measures and their effects on extended cut mining methods versus traditional 18- or 20-foot cuts. The study focused on
six control mines throughout central Appalachia during an 18-month period from the fall of 2009 to late 2010. We will also attach a copy of this study for your review and consideration. The report concludes that with regard to respirable dust, which we so often hear is the reason that MSHA withholds or has a moratorium on approving extended cut mining plans, that there was no statistical differences between dust control and compliance averages between extended cut mining and traditional or non-extended cut mining methods.

Two independent analyses of this method of mining were also recently conducted, which we'll include with our written comments. Both reports reveal similar findings, particularly as it relates to the number of unnecessary equipment moves; mining machines are being compelled to maneuver in West Virginia underground coal mines subjecting miners to a high risk of hazards. It was found that under the same conditions, taking an 18-foot cut instead of a 38-foot extended cut, increases the tram distance and, thus, exposure to machine-related injury by 78 percent.

I would also point out that the study cited within MSHA's proposed rules by MSHA's Technical Support Approval and Certification Center, also updated and revised earlier this year, fatal accidents involving
remote controlled continuous mining machines also
provides shocking findings. A study of these accidents
resulted in the following summary conclusions as to how
and where the accidents occurred. "Tramming the machine
to a new location was the most dangerous work function;
26 out of 33 fatalities and, thus the majority of the
fatalities occurred while tramming or performing
maintenance, and only 2 during the actual mining .
process." The accidents in this study were limited to
those involving continuous mining machines. However,
when the continuous miner is forced to move or relocate,
so is every other piece of equipment used in the mining
cycle.

Ironically, as it relates to the current rule
making, MSHA clearly acknowledges the hazards attendant
to place changing and repositioning continuous mining
machines underground in its proposed rule before us today
and remarkably states in its justification for not
requiring proximity detectors on full-face continuous
mining machines; that full-face continuous mining
machines involve less frequent place changing and
repositioning resulting in fewer pinning, crushing or
striking hazards to miners.

It is perplexing and absolutely belies logic
that MSHA would exempt mining machines from this safety
feature based on its limited movement, while at the same
time force other machines to be moved from place-to-place
or relocated in an underground mine 78 percent more
frequently. The central states of the Appalachian
region, principally West Virginia, Kentucky and Virginia,
have been under attack by this administration and federal
agencies with responsibility for mining. Their goal
seemingly appears -- is to limit coal production from
this region. They appear destined to do so, to see coal
production from this region severely restricted, and all
associated mine permitting and operation costs elevated.

In West Virginia, for all intent and purposes,
a moratorium is in place on the approval of new mines or
expansion of existing mines that seek to use extended cut
remote control continuous miners with scrubbers equipped
on those machines. The use of deep cut mining and
machine-mounted scrubbers have improved the level of
health and safety of coal miners by reducing explosive
and respirable dust and by reducing unnecessary equipment
moves eliminating a multitude of accident-producing
situations every single day.

Clearly and simply stated, extended cut mining
offers superior safety advantages over traditional
methods, and MSHA's reluctance to expedite approvals of
these systems is indefensible, subjecting hundreds of
working miners to unnecessary hazards on a repeated basis every day. As part of this rule making and goal of eliminating hazards, we respectfully request MSHA to use all available tools in its tool box to encourage immediate approval of extended cut mining plans in order to reduce miner exposure around moving machines underground.

Towards this end I simply ask, is our goal to reduce accidents of this nature, or is our goal something other?

Thank you. I appreciate your indulgence and attention.

MODERATOR WAGNER: Thank you very much. I'm going to turn first to Mr. Chirdon, do you have any questions?

MR. CHIRDON: I do not have any questions.

MODERATOR WAGNER: Mr. Ward?

MR. WARD: No.

MODERATOR WAGNER: I want to take a quick look through my notes.

You don't have any specific recommendations on a timeline for implementation at this point.

Am I correct in understanding you to say that?

MR. HAMILTON: That's correct.

MODERATOR WAGNER: Okay. But we will expect to
hear from folks later.

MR. HAMILTON: Yes.

MODERATOR WAGNER: Thank you.

You also noted that the Agency addressed some of the issues of training, supervision, education, work practices intended to reduce risk.

And do you have anything to say about the adequacy or inadequacy of those approaches?

MR. HAMILTON: I think those approaches appear to be sufficient.

MODERATOR WAGNER: I beg your pardon?

MR. HAMILTON: I say, I believe those approaches appear to be sufficient.

MODERATOR WAGNER: Okay. So despite the fatalities and the serious injuries that were noted in the preamble, you feel they are sufficient to prevent all the fatalities and the significant injuries that were noted.

