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**Cc:** [jjudeikis@comcast.net](mailto:jjudeikis@comcast.net)  
**Subject:** Regulatory Reform Comments  
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I've been involved in accident investigations and have studied the dynamics of mining safety for over 3 decades. These items are my best assessment of how to take mining safety to the next level as seen from my vantage point. Some of the items are not necessarily politically palatable but, they are provided from the bottom of my heart as definitive ways to achieve measurable positive safety improvements and needed protections for miners while also providing incentives for mine operators to adopt them.

**Respectfully Submitted,**

**JOE JUDEIKIS**

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**“Spend it on Safety” – Citation Abatement Concept**

· Provide mine operators with the opportunity to use 50 percent of assessed fines for health and safety improvements in lieu of paying the government the total amount of fines assessed. This would ultimately direct corporate financial resources to improve working conditions while providing incentive to settle versus contesting citations. This program would provide mine operators with an opportunity/incentive to receive an immediate reduction in the potential cost of a citation to half the assessed value and at the same time improve the safety and corresponding productivity at their operation by directing half the fine assessment into tax deductible safety improvements. The monies directed to the agreed upon safety improvements would also potentially reduce the possibility of the mine operator receiving a repeat citation as adopted engineering solutions would eliminate those type hazards. After receiving a citation, the mine operator would be given the opportunity to opt for the “Spend it on Safety” program as opposed to either paying the entire fine to the government and receiving no benefit or, contesting the citation and spending their money on lawyers, wasted time for hearings and court trials while still possibly needing to pay the assessment or a significant portion of it, not to mention providing absolutely no improvements to the mining operation. The mine operator would propose what related improvements he would plan to make and their estimated costs. The Engineering Solutions portion of the Rules to Live By initiatives would be a useful reference of candidate improvements the operator could consider adopting. An abatement time would be assigned for incorporating the engineering solutions similar to current abatement protocol. The District Conference Litigation Officer (CLO) would be the clearing house for mine operators using this program. The program, by definition, can only serve to improve working conditions in mines while offering mine operators an honorable way to resolve citation issues as opposed to the current win or lose method in which the miners lose either way. Indirectly, this program could serve to improve deficient safety cultures at operations where the mine operators currently prefer to dig in and fight the government rather than give in and pay the fine. This program would present an opportunity for them to improve the safety at their operation under the pretense of avoiding giving the government a penny and, the citation becomes satisfied. At face value this concept may be awkward to appreciate but, it is a very smooth way to realize safety improvements for miners at operations owned by “anti-

government” mine operators. In time as the program would take roots, it is believed mine operators would search out anyway possible to use the “Spend it on Safety” option as opposed to paying or otherwise contesting the majority of citations.

### **“Exempt from Inspections” – Inspector Resources Management Concept**

· Provide mine operators with the opportunity to go inspection free for designated time periods not to exceed two years if they operate accident free and have a zero citation inspection. This program is intended to bring the realities of resource utilization demands of the 21st Century into the intent of the mining laws MSHA is responsible for enforcing. A rule-making effort may or may not be required to alter the mandatory 2s and 4s requirements. When one realizes there do exist a significant number of mines that operate citation and or accident free for years while other mines have pitiful safety and citation records it seems illogical and foolish to devote precious inspection resources equally to both categories of mines. Candidate mines would be selected based on the absence of accidents from the previous inspection to the current inspection and the lack of citations during the current inspection. Mines satisfying these two requirements would be exempt from MSHA inspection for two years unless they experienced a serious disabling injury or fatality during the exemption from inspection period. If the mine experiences such an injury, they would be bumped off the exemption status and the regular normal inspection cycle would resume for their operation. The District Manager would approve mines meeting the exemption status requirements and he would also have the authority to remove mines from this preferred status. The mines reporting obligations would not be altered or affected in any way. After a two year time period, the mine would need to achieve a zero citation inspection to renew its “Exempt from Inspections” status along with remaining accident free.

