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ELECTRONICALLY VIA REGULATIONS.GOV WEBSITE

Ms. S. Aromie Noe
Director, Office of Standards, Regulations, and Variances
Mine Safety and Health Administration
202 12th Street South, Suite 4E401
Arlington, VA 22202-5450

Re: Lowering Miners' Exposure to Respirable Crystalline Silica and Improving Respiratory Protection
RIN 1219-AB36/ MSHA-2023-0001

Dear Ms. Noe:

The American Exploration & Mining Association ("AEMA") offers the following comments to the Mine Safety and Health Administration ("MSHA") concerning its proposal to amend its existing standards to better protect miners against occupational exposure to respirable crystalline silica and to improve respiratory protection for all hazards as set forth in the proposed rule entitled "Lowering Miners' Exposure to Respirable Crystalline Silica and Improving Respiratory Protection," 88 *Fed. Reg.* 44582 (July 13, 2023). The safety and health of our nation's miners is the primary concern of all our members, and AEMA welcomes the opportunity to submit these comments. As discussed below, AEMA and its members support lowering the permissible exposure limit of silica exposure to better protect the mining workforce. As discussed below, however, we have concerns about the implementation of the proposed rule.

I. INTRODUCTION

The comments below are divided into two major sections. Section II addresses AEMA's overarching concerns about the proposed standard and its implementation. Section III provides comments on many of the requests posed by MSHA at 88 *Fed. Reg.* at 44854-44858.

A. AEMA Statement of Interest

AEMA is a 128-year-old, 1,400-member national trade association representing the mineral development and mining industry, with members residing across 46 states, 7 Canadian provinces or territories and 10 other countries. AEMA is the recognized national representative

for the exploration sector, the junior mining sector, as well as mineral developers interested in maintaining access to public lands. Thus, AEMA represents the entire mining life cycle, from exploration to mineral extraction and then to reclamation and closure. More than 80 percent of our members are small businesses or work directly for small businesses.

Our members take great pride in producing the metals and other important minerals America needs for national and economic security, as well as the materials people use in their everyday lives. We are proud of our members' contributions across the communities and regions where they operate, many of which are rural areas facing significant economic and social development challenges. AEMA's members work to ensure America has secure and reliable supply chains, abundant and affordable energy, and the American-sourced materials necessary for U.S. manufacturing, national security, and economic security, all delivered under world-leading environmental, safety, and labor standards.

AEMA's producer members, all of whom would be impacted by the proposal, conduct surface and underground metal/nonmetal ("MNM") operations across the U.S. These operations include a wide range of activities that may involve exposure to silica from drilling and excavation to processing and hauling. While AEMA generally supports MSHA's desire to have a uniform approach to respirable crystalline silica occupational exposure and improved respiratory protection, we note that given the existing regulatory frameworks applicable to coal and MNM operations, an identical approach will not work for coal and MNM in all circumstances. Upending the existing sampling frameworks applicable to each in the attempt to create a uniform approach will complicate sampling efforts and compliance. The comments below identify areas where a uniform approach is unworkable.

B. Acceptance of Proposed 50 $\mu g/m^3$

AEMA supports MSHA's intention to reduce the permissible exposure level ("PEL") for respirable crystalline silica from 100 $\mu g/m^3$ to 50 $\mu g/m^3$. The prevention of lung disease is an area that needs our collective attention to build upon the advances of the past 20 years. Over the last two decades, effective ventilation engineering controls have been widely adopted to control mine dust both in surface and underground coal and MNM mines. Adopting best practices, strictly adhering to ventilation and dust control plans, and increasing miner and operator awareness have all contributed to exponentially lowering dust levels in both underground and surface mines.

Working together, equipment manufacturers and mine operators have invented and implemented effective ventilation controls. Wet bed scrubbers and water spray technology have greatly reduced dust exposures. HEPA-filtered enclosed cabs in surface and underground haulage equipment keep dust levels to a minimum. Throughout the development of all these engineering controls, the National Institute for Occupational Safety and Health ("NIOSH") has conducted research to establish effectiveness, which hastened adoption and widespread use. Due to improved technology in the mining industry, diligence by the mining operators to provide a healthful work

environment, and intelligent regulations promulgated and enforced by MSHA, miners today work in one of the most health and safety-conscious industries in America.