MR. HAMILTON: My recollection is that MSHA delineates a number of activities currently underway within the industry.

MODERATOR WAGNER: Uh-huh.

MR. HAMILTON: And while I believe, you know, individual training and human resource development programs consistently evolve based on needs. And I note
that they are evolving every single day by our hundreds of Mine Safety engineering and training professionals within the business; but I believe, as I said, the reference to those safety accident-prevention techniques appear to be adequate as they are provided for within MSHA's rule.

MODERATOR WAGNER: So within the context of the rule, they're adequate if supplemented by the engineering controls that we're discussing.

MR. HAMILTON: Your reference in the rule, as I understand, and based on my reading of the rule, addresses a number of the training education activities that are currently underway within the industry.

MODERATOR WAGNER: Right. I think that what the rule says, to my reading, is that there are a number of training, warning, education, supervision and information dissemination efforts; and these have been inadequate to stop the fatalities. That's why the Agency is looking beyond training in order to use available engineering controls and is proposing to do that in order to prevent the continuing fatalities from this suppression hazard?

MR. HAMILTON: Let me make it perfectly clear. We support the development of proximity detection technology and advancement within the industry. So we
think it will aid in the prevention of these types of accidents.

MODERATOR WAGNER: Great, thank you very much.

MR. HAMILTON: Now, let me finish.

MODERATOR WAGNER: Uh-huh.

MR. HAMILTON: We think there's a whole array of tools within this toolbox. You know, the statement that you just made where you questioned the adequacy of these techniques, because we still have accidents, it's almost like, you know, the immediate response that when a piece of rock falls in the mine, the roof control plan is inadequate. I'm not sure all those measures are inadequate. Can they be improved upon? Yes. But MSHA has to realize that it has the control and ability today to eliminate the majority of these accident-producing situations. Eliminate the exposure. Again, it's inexplicable to us; it's incomprehensible, how MSHA can continue this path forward with this apparent moratorium in place on approving extended cut mining plans.

MODERATOR WAGNER: Let me be clear --

MR. HAMILTON: You cut that expose --

MODERATOR WAGNER: -- because you've said this a number of times. There is no moratorium on the approval of extended-cut plans.

MR. HAMILTON: There is not a written official
moratorium, I will grant you that. But for those of us
in the field, and for those of us that work in this
industry in this state on a routine basis, there is
tremendous reluctance and resistance on behalf of MSHA.
And they're holding these plans that are approved over
the head of operators and using those on a threatening
basis, on a daily basis.

Miners, like mine operators and managers, are
raising these concerns repeatedly and MSHA has a deaf
ear. And, yet, we're going to subject miners on a daily
basis to all this unnecessary movement of equipment. You
know, the more stable a work place, a work area is going
to be a tremendous enhancement for mine safety.
Disruption of that twice as often creates a lot of
extraordinary confusion as it relates to movement of all
this equipment, coordination and communications.

MODERATOR WAGNER: Thank you very much.
MR. HAMILTON: Thank you.
MODERATOR WAGNER: The second person who signed
up to speak today is Brian Thompson.
MR. THOMPSON: I have some slides to show this
morning, if that's okay.
MODERATOR WAGNER: That's fine. I hope that
you have a copy of them to share with the court reporter.
MR. THOMPSON: I do not have a hard copy with
me. The detailed information I'll be showing here today is going to be submitted in a written report as well.

MODERATOR WAGNER: Thank you.

MR. CHIRDON: We would normally ask for a copy of the presentation as well, if you can provide that to us, maybe subsequent to the hearing.

MR. THOMPSON: Yeah, that would be fine.

MODERATOR WAGNER: Thank you.

And, Mr. Thompson, if you could identify yourself, spell your name, and say who you represent. We can also give you an e-mail address to e-mail the presentation.

MR. THOMPSON: Good morning. My name is Brian Thompson. We have a little bit of an echo. I'm the local rep for continuous miners and Joy Mining machinery.

We wanted to come in this morning and address a few of the items that were listed in the proposed rule. I've got some detailed examples that I'd like to go through as well, just give you some perspective on where we've been from an historical point of view and actually where we're going from -- a future vision with proximity detection on our continuous miners.

So as we go through, if you have any questions, I would just encourage you to ask those as we go through.
If we could do that, and that way we'll keep topics linked together as we go. Proximity detection has been an item on Joy's vision or plan for some time. We've been working with several folks within the industry to make that happen. We've been working with MSHA and Nautilus for four to five years ago on the first system, the first set of trials.

