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MSHA/OSRV

Natural building blocks for quality of life

March 27, 2006

Mr. Robert Stone
Office of Standards, Regulations and Variances
Mine Safety & Health Administration
U.S. Department of Labor
1100 Wilson Blvd., Room 2350
Arlington, Virginia 22209-3939

Subject: RIN 1219-AB44 Underground Mine Rescue Equipment and Technology

VIA E-MAIL: zzMSHA-comments@dol.gov.

VIA Hand Delivery

Dear Mr. Stone:

The National Stone Sand & Gravel Association (NSSGA) appreciates the opportunity to submit comments to the record regarding the Mine Safety and Health Administration (MSHA) Request for Information (RIF) for relevant information regarding mine rescue equipment and technology including communications. It is important to recognize in your deliberations that one size does not fit all. Any new or updated regulations should ensure that appropriate decisions can be made in relationship to the level of hazard presented by the mineral being mined and the mining techniques used.

Based near the nation's capital, NSSGA is the world's largest mining association by product volume. Its member companies represent more than 90 percent of the crushed stone and 70 percent of the sand and gravel produced annually in the U.S. and approximately 115,000 working men and women in the aggregates industry. Sale of natural aggregates (crushed stone, sand and gravel) generates nearly 38 billion dollars annually for the U.S. economy. The estimated output of aggregates produced in the first half of 2005 was 1.3 billion metric tons, a 4 percent increase over the same period in 2004 (2.85 b MT). According to the USGS, the significant increases in aggregates production were due to the increase in construction activity, which has increased every year for the past decade. Construction spending amounted to \$617.9 billion during the first half of 2005, a 9 percent increase over the same period in 2004.

Aggregates are used in nearly all residential, commercial and industrial building construction and in most public works projects, such as: roads, highways, bridges, railroad beds, dams, airports, water and sewage treatment plants, and tunnels. While the American public pays little attention to these raw natural materials, they go into the manufacture of asphalt, concrete, glass, paper, paint, pharmaceuticals, cosmetics, chewing gum, household cleansers, and many consumer goods. They are used for water treatment at many public utilities.

The National Stone, Sand & Gravel Association (NSSGA) is committed to safety and health in mines. Safety is, and will continue to be, the number one priority for the aggregates industry. The industry recognizes that its employees are its most valuable asset -- an asset that must be protected for the well being of the industry now and in the future. NSSGA respects the government's effort to identify and require effective and proven technology and procedures to ensure that miners can be rescued in the event a major disaster in underground mines.

Summary

The disasters in the Sago Mine and Aracoma Coal Alma No. 1 Mine are tragic and the loss of even one life, let alone 14 lives, is devastating. Nevertheless, the safety record of the mining industry and the aggregates industry in particular, has improved due to a heightened level of effort invested by the industry to sustain an improved performance. The improvement in the aggregates industry safety record is attributable to a combination of more effective safety and health programs developed and implemented by the industry over the past decade

With respect to mine rescue, improvements in the mine rescue system were instrumental to the recovery of nine miners from Quecreek in 2002 supporting the belief that the current mine rescue system was up to the task. However, the most recent mine disasters in Sago and Alma, West Virginia, have highlighted limitations in the mine rescue system. MSHA is taking the appropriate steps to review the standards as well as the available technology available for improving the probability of success when such disasters occur.

It is important to recognize that underground aggregates operations present a much lower risk than other underground mining sectors because of the nature of the mined product and the mining methods used to extract the material. Specifically, aggregates products are non-combustible, non-flammable minerals. As a result, the probability for fire is very low. Since there are no flammable gases present and the material does not act as a fuel, specialized equipment is not needed in aggregates underground mines. The mining methods used, called "room and pillar," creates large open spaces adequately supported by the material left in place. These mines are generally only a few hundred feet deep and have entrances suitable for large material handling equipment like front end loaders and haul trucks. These large entrances also provide access for emergency equipment minimizing the need for specialized mine rescue teams and equipment. Natural ventilation is often adequate for providing adequate air to miners underground. Consequently, underground aggregates operations will need to structure emergency response plans to meet their specific needs and provide the highest level of protection to aggregates miners.

Due to the nature of mining performed by our membership, The National Stone, Sand & Gravel Association has limited experience responding to entrapment scenarios and is unable to provide answers for many of the questions posed in the referenced Request for Information. However, the NSSGA is pleased to submit the information in the following areas. They are keyed to the specific topics listed in the RIF.

III. A. Rapid Deploy Systems

MSHA should continue to develop and appropriately equip Rapid Deploy systems to maintain the best available life-saving tools in a state of readiness so that they may be deployed in the event of an emergency. This is the most prudent way to allow miners to benefit from emerging technologies during entrapment scenarios.

By building a mobile-ready cache of the most advanced products available and maintaining an elite staff of individuals competent to use the equipment, MSHA will be able to respond in a high impact way to future accidents involving entrapment.

Seismic locators would represent a good example of equipment to maintain in such a system. This technology has been proven effective in a wide range of studies and might possibly be useful in some mine emergencies. What's more, it is not dependant on any investment or work practice on the mine's part so it will have a wider range of applicability than electromagnetic systems would.