Technological advancements continue to be made. For example, as envisioned by MSHA's 2014 rule, "Lowering Miners' Exposure to Respirable Coal Mine Dust, Including Continuous Personal Dust Monitors" (2014 Coal Dust Rule),[1] the continuous personal dust monitor gives coal miners a minute-by-minute readout of dust exposures. We look forward to the development of a similar device to measure silica exposures, which is under development by at least one manufacturer.

While progress is positive, disease persists, and we believe that more can be done which is a primary reason that AEMA is supporting the proposed 50 $\mu g/m^3$ permissible exposure limit ("PEL"). We agree that there is benefit to the miner and operator if we can reduce and sustain silica levels to the lowest reasonably practicable level, provided additional mitigations such as respiratory protection are accepted when the levels are elevated. The proposed MSHA standard is generally consistent with recommendations of NIOSH and mirrors the Occupational Safety and Health Administration's ("OSHA") 2016 PEL in its Occupational Exposure to Respirable Crystalline Silica rule (2016 OSHA Silica Rule)[2] that is applicable to many of its regulated industry sectors.

C. Preview of Major Concerns

As detailed below, while AEMA supports the 50 $\mu g/m^3$ standard, we have significant concerns regarding the implementation of the standard. Chief among these is MSHA's application of the hierarchy of controls for the purposes of the silica standard compared to the approach utilized by OSHA in its 2016 Silica Rule. AEMA does not agree with the proposed action level ("AL") of 25 $\mu g/m^3$. As well, given that the vast majority of mining operations work longer than an 8-hour shift, MSHA's use of an 8-hour TWA is problematic and not in accordance with NIOSH's recommendation. Another significant concern is the unreasonably short timeframe for implementation of, and compliance with, this very complex rulemaking. Our comments also address the approach to sampling and surveillance, which are not currently risk based and with refinement could better distribute available resources. Another key issue relates to the need for an error factor applied to the PEL and AL to account for sampling and analytical weighing errors. Finally, we raise concerns with MSHA's use of an eight-hour shift length, in a way that is inconsistent with both NIOSH's recommended exposure limit ("REL") and OSHA's 8-hour time-weighted average.

II. GENERAL COMMENTS/OVERARCHING CONCERNS

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1 79 *Fed. Reg*. 24814 (May 1, 2014).

2 81 *Fed. Reg.* 16286 (March 25, 2016).

A. Failure to Allow Implementation of Full Hierarchy of Controls

As proposed, MSHA fails to allow mine operators to deploy a comprehensive approach that uses the "hierarchy of controls" to protect miners' health and to comply with the proposed silica standard. As articulated by NIOSH, the hierarchy states the most effective controls are elimination, substitution, engineering, administrative, and personal protective equipment.[3] It is an accepted industrial hygiene practice to use the controls in combination to act as redundant measures and best practices to protect employees from hazards.

OSHA's 2016 Silica Rule demonstrates the benefits of such an approach. In that rule, OSHA treats engineering and administrative controls (*e.g.*, work practices) as equally effective in reducing silica dust exposures to achieve compliance.[4] Furthermore, if these controls do not achieve compliance with the PEL, OSHA allows the use of respirators. If both fail, OSHA requires employers to supplement them with respiratory protection to achieve compliance.[5] OSHA further requires employers to provide respirators to employees, and employees to wear the respirators provided by the employers when they enter regulated areas.[6]

MSHA needs to recognize that relying exclusively on engineering controls has not stopped lung disease among miners and that supplemental controls are necessary to protect miners' health. Technological progress in engineering controls has been positive, but challenges remain, and more can be done if lung disease is to be eradicated among miners. As explained further below, greater use of administrative controls and acceptance of personal protective equipment in the form of respirators should be allowed to achieve and comply with the reduced PEL. Collectively (industry, labor, and MSHA) working together to promote the effective use of respirators would have a positive impact on miner health.

1. Engineering Controls

The proposed rule discusses a number of potential engineering controls "designed to remove or reduce the hazard at the source." MSHA's stated examples include: the installation of proper ventilation systems, use of water sprays or wetting agents to suppress airborne contaminants, installation of machine-mounted dust collectors to capture respirable crystalline silica and other contaminants, and the installation of control booths or environmental cabs to enclose equipment operators.