### **“Certified Safety Officer” – Mine Safety Culture Improvement Concept**

· Establish a safety officer certification and licensing program and mandate the requirement for each underground coal mine to have a certified safety officer. Safety Officers will have their certifications called into question by MSHA if mine inspections demonstrate repeat citations issued and their certifications can be suspended or revoked based on a mine’s safety performance. Mines will not be permitted to operate without a certified safety officer. There currently exists a void between the MSHA efforts to have its hazard awareness materials effectively dispensed and utilized by mines. Additionally, there is a lack of concern at many operations to avoid repeat accidents and citations. It is unfortunately viewed by many mine operators as a cost of doing business. This attitude is clear indication of a lack of accountability and concern for safety on the part of the mine operator. This deficient safety culture is a barometer for pending fatalities or disasters at such operations. To remedy this complacency and the resultant dire consequences, mine operators need motivation to alter their risky behaviors. The requirement for a certified safety officer along with annual mandatory re-certification for each underground coal operation in order to remain operational would provide such motivation. This certification would be results focused as opposed to an administrative exercise. Initially, to establish the program (after the required authority is established by a promulgation effort) mines would designate their safety officer. The designated safety officer would receive training from MSHA which outlines the associated responsibilities and expectations and then a certification would be issued. Annually, the certified safety officer would be required to meet with the designated MSHA Certification Reviewing Official and review all accidents and citations issued at the operation he is responsible for. In order to have his certification renewed, he would need to demonstrate the specific mitigation efforts that were performed at the mining operation to prevent repeat

accidents and violations. Additionally, he would be required to show all the MSHA generated outreach materials he provided to the miners along with the method and dates for providing same. Additional scrutiny would be given to issues involving miner complaints, repeat accidents, and repeat violations. A passing grade for demonstrating good faith efforts to receive re-certification would be demonstration of solid, effective mitigation efforts for at least 70 percent of all accidents and citations and dissemination of at least 90 percent of the applicable MSHA outreach materials available. The effort is totally directed to have mines taking serious measures to prevent repeat accidents and citations along with conscientious use of the hazard awareness materials MSHA makes available to protect miners. The Certified safety officer will provide the nexus that has been missing in mining enforcement efforts from the enacting of mining regulations. The motivation for a mine operator to take this position seriously is born in the fact that without a certified safety officer, a mine would not be permitted to operate. As such, the certified safety officer would be required by law to only report to the owner of the mine and not to anyone in production. He would also be required to have the authority to cease any aspect of the mining operation he determined to be unsafe.

### **“Geographic Enhancement of MSHA HQ Operations”**

·Relocate the MSHA headquarters to South Point PA to remove the operations from the current high cost hub of Arlington which will improve the prospects for being able to attract high quality personnel to maintain staffing of critical HQ type positions. Additionally, this movement should be adopted by a vast majority of Agencies to effect a significant lowering of facilities operating costs across the board. This concept is not new to governmental operations and has significant monetary and human resource utilization benefits. The cost of living in the metropolitan DC area is among the highest in the nation and the commuting conveniences are less than accommodating even with the use of the Metro. The government is very interested in reducing its carbon footprint however, even with the use of carpools; commutes are significant, time consuming, and expensive for persons working in Arlington. The interest in working in the DC Headquarters of MSHA is also squashed by the financial drain placed on persons due to housing and rental costs. By relocating the MSHA Headquarters to South Pointe in the Pittsburgh PA area, in addition to the office infrastructure economic benefits, the locations’ reasonable housing costs, excellent interstate roads system access, and extremely close proximity to the Pittsburgh International Airport make it a perfect location for a mine safety headquarters since it is in the heart of coal country and within less than a one hour drive to 3 of the largest MSHA District offices and both Technical Support facilities not to mention the NIOSH Bruceton and Lake Lynn complexes. There isn’t much mining taking place inside the beltway in DC and, as such, the current location does not provide the Agency with an optimal location presence to carry out its mission of protecting miners. From a human resources standpoint, the ability to attract high quality personnel both from within and outside the Agency would be greatly enhanced if the Headquarters location was more financially friendly such as at South Pointe PA. Operating costs reductions, reducing the Agency carbon footprint, improving accessibility to the coal fields and other mining operations and research facilities, and greatly improved ability to attract the finest mine safety persons in the world would be achieved by moving the MSHA Headquarters from Arlington VA to South Pointe PA.

