October 28, 2019

Ms. Sheila A. McConnell  
Director  
Office of Standards, Regulations, and Variances  
Mine Safety and Health Administration  
201 12th Street South, Suite 4E401  
Arlington, Virginia 22202-5452

Re: RIN 1219-AB36; Docket No. MSHA-2016-0013, Respirable Silica (Quartz)  
Comments of the Industrial Minerals Association – North America

Filed via the Federal eRulemaking Portal: http://www.regulations.gov

Dear Ms. McConnell:

Please find attached supplemental comments of the Industrial Minerals Association – North America (IMA-NA) on MSHA’s Request for Information (RFI) on Respirable Silica (Quartz), published at 84 FR 45452 et seq. (August 29, 2019). These supplemental comments provide additional context for IMA-NA Attachment 4 to our initial comments. IMA-NA Attachment 4 addressed comments filed by the American Chemistry Council’s Crystalline Silica Panel (ACC CS Panel) on OSHA’s Proposed Rule on Occupational Exposure to Respirable Crystalline Silica, RIN 1218-AB70, Docket No. OSHA-2101-0034, published at 78 FR 56274 et seq. (September 12, 2013). Given MSHA’s “. . . interest in data and information on economically and technologically feasible best practices to protect coal and MNM [metal and nonmetal] miners’ health . . .,” 84 FR at 45456, and the agency’s request for information on costs at the public meeting it held on October 17, 2019, IMA-NA believes that MSHA will benefit from having some of the attachments that were part of the ACC Panel’s comments to OSHA included as IMA-NA Attachment 4.

To avoid confusion, these attachments retain the name attached to them by the ACC CS Panel and, thus, can be readily cross-referenced within IMA-NA Attachment 4.

IMA-NA also is submitting additional related comments the ACC CS Panel submitted in the OSHA rulemaking. These include the Post-Hearing Brief of Stuart L. Sessions and a report for the ACC CS Panel titled: Re-Estimated Benefits and Costs of OSHA’s Proposed General Industry Standard for Occupational Exposure to Crystalline Silica.

AB36-COMM-50
Thank you again for the opportunity to comment on the RFI. IMA-NA looks forward to working with MSHA on the RFI and on other issues related to occupational exposure to respirable silica (quartz).

Sincerely,

[Signature]

Mark G. Ellis
President

Attachments:

ACC CS Panel – Comments Attachment 8
ACC CS Panel – Comments Attachment 9 [Environomics Report]
ACC CS Panel – Comments Attachment 10
ACC CS Panel – Comments Attachment 11
ACC CS Panel – Comments Attachment 12
ACC CS Panel – Comments Attachment 13
ACC CS Panel – Comments Attachment 14
Sessions Post-Hearing Brief -- Final
Silica rule benefit-cost report -- 1-27-16 final
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Dear Ms. McConnell:

Please find below the comments of the Industrial Minerals Association – North America (IMA-NA) on MSHA’s Request for Information (RFI) on Respirable Silica (Quartz), published at 84 FR 45452 et seq. (August 29, 2019). IMA-NA is the representative voice of companies that extract and process a vital and beneficial group of raw materials known as industrial minerals. Industrial minerals are the ingredients for many of the products used in everyday life such as glass, ceramics, paper, plastics, paints and coatings, cosmetics, pharmaceuticals and laundry detergent. IMA-NA’s companies and the people they employ are proud of their industry and the socially responsible methods they use to deliver these beneficial products. Industrial minerals include ball clay, barite, bentonite, borates, calcium carbonate, diatomite, feldspar, industrial sand, kaolin, perlite, soda ash (trona), talc and wollastonite, among others. IMA-NA also represents associate member companies that support the producers of industrial minerals. The safety and health of our employees, and workers in general, are of paramount importance to IMA-NA members. IMA-NA and its member companies welcome the opportunity to submit these comments on the RFI.