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[3] "Hierarchy of Controls" is a process to control occupational hazards to protect individuals. The hierarchy states the most effective controls are elimination, substitution, engineering, administrative, and personal protective equipment. It is an accepted industrial hygiene practice to use the controls in combination to act as redundant measures and best protect employees from hazards. https://www.cdc.gov/niosh/topics/hierarchy/default.html

[4] 81 *Fed. Reg*. at 16651, 16863, 16880 and 29 C.F.R. § 1910.1053(f)(1) *Engineering and work practice controls*.

[5] Id.

[6] 29 C.F.R. § 1910.1053(e)(4). (A "regulated area" is one where the employee is expected to be exposed to levels of airborne silica dust is, or can be expected to be, in excess of the PEL).

AEMA agrees that engineering controls play an important role in miner protection. For example, over the last two decades, effective ventilation engineering controls have been widely adopted in both surface and underground coal and hard rock mines. Best practices, strict adherence to ventilation and dust control plans and increased miner and operator awareness have all contributed to exponentially lowering dust levels in both surface and underground mines.[7]

a) Technological Feasibility

MSHA contends that engineering controls are technologically feasible and readily available but this conclusion ignores the variability in locations and types of actions that may involve elevated silica exposures. There may be certain locations or activities where established engineering controls are not feasible.

The availability and feasibility of engineering controls is different for each operation and its facilities' designs, and those controls may not effectively control exposures to silica below the proposed PEL. As an example, retrofitting existing infrastructure with adequate ventilation controls may reduce exposures but is not certain to meet the proposed PEL. Ventilation controls are effective for point source generation of contaminants, but when the source is an entire mill or crushing facility ventilation controls become less effective. Many mine facilities predate MSHA and retrofitting them with engineering controls will be very difficult if not impossible. Supply chain constraints (exacerbated by high demand from mining companies for specific equipment required to comply with proposed MSHA standards) lengthen project schedules and operational down time.

Another example provided by AEMA members when the technological feasibility of engineering controls may be in question is for activities that take place outside in windy conditions (*e.g.*, tailings deposition, maintenance, blasting). Mining companies should make every effort to implement engineering controls, but when those controls will still not be effective in meeting the proposed PEL, respirators and administrative controls including shift rotations must be allowed for use to reduce silica exposure.

Additionally, MSHA's proposal raises questions about what feasibility means in this context. For example, MSHA requires in the proposal that operators install all "feasible" engineering and administrative controls to achieve compliance with the PEL. Respirators are to be considered temporary until the controls reduce exposures to below the PEL. Since respirators

[7] SME Annual Conference & Expo, Denver, Colorado, February 27, 2019. Assistant Secretary for Mine Safety and Health David Zatezalo provided statistics showing the number of MSHA and operator-collected coal dust samples proved that overexposures of the coal dust permissible exposure limit have exponentially decreased since 2000, that the average concentration of quartz in all samples taken in the coal sector since 2009 averaged 25.6 micrograms/m^3, and that the number of quartz overexposures in coal have decreased from 23.3% to 1.2% from 2000 – 2019. https://www.msha.gov/sites/default/files/events/SME%20presentation%202-26-19.pdf

are temporary, operators must continue to add engineering and administrative controls until compliance with the PEL is achieved, even if the controls are not feasible. The way the rule is written, when all "feasible" controls are implemented, the operator will have to continue to install more controls if compliance with the PEL is not achieved and the use of respirators is temporary.

b) Economic Feasibility

MSHA also maintains that engineering controls are economically feasible. Again, this conclusion fails to factor in variability in operations and actions. Engineering controls need to be tailored to address site-specific conditions and not every engineering control will be economically feasible in all locations. The question of economic feasibility takes on heightened importance for small businesses. AEMA understands the Small Business Administration ("SBA") Office of Advocacy plans to submit comments on MSHA's proposed rule. We urge MSHA to pay close attention to the SBA's recommendations for impacts to smaller mining companies and the communities that rely on those companies for high-wage jobs and contributions to the local economy.

An additional example of economic feasibility is the increase in cost to sample, evaluate samples, and interpret results. This will also impose significant costs on mine operators. For example, one AEMA member attempted to roughly estimate the costs to comply with the proposed rule. The total amount to retrofit all underground and surface mobile equipment with filtered pressurized air, conduct medical surveys, and increased sampling is $22.7 million for the first year and $13.6 million each year thereafter. The cost does not include controls for process areas, as those estimates are still being assessed.