### **“Proximity Protection” – A practical and realistic approach that can be done NOW!**

·Since there are a wide variety of activities required concurrently during the operation, tramming, and repositioning of a continuous miner, it is relatively easy for a miner operator to become drawn into the red zone and, before he can reposition himself out of the hazardous

area one miscue can and has resulted in crushing injuries.

These activities include watching the cable, watching the location of other miners i.e. the miner helper, shuttle car positioning to get loaded, ventilation curtains, traveling through check curtains, positioning/slewing the cats to turn into or out of cross cuts, loose coal and other tripping hazards under foot, irregular or wet bottom, monitoring the roof, etc. Additionally, the noise and dust present in the area add to the distractions confronting the miner operator not to mention the contorted operating position required due to low mining heights. All these distractions result in the need for the miner operator to have more than “eyes in the back of his head” to ensure his safety.

All these factors have provided the impetus to justify the need for “proximity protection” afforded to the miner operator however, even though great strides have taken place in the past decade to develop and ultimately approve “wireless proximity protection systems”, the need to significantly modify existing continuous mining machines to retrofit such systems, among other issues, has resulted in a very slow and apprehensive acceptance of the systems by the industry.

The following concept is offered to afford rapidly retrofitted and relatively inexpensive continuous mining machine proximity protection:

The concept consists of installing eyelets at the mid point length of the machine on both the left and right sides of the machine. To the eyelet would be connected a retractable constant tension high strength, lightweight tether line similar to the line used on weed eaters. The other end of the line would be wound around a take-up reel installed in or at the remote controller. Such reels are commercially available and are called String Pots. The String Pot would be small i.e. similar to a fly fishing reel (or smaller) and be under constant spring tension to keep the line taught between the machine and the remote control unit. The String Pot would be interfaced electronically to the remote control electronics to prevent power to the tram circuit and electric solenoids portion of the unit controlling the hydraulics when a preset amount of tether line is on the String Pot spool. The way the system would work is by preventing power to these portions of the machine functions unless a minimum amount of tether is paid out from the String Pot spool i.e. a specific number of turns on the String Pot as determined from the tether end. The amount of tether required to be paid out to allow power to the subject functions would define the zone where, when the remote controller is within this zone, whether it be in front of or in back of the machine no potentially hazardous movement of the machine would be possible. When operating the machine from the left side, the tether would be hooked to the left side eyelet via a hook similar to those used on dog leashes and, when operating the machine from the right side, the miner operator would unhook the tether from the left side eyelet and re-hook it to the right side eyelet. Note that at any time the operator would need to change operating from one side of the machine to the other or, traveling along side the machine from the front to the rear or visa versa, the recoiling of the tether as he approached into the red zone would automatically disable machine movement functions. The logic would be configured to prevent the pump from shutting down and just prevent the electric solenoids that control hydraulic flow from actuating machine movement.

It is estimated there are no more than about a dozen remote control manufacturers and probably just a few that control the majority of the market for continuous miner remote controls. The benefits of such an approach are that no machine modifications are required other than a non permissibility related modification to the machines involving the installation of left and right side eyelets. The remote controllers lend themselves to a much more

amenable retrofit/redesign and all this can be done without the need to take the continuous mining machine out of production other than minor eyelet installations. The “tether incorporated” remote controls could be bench set up at the factory for any machine by knowing the minimum dormant tether distance required and then just be swapped out with the existing remote control. The dormant distance could be color coded to ensure the line wasn’t cut and the end connection reattached once systems are in operation or the tether end latch could have a factory seal to ensure it is not tampered with. The system could certainly be jumpered out by tying the tether in a loop and knot but, so could virtually any other safety features. The system is intended to protect conscientious operators from unknowingly/unintentionally getting into a red zone and inadvertently crushing themselves which appear to be the case in the vast majority of all red zone fatalities.

Please understand this proposal is not intended to detract from or otherwise minimize the potential benefits of electromagnetic based proximity protection but rather to provide another method to achieve a similar safety enhancement and, do so potentially much more rapidly than the existing track.

