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**From:** Harman, Tom [tharman@nssga.org]  
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**To:** zzMSHA-Standards - Comments to Fed Reg Group  
**Subject:** RIN1219-AB56

**Attachments:** MineRescueTeamEquipment.pdf  
Attachment submitted to subject docket

Best regards,

Thomas (Tom) Harman  
Vice-President, Safety Services  
National Stone, Sand & Gravel Association  
Phone direct 703-526-1074  
email [tharman@nssga.org](mailto:tharman@nssga.org)  
Website [www.nssga.org](http://www.nssga.org)

**1219-AB56-COMM-10**

NATIONAL STONE, SAND & GRAVEL ASSOCIATION



*Natural building blocks for quality of life*

November 16, 2007

Mine Safety and Health Administration  
Office of Standards, Regulations and Variances  
1100 Wilson Boulevard  
Room 2350  
Arlington, Virginia 22209-3939

Dear Sir or Madam:

**Re: RIN 1219-AB56, Mine Rescue Team Equipment**

Based near the nation's capital, the National Stone, Sand & Gravel Association (NSSGA) is the world's largest mining association by product volume. Its members represent more than ninety percent (90%) of the crushed stone and seventy percent (70%) of the sand and gravel produced annually in the United States. Approximately one hundred twenty thousand (120,000) men and women work in the aggregates industry. During 2006, a total of 2.95 billion metric tons of crushed stone, sand and gravel were produced in the United States.

The NSSGA appreciates the opportunity to provide comment on the proposal by the Mine Safety and Health Administration (MSHA) to amend the agency's existing standard addressing mine rescue team equipment for underground mines. The proposal was published on September 6, 2007, in the Federal Register, Vol. 72, No. 172, and beginning on page 51341. NSSGA members are directly affected by the rule.

The NSSGA fully supports efforts from MSHA in its progress to implement the provisions contained in the Mine Improvement and New Emergency Response Act of 2006 (MINER Act). Improving mine rescue team effectiveness is essential to increasing both mine safety and miner safety and health. The advances that have been made in mine rescue equipment over the last several years must be put to use so the nations' miners have the best protection currently available.

## **Alternative Mine Rescue Capability**

There are approximately one hundred (100) underground stone operations in the United States. Underground stone mines do not liberate gases, and no underground stone mine is classified as “gassy” in accordance with Title 30 Code of Federal Regulations Part 57.22003 (30 CFR 57.22003). Many underground stone operations have roof heights that allow both passenger vehicles as well as heavy equipment to travel. Several underground stone mines have MSHA-approved plans for “*alternative mine rescue capability*” due to the mines’ size and location being considered “*small and remote*”, or because the mines have “*special mining conditions*”, as defined in 30 CFR 49.3 and 49.4 respectively.

## **Four-Hour Breathing Apparatus**

The MSHA is proposing to require mine rescue stations to be equipped with four-hour self-contained breathing apparatuses (SCBAs). The proposal further notes that the change to four hour SCBAs is supported by newer technology and equipment which allow users longer breathing times during rescue operations, and therefore rescuers can have more time to engage in rescue activities without having to substitute machines. Additionally, rescuers have more rest time between work periods.

## **Gas Detectors**

During rescue operations, the mine rescue teams that respond to an incident at an underground stone mine would typically monitor the mine atmosphere for oxygen content and carbon monoxide.

The proposal states that it has been the agency’s “*experience that the number of gas detectors used in an underground emergency can vary depending on the needs of the individual mine rescue teams and conditions present at the mine.*” (*Federal Register*, Vol. 72, No. 172, p. 51341).

Proposed standard 30 CFR 49.6(a)(6) would require mine rescue stations providing coverage to underground stone operations to maintain gas detectors that measure oxygen content from 0 – 20% and carbon monoxide (CO) from 0 – 10,000 parts per million (ppm). If this standard is imposed as written, the NSSGA believes that most stations, if not all stations, providing coverage to underground stone operations would have to purchase four multi-gas detectors (as opposed to eight to twelve single gas detectors) capable of measuring oxygen concentrations in the lower range and carbon monoxide concentrations in the upper range.

The NSSGA has identified twenty-nine mine rescue stations that provide coverage to underground stone operations in the United States. In addition, local fire departments or other local emergency responders provide assistance to those underground stone operations that have *alternative mine rescue capability*. Estimates are that at least the same number (twenty-nine) of local emergency responders provide *alternative mine rescue capability* coverage to underground stone mines.

