

Received 3/27/06
MSHA/OSRV

US Department of Labor
Mine Safety and Health Administration
Office of Standards, Regulations and Variances
1100 Wilson Boulevard, Room 2313
Arlington, Virginia 22209-3939

*Re: RIN 1219 – AB44
Request for Information
30 CFR Part 49*

Dear Mr. Stone:

Enclosed are Foundation Coal Corporation's comments on the Request for Information published in the January 25, 2006 Federal Register.

John Gallick
Director of Safety
Foundation Coal Corporation

AB44-COMM-92

Foundation Coal Corporation is offering the following comments concerning the request for information concerning underground mine rescue equipment and technology published in the Federal Register on January 25, 2006. We would note initially that many of the questions posed in the Federal Register have been rendered moot by events, the many legislative activities at the state and federal level as well as MSHA's promulgation of Emergency Temporary Standards (ETS).

By way of introduction Foundation Coal Corporation would offer a word of caution that any rulemaking not seek to address any particular set of events in any particular accident. Accidents often have unique circumstances that do not lend themselves to generalized rulemaking and this is particularly true with respect to mine emergency systems and planning. Mine Emergency systems and any subsequent changes to such systems need to be reviewed from a global perspective. Prevention, emergency systems and rescue and recovery systems all have to be integrated and balanced. First, prevention needs to be addressed. Atmospheric Monitoring Systems, communication systems, firefighting systems all need incorporated into the overall mine planning. Next, emergency systems and how they will be implemented need to be considered. The overall plan may include first response firefighting at a more advanced level and finally mine rescue teams for final rescue and recovery. How each of these segments is designed needs to be based on the type and age of the mine as well as a risk assessment of the types of emergencies and outside support systems available to the mine. These systems must be integrated into the overall operations system design. To try to regulate or legislate only pieces of a system without reviewing those requirements in context of the overall operation is a mistake that can lead to unintended consequences.

One example of this is how various agencies, elected government officials, and other parties who are advocating one type of “solution” to the need for emergency communications i.e. The PED system. This system has some applicability in emergency systems, but it is first and foremost a system designed to notify the in-mine person to call someone on another mine-wide system for further discussion. It is also likely that the antenna for this system will be an in-mine antenna that may be subject to damage in a mine emergency. It is not the “fail safe” panacea that some have suggested, but requirement of the adoption of that specific system may have consequences that will have an overall detrimental effect on mine safety and emergency planning.

If an operator is required to purchase a PED system, or if a PED system is the only “solution” to a regulatory or legislative requirement, then it is likely that any other system, such as leaky-feeder walkie-talkie system will no longer be supported at a mine. A leaky-feeder system has many overall advantages to a PED-type system but both require a substantial initial investment and ongoing maintenance and support. Other systems presently in place at an operation will eventually go the way of the trolley phone because the support of two systems is unduly burdensome when one is mandated. Further, any new or developing systems will lose drive as the customer base – a rather small base as we are all aware – will have already installed the required system. That will become the industry’s system of “choice” (choice that is of regulations, legislators or others). Once installed any system can be expected to remain in place for the life of the mine unless it proves to be substantially ineffective.

Foundation Coal urges the Agency to continue on the path on which it has embarked: review and study technology and develop protocols for these studies; work

through the Partnership system so that all interested parties can participate in the study of the technology presently available, and lastly support research through NIOSH to expedite some of the work that is going on in both the research sector and in other sectors.

Foundation Coals responses to MSHA's request for information:

A. Rapid Deploy Systems

The requests for information sought information on the availability of rapid deploy systems and the potential use of such systems. These are difficult questions to answer. To our knowledge there is no commercially available system that will accomplish the goal that has been articulated by various groups i. e. communicating with all people at all times in all locations of an underground mine via through – the – earth (TTE) systems. This is a laudable goal but no system is presently is available to accomplish this in a reliable and consistent manner.

There has been a great deal of discussion about the PED system and its capability. Our predecessor company owned and operated the Willow Creek Mine which employed one of the first PED systems. This system did work to notify miners of a mine fire in 1998. The system allowed a simple text message to be sent to the miners advising them to evacuate the mine. This early warning allowed miners to evacuate the mine immediately. In 1998, everyone evacuated safely and for that we are grateful. However, somewhat lost in many of the previous discussions of the PED system and the Willow Creek event have been relevant facts needed to help put the system in perspective. First, the communication is a one-way only text message. Second, the system had shadows

whereby miners were not always able to receive messages. Third, the system relied on an in-mine antenna to function. In fact, the system was lost within a few minutes after the original text message had been sent due to the mine fire destroying the underground circuit. After that incident, testing was done to see if an indestructible surface circuit could be installed that provided the same level of coverage. No system could be found that was capable of achieving this goal.