On a slightly different note, I have not seen any discussion regarding the potential health issues associated with miner operators being continually exposed to the electromagnetic fields and corresponding electromagnetic radiation associated with the electromagnetic based proximity protection systems however, I would suspect at some point in time this may, unfortunately, become a serious issue regarding using them. It would be truly tragic to spend over a decade of research, development, testing, and rule-making, not to mention the tens of millions of dollars expended by both government and industry to find out that by eliminating one problem we have created a more significant health related one for every continuous miner operator. There are several conflicting studies regarding the health effects of electromagnetic radiation however, in the 1960’s there was similar debate on the adverse effects of cigarette smoking. We all know how that turned out and currently the same type of a health debate is ensuing for cell phones. The following link touches upon much of this: [http://en.wikipedia.org/wiki/Electromagnetic\\_radiation\\_and\\_health](http://en.wikipedia.org/wiki/Electromagnetic_radiation_and_health)

#### **·Surface Equipment Regulations Needed:**

1. Require Coal & M/NM design requirements for seat belt systems (interlocks or in use lights etc.) on ‘off highway’ equipment to ensure the machine cannot be moved without the seatbelt being utilized. Also for all machines originally equipped with seatbelts by the manufacturer, require that the seatbelts be used.
2. Require all crane operators to wear seat belts
3. Prohibit cell phone usage while mobile equipment is in motion
4. Require compliance with manufacturer established payload limits (payloads must not exceed the design capability of the truck as specified by the manufacturer i.e. GVW or GCWR)
5. Establish brake adjustment requirements (incorporate CVSA Out of Service Criteria by Reference into regs) for on-highway type trucks
6. Require Ingress/egress standards for new equipment after a future date (improved stairways, slip resistant steps and handrails, powered access systems etc. patterned after ISO Standards with focus on the first step from the ground)
7. Require on board in cab deployment of dump bed, bucket, parking chocks, and articulation joint blocking systems for new equipment after a future date
8. Require blind area aids i.e. cameras, GPS, or other developed technologies on new haul trucks, dozers, and FELs after a future date

9. Require greatly improved back-up lighting and installation/use of convex type mirrors on mobile equipment

#### **·Traffic Control Uniformity Regulations Needed**

1. Establish haul road maximum grade limits (require petitions for grades exceeding 10 percent and under no circumstances allow grades to exceed 15 percent)
2. Establish performance requirements for site illumination at dump areas
3. For both Coal and M/NM establish national speed limits for all mine roads based on the material base, grade, curve radii, intersections, etc and corresponding standard signage size, shape, color and hazard warning signs etc. Many trucks weighing in excess of several hundred thousand pounds are capable of traveling at speeds greater than 45 miles per hour and the corresponding haul road designs may only be suitable for vehicle size and speeds less than half to a third that amount.

#### **·PPE Equipment Regulations Needed**

1. Require maintaining and using seat belts in non ROP equipment when provided by the manufacturer
2. Require all crane operators to wear seat belts
3. Update PPE regulations to require using PPE during specific activities along with addressing new materials and new equipment including shock absorbing and retractable lanyards; full body harnesses; properly designed and designated tie off points; fall protection usage training; and,
4. Explicitly mandate tying off for specific activities e.g. man lifts, working around access openings in floors or walls, roofs, scaffolds, etc.
5. Require wearing of Inflatable or std life vests when on boats, dredges, or working within falling distance of water regardless of whether or not railings are provided
6. Require high visibility coveralls/clothes;
7. Require arc flash protection when working in/on High Voltage areas
8. Require pedestrians walking or working around mobile equipment in low light conditions to wear illuminated vests or light bands around their hardhats visible for 360 degrees of viewing
9. Require persons working alone on the surface, especially near bodies of water to wear a 'First Alert' type warning device that communicates with a responsible person with outside emergency response contact capability

#### **·Roof Control Plans Templates Regulation Needed**

Add additional Coal roof control requirements for deep cuts and retreat mining including additional supports, second row streamers, etc.