2. Administrative Controls

MSHA proposes to allow the use of administrative controls if supplementary protection is needed after implementation of engineering controls. Examples of administrative controls to reduce silica exposures provided by MSHA include:

- housekeeping procedures for miners to clean spills;
- procedures to handle contaminated clothing contaminants;
- proper work positions of miners; and
- walking around the outside of a dusty process area rather than walking through it.

AEMA agrees that administrative controls are an effective tool in addressing silica exposures. However, we disagree with MSHA's narrow view of administrative controls. As mentioned above, OSHA more broadly puts administrative controls on equal footing with engineering controls. Not only does MSHA require use of engineering controls to be exhausted before operators can resort to administrative controls, MSHA forbids the use of a key administrative control provided by OSHA – the rotation of miners. Despite not allowing for the

rotation of employees in its proposed silica rule, OSHA made the determination that rotation of employees was warranted after reviewing comments received during the comment period. Yet MSHA specifically prohibits the rotation of miners, despite generally defining administrative controls as "work practices that reduce the duration, frequency, or intensity of miners' exposures." As explained below, AEMA strongly disagrees with MSHA's position on job rotation.

a) Job Rotation

According to NIOSH, reduction of a worker's exposure to chemical carcinogens is the primary way to prevent occupational cancer.[8] Exposures to carcinogens should be kept to levels as low as reasonably achievable. Accordingly, one effective method to reduce individual exposure to crystalline silica is to allow for rotation of miners as an administrative control. Rotation of miners for specific high exposure tasks, along with engineering controls and respirators for that task, will reduce individual exposures to lower levels than the use of engineering controls alone. An added benefit of rotation of miners in physically demanding tasks is a reduction of muscular skeletal disorders due to overuse. Prohibiting such rotations could, in effect, therefore increase risks of contracting a range of other occupational illness and injury. The prohibition of miner rotation to maintain compliance removes an administrative tool available in the hierarchy of controls and ultimately restricts through regulation a mine operator's ability to direct the workforce.

3. Personal Protective Equipment

a) Use of PPE for Compliance

As mentioned above, MSHA proposes requirements for the use of respirators/PPE under certain circumstances to reduce silica exposure. Yet, in stark contrast to OSHA's rule, MSHA refuses to accept PPE for purposes of complying with the PEL, even when its use is the only known technological and economically feasible way to keep exposure below the limit. MSHA should follow OSHA's precedent to allow the use of respirators as a compliance measure. Respirators, especially PAPRs, have been tested and meet NIOSH specifications and have been demonstrated to be protective against crystalline silica.

NIOSH recommends the use of respirators with N95 or better filters for airborne exposures to crystalline silica at concentrations less than or equal to 0.5mg/m^3 (10 times the proposed PEL).[9] This demonstrates the effectiveness of respirators in addressing significantly worse conditions than the proposed PEL. Respirators, including PAPRs, are commonplace within mines and are an acceptable and feasible control for exposure to respirable crystalline silica.

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[8] *Current Intelligence Bulletin 68: NIOSH Chemical Carcinogen Policy* available at: https://www.cdc.gov/niosh/docs/2017-100/pdf/2017-100.pdf?id=10.26616/NIOSHPUB2017100revised.

[9] NIOSH Policy Statement: Respiratory Protection Recommendations for Airborne Exposures to Crystalline Silica, July 2008.

The proposed standard should be amended to allow for NIOSH-approved respirators in accordance with § 60.14(c) to be used as a recognized control. We propose adding language like that in the OSHA lead standard, 29 C.F.R. § 1910.1025(e)(2), to § 60.14(a): (3) Where engineering and work practice controls do not reduce employee exposure to or below the 50 $\mu g/m^3$ permissible exposure limit, the employer shall supplement these controls with respirators that are effective at bringing the air breathed below the PEL. This approach appropriately recognizes there may be areas where current engineering or administrative controls are not adequate to reduce exposures.

Such situations can be differentiated from unexpected exposures in areas where silica is normally below the PEL, which would trigger MSHA's requirement to make NIOSH-approved respirators available to affected miners before the start of the next work shift. In such cases, once overexposure has been confirmed by two or more samples, the operator should make the respiratory protection available as required but given additional time to conduct any needed for medical evaluations, fit testing or training related to PPE if the overexposure proves persistent. As discussed below, it takes time and resources to meet the requirements of ASTM F3387-19 and operators properly focus these resources on areas that are expected to exceed the PEL.