I know there was mention in the literature that was sent out. We've done a lot of work to develop proximity detection and to make it viable underground. Later on in 2009, we did partner with another supplier to develop a better product for the continuous miners, in particular. The goal of those products has always been to train operators in the most effective place to be underground in the safest areas where they can be, but really function in a training scenario more so than a safety system.

The system reliability has been critical. That's one thing that stands out as we go through all of these tests, all of these implementation processes, and an unreliable system does not promote safety. It seems to promote frustration throughout the operating work force, as well as the adoption of new technology. So anything we can do to make these newer technologies...
accepted underground, adaptable and less intrusive, all those things go hand-in-hand to make a successful system. We do note that there are limitations to the technology as it exists today. These are electromagnetic systems. They can be influenced by certain things. So they're not perfect. The industry continues to work on things to evolve the product and make it better. But, fundamentally, they're not a hundred percent failsafe; they're not a hundred percent perfect in the environment that we're in. So we work through that to come up with the best product that we can and have the best system on the market.

A little bit of background. We do have over 30 systems running in the U.S. mine industry today. Those are spread out across a variety of operators. The largest install base is with Alliance, and then there are subsequent machines that have been shipped over the last year to 18 months at a variety of operators. Those systems are up and running and running well. They've been adopted well. They've been brought into those environments with little trouble or disruptions to the overall process.

So while the end goal is being achieved as far as keeping operators in a safe area, in an appropriate distance away from the machine, it's also blending into
an operator work force and being adopted in such a manner
that it's been very successful. Having a bit of
foresight or looking out in the future, we actually
started planning for proximity in the latter part of
2009. In November of 2009, we started making provisions
on machines that they would be capable for field fitment.
This coming November, in a few weeks, we'll flip the
switch and actually make that same provision available on
our rebuilt miners. Prior to that, those were done at
customer request; those were not done as an automatic
function.
Since 2009, we've been working with this style
system in making preparation for its implementation prior
to any rule writing or any issuance of a rule. Full
system release -- my apologies for the slide, they're
being cut off slightly -- but the full system release is
underway now. We'll start shipping machines after the
first of the year with full "prox" loaded on them. So
the three key areas that I want to focus on this morning
and bring attention to. Again, we will detail these a
bit more in our written comments that will come before
the November deadline, so all this information will be
included in that.
The three key success factors that we've seen
through this implementation process has really been about
proper installation and system protection. It's been about proper training, having that in place, and having it set up and running. And also understanding the limitations of the technology and not trying to push it past what it's capable of doing or putting requirements on it that it can't, or we can't, meet. Those are probably the three biggest areas that we see and those are the areas I'll talk about this morning, specifically, in the rule and some of the comments that are in there, the first of which is proper installation.

The installations that have been made to date have been done in a workshop environment. Any manufacturer out there today, us included, have the capability of taking a system underground. We could lay it over top of a machine and that product would function. It would work satisfactorily. But, again, that does not deem success with this product. Success with this product ends up being, you know, how long can that system survive? How long can it make it through a working environment?

These systems need to be protected. They need to be robust and solid to where they can withstand the every day working environment. Even noted in the comments on page 44, you know, proper function is directly related to the quality and installation. We
believe that wholeheartedly, and we've seen that in a number of instances. I think we'll hear that from other written comments and verbal comments as well. So, we see that as a very key staple to this process; that these systems be installed in a work environment, a workshop environment; that they be installed in a manner that can be well protected and that they will survive.

Addressing the individual rule itself, we've given an 18-month timeline right now; that's what's been set out. If this product would be required to be installed underground, there are several things that would have to take place, many shifts of cutting and welding to properly protect. We feel that's not the best environment to be doing large amounts of cutting and welding and multiple shifts-style working.

As an example, the 1150 number that was set out in the written comment or in the written rule that was proposed, if you apply that over 18 months, that means you need to be installing about 64 machines per month over that 18-month period. To do that, is quite taxing and quite hard. Just in general, if you're going to take those same 64 machines and stick them into a shop environment, there's not enough capacity in the U.S. market to handle that workload. Our current workloads for rebuilding machines, right now, we usually average
about 11 or 12 machines in a given month. So you take
that in comparison with the 64 machines that would be
required, and you see that's quite a daunting task that's
being asked of the industry. If you spread that out and
look at it in a different form and look at it in the way
of coal production -- I've taken the MSHA data from 2010
and looked at it by region and basically taken three of
those particular regions, probably the worst case
examples of those environments. When I say worst case, I
mean, lowest tons per miner in any given area, Northern
App, Central App and Southern App; you'll see represented
up here the 41,000 tons, 29,000 tons and 30,000 tons are
average tons per month per mine. And, again, this is
coming from the MSHA data. All I've simply done there is
taken the number of tons for those regions divided by the
number of mines.

