A-346 – Hearing Submission

EMERGENCY TEMPORARY STANDARD

EMERGENCY MINE EVACUATION PUBLIC HEARING

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My name is R. Lincoln Derick, Technical Safety Manager, for Twentymile Coal Company. I appreciate the opportunity to present comments here today on behalf of Twentymile Coal Company. I have been very active in the subject of mine emergency for over thirty years. The format of my comments starts with specific MSHA requests for comments, followed by comments specific to the emergency standard as published in the Federal Register. Several additional comments that are outside the scope of these specific regulations, but related to the overall topic are also included and designated as such.

MSHA REQUEST FOR COMMENTS

PAGE 12256 (c) Mine Emergency Incidents

MSHA requests comments about whether miners should be required to walk the escapeway rather than use mechanized transportation during the drill.

This could result in serious medical concerns. Without actually donning a SCSR, the air flow or temperature could be a serious concern. At Twentymile, both escapeways are in fresh intake air with over 300,000 CFM. At this quantity, the velocity exceeds 30 mile per hours and can have a wind chill affect of more that minus 100 degrees in the winter time. No miner should be exposed to this temperature for the length of time required to walk out of the escapeway when mechanical transportation is available and normally always utilized.

In a real emergency situation, the fact that a SCSR is being used would protect the miner's lungs from temperature or high velocity airflow and the very fact that a SCSR, if donned would most likely address the temperature variation. The time it takes to walk an escapeway where mechanical means are available only would measure endurance of miners versus increasing their knowledge. The walking is going to be continually disrupted if walking the primary intake escapeway and mobile equipment is also utilizing that airway. The chances of a vehicle-pedestrian accident increases.

A confusing requirement has existing in the current regulations and continues in the emergency temporary standards. Drills should be required quarterly versus every 90-day. The drill should take place in the first two-weeks of each quarter, which would allow for two-weeks of flexibility. The ninety days only accounts for 360 of 365 or 366 days; therefore, the drills would be at different calendar times every year versus January, April, July, and October. The annual retraining requirements allow for training to the end of the month in which the certificate is dated. Also, if someone returns to the mine that missed a drill, a two week period should be granted to conduct the drill with all employees who missed that drill. Then, all of the employees who have missed the drill can be given a mine emergency drill as a group, but never work greater than two weeks upon return until a drill is performed.

AB46-HEAR-1D-SUBMISSION

PAGE 12260 Section 50.10 – Immediate Notification

MSHA invites comment on whether 50.10 should be further amended to require that the notification specify the type of accident per existing paragraph 50.2(h) and pertinent details.

The 15-minute requirement or a more reasonable 30-minute requirement should only be required for emergencies that are still on-going and personnel's safety is still at risk. The current requirement of within one hour is sufficient for other emergencies. A roof fall in an outby location usually isn't even investigated by MSHA until a convenient time allows. In a recent attempt to do an immediate notification that resulted solely from a power outage took over fifteen minutes of constant calling and multiple contacts with spouses of MSHA officials. A call to the office with a voice mail should be sufficient notice. The responsibility of response then should be MSHA. Should the call be placed to the National number, the call backs to clarify the incident would be very time consuming.

PAGE 12260 Section 50.10 – Immediate Notification

MSHA invites comments on whether a revision, for example, should cover all unplanned underground mine fires, or all unplanned underground fire of a particular types, duration or occurrences at particular locales.

MSHA has utilized the 30-minute fire for reporting under part 50 for years. We would hope that MSHA would verify a "press" article before using it in the emergency temporary standard. This paragraph would lead one to believe that any type of fire should be reported under part 50; therefore, an immediately reportable event would be considered to have occurred, even though it has been totally abated before any notification could be made. This could be as simple as cutting sparks smoldering that are quickly extinguished. A clear and concise definition of what constitutes a reportable fire must be made available. How does spontaneous combustion get clarified with the oxidation of coal process? Approved ventilation plans have had defined terms, such as oxidation, increased oxidation, elevated oxidation, and spontaneous combustion for that specific mine. In these cases, smoke or flame may never been encountered. The mine operator usually discusses these issues with the appropriate MSHA personnel versus a must report situation.

PAGE 12260 Section 50.10 – Immediate Notification

MSHA solicits comments on whether and how the definition if "accident" in paragraph 50.2(h)(6) should be revised to accurately take into account the fire hazards that miners face.

If all situations of fire or smoldering would constitute a part 50 reporting event, then part 50 should be revised to allow for the operator to keep a log of such events, versus trigger an "immediately reportable" event. This could be similar to the OSHA log for reporting injuries versus the MSHA need to submit a 7000-1 report within 10-days.