In 1995, MSHA, with the exception of gassy mines, transferred authority to approve air-purifying respirators to NIOSH.[10] As part of the transfer, MSHA retained the "existing provisions related to selection, use, and maintenance of respirators for coal and metal and nonmetal mines."[11] With the transfer, MSHA removed Part 11 from Title 30 of the Code of Federal Regulations, which contained guidelines for testing and approving all types of respirators in mining operations, including those used in mine rescue operations. To facilitate the transfer and future approval and testing, MSHA and NIOSH entered into a memorandum of understanding. As such, 42 C.F.R. Part 84 then became the governing standard containing the application process and additional protocol for approving and certifying respiratory devices used in mining operations. As detailed in 42 C.F.R. § 84.170 *Air-purifying respirators; description*, N95, N99, and N100 devices must demonstrate a minimum efficiency level of 95%, 99%, and 99.97% respectively.[12]

The NIOSH Pocket Guide to Chemical Hazards[13] is the expert's reference source for chemical and physical hazards and is used by industrial hygienists and other practitioners of occupational health services. The current edition of the Guide recommends N95, R95, and P95 respirators for crystalline silica (dust).[14] The Guide shows that a respirator with an assigned

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10 Federal Register, Vol. 60, No. 110, June 8, 1995, p 30398 See Supplementary Information. Background here: https://www.govinfo.gov/content/pkg/FR-1995-06-08/html/95-13286.htm

11 Ibid

12 42 C.F.R. § 84.170(a)(3)(iii). See here: https://www.ecfr.gov/current/title-42/chapter-I/subchapter-G/part-84 .

13 See here: https://www.cdc.gov/niosh/npg/npgd0684.html .

14 Ibid.

protection factor ("APF") of 10[15] provides protection to individuals exposed to silica level of 0.5 milligrams per cubic meter of air TWA (50 microgram per cubic meter); the N95 is classified as 10 APF. Mine operators and miners have a long history of consistent and effective use of N95 air-purifying respirators to protect miners' respiratory health. AEMA recommends MSHA revise the proposed rule as follows:

> *§ 60.14(c)(1)(i) Respiratory protection requirements. (1) Affected miners shall be provided with a NIOSH-approved atmosphere-supplying respirator or NIOSH-approved air-purifying respirator equipped with the following: (i) Particulate protection classified as 100, 99, or 95 series under 42 CFR 84*

Providing respiratory protection for miners in occupations with the potential for high silica exposures adds another layer of protections for preventing pulmonary disease. The time to act is now. MSHA should not make the mistake of missing this opportunity to minimize miners' silica exposure with respirators and ensure compliance when other controls have been exhausted.

b) Requirements of ASTM F3387-19

Under the proposal, use of respirators must be done in accordance with the strict requirements prescribed by ASTM F3387-19, which include medical evaluations, training, and fit testing. These requirements are designed to ensure respirators do their job in protecting miners. It makes little sense for MSHA to tout the importance of these requirements while failing to acknowledge the use of respirators for compliance purposes, especially given the significant burdens on operators in preparing for implementation. Because meeting the ASTM requirements could take several days to several weeks in order to be totally prepared for the use of respirators as mandated, the operator will most likely be forced to require everyone to get a medical evaluation and be fit tested to be prepared for respirator use.

MSHA should specifically allow for the use of respirators, including PAPRs, for compliance purposes in areas likely to exceed the AL. If the mine operator states in its dust protection program that all people on a working in such areas will be wearing respiratory protection, and providing that people are trained, medically capable, fit tested and using the respirator, and the respirator provides the protection factor required to maintain silica levels in the breathed air below PEL, then that is acceptable.

B. Use of Action Level to Trigger Periodic Sampling

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[15] An APF of 10 means that a respirator is designed, tested, approved, and certified to reduce an airborne contaminant to one-tenth of the ambient concentration of the contaminant, which is a significant reduction in the surface nonmetal mining environment.

