October 16, 2018

The Honorable David Zatezalo
Assistant Secretary for Mine Safety and Health
201 12th Street, Suite 401
Arlington, VA 22202-5450

Dear Assistant Secretary Zatezalo:

As the century-old safety and security association of the commercial explosives industry, the Institute of Makers of Explosives (IME) believes that modernizing regulations and aligning them to current industry best practices provides measurable safety value to employees and the public. For this reason, IME appreciates the opportunity that the Mine Safety and Health Administration (MSHA) has afforded stakeholders to provide input in identifying improvements to its regulations, per Executive Order 13777, without negatively impacting miner safety and health.

As you may recall from our MSHA-IME Alliance meeting on March 6th, 2018, IME has been developing a proposal for MSHA’s consideration and cooperation that seeks to modernize MSHA regulations and harmonize rules with the requirements of other agencies with explosives jurisdiction. Although IME has not yet finalized our entire project, at this time, IME is submitting comments related to electronic detonators.

MSHA regulations address safety fuse and blasting caps, non-electric detonators, and electric detonators, but do not address electronic detonators. Electronic detonators have been used by the industry for well over two decades and provide a sophisticated level of safety and security. Electronic detonators account for at least 15% of initiation systems used in the United States, surpassing the use of electric detonators. IME has published “plain language” information describing the technology and general design associated with electronic detonators. The document, Electronic Blast Initiation Systems Guideline: General User Information for Mining, Quarrying and Construction Applications (December 2017), also provides use and handling recommendations and identifies possible risks associated with electronic detonators.

IME has previously submitted information to MSHA articulating our technical position regarding shunting of electronic detonators. We noted that, since MSHA regulations do not address electronic detonators, the agency applies requirements for shunting of electric detonators at 30 CFR 56.6401 to electronic detonators. This example provides one illustration of the need to modernize MSHA regulations to properly address electronic detonators.

IME proposes the following changes to MSHA regulations, as related to explosives and blasting:

2. The Electronic Blast Initiation Systems Guideline is published at www.ime.org and is available at no cost.
• 56.6401 – This section should remain applicable to electric detonators only. If the agency feels obligated to also address electronic detonators in this section, IME proposes that an exception be developed for electronic detonators specifying that engineering features serve the same purpose as shunting.4
• 56.6000 Definition of “Detonator” – Add (where underlined) “These devices include electric or nonelectric instantaneous, electronic, delay blasting caps and delay connectors.”
• 56.6310 Misfire waiting period – Add a new section (c) “If electronic detonators are involved in a misfire, wait a minimum of 30 minutes before reentering the blast area, unless the manufacturer recommends additional time.”5
• 57.6407 Circuit testing – Add (where underlined) under (b)(2) Continuity or verification of blasting lines prior to the connection of electric or electronic detonators.
• 57.6604 Precautions during storms – Add (where underlined) under (b) Underground electric or electronic blasting operations that are capable of being initiated by lightning shall be suspended and all persons withdrawn from the blast area or to a predetermined safe location.
• 75.1310 Explosives and blasting equipment – IME suggests an exception for copper shell electronic detonators from the required delay requirements of section (c) because there is no concern for out of sequence firing with electronic detonators. Alternatively, MSHA could develop a separate rule specifically addressing the use of electronic detonators underground.
• 77.1303 Explosives, handling and use – Include an exception under (z) for electronic detonators. Electronic detonators must be tested with the specific equipment designed by the manufacturer for the electronic detonator. Under current regulations, companies are required to obtain a variance from this requirement.

These suggested regulatory modifications would serve to reduce regulatory burden, modernize MSHA rules, and improve miner safety.

To assist MSHA with evaluating our proposals, IME invites you and your staff to participate in a technical demonstration of electronic detonators. Our member companies could provide such a demonstration(s) at either an appropriate location or with inert training aids at an MSHA office to aid in the agency’s understanding of electronic detonators.

Once again, on behalf of IME and our member companies, I thank you for the opportunity to submit this input. Please advise if IME may host you for a demonstration or if we may otherwise assist with your regulatory reform efforts. I may be reached at (202)266-4320 or dsatkowiak@ime.org.

Sincerely,

Debra S. Satkowski
President

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5 IME is currently conducting a technical review of the minimum wait period for electronic detonators and a revised recommendation may be forthcoming.