So the general assumption is there's one miner
working at those locations. Those come out to believable
numbers from everything that we've dealt with over the
years, very believable numbers. These are clean tons, so
there would be some variation there in that number. But
you can see the relative numbers at the bottom. An
average month between rebuilt is 36, 50, 49, and those
are in stark comparison to the 18 months that's being
proposed.
So, again, starting with the general premise that this product needs to be installed in a workshop. To effectively do that, you're looking at timelines more along the lines of 48, 50 months to capture some of the lower producing regions within the United States.

Training was the second aspect that was mentioned in the intro, and we see that as a very key part of success with this product. Minimum, absolute minimum, training of three days that we provide today, and that's usually extended into about two weeks. By the time you do training, and if you include hands-on initiation underground, our service reps are there for usually ten days on and off to make sure the machine is up and running, making sure it's stable, making sure everything is working properly. Again, the system itself goes in, gets turned on; but the training, the maintenance, the follow-up activity that needs to take place with this equipment, or this type of system, is very critical.

To give you an example of that, again, taking the same 1150 number that was mentioned in the written rule, we divide that over the 18 months; you end up with those 64 installations per month that are required. If you multiply that by the three man-days of training that exist, you roughly have 192 days of training. My note at ANTHONY & ASSOCIATES, INC. 770.590.7570
the bottom of this slide, which didn't pop up, was we
typically, as an organization, train about 30 man-days in
a given month. So, you know, if you take that number and
multiply it across the industry, there would have to be
quite a few training organizations developed and
established to hit this 18-month target.

The next one I want to talk about is some of
the technical details. In particular, the 3-foot rule
that was mentioned in the rule. The comment, it says
when cutting machines must stop before contacting an
operator.

First of all, the technology is not failsafe.
And I've said that a couple times already, but there's no
way to predict exactly where the machine is going to
stop. We can do shutdown functions at 3 feet; that's not
an issue. But all we can control is the turning off of
activity. What we can't control are floor conditions:
slopes that the machine may be sitting on; whether
bottoms are wet; whether they're sloppy; whether they're
rock; those type of things we can't control. And for
that reason, it would be extremely hard to dictate an
exact number. So unless you can narrow down what your
friction is going to be on that floor every single time,
it's going to be nearly impossible to dictate a number in
that portion of the rule. Again, just noting the
technology; we see it as a training aid; we see it as something that's very valuable and gets us toward an end goal, but it doesn't satisfy the purity of a safety system or a hundred percent failsafe type system.

The last point I'll make on this topic is zones. We talk about defining the zones as 3 feet out for stopping distances. The rule also mentions that in the cutting environment, we want that to be -- it drops down; there's no specific number given for cutting coal. What we do say in that rule is that machines cannot contact an operator. There is an environment when cutting where we change our zones currently, and there are two aspects.

The tramming, as mentioned before, has been the most hazardous environment. In those areas, we fully protect the machine; we fully engulf the machine in the zone and prevent operators from coming into those areas. When we are in cut mode, we do drop that zone in back in behind the bumper to give the operator a safe place or a safer position to be. What we don't see as viable is keeping that zone at its full strength or full size, and actually moving the continuous miner operator backwards into the path of haulage.

You do have various forms of haulage. I understand shuttle cars are the most prevalent. But when
you have that environment, the last thing we do is push
that operator into a more hazardous area than what he
could be if he was actually standing just behind the
machine. We don't like the idea of operators standing
beside the back bumper, obviously. We keep zones in that
area. That seems to be a very hazardous area that's been
identified with various red zone diagrams produced by
MSHA and also local mining groups. But we do see the
need to have separate zones for cutting and tramming.

In tramming, we do envision having a larger
zone, keeping that at quite a large area. Then, during
cutting, we believe the right idea is to shrink that zone
into the back bumper and give that operator a chance to
stay out of the haulage path.

MR. CHIRDON: If I could just ask you for
clarification.

These two pictures that you have at the bottom,
the one would be your protection zone while tramming, and
the other is what, cutting?

MR. THOMPSON: Yes, yes.

Next time, I'll put those names up at the top
so if they do get chopped off, you'll be able to see
those.

Yes, the image on the left-hand side is for
tramming. We do have the two zones as mentioned. We do
have the warning zone and the shut down zone on this system. They are set roughly about the same numbers that were prescribed in the rule.