PAGE 12261 Section 75.380 – Escapeways, Bituminous and Lignite Mines and Section 75.381 – Escapeways Anthracite Mines.

MSHA also requests comments about whether miners should have the ability to tether themselves together during escapes through smoke-filled environments.

This is a reasonable requirement for section crews or fixed location crews performing work. Examples of method to quickly implement make-shift tether lines should be provided to mine operators and miners. Electricians tape, bailing wire, fire hose, and tag line from an outby SCSR cache if all units removed for use, etc. are simple possibilities. As a last resort, miners can be taught to simply grasp the miner's belt of the miner in front of them.

Consideration must be made that it may be safer to only have each miner holding the crew life line versus being fastened to it, with the miner behind continually stepping on the heels of the miner in front of them all the way out of the mine.

PAGE 12262 Section 75.1502 – Mine Emergency Evacuation and Firefighting Program of Instruction.

MSHA is asking for comments and suggestions on alternative realistic emergency practices to ensure that miners are prepared to act in an emergency.

Current regulations result in the mine operator and "responsible person" being in a difficult situation, because of questionable alternative options of evacuation or escape versus solely instructing on designated escapeways as specified by the regulations. Hands-on fire fighting training, realistic smoke training and other training should be considered as compliance with these regulations, as long as MSHA is properly notified in advance to participate and determine the effectiveness of such training. MSHA must recognize the possibilities of other escape or evacuation options that do not include solely the designated primary and alternate escapeways.

PAGE 12262 Section 75.1502 – Mine Emergency Evacuation and Firefighting Program of Instruction.

MSHA is soliciting comments on whether such a record of training should include additional information, such as a checklist.

These regulations are already in place with the current fire drill requirements. The checklist should be optional for the operator and used to consider a miner is a trained mine emergency person, who could respond to an emergency.

PAGE 12264 Section 75.1714 -4– Additional Self-Contained Self Rescuers.

MSHA solicits comments on whether a specification standard would be more appropriate than the performance-oriented approach provided in this ETS.

A design type standard is reasonable to be the minimum requirement, with performance testing being used to allowing an increase in the storage distances.

PAGE 12265 Section 75.1714 -4– Additional Self-Contained Self Rescuers.

MSHA solicits comments on the appropriateness of eliminating filter self-rescuers ("FSR's") from all underground bituminous, lignite, and anthracite mines.

Reasonable change as long as time period for removal of FSR'S is flexible. MSHA had discouraged in the past for many mines that desired utilizing short duration oxygen units, which resulted in the use of the FSR'S. Once the United States Navy ordered a very large number of these units, there acceptance by MSHA finally changed.

PAGE 12265 Section 75.1714 -4– Additional Self-Contained Self Rescuers.

MSHA also solicits comments on the appropriateness of requiring mine operators to report the total number of SCSR's in use at each underground coal mine, semi-annually, to the MSHA District Manager.

This should be a prudent business practice for operators to perform, especially with the large investment resulting from these new regulations. It may be a reasonable expectation by MSHA to have these records available.

PAGE 12265 Section 75.1714 -4– Additional Self-Contained Self Rescuers.

MSHA is, therefore, soliciting comments on storage locations that are readily accessible to such persons.

Outby personnel would have sufficient SCSR units available for escape with the two units required to be available (see comment below). If the mine escapeway distances exceeded that capability, then they would be covered under the amount of SCSR'S needed in each outby storage area. The regulation mandates that a sufficient number of SCSR'S be available in both the primary and alternate escapeway for all employees who might either of those escapeways.

Storage locations within stoppings should be considered readily accessible. Escapeways often times go through stoppings or miners have to go through stoppings to get to an escapeway and this location could offer better protection to the units than storing the devices in the intakes at below freezing temperatures.

If the travelway utilized by outby personnel or section crews is the same as the escapeway, we do not believe that an additional SCSR gives additional protection, since the miners will always be within one hour of a storage location. Carrying additional units will only result in more damage from frequent handling and being misplaced and forgotten at shift change or other times.

PAGE 12265 Section 75.1714 -4– Additional Self-Contained Self Rescuers.

MSHA solicits comments on the appropriateness of requiring signs be made of reflective material and whether there are alternative methods available for making storage locations easy to locate when conditions in the mine might obscure the storage locations.

This is a reasonable requirement. The alternative methods should only have to provide an equivalent level of identification. Future intake storage locations may allow for the possibility of strobe lights activated from the surface or other similar method.

PAGE 12265 Section 75.1714 -5– Map locations of Self-Contained Self-Rescuers.

MSHA solicits comments on this reporting requirement because, in the past, MSHA did not always learn of problems associated with SCSR's in a timely manner.