1. Make the roof control plan requirements 'templates' as standardized as possible for the different types of mining. It is understood each mine has certain unique issues but, there are also many standard good practices that should be included in all parallel type plans across all Districts.
2. Require roof control 'Cliff Notes' type reference pocket cards of a mine's roof control plan be prepared by the mine operator as part of complying with the roof control plan and, given to all underground miners. These pocket cards should only address the most critical/life saving aspects of the roof control plan. Current roof

control plans are so voluminous that they lend themselves to being ignored by the miners who need the information the most.

### · **Essential Persons Regulation Needed**

1. For both Coal and M/NM Create a "necessary resources/essential persons" regulation with the sole purpose to limit the persons present during a task to only those having an immediate need to be there. There are a significant number of fatalities involving cranes and other equipment where the person who was killed was serving no purpose other than being a spectator.

### **Focus Areas for 2018 and beyond:**

- Need to focus more on accident info sharing with equipment manufacturers to engineer out safety problems. Through the MSHA/AEM Alliance, establish a standard protocol for notifying the manufacturers of an accident via AEM and soliciting their input for engineering solutions. This will serve, multiple purposes including putting manufacturers on notice of the accident and providing justification on their end for their providing engineering solutions.
  - Working through AEM, require/entice manufacturers to provide proficiency exams as part of the operation manual for each piece of equipment (manufactured after a specified date into the future) and require the equipment operator's successful completion of said exam as partial demonstration of adequate task training on said equipment i.e. compliance with MSHA task training requirements.
  - Need to better utilize accident data to provide inspection guidance for each mine. For example, have the Data Retrieval System flag repeat 7001 occurrences/reportable incidents when the mine ID is queried. If this information is readily obtainable by inspectors prior to conducting an inspection, it will alert inspectors to areas they need to give additional attention to when inspecting each mine. If the flagged information for a given mine indicates several roof falls, the inspector will know to take a close look at the roof control plan, see if it is being strictly followed, and possibly alert him to the need for the plan to be modified.
  - Need to focus more on condensing all Agency safety information to "one page" topics tailored to the specific activities to better insure it will be read, more readily disseminated to the workforce, and possibly acted upon.
  - Need to create task training proficiency canned models that include safety precautions as part of operational training. For example, emergency shutdown protocols for mobile equipment need to be emphasized. The current method of verifying, via a completed training form, that task training has been provided does not ensure the task training was worthwhile or if it taught the person how to handle an emergency situation.
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- Surface Electrical Regulations addition - for both Coal and M/NM require voltage interruption devices on welders. These commercially available devices would serve to eliminate the related fatalities we have experienced.
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**Subject:** Fwd: Regulatory Reform Comments  
**Date:** Wednesday, April 18, 2018 10:29:49 AM

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Resent 4-18-2018

----- Original Message -----

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The following concept is offered to afford rapidly retrofitted and relatively inexpensive continuous mining machine proximity protection:

The concept consists of installing eyelets at the mid point length of the machine on both the left and right sides of the machine. To the eyelet would be connected a retractable constant tension high strength, lightweight tether line similar to the line used on weed eaters. The other end of the line would be wound around a take-up reel installed in or at the remote controller. Such reels are commercially available and are called String Pots. The String Pot would be small i.e. similar to a fly fishing reel (or smaller) and be under constant spring tension to keep the line taught between the machine and the remote control unit. The String Pot would be interfaced electronically to the remote control electronics to prevent power to the tram circuit and electric solenoids portion of the unit controlling the hydraulics when a preset amount of tether line is on the String Pot spool. The way the system would work is by preventing power to these portions of the machine functions unless a minimum amount of tether is paid out from the String Pot spool i.e. a specific number of turns on the String Pot as determined from the tether end. The amount of tether required to be paid out to allow power to the subject functions would define the zone where, when the remote controller is within this zone, whether it be in front of or in back of the machine no potentially hazardous movement of the machine would be possible. When operating the machine from the left side, the tether would be hooked to the left side eyelet via a hook similar to those used on dog leashes and, when operating the machine from the right side, the miner operator would unhook the tether from the left side eyelet and re-hook it to the right side eyelet. Note that at any time the operator would need to change operating from one side of the machine to the other or, traveling along side the machine from the front to the rear or visa versa, the recoiling of the tether as he approached into the red zone would automatically disable machine movement functions. The logic would be configured to prevent the pump from shutting down and just prevent the electric solenoids that control hydraulic flow from actuating machine movement.