MR. CHIRDON: Okay.

MR. THOMPSON: As an alternate, again, we've talked about some of these things prior to. Again, the shutdown process, we can turn functions off at any given time. That's not a problem. But we feel it's going to be impossible to dictate exactly where the final resting position of the machine is going to be just because of motion, because of ground conditions, because of inertia that's built up around that machine. So we think that's going to be very, very hard to overcome.

We also feel that the prohibiting of certain functions is ideal. Tram and swing movement are the two things that cause the most motion on the machine. Those are the two features that we do shut down today and also seem to be the least intrusive on the mining operations. It provides the highest level of protection for an operator matching up with the incidents that have been recorded over time. So those two areas we see as very critical. We want to make sure that those two features are taken care of.

And the last thing, as we mentioned earlier, definitely the zone configuration is keeping those in an
order that allows an operator to stay away from any type of haulage, batch or continuous, either one, we see as critical.

Finally, there's a comment about preventing interference from other electrical systems. These are electromagnetic systems. They can be influenced by some things, either heavy metal or other electromagnetic fields. There are possibilities for influence in this environment, and that goes back to the original comment about the systems not being failsafe, not being a hundred percent reliable.

You know, you can probably hit those things 95 percent of the time, and I'm sure we can come up with numbers to substantiate. But, fundamentally, we're not going to be there a hundred percent of the time. I don't think anybody with this current technology will be.

And those are the general comments I have. If you guys have any questions at all, I'll be glad to answer them.

MODERATOR WAGNER: Thank you very much.

I'll start with Mr. Chirdon.

MR. CHIRDON: I do have a couple of questions.

Regarding your rebuilt data that you provided --

MR. THOMPSON: Yes?

MR. CHIRDON: -- you mentioned the different
time frames. Depending on the production, how frequently they're removed. When the machine is removed from service, how long would it typically be out of service for this rebuilt?

MR. THOMPSON: Usually, you're out for about six months.

MR. CHIRDON: Six months.

MR. THOMPSON: Yeah. Just to make a clarification point there, those rebuilds simply come out as the machines are due anyway. So there's obviously extensive work that takes place on these pieces of equipment.

MR. CHIRDON: How many rebuilt facilities do you have?

MR. THOMPSON: Right now, for continuous miners, we've got one rebuilt facility operating in Virginia. We have secondary rebuilt facilities that we do overflow work in, so there are two additional facilities we work in across the United States.

MR. CHIRDON: So everything has to go through Duffield then, primarily?

MR. THOMPSON: Most of our rebuilds go through Duffield. The exception to that would be our western facilities. We do have operations in Wellington that run rebuilds through that shop. It runs as an independent
shop on its own. We do some overflow business into Bluefield, into Kentucky as well.

MR. CHIRDON: Okay. And then one additional question.

You said it would be possible to prevent contact in all cases. With your 30-plus systems you have in operation, do you have data of failures available?

MR. THOMPSON: Failures in what way?

MR. CHIRDON: Failures of the proximity detection system to do its intended function, which is to stop before contacting the miner.

MR. THOMPSON: I'll state it this way. In those instances, we've not had any reported contact of an operator.

MR. CHIRDON: Okay.

MR. THOMPSON: As far as giving you a number that says such a percentage of time, you know, it will function properly, I can't give you a number for that.

MR. CHIRDON: Thank you.

MR. WARD: You mentioned that it's hard to predict where the machine would stop based on ground conditions.

Have you done any testing on that issue?

MR. THOMPSON: We've not done any testing directly to it. The reason for that is there's so much
variability there. You know, you can do testing on a marble floor and you're going to get different results than what you would if you're on a mud floor. So there's really not a single place or a single point you can test and say: "Okay, that's going to be perfect; that's going to be our number." It's always going to vary. So with that level or breadth of variability, there's really not much emphasis being placed on individual testing for those.

MR. WARD: One follow-up. Within that range of variability, are you expecting that generally this would be like a de minimis movement, like in terms of a few inches that it would move?

MR. THOMPSON: Typically, yes, I would think it would be small. But, again, it's all dependent on what the bottom conditions are.

MODERATOR WAGNER: My questions are along the same lines.

Do you have an idea of what the range is, or a margin of safety that would be needed if you had to be highly confident that a 3-foot cut-off would be achieved?

MR. THOMPSON: That, I don't know. I don't have a number that I can give you there. As I said before, there's enough variability in each of the mine conditions that I would be afraid to give you a number.
MODERATOR WAGNER: Because of that variability, do you think that it would --

There's a question that we ask concerning views of this specification of 3 feet versus a performance standard that said cut it off before it would contact an individual.