Table 1 summarizes the costs associated with purchasing four multi-gas detectors at twenty-nine mine rescue stations. Some of these costs would be attributable to state and local teams that provide rescue coverage for underground stone operations. Taxes, shipping and handling costs are not illustrated in Table 1, nor are instrument replacement parts and supplies.

**Table 1**

| Detection Equipment <sup>1</sup>            | Calibration Equipment <sup>2</sup> | Unit Cost        | Station Cost (4X) | Team Member Training - Mine Rescue Station <sup>3</sup> | Subtotal Station Cost | Underground Stone Mine Rescue Detector Cost (29X) |
|---|------------------------------------|------------------|-------------------|---|-----------------------|---|
| X-am 7000 multi gas detector-EX, CO, Oxygen |                                    | \$3,085          | \$12,340          | \$6,000   | \$18,340              | \$531,860   |
| Charging Module                             |                                    | 139              | 556               |   | 556                   | 16,124  |
| Battery Pack                                |                                    | 376              | 1,504             |   | 1,504                 | 43,616  |
| Protective Case                             |                                    | 108              | 432               |   | 432                   | 12,538  |
| Remote Sampling Pump                        |                                    | 400 <sup>4</sup> | 400               |   | 400                   | 11,600  |
|   | Calibration Regulator              | 147 <sup>5</sup> | 147               |   | 147                   | 4,263   |
|   | Calibration Gas – CO and Oxygen    | 268 <sup>6</sup> | 268               |   | 268                   | 7,772   |
| <b>Grand Total</b>                          |                                    | <b>\$4,523</b>   | <b>\$15,647</b>   | <b>\$6,000</b>  | <b>\$21,647</b>       | <b>\$627,773</b>                                  |

The cost estimate by MSHA is significantly lower than Table 1 shows. (*Federal Register, Vol. 72, No. 172, pp 51343-51344*) There are many vendors that sell gas detectors, auxiliary and maintenance equipment, but the data illustrated in Table 1 are accurate and can be used for purposes of comparison.

### **Oxygen Resuscitators**

The NSSGA fully appreciates the arduous and dangerous work in which mine rescue teams engage, and believes that rescuer safety as well as patient safety is of paramount

<sup>1</sup> Unit costs from [www.premiersafety.com](http://www.premiersafety.com) for Drager X-am 7000 multi gas detectors

<sup>2</sup> Calibration costs from [www.premiersafety.com](http://www.premiersafety.com)

<sup>3</sup> Mine Safety and Health Administration hearing transcript, Salt Lake City UT, October 23, 2007, p. 102. Drager sales manager stated that the company provides a certification for mine rescue team members at \$500 per member. The certification must be renewed. In arriving at the \$6000 figure, the assumption was made that every member of a mine rescue team must know how to use the multi gas detector, as opposed to only team members who carry and utilize the detector in a mine emergency response.

<sup>4</sup> Mine Safety and Health Administration hearing transcript, Salt Lake City UT, October 23, 2007, p 100.

<sup>5</sup> There would be 1 calibration regulator per rescue station

<sup>6</sup> There would be 1 set of calibration gases per rescue station

importance. The NSSGA furthermore recognizes the inefficiency and difficulty of using self-contained self-rescuers (SCSRs) for breathing aids in rescuing trapped miners.

However, oxygen resuscitators may trigger additional training requirements in various states due to the nature of the activity, which is administering oxygen. In consideration of the various state regulations, an appropriate decision for the mine rescue team to make is whether to use an oxygen resuscitator in place of an SCBA. For this reason, the NSSGA believes that underground stone mine operators and their rescue teams should decide the appropriateness of using either the SCBA or the oxygen resuscitator during rescue operations, and that the resuscitators should not be mandatory mine rescue team equipment for underground stone operations at this time.

### **Summary**

The NSSGA fully supports efforts from MSHA to continue implementation of the Mine Improvement and New Emergency Response Act of 2006. Our nations' mine rescue teams must have the best possible equipment to effectively and as quickly as possible rescue miners who are entrapped or otherwise in danger.

The "small and remote" and "special mining conditions" status of many underground stone mine operations allows them to have "alternative mine rescue capability". The compliance costs estimated by MSHA for the proposed rule in the entire metal and non metal sector are significantly lower than the costs estimated by NSSGA to purchase and maintain four multi gas detectors at each mine rescue station that provides coverage to underground stone operations.

Thank you,



Thomas Harman  
Vice-President, Safety Services  
National Stone, Sand & Gravel Association