I am not sure that a system presently available can logically be used to locate miners trapped in a mine emergency. Foundation Coal is participating in the NIOSH-Sponsored Communication Partnership established to study and test the communication technology. As a member of the Partnership, Foundation Coal intends to test some of the more promising technology. We have certainly not finalized our thinking on how to incorporate TTE technology with mine emergency planning. Some of the systems scheduled to be tested may provide an “emergency only” type TTE system. At this time, these systems are not commercially available and more testing is needed before any definitive statements about deployment can be made. Foundation Coal believes that more research of this type technology is needed and should be supported by all parties.

B. Breathing Apparatus

The request for information sought information on mine rescue breathing apparatus. Our teams have been deployed at a number of emergencies. Based on this experience it appears that the mine rescue breathing apparatus provided to the United States mine rescue teams are more than adequate. I don't see any concern with their capability. Like anything else, if more models were available the industry would have a greater choice.

C. Self-contained self rescuers (SCSR)

It would appear that the questions concerning SCSRs have been decided. The Emergency Temporary Standard (ETS) practically eliminates the use of a belt worn unit of less than one hour. Also, caches and a plan to provide SCSRs to miners in greater numbers have been included in the ETS. Since these two questions are part of the ETS I'll reserve any comments on these questions for that comment period. We would note that given the substantial investment required in current SCSR technology to establish caches it is unlikely that the industry would support efforts to develop different technology that would render its forced investment useless.

In answer to your other questions, the present inspection requirements are acceptable. Also, the SCSR service life should be based on testing and engineering/scientific criteria. It is not appropriate to set an arbitrary service life.

D. Rescue Chambers

In the early 1970's the issue of rescue chambers was debated by mine rescue experts. Their conclusion was that it was a better utilization of resources for coal mining to develop better evacuation systems. That advice is still applicable for the most part. This view is shared by workers, mine rescue experts and various safety agencies. Retreating to a Rescue Chamber is the absolute last resort. In coal mining the chamber may be subjected to fire or secondary explosions as well as irrespirable atmospheres.

Our predecessor company previously installed chambers in two of its western coal mines with exceptionally long escape distances. There may be a place for chambers in other mines emergency system designs.

I would only support chambers as a last resort i.e. when escape has proven impossible.

The specific design of rescue chambers that MSHA has asked to discuss is difficult to answer with any precision. In general rescue chambers should be designed to provide enough breathable air for the number of persons reasonably likely to be in that area of the mine. The amount of air needed to be supplied to the chamber should be based on the timing it would take to reach the workers in an emergency.

It would make the most sense to have chambers “more or less” permanently situated in the mine located based on the mine design, not an arbitrary distance. The chamber would be equipped with enough air making capacity to provide for a rescue i.e. the amount of time it would take to reasonably reach the chamber from the surface via a borehole.

Ideally, the chamber would already be equipped with a borehole but terrain etc. would make that impractical in some cases. By advocating permanent installations, the chambers can include plans for communications and locations can be chosen that will be least affected by water drainage interruptions etc.

Of course, if chambers are required to move with the section and have specific distance/location requirements then the chambers would need to be entirely self supporting.

E. Communications

The basis for any mine communication discussion is the system used by the mine for

day-to-day activities. Just as each type of day-to-day mine communications systems has advantages and disadvantages in daily use; each system also has issues in mine emergencies. In general the in-mine systems currently in use can be compromised in an emergency by loss of power for the communication system and/or the destruction of the communication infrastructure. The use of two basic communication systems would provide redundancy that would provide communications during all emergencies except the catastrophic events. As I had noted earlier the Willow Creek PED system continued to function for a very short time until the fire severed the antenna. A phone system or a leaky-feeder system would also have survived until the fire severed these lines. The installation of two systems used for day-to-day communications and designed to minimize the type of events that would disrupt both systems simultaneously is a logical first step toward providing communications for people in an emergency. Ironically, any additional system changes or new system additions are probably “on hold” pending the various state and federal legislative activities.