This would discourage testing of SCSR'S, since what might be perceived to be a failure might be improper donning or premature removal of the unit. Many removal of the units by employees during testing is because of uncomfortable feeling and not a unit failure. MSHA would need to demonstrate to industry that reporting would be beneficial to learning versus enforcement. The safety of miners is what is important, not the manner of enforcement.

OTHER COMMENTS DIRECTLY RELATED TO EMERGENCY TEMPORARY STANDARD

PAGE 12253 B. Grave Danger

The first 15-minutes following an emergency can be critical. One must use a "Saturday night swing shift" mindset when making assumptions of who is available on the surface and underground at the time of an emergency. Our mine emergency plan is based on time versus who does what. In the first 15-minutes, all employees inby an emergency, all employees outby the emergency, and the responsible person must be notified. In addition, the intentions of each crew or individuals must be documented. There may not be time to even notify critical company personnel or company emergency personnel that are off-site. These regulations place such a burden, which fulfilling this requirement may cause other critical notifications or employee intentions to go un-documented.

PAGE 12254 B. Grave Danger

The examples MSHA uses further illustrate the hectic activity that might occur during the first 15-minutes. In addition to the notification and intent that one might be required to note, the responsible person may issue numerous requests that need immediate attention.

PAGE 12254-5 B. General Discussion & a. Introduction

MSHA keeps referring to the "hands-on training in the transferring of self rescuer devices. Information on the correct procedures is not provided by the manufacturer, especially from one manufacturers unit to another. Also, no instructions are available to transfer from a chemical generating oxygen unit to a compressed oxygen type unit or visa-versa.

PAGE 12255-6 b. Research and Studies

We have participated in hands-on training with the Bureau of Mines (NIOSH now) on training in the 1980's. The Bureau developed a training model for the Oxy-60 unit that simulated breathing resistance. Also, individual mouth-pieces and corrugated hoses were available for each miner, so the mouth-pieces and hoses could be sanitized and bagged by each miner's name. With the amount of different SCSR'S in use today, that is not available, but the only method to fully don the SCSR using the "hands-on" method. Since a total donning was possible, each miner had to perform five perfect 3+3 donning in a row to be considered proficient. The training models available today make that almost impossible.

The recently publish NIOSH Informational Circular # 9481 "Fire Response Preparedness for Underground Mines" was preceded by Informational Circular # 9452 "An Underground Coal Mine Fire Preparedness and Response Checklist: the Instrument". That publication was a co-operative research effort between NIOSH and Twentymile Coal Company, which was conducted over a period of years.

PAGE 12258 4. The Need for Additional Self-Contained Self Rescuers

Too much emphasis is being placed on all miners evacuating the mine that are not needed to respond to an emergency. Once an employee is outby an emergency, they may be needed to obtain additional supplies from the outby locations. Now that emergency drills are required on the different types of emergencies, are the employees now deemed to be considered a trained person to respond to such emergencies? If not, will additional mine emergency training, such as hands-on fire extinguisher, fire hose usage, etc be sufficient to classify them as a trained mine emergency employee? Does MSHA have any plans on developing training guidelines that would qualify a miner?

TRAINING QUESTIONS PROVIDED BY MSHA – EMERGENCY TEMPORARY STANDARD COMPLIANCE GUIDE

Q. Can I store the SCSR's in a room or entry that is adjacent to the escapeway that may be reached by going through a mandoor? A. No

Comment: This is understandable if you need to enter the other aircourse, but using the answer to the next question as "No" is absolutely wrong.

Q. I have a mine where the primary and alternate escapeways are adjacent to each other. Can I build a room between these two escapeways with block stoppings and two mandoors that is accessible from either escapeway to store one set of extra SCSR's required by 75.1714-4 (c) rather than one set in each of the escapeway? A. No

Comment: This prohibits the mine operator from storing the SCSR's in the most preferred locations. Temperature would be one reason and it may be the most logical location to test to see if another airway is now smoke free or less smoke. In our situation, we plan to store the additional units between machine doors that isolate two intake escapeways and also isolate the belt. We want escaping employees to be led into this area, so they can test the escapeway on the other side of the belt, or secure additional units if needed. If the issue is the quantity versus going through a door, then if the quantity needed for both escapeways is present, MSHA should encourage this situation.