In the RFI, MSHA is interested in data and information on economically and technologically feasible best practices to protect coal and metal/non-metal (MNM) miners’ health from exposure to respirable quartz, including reduced exposure limits, new or developing protective technologies, and/or technical and educational assistance. IMA-NA’s response to these issues provides MSHA with a roadmap of next steps to offer mine operators clear direction for improving the health protections for all miners, at all mines, from overexposure to respirable silica (quartz).
IMA-NA submits that the weight of the evidence supports the current MSHA Permissible Exposure Limit (PEL) based on the 1973 Threshold Limit Value (TLV), which is the functional equivalent of 100 µg/m\(^3\), if operators fully complied. On the other hand, IMA-NA acknowledges that in 2016 the Occupational Safety and Health Administration (OSHA) published a final rule establishing a new PEL of 50 µg/m\(^3\) for general industry, construction and maritime that is substantially lower than MSHA’s current PEL. During the OSHA rulemaking, IMA-NA and its constituent associations, as well as the American Chemistry Council’s Crystalline Silica Panel, filed extensive comments in support of the 100 µg/m\(^3\) PEL. See IMA-NA Attachments 1, 2, 3, 4(a) and 4(b). However, IMA-NA also is aware of two recent studies sponsored by the National Industrial Sand Association that show residual risk at 50 µg/m\(^3\). See IMA-NA Attachments 5 and 6. It is worth noting that since 2016 the European Union has adopted a Binding Limit Value (PEL) of 100 µg/m\(^3\) for respirable crystalline silica dust generated by work practices (2017) and Australia has adopted a Recommended Workplace Exposure Standard of 50 µg/m\(^3\) for respirable crystalline silica.

Recognizing the equivocal nature of the evidence in support of either a 100 µg/m\(^3\) or a 50 µg/m\(^3\) PEL, IMA-NA is open to discussion about modification of the MSHA PEL. However, MSHA must recognize that a PEL is not an island onto itself. The PEL for respirable silica (quartz) should be set at a level to protect all miners, at all mines. However, to accomplish this objective, the PEL needs to be both technologically and economically feasible. In striking this balance, MSHA must offer mine operators the ability to utilize administrative controls (work practices) and personal protective equipment (respiratory protection), to supplement engineering controls, in order to prevent overexposure to respirable silica (quartz).

Whatever action MSHA decides to take on the existing PEL, any exceedances of the PEL should serve as the trigger for operator actions to reduce miner overexposure below the PEL. In other words, any Action Level should be the same as the PEL. Recognizing the unique nature of mining and potentially higher background levels of respirable crystalline silica that may be encountered, all tools should be available to the operator to comply.

IMA-NA supports an approach to limiting overexposures to respirable crystalline silica that addresses the uniqueness of the mining industry generally, and specifically as it relates to the MNM sector. However, there are aspects of OSHA’s approach to limiting overexposures to respirable crystalline silica that should be incorporated into the existing MSHA standards. For instance, IMA-NA supports extending the concept of Table 1 in the OSHA rule to the mining industry as one means of complying with the occupational PEL for respirable crystalline silica. An MSHA Table 1 approach may differ from the OSHA Table 1 approach somewhat in terms of the equipment, tasks and work practices included, but this is entirely appropriate as the mining industry differs in some meaningful ways from the general industry, construction and maritime sectors. But where there is commonality, the solutions accepted by OSHA for compliance in Table 1 also should be deemed compliant by MSHA. For other equipment, tasks and work practices omitted from the OSHA table, MSHA should pursue a similar approach for exposure scenarios presented in the mining sector.

IMA-NA believes that the Table 1 concept has universal merit as the best approach for protecting workers exposed to respirable crystalline silica and simplifies and avoids the
challenges of accurately assessing worker exposures to respirable crystalline silica. Considering this fact, IMA-NA encourages the National Institute for Occupational Safety and Health (NIOSH) to work with MSHA and their stakeholders to identify equipment, tasks and work practices appropriate to include in a comparable “Table 1” for the mining sector. In doing so, the cause of promoting occupational health will be advanced significantly.

Some ideas for Table 1 may include processes with consistent/predictable dust generation characteristics, such as heavy equipment for excavating and hauling, utility vehicles, hand tools, and tasks performed in potentially high exposure areas, such as crushing or bagging. Also under a Table 1 approach, MSHA could establish a more appropriate definition of the following phrase in Part 56/57.5005, “However, where accepted, engineering control measures have not been developed or when necessary by the nature of the work involved (for example, while establishing controls or occasional entry into hazardous atmospheres to perform maintenance or investigation), employees may work for reasonable periods of time in concentrations of airborne contaminants exceeding permissible levels if they are protected by appropriate respiratory protective equipment.” The tasks of maintaining bag houses or kilns or other similar tasks can vary in how frequently they occur; however, it is within MSHA’s authority to define specific tasks where respiratory protection is the primary form of supplemental engineering controls. This is a straight-forward approach and a better way to ensure miner health, operator acceptance, and fairer and more consistent enforcement.

IMA-NA submits that many engineering controls and administrative controls or work practices can be gleaned from the recently updated Dust Control Handbook for Industrial Minerals Mining and Processing, Second Edition, NIOSH Mining Program Report of Investigation RI 9701. The 2019 Dust Control Handbook is an excellent resource and could reduce the amount of research necessary to create a usable Table 1. The Dust Control Handbook can be accessed and downloaded through the following hyperlink: [https://www.cdc.gov/niosh/mining/works/coversheet2094.html](https://www.cdc.gov/niosh/mining/works/coversheet2094.html). See IMA-NA Attachment 7. As this attachment is too voluminous to include in its entirety as an attachment to these comments, IMA-NA will submit digital and hard copies directly to MSHA for inclusion in the docket.