Do you have any ideas about which would be preferable?

MR. THOMPSON: Just in general, I'd make one statement about that.

As I said before, I don't think it's possible to prevent contact in every situation. With that being said, the ranges, you know, whether it's performance or a hard number, I think it could go either way, but I'm very uncomfortable with treating this system in general as a hundred percent failsafe, as not ever having a problem, not ever having an incident where you do touch someone. The systems aren't that perfect. I don't believe the current technology is in a position, or will be in a position in the near future, to be presented in that form.

MODERATOR WAGNER: Thank you very much.

When we started this hearing, those were the only two individuals who had signed up to speak. I'd like to ask now whether there's anybody in the room who
would like to speak.

Mr. O'Dell.

MR. O'DELL: Good morning.

MODERATOR WAGNER: Good morning.

MR. O'DELL: A great day to be alive. My name is Dennis O'Dell -- D-E-N-N-I-S, O-D-E-L-L. I'm the Administrator of Occupational Health and Safety for the United Mine Workers of America.

I have a total combined time of 34 years in the industry; close to 20 as an underground miner, and the remaining time with the UMWA in the safety department.

I would like to thank MSHA for the opportunity to speak today on a device that is way overdue and should have been implemented years ago.

For years, miners have been killed by equipment that has crushed, pinned, struck and ran over them. With the implementation and use of proximity detection, this violent and needless act of death can be avoided.

Many who will come to testify before you over the time period of these hearings may argue that the system is not ready yet; that it's not a hundred percent; that it has bugs that need to be worked out; that they need more time to perfect it. I will argue that mining equipment that we use today is not a hundred percent. It has a tendency to break down. It has bugs in it that
need to be worked out. It's not perfect; yet, we use it every day to mine coal. Even more important to remember are the miners who have died on the job because of the lack of the use of a technology like proximity devices. They weren't ready to die. They and their families would love to have had more time.

If operators are really about protecting their work force and providing a safer environment, then the mining community needs to stop making excuses to put this off. Systems have been approved, tested, had successful results, and are already adopted and used by other countries with much success in saving lives. Experience with proximity detection systems on remote control continuous mining machines already exist in five coalmines in the United States, and are on machines and mines in South Africa, Canada, and Australia, where they have been reported to be very reliable.

Of the 70 fatalities resulting from pinning, crushing and striking accidents from 1984 through 2010 in underground coalmines, 30 were associated with the continuous mining machine. That leaves 40 accidents from other types of equipment, and we've had some since. The use of proximity detection systems could have prevented these accidents and fatalities. The union is disappointed that MSHA failed to require proximity

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devices on other mining equipment, and we would insist
that the rule be expanded to mandate the use of proximity
detection systems to shuttle cars, loading machines,
scoops, bolters, and other equipment that have been
associated with serious accidents or fatalities that have
occurred.

We are also disappointed that the proximity
devices were not mandated to be placed on surface
equipment and recommend that MSHA expand the use of these
devices to surface areas for surface equipment also.

In June of 2007, NIOSH put out a report,
RI-9672, where they gave a recommendation for evaluating
and implementing proximity warning systems on surface
mining equipment. The union believes that you must take
this into consideration. We also believe that you should
change your position on the type of miners you require
with the use of proximity devices. For example, persons
working around full-face continuous mining machines while
moving from one place to another can still be put at risk
when tramming the equipment.

During the time period when moving any
equipment from one place to another, the risk of an
accident increases. It doesn't matter if you're moving
an inch or the length of a football field, the individual
has a chance that he may be crushed, pinned, killed or
maimed. The rule should require the use of proximity
detection on all types of miners, as well as other mining
machines as I mentioned before. MSHA's own data supports
this. If you go back and review all the accidents that
have occurred over the years, on the question of the
transitional time period, because, as with any new
technology, we realize it takes time to get the required
amount of systems produced and delivered for use at the
mines, the UMWA supports the transitional time period as
suggested by MSHA. But if it takes longer, as pointed
out by the gentleman from Joy today, then MSHA may need
to revisit this time. We do ask, however, that you need
to speak to other manufacturers as well and take their
information in as consideration.