It would be valuable for MSHA to perform a study of the active underground operations in the country to determine the appropriate number (and locations) of Rapid Deploy Teams. Risk profiles, including the probability of entrapment should be taken into consideration when evaluating the needed response times.

III. B. Breathing Apparatus

For obvious reasons, it is important for sophisticated rebreathers such as those manufactured by Biomarine to be available for use in gassy environments where explosion hazards exist. There may; however, be occasions where a less sophisticated system would serve just as well.

In high-ceiling stone mines, an emergency would most likely be brought about by an equipment fire. With the limited fuel source and the non-flammable environment, the probability of encountering an explosive atmosphere would be extremely remote. As such, MSHA should consider approving less sophisticated (and more commercially available) products for such instances. The units used by firefighters for environments that are immediately dangerous to life and health would provide adequate protection under these more limited hazard conditions.

This would significantly improve the availability of rescue equipment for the conditions that would most likely create a danger to underground stone miners. Moreover, it would significantly reduce the cost of equipping a mine rescue team. Addressing this cost factor alone would open the door to many operations that might have an interest in developing a mine rescue team.

III. C. Self-Contained Self-Rescuers (SCSR)

The majority of underground stone miners carry the W-65 self rescuer. This unit does not provide oxygen but it is very effective at converting carbon monoxide into breathable carbon dioxide. Its intended purpose is to aid in escape, not to sustain breathable air for extended periods while miners await rescue. This MSHA approved device is appropriate for the aggregates industry because it reflects the proper risk profile and is designed to give miners the appropriate protection for the types of emergency situations encountered.

Any suggestion that mines should maintain caches of extra rescuers to supply breathable air for entrapment situations fails to acknowledge the intended purpose of the device. Each mine should continue to include in its emergency response plan a provision for miners to have access to sufficient self-rescuers to escape the mine given the worst case scenario.

III. D. Rescue Chambers

The value of Rescue Chambers was made clear in the successful rescue of the potash miners in Canada's Mosaic mine this past winter. Those chambers provide a secondary refuge when escape is not an option. There is already a provision for requiring these of metal and non-metal mines when escape takes longer than one hour. No new regulation is required to implement this requirement.

It is important to stress that rescue chambers are not favorable in every mining environment. As such, individual risk assessments should be performed before deciding where to encourage their use. The best course of action for MSHA is to engage in risk assessments of individual operations to determine if their use would be appropriate.

III. E. Communications

Regardless of advances in technology, wireless two way communication in stone mines is still limited to line of sight transmission. Moreover, range of transmission is significantly restricted. Most systems tested in room and pillar stone mines show that contact typically drops off at around 1000 feet. Once the receiver is carried into a cross heading, that range drops off substantially.

Antenna systems can be useful in extending that signal but there are still substantial functionality concerns that surround their use. It might be an appropriate course of action to reach out through the partnership agreements with associations like the NSSGA to participate in field trials and pilot programs that can assess functionality concerns in a "real world" setting of any new communications devices being considered.

New communications technologies should be carefully considered with respect to their functionality, installation and operational ease and the cost of implementation. The level of communications technology required should be based on a risk assessment with more sophisticated communications technology used at the appropriate level of hazard.

III. I. Mine Rescue Teams

At present, every member of a mine rescue team has voluntarily decided to undergo the training and take the risks necessary to participate in rescues in a very challenging environment. This personal commitment is the core of what makes the program so successful. The provisions available to small and remote locations as stated in part 49 are critical to ensure that the Mine Rescue programs continues to have that strong volunteer foundation.

If the consortium option were to be withdrawn, many mines would be forced to mandate participation in those programs. Small operations may not have six able-bodied employees who are willing to accept such a risk; much less endure the harsh physical requirements of the job. As such, the provisions made in Part 49.3 are critical for ensuring the most effective emergency response for all miners.

III. J. Government Role

Mine safety has taken on a very high profile since the recent underground mine disasters drew national attention to the industry in January. Through this period of increased emphasis, it is critical that MSHA, as well as stakeholders, remain pragmatic as the search for ways to continue the remarkable improvement in safety and health that the mining industry has demonstrated over the past several years.

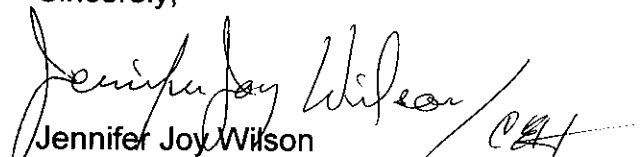
Conclusion

MSHA should continue engaging stakeholders in an effort to press the need for communication and tracking systems that could improve mine rescue operations. In short, while technology is advancing, the government should continue to both promote and facilitate that development with the goal to have proven technology that actually enhances mine safety. Moreover, implementing broad requirements for mine rescue would result in compliance with regulations having a negligible impact on mine safety.

At this stage it is far more important to encourage the development of practical tools and to evaluate their usefulness in a broad range of mines. This is the best way to match the best of the emerging systems with the environment where they will provide the most help.

Thank you for the opportunity to make the concerns of the NSSGA known to MSHA during this comment period. We look forward to a satisfactory resolution to these issues during the standard setting process.

Sincerely,


Jennifer Joy Wilson
President & Chief Executive Officer