IMA-NA supports OSHA’s acceptance of the “hierarchy of controls” approach and we maintain that MSHA has the same authority in the MNM industry sector under Parts 56/57. Universal industrial hygiene practice identifies five major categories of control measures: elimination, substitution, engineering controls, administrative controls and personal protective equipment. The concern with the existing standards under Parts 56/57 is that they do not apply accepted and sound industrial hygiene principles insofar as the use of respirators is not explicitly identified as an acceptable control measure after the implementation of technically and economically feasible engineering controls and administrative controls.

In its RFI, MSHA suggests that it does not have the authority to accept the last line of defense - personal protective equipment (PPE) - as a means of compliance based on Sections 201(b) and 202(h) of the Federal Mine Safety & Health Action of 1977 (Mine Act). However, Title II – Interim Mandatory Health Standards applies only to coal operations, and not MNM mines. Thus, from a statutory standpoint, MSHA has clear authority to allow the use of PPE in the MNM sector. From a regulatory standpoint, MSHA can show that health protection to
miners is not reduced by using PPE. In fact, just the opposite is the case. If the use of respiratory protection created a less safe environment, then why would MSHA allow its use for diesel particulate matter under Part 72, but not for respirable silica (quartz)? Why would MSHA allow P-Codes under Part 62? In summary, MSHA has the statutory and regulatory authority to allow the use of PPE/respiratory protection in the MNM sector after implementing technically and economically feasible engineering controls and administrative controls without encroaching on the Mine Act’s “no-less-protection” provision.

Another perspective on the effectiveness of the hierarchy of controls approach is provided by OSHA under its enforcement scheme for air contaminant PELs, including respirable crystalline silica. So, MSHA’s argument that respiratory protection can be detrimental if not worn properly is an obvious misstatement and a flawed premise for a defense not to allow respiratory protection for compliance purposes. Moreover, the mine operator is obligated to implement a respiratory protection program if respirators are in use. MSHA would have full enforcement authority against a mine operator failing to adhere to a respiratory protection program if respirators were in use.

By extension of the previous argument, MSHA has the statutory and regulatory authority to provide for using administrative controls for compliance purposes in the MNM sector after implementing engineering controls. Even under sections 201(b) and 202(a) of the Mine Act, MSHA can provide for administrative controls in the coal industry, but chooses not too, because the language refers to the exposure each miner is exposed to, which implies a personal sample must be taken. The bottom line is that MSHA should not interfere with how an operator directs its workforce, but should only ensure that each miner’s exposure is below the PEL. The rotation of miners performing specific tasks (job/worker rotation) is a feasible administrative control.

When defining the meaning of “technically and economically feasible engineering controls,” MSHA has flexibility to express its reasoning in a way that allows operators, especially small operators, to claim infeasibility under reasonable terms. MSHA needs to consider that a significant number of mines employ few miners. According to MSHA statistics, the coal sector included 1,150 mines in 2019. Of those 1,150 mines, 364 mines employed five or fewer miners (32 percent of the coal total). According to these same statistics, the MNM sector included 11,848 mines in 2019. Of these 11,848 mines, 6,471 mines employed five or fewer miners (55 percent of the MNM total). Source: MSHA Program and Information Resources Directorate. This requires MSHA to be thoughtful in how it permits all mine operators to comply, which will lead to greater acceptance by operators, which will lead to greater compliance by operators, which will lead to less miner exposure and which will lead to better health of miners. And to reiterate as it relates to administrative controls, the key is the exposure to “each miner” and thus an operator should be given discretion in how it chooses to comply.

MSHA also takes an approach that abatement must be immediate before an operator can challenge the alleged MSHA findings or terms for abatement. This is backwards. MSHA should allow for a fair hearing on the merits before requiring abatement since the operator can ensure employee exposure below the PEL using interim respiratory protection. This is especially necessary because MSHA has few, if any, inspectors who are certified industrial hygienists. Historically, MSHA exposure monitoring samples that initially triggered citations have been
invalidated for a variety of reasons, including sampling and analytical error and even faulty calibration of equipment. The mine operator must have an opportunity to verify the legal validity of MSHA samples before spending thousands of dollars on workplace controls that may be unnecessary, particularly where the operator’s own data suggest no overexposures are present.