With saying that, I would suggest that if
manufacturers need to step up the process, this could be
a way to help stimulate the economy by them hiring more
people and personnel to meet the time and the demand to
help save miners' lives. The union has always been
strong advocates for training and retraining when new
technologies are introduced. We have learned that
initial training has to be given prior to the
implementation of the technology, actual and hands-on
training, once a miner is to operate or work around the
system, and frequent retraining has to occur so that
miners can retain and put to use what they have learned. Training must also take place if any changes or modifications are made to the system after the implementation of the devices. Ideally, retraining should occur on a daily basis, and our hope is that it does. But once every quarter, or more often if a miner requests it, may seem to be beneficial. Training and retraining must also be separate of the operator's annual retraining programs. The best and safest work force is a well-trained work force. For that reason, incorporating ongoing training into operations can make employees aware of the importance of respecting the equipment while providing employees with helpful information about these devices and new technology. The union agrees with MSHA that the rules should mandate that a detection system shall cause a machine to stop no closer than 3 feet from a miner. Based on feedback from our members, this would provide an appropriate distance and a margin of safety between a machine and a miner to prevent pinning, crushing or striking him. Again, NIOSH has provided research on this with continuous mining machines and roof bolting machines where a minimum 3-foot distance from the machines shows
operators can substantially reduce their risk of being struck. The proposed 3-foot stopping requirement is also consistent with proven and experienced proximity detection systems in underground coal mines in other mining countries, such as South Africa.

The union supports the 3-foot distance and it shall be measured from the surface of the machine closest to the miner-wearable component. The machine shall also remain stopped and will not move while any miner is 3 feet or closer to the nearest surface of the machine.

All miners working in and around the equipment must be required to have a mine-wearable component.

Training is necessary and must be provided by the operator and the manufacturer for miners to learn about this task. The union supports a mandate that both, not just one, but both an audible and visual warning signal should occur when a machine is 5 feet and closer to a miner. Having both will assure the necessary margins of safety to allow miners an opportunity to be proactive and move away from the machine to avoid danger.

With machines being so loud and the use of hearing protection as required today, an audible may not always work. The same falls true with a visual warning, depending on the location of miners around the equipment. Having both will give an added protection. They should
also be set up on a separate circuit so that if one fails or malfunctions, the other would continue to work.

Training also would be necessary and must be provided by the operator for miners to learn this new task.

The union supports that a proximity detection system should include visual system diagnostics to indicate that the system is functioning properly. Each proximity detection system should also be able to perform self-diagnostics to identify software or hardware problems. Miner operators must be trained on the use of this function. A visual will allow miners to readily determine if a proximity detection system is functioning properly or not. The visual should be located so that the miner operator would be able to observe it from all locations that he or she is required to be placed during the operations of that equipment. Again, training is necessary and must be provided by the operator and manufacturer for miners to learn this task.

If a system is not functioning properly, the union supports the proposal to allow machine movement so that it can be relocated from an unsafe location for repair purposes only. The machine could be moved only if an audible or visible warning signal has been designated and used to distinguish it from other signals. The rule needs to further mandate that this function can only be

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performed under the direction of a qualified mechanic or
certified electrician. Again, this would be allowed only
to relocate the mining machine for safety reasons so that
repairs could be made.

Also when this occurs, the incident should be
recorded in a book showing the date, time, action taken
to repair, time put back into service, and then should be
signed off by the person who made the repairs, along with
a counter signature by the company's maintenance
supervisor. This record should be kept for a period of
one year and made available to all interested parties.

The union understands that there may have been
some questions and concerns that proximity detection
devices can interfere with other electrical systems.
Manufacturers of three approved proximity detection
systems have all stated that their systems do not have
significant interference issues. But if there truly are
interference issues, as pointed out by the gentleman
today from Joy, then they need to be identified,
resolved, and shared with the rest of the industry on the
problems that have been encountered. If necessary, NIOSH
could become involved to help identify and resolve these
concerns.

MSHA's proposal would require that a proximity
detection system be installed and maintained by a person
trained in installation and maintenance. The union believes this is to be effective for machine operators, mechanics, and electricians, and they need to be involved in this process. Everyone must be properly trained to understand the operation of the system; and those that work on the system performing proper installation and repair techniques should be additionally trained to do this work.

All machine operators, mechanics and electricians should receive training from manufacturer representatives for operation, installation and maintenance duties at the mine. These individuals will need this training to assure that they understand the proximity detection system functionally and any maintenance issues and requirements that may occur. The union supports a pre-operational check to be performed by the individuals operating the machines at the beginning of each shift, immediately prior to when the machine is to be used.