It is estimated there are no more than about a dozen remote control manufacturers and probably just a few that control the majority of the market for continuous miner remote controls. The benefits of such an approach are that no machine modifications are required other than a non permissibility related modification to the machines involving the installation of left and right side eyelets. The remote controllers lend themselves to a much more amenable retrofit/redesign and all this can be done without the need to take the continuous mining machine out of production other than minor eyelet installations. The “tether incorporated” remote controls could be bench set up at the factory for any machine by knowing the minimum dormant tether distance required and then just be swapped out with the existing remote control. The dormant distance could be color coded to ensure the line wasn't cut and the end connection reattached once systems are in operation or the tether end latch could have a factory seal to ensure it is not tampered with. The system could certainly be jumpered out by tying the tether in a loop and knot but, so could virtually any other safety features. The system is intended to protect conscientious operators from unknowingly/unintentionally getting into a red zone and inadvertently crushing themselves which appear to be the case in the vast majority of all red zone fatalities.

Please understand this proposal is not intended to detract from or otherwise minimize the potential benefits of electromagnetic based proximity protection but rather to provide another method to achieve a similar safety enhancement and, do so potentially much more rapidly than the existing track.

On a slightly different note, I have not seen any discussion regarding the potential health issues associated with miner operators being continually exposed to the electromagnetic fields and corresponding electromagnetic radiation associated with the electromagnetic based proximity protection systems however, I would suspect at some point in time this may, unfortunately, become a serious issue regarding using them. It would be truly tragic to spend over a decade of research, development, testing, and rule-making, not to mention the tens of millions of dollars expended by both government and industry to find out that by eliminating one problem we have created a more significant health related one for every continuous miner operator. There are several conflicting studies regarding the health effects of electromagnetic radiation however, in the 1960's there was similar debate on the adverse effects of cigarette smoking. We all know how that turned out and currently the same type of a health debate is ensuing for cell phones. The following link touches upon much of this: [http://en.wikipedia.org/wiki/Electromagnetic\\_radiation\\_and\\_health](http://en.wikipedia.org/wiki/Electromagnetic_radiation_and_health)

#### **·Surface Equipment Regulations Needed:**

1. Require Coal & M/NM design requirements for seat belt systems (interlocks or in use lights etc.) on 'off highway' equipment to ensure the machine cannot be moved without the seatbelt being utilized. Also for all machines originally equipped with seatbelts by the manufacturer, require that the seatbelts be used.
2. Require all crane operators to wear seat belts
3. Prohibit cell phone usage while mobile equipment is in motion
4. Require compliance with manufacturer established payload limits (payloads must not exceed the design capability of the truck as specified by the manufacturer i.e. GVW or GCWR)
5. Establish brake adjustment requirements (incorporate CVSA Out of Service Criteria by Reference into regs) for on-highway type trucks
6. Require Ingress/egress standards for new equipment after a future date (improved stairways, slip resistant steps and handrails, powered access systems etc. patterned after ISO Standards with focus on the first step from the ground)
7. Require on board in cab deployment of dump bed, bucket, parking chocks, and articulation joint blocking systems for new equipment after a future date
8. Require blind area aids i.e. cameras, GPS, or other developed technologies on new haul trucks, dozers, and FELs after a future date
9. Require greatly improved back-up lighting and installation/use of convex type mirrors on mobile equipment

#### **·Traffic Control Uniformity Regulations Needed**

1. Establish haul road maximum grade limits (require petitions for

- grades exceeding 10 percent and under no circumstances allow grades to exceed 15 percent)
2. Establish performance requirements for site illumination at dump areas
  3. For both Coal and M/NM establish national speed limits for all mine roads based on the material base, grade, curve radii, intersections, etc and corresponding standard signage size, shape, color and hazard warning signs etc. Many trucks weighing in excess of several hundred thousand pounds are capable of traveling at speeds greater than 45 miles per hour and the corresponding haul road designs may only be suitable for vehicle size and speeds less than half to a third that amount.