MSHA should not be allowed to maintain its current leverage over operators to demand certain engineering controls even where the operator legitimately argues infeasibility. MSHA should allow administrative controls if the operator implements a workable solution. Pursuant to current OSHA regulations, when an employer challenges an alleged violation the abatement period tolls while the case is heard provided no risk to employees would result. MSHA has discretion and needs to define a similar, reasonable process that does not threaten the viability of operators, especially small operators, when the risk to individual miners is removed from the equation due to administrative controls or respiratory protection. MSHA’s own dust data on its website reflects that there are mine operators in the MNM sector that have implemented mandatory respiratory protection programs many years ago and that have not seen evidence of silicosis.

IMA-NA submits that if MSHA decides to propose regulatory change it should use in the first instance the existing framework under Parts 56 and 57, making any process more efficient. The existing framework could apply even if MSHA proposes a new PEL. Also, MSHA can use Parts 46 and 48 to address any additional respirable crystalline silica training needs and avoid exposure to redundant citations. MSHA took this approach when adopting its Hazard Communication Standard, and the harmonization of that training with existing new miner and refresher requirements has worked well.

As to other possible provisions MSHA may consider addressing, the following suggestions are provided,

- **Exposure Monitoring** – Provide more defined exposure monitoring sampling intervals based on past sampling results and provide for the use of objective data. See 56/57.5002. For instance, baseline, periodic and monitoring following changes in production/processes and following changes to reduce exposure levels may be warranted, depending on individual or similar exposure group circumstances. Not every miner requires personal exposure monitoring. Subjective and objective evaluation should be utilized as necessary to determine the adequacy of control measures. Implementation of a Table 1 approach could potentially obviate the need for extensive exposure monitoring.

- **Medical surveillance** – Define voluntary parameters on who and when miners should be examined and for what medical condition. Compare 72.100. Medical surveillance for silica-related disease typically would include medical evaluation of symptoms, lung function tests and chest x-rays, dependent on current and historical exposures to respirable crystalline silica. However, medical surveillance, if any, should match the exposure. Miners with higher cumulative exposures or sustained exposures over prolonged periods of time would be likely candidates for medical surveillance.

o Recordkeeping – Include specific time frames for retaining exposure monitoring records and medical surveillance records. See 57.5075.

IMA-NA members accept their responsibility to provide a safe and healthful workplace as set forth in the Mine Act. MSHA shares our commitment to reducing health impairment due to overexposure to respirable crystalline silica and other air contaminants, and so it must provide mine operators with all the tools in the industrial hygiene tool bag to do so. A reasonable approach still would require operators to deploy engineering controls and administrative controls to the extent technologically and economically feasible. But to disregard critical control measures such as administrative controls and respiratory protection ignores the hierarchy of controls long recognized by safety and health professionals.

Thank you for the opportunity to comment on the RFI. IMA-NA looks forward to working with MSHA on the RFI and on other issues related to occupational exposure to respirable silica (quartz).

Sincerely,

Mark G. Ellis
President

Attachments:

IMA-NA Attachment 1
IMA-NA Attachment 2
IMA-NA Attachment 3
IMA-NA Attachment 4(a)
IMA-NA Attachment 4(b)
IMA-NA Attachment 5
IMA-NA Attachment 6
IMA-NA Attachment 7
PUBLIC SUBMISSION

Docket: MSHA-2016-0013
Respirable Crystalline Silica/Quartz

Comment On: MSHA-2016-0013-0001
Respirable Silica (Quartz) - Request for Information

Document: MSHA-2016-0013-0060
Comment from Mark Ellis, Industrial Minerals Association - North America (IMA-NA)

Submitter Information

Name: Mark Ellis
Organization: Industrial Minerals Association - North America (IMA-NA)

General Comment

Please see the attached.

Attachments

IMA-NA Comments on MSHA RCS RFI
IMA-NA Attachment 1
IMA-NA Attachment 2
IMA-NA Attachment 3
IMA-NA Attachment 4(a)
IMA-NA Attachment 4(b)
IMA-NA Attachment 5
IMA-NA Attachment 6
IMA-NA Attachment 7
PUBLIC SUBMISSION

Docket: MSHA-2016-0013
Respirable Crystalline Silica/Quartz

Comment On: MSHA-2016-0013-0001
Respirable Silica (Quartz) - Request for Information

Document: MSHA-2016-0013-0062
Comment from Mark Ellis, Industrial Minerals Association - North America (IMA-NA)

Submitter Information

Name: Mark Ellis
Organization: Industrial Minerals Association - North America (IMA-NA)

General Comment

Please see the attached.

Attachments

IMA-NA Comments on MSHA RCS RFI - ACC Panel Comments
ACC CS Panel - Comments Attachment 8
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