The second issue for review is the issue of hardening one of the communication systems installed in-mine for day-to-day use. At present, the methodology/techniques that would guarantee that a communication system would survive catastrophic events are not known. It may be that the systems infrastructure would need to be in explosion proof enclosures and adequately anchored or protected to withstand the expected forces and pressures of an explosion. The systems “backbone” whether its wiring or cables would also need protected possibly in conduit or trenched.

Additional thought, study and research would be needed to develop a hardened system reliable and capable of withstanding typical explosion forces that could continue to

function after an explosion. This type of modification to existing in-mine systems needs to be added to the communications research discussion that is on-going.

To supplement the above in-mine system a possible “emergency only” system could be made available at key in-mine locations. In mines with the appropriate topography communications using boreholes to the surface may be used. In other areas emergency antenna/transceivers such as those now being tested via the NIOSH –sponsored Partnership could be used as a supplement.

It is important to recognize the dilemma being presented to the mining industry today. At the January 23, 2006 Senate hearings certain speakers implied that TTE communication was available and only a lack of interest by the industry was holding back TTE communication implementation. Based upon these types of irresponsible public statements, various state legislatures and the United States Congress have either passed or proposed legislation to require TTE (i.e. PED) technology. As stated previously and as your agencies Tech Support group has noted, all but one PED system in the United States has in-mine antennas.

All of the proposed legislation requiring a PED type approach will forestall the development and implementation of any other type communication system modifications or new installations. It is important for your agency to do a risk assessment based on the following. It is unlikely that a PED type system can be modified in the near term to two way communication. Further, a TTE antenna system will not be practical for most operations. (I understand that an Australian mine has a 14 kilometer loop antenna. Only certain types of locations would be able to place this length of antenna on the surface). Therefore, most PED systems have in-mine antennas. Contrast that one way 32 character

text message system with a leaky-feeder system. This system has the in-mine cable but can provide two way communications whereas the PED system has a broader communication reach but requires the message receiver to locate another communication system to follow-up on the message. Understand that both systems have positive features and also limitations. Also, recognize that the infrastructure backbone for these systems, the communication devices either radios or cap light text systems and maintenance up keep is extremely expensive. It is unlikely that most mines would maintain both of these type systems in addition to the standard phone systems universally used as the primary means of in-mine communication system.

In summary it is Foundation Coal's opinion that two means of communications should be established based on the operations needs and circumstances. Further research and testing should continue on emergency TTE communications and hardening and survivability of in-mine systems.

F. Robotics

This question is posed as if robotics are mine emergency ready and capable of being incorporated into a mine emergency plan. They are not in fact ready. The failure of the robot at Sago to get much beyond the end of the track is evidence of the need not to place reliance on such devices. Expenditures on robotics are misplaced if the money comes from any project which has a greater potential for efficacy.

G. Thermal Images and Infra-Red Images

Foundation Coal does not have an opinion at this time on this type of technology.

H & I. Mine Rescue Teams

Is there a need to update the requirements of Part 49? There may be and certainly some suggestions will be forthcoming in response to your request for information. I will be interested in reading what others recommend or suggest. But several fundamental facts must be recognized. It requires a tremendous investment for an individual operator or mine to equip and maintain a mine rescue team. Given the relatively few accidents that require full scale marshalling of rescue teams it is unclear whether it is appropriate to impose such a cost when the resources could be better directed to prevention. Further, it must also be recognized that despite the controversy about response times at Sago, it is unlikely to be deployed any more quickly. The much-shortened notification times will in all likelihood cause swifter imposition of 103(k) orders making deployment dependent not on the nearness of the teams but on the nearness of MSHA personnel and their ability to get to the site.

My reluctance to respond to this question in any detail stems from attending the first conference on mine emergency preparedness in 1995. There was a great deal of discussion and ideas brought forth from that conference and the two subsequent conferences held on the same subject. The discussion subjects included the questions you pose in items H and I of this request for information. For example, the 1995 conference included the topics of new apparatus, the need for more teams, the need for newer communication and gas testing equipment etc. Also, discussed were suggestions on how to pay for this equipment – most specifically new apparatus. By not taking any action for ten years this problem has solved itself. Any team still in service has either purchased new equipment or is hoarding the last parts available for the BG-174 model.

J. Government Role

Foundation Coal supports the national Mining Association public statements regarding government's role in supporting mine emergency equipment, technology, equipment and procedures.