### **· PPE Equipment Regulations Needed**

1. Require maintaining and using seat belts in non ROP equipment when provided by the manufacturer
2. Require all crane operators to wear seat belts
3. Update PPE regulations to require using PPE during specific activities along with addressing new materials and new equipment including shock absorbing and retractable lanyards; full body harnesses; properly designed and designated tie off points; fall protection usage training; and,
4. Explicitly mandate tying off for specific activities e.g. man lifts, working around access openings in floors or walls, roofs, scaffolds, etc.
5. Require wearing of Inflatable or std life vests when on boats, dredges, or working within falling distance of water regardless of whether or not railings are provided
6. Require high visibility coveralls/clothes;
7. Require arc flash protection when working in/on High Voltage areas
8. Require pedestrians walking or working around mobile equipment in low light conditions to wear illuminated vests or light bands around their hardhats visible for 360 degrees of viewing
9. Require persons working alone on the surface, especially near bodies of water to wear a 'First Alert' type warning device that communicates with a responsible person with outside emergency response contact capability

### **· Roof Control Plans Templates Regulation Needed**

Add additional Coal roof control requirements for deep cuts and retreat mining including additional supports, second row streamers, etc.

1. Make the roof control plan requirements 'templates' as standardized as possible for the different types of mining. It is understood each mine has certain unique issues but, there are also many standard good practices that should be included in all parallel type plans across all Districts.
2. Require roof control 'Cliff Notes' type reference pocket cards of a mine's roof control plan be prepared by the mine operator as part of

complying with the roof control plan and, given to all underground miners. These pocket cards should only address the most critical/life saving aspects of the roof control plan. Current roof control plans are so voluminous that they lend themselves to being ignored by the miners who need the information the most.

### · **Essential Persons Regulation Needed**

1. For both Coal and M/NM Create a "necessary resources/essential persons" regulation with the sole purpose to limit the persons present during a task to only those having an immediate need to be there. There are a significant number of fatalities involving cranes and other equipment where the person who was killed was serving no purpose other than being a spectator.

### **Focus Areas for 2018 and beyond:**

· Need to focus more on accident info sharing with equipment manufacturers to engineer out safety problems. Through the MSHA/AEM Alliance, establish a standard protocol for notifying the manufacturers of an accident via AEM and soliciting their input for engineering solutions. This will serve, multiple purposes including putting manufacturers on notice of the accident and providing justification on their end for their providing engineering solutions.

· Working through AEM, require/entice manufacturers to provide proficiency exams as part of the operation manual for each piece of equipment (manufactured after a specified date into the future) and require the equipment operator's successful completion of said exam as partial demonstration of adequate task training on said equipment i.e. compliance with MSHA task training requirements.

· Need to better utilize accident data to provide inspection guidance for each mine. For example, have the Data Retrieval System flag repeat 7001 occurrences/reportable incidents when the mine ID is queried. If this information is readily obtainable by inspectors prior to conducting an inspection, it will alert inspectors to areas they need to give additional attention to when inspecting each mine. If the flagged information for a given mine indicates several roof falls, the inspector will know to take a close look at the roof control plan, see if it is being strictly followed, and possibly alert him to the need for the plan to be modified.

· Need to focus more on condensing all Agency safety information to "one page" topics tailored to the specific activities to better insure it will be read, more readily disseminated to the workforce, and possibly acted upon.

· Need to create task training proficiency canned models that include safety precautions as part of operational training. For example, emergency shutdown protocols for mobile equipment need to be emphasized. The current method of verifying, via a completed training form, that task training has been provided does not ensure the task training was worthwhile or if it taught the person how to handle an emergency situation.

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.Surface Electrical Regulations addition - for both Coal and M/NM require voltage interruption devices on welders. These commercially available devices would serve to eliminate the related fatalities we have experienced.

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