OTHER COMMENTS RELATED TO EMERGENCY TEMPORARY STANDARD BUT OUTSIDE THE SCOPE OF ACTUAL NEW EMERGENCY REGULATIONS

FIRE RESEARCH OR ITEMS NEEDED

High expansion foam generator tests – We have been conducting high-expansion foam generator tests in conjunction with NIOSH for over ten years and in the near future, a NIOSH report will be issued. MSHA has not demonstrated a confidence in this type of fire fighting and therefore, industry hasn't accepted it wide spread. Additional fire fighting equipment, methods, and training must be pursued. With barricade chambers being considered as new approaches, fire fighting is more important than ever. We will not want to seal a mine with miners still barricaded inside, but sealing seems to be the standard method chosen. The gas chromatography data form the 1986 Orchard Valley fire in Colorado indicated that high expansion foam controlled a very large fire to a fuel starved fire with high oxygen and lower levels of carbon monoxide for hours. When the foam supply was exhausted, the fire immediately went to a fuel rich fire and dropped the oxygen by 5% to 7 %. The carbon monoxide went from a level of within the FSR protection range to many times that range in only five minutes after foam depletion. A test several years ago at Twentymile's mine, demonstrated foam being pushed up-dip for 285 feet over a 1,000 feet distance in two entries and connecting crosscuts. This was equivalent of pushing foam up to a 28-story building from the ground floor.

Other fire fighting improvements or issues – We have been requesting for years that research is needed in determining the products of different types of fires along with products as different fire fighting measures are being applied. This research could easily be done in the Lake Lynn facility.

See-through smoke research needs accelerated – In large mines, such as the Foidel Creek Mine operated by Twentymile Coal Company, numerous escape or evacuation routes are possible that could be used if rapid escape or evacuation occurs versus walking using multiple SCSR'S. If a fire was outby a section and the products of that fire are obstructing vision, such capability of driving or tramming through that smoke might get the miner's to other clear escapeways.

Air changes that can be made during emergencies – We are investigating air changes that could be made quickly in the mine or by remote computer controls that would contain the products of a fire. In our mine, we have isolated intake escapeways that are separated by the beltlines, except at connecting overcast areas with hydraulic equipment doors. We also have steep slopes, so a fire spreads similar to a high rise building. Additional computer controlled doors are being investigated to control air from intake to the returns. With additional Carbon Monoxide sensors in the intakes, a fire may be detected, shorted to an up-dip return, and the adjacent intake fed to the fire; thus, allowing the intakes inby to be cleared of smoke. Additional doors that are installed in entries to separate several sections from other sections contain hydraulic doors that could be opened and closed; thus, allowing intake air form a clear air escapeway to ventilate that section versus a contaminated intake airway. MSHA needs to be receptive to this different approach to aid evacuation or escape from a mine emergency.

PAST ADVANCES THAT WERE NOT SUPPORTED BY AGENCIES

Fire suppression systems for power centers – Orchard Valley Coal and Ansul designed and tested an inexpensive Halon Fire Suppression System that could detect a small fire, extinguish the fire with no damage, de-energize the power, and notify the Atmospheric Monitoring System.

Robotic fire fighting vehicle – At Cyprus Shoshone, a fire fighting vehicle very similar to the new robot was tested that could drag 500 feet of two and ½ inch fire hose with camera and nozzle control. No interest was expressed, so the project was dropped.

Use of green lasers – At Twentymile Coal Company and numerous other mines in cooperation with NIOSH while performing in mine simulated smoke escape exercises, green lasers were found to very effective in walking in smoke. Several requests have been made to utilize these during emergency conditions, but are having permissibility issues. MSHA should review the NIOSH data and help by getting the units approved. MSHA quotes NIOSH'S Informational Circular #9481, which recommends these lasers, but has not assisted in making these units available.

WHERE IS MSHA'S DOCUMENTATION OF FIRE EXPERIENCES?

We need emergency situations and experiences documented in a teaching tool fashion. The findings of the investigation are distributed by MSHA; however, the use of the gas sampling data is not distributed. Fire fighting steps are also not distributed in a useful fashion. MSHA is present at all mine emergencies and many lessons are being learned, but there is no useful release of that data. There are no guidelines on inert gas injection and quick response drilling. It appears that only NIOSH publishes useful information on mine emergency, yet they are not the ones gaining the first hand experiences at mine emergencies. This should be a high priority.

A CHANGE IN POLICY ON HOW REGULATIONS ARE PROMULGATED

There has been problems with almost every regulation promulgated in the last 10 years, especially when they are "technology forcing" or compliance needs are not immediately achievable. The process needs to allow for the record to be re-opened after one year or other time period, so unforeseen difficulties can be addressed. An example of this is the need for an Operator to file a Petition of Modification to use a tested engine certified by a laboratory, but paid by the Operator, since the regulation states that only the original manufacturer can have an engine tested and use that data for obtaining a certification under Part 7. The need to not use front brakes on road graders is another example that could be alleviated by a logical re-write of the regulations.

MSHA, without input from industry or other interested parties, can change their interpretation of a regulation utilizing the Program Policy Bulletin or Letters; however, that avenue is not open to the other parties.