A set of procedures is to be written by the operator, the manufacturer, miners, and the miners' reps to use as a checklist of items to be examined at the start of each shift. This pre-operative check would need to be submitted for approval to MSHA before using. A visual check of the machine-mounted components of the
proximity detection system to verify that the components are in tact would also ensure that proximity detection systems are functioning properly before the machines are operating. At a minimum, an appropriate check should also include the visual inspection to identify if the machine-mounted components are damaged so that action can be taken to correct any defects. The proposed visual check of the proximity detection system on the mining machine must be made by the machine operator and a certified electrician or qualified mechanic assigned to the area of the section.

Training is necessary and must be provided.

The union supports that the miner-wearable component shall be checked at the beginning of each shift for damage, and to make sure that it has sufficient power to work for the duration of the shift that it is to be used. Training also has to be provided for this. The union agrees that a trained, qualified maintenance person should examine the basic functions of the proximity detection system every seven days by checking zone sites, system communication, and warning signals. The proximity detection system must be examined at regular maintenance intervals and each time there's been a modification to the machine or the working environment.

The person evaluating a proximity detection

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system should fully understand what the system is intended to do and how electromagnetic field technology operates. The examination would occur while the machine is not in service. The qualified person would examine the proximity detection system for the requirements in the proposed paragraphs (b)(1) through (b)(5).

When this occurs, it should also be recorded in a book showing the date, time, action taken to repair it, time put back into service, and signed by the person who made the checks, repairs, along with a counter signature by the company's maintenance supervisor. This record should also be kept for a period of one year and made available to all interested parties. The union supports that the defects and corrective actions in proposed paragraphs (d)(1) and (d)(2) shall be reported and results made available to all interested parties. These records also should be maintained for one year. The check for the miner-wearable component that would be required under the proposed paragraph (c)(2) shall be certified, recorded and results made available to all interested parties. These records must be maintained for a year and made available to all interested parties.

MSHA's proposal under paragraph (d)(3) would require that the operator make and retain records at the completion of the examination under proposed paragraph
(c)(3) of the section. The union supports that these records must be retained for a year and the results be made available to all interested parties.

The union also supports having the qualified person conducting these examinations record, certify by signature, and date that the examination was conducted with a description of any defects and whatever corrective action would have been taken. The union agrees that it is necessary to assure that there is recorded evidence that persons assigned to install and perform maintenance on the proximity detection systems have to be trained.

The union insists mine operators would need to make and retain records of training for proximity detection system manufactures' employees who install or perform maintenance on their systems for a period of a year also. The union recognizes that in this age, many records are kept by computer databases. The union will support this for all recordkeeping requirements under this proposal only if assistance is made available for those that lack computer skills that would prohibit them from viewing this information. The operator must either assist those individuals to access these records, or make and provide them with hard copies. These records should be maintained for a period of a year and made available to all parties.
I hope I've covered all the areas in question.

We'll also be providing written comments when the time period is due.

Thank you for your attention to this important proposed rule. When enacted, it will no doubt help save miners' lives.

That concludes my comments for today.

MODERATOR WAGNER: Thank you very much.

Let me turn first to Mr. Chirdon.

MR. CHIRDON: I have no comment.

MODERATOR WAGNER: Just take a quick look here. I don't know if you said specifically or if I -- if you did, I didn't -- you did. You supported the 5-foot perimeter for the visual and audio signals, the 3-foot for stopping.

Okay, thank you very much.

And I'll say again, we have records of no one else having requested to speak.

Is there anyone in the audience who would like to present remarks now? I will give anyone a chance. And make sure that I'm not seeing them.

All right. If no one else wishes to make a presentation, I want to say again that the Mine Safety & Health Administration appreciates your participation at this public hearing. Thanks to everyone who made a
presentation, as well as those who did not present, for
your attendance at this hearing and your interest in this
rule making.

I want to again emphasis that all comments must
be received or postmarked by November 14th, 2011. MSHA
will take your comments and your concerns into
consideration in developing the Agency's final rule.

I'd like to encourage all of you to continue to
participate in the rule making process throughout the
process.

And with that, this public hearing is
concluded. Thank you very much.

(Whereupon, at 10:25 a.m., the hearing in the
above-entitled matter was concluded.)
REPORTER'S CERTIFICATE

CASE TITLE: Public Hearing on Proximity Detection Systems for Continuous Mining Machines In Underground Coal Mines

HEARING DATE: October 20, 2011

LOCATION: Charleston, West Virginia

I hereby certify that the proceedings and evidence are contained fully and accurately on the audio and notes reported by me at the hearing in the above case before the Department of Labor, Mine Safety & Health Administration.

Date: October 20, 2011

ANTHONY & ASSOCIATES, INC.

[Signature]

ANGELA PRESTON
(Official Reporter)