While AEMA agrees that an AL is beneficial to early identification and action of elevated exposure to any air contaminant, we strongly believe this should be an internal company policy and not one defined by MSHA. Every company should develop their own internal policies for steps to be taken at an AL. While AEMA disagrees that 25 $\mu g/m^3$ should be the defined AL, we do believe that some AL should be developed per mine and company-based on conditions at that facility. In some cases, this may be a 30-45 $\mu g/m^3$. MSHA acknowledges in the proposed rulemaking that "an exposure limit of 25 $\mu g/m^3$ may not be achievable for all mines," further underlying that this component should not be part of the final rule.

C. Sampling and Surveillance Program Concerns

Pointing to the pervasive nature of silica, MSHA proposes to impose broad and significant new medical surveillance requirements upon mine operators. As MSHA articulated, silica dust is generated in most mining activities, including cutting, sanding, drilling, crushing, grinding, sawing, scraping, jackhammering, excavating, and hauling materials that contain silica, and is found in all mines—underground and surface MNM and coal mines.[16] What the proposed rule does not address, however, is that exposure risk should drive sampling requirements and inclusion in a medical surveillance program.

OSHA's respirable silica rule implements a risk-based approach to both sampling and medical surveillance. One method OSHA adopts to ensure focus is on individuals facing significant exposures is its recognition and utilization of similar exposure groups ("SEG"). The SEG approach is an accepted industrial hygiene practice that allows categorization of individuals who may be at risk for exposure and those who are not at risk.[17] OSHA specifically allows SEGs to be used when conducting baseline sampling. Additionally, OSHA uses SEGs to categorize job positions or tasks that, when prescriptive engineering controls are in place, are consistently effective at protecting the worker below the AL. A risk-based approach has the added advantage of reducing costs, particularly the cost of over sampling.

1. Massive Increase in Scope of Surveillance Program

The proposed rule would also include requirements for all MNM operators to provide medical surveillance in the form of a medical examination regime similar to what coal miners already receive. As such, the medical surveillance requirements would be extended to incorporate potentially 200,000 MNM miners at more than 11,000 mines. Such a significant expansion of these requirements will stress the capabilities of service providers and accredited laboratories to conduct the examinations, evaluate samples, and interpret results. Additionally, many mine operations are located in rural locations with fewer options to perform these tests and maintain

16 88 *Fed. Reg.* at 44853.

17 The American Industrial Hygiene Association's Strategy for Assessing and Managing Occupational Exposures outlines these accepted best practices.

compliance. Not only does this increase the challenge for mine operators to maintain compliance, it also decreases the availability of medical access to the public in these communities by placing additional stress on the current capacity of medical access.

AEMA believes that medical surveillance should only apply to employees who are or may reasonably be expected to be exposed to respirable silica at the company-developed internal action level for more than 30 days per year. This is consistent with sound science and is significantly more manageable than requiring medical evaluations for all miners regardless of identified exposure risk levels. Finally, as proposed, the medical surveillance requirement will impose significant costs on AEMA's members. For example, one AEMA member estimated that medical surveillance costs alone will increase by approximately $1 million for its estimated 7000 employees, and this is for a mine operator that currently has access to a well-staffed occupational health clinic.

2. Failure to Tie Surveillance to Exposure Risk

OSHA's 2016 Silica Rule standard, as well as other standards OSHA has established which include medical surveillance (*i.e.*, beryllium and lead), tie medical surveillance to exposure risk. For example, for most impacted industries, OSHA's 2016 Silica Rule requires the employer to conduct medical surveillance and sampling only of employees who are, or may reasonably be expected to be, exposed to respirable silica *at or above the action level* for 30 or more days a year.[18] This is consistent with sound science and is significantly more manageable than requiring medical evaluations for all miners regardless of identified exposure risk levels.

Unlike OSHA, MSHA's proposed rule requires baseline sampling to be completed for any miner who is reasonably expected to be exposed to respirable silica *at any level*[19] and includes all new miners in the medical surveillance program. OSHA's focus on the risk not only is consistent with accepted industrial hygienist practice but also ensures that MSHA's and operators' resources are focused on the greatest hazards and appropriately accounts for growing medical personnel and laboratory capacity.

Further, the ASTM F3387-19 standard uses age qualifiers to determine the timelines related to medical surveillance. However, MSHA's proposed rule outlines a completely different set of guidelines on when to enact the surveillance components. MSHA should be consistent in its adoption of the ASTM F3387-19 standard.

3. Sampling Issues and Frequencies

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18 29 C.F.R. § 1910.1053(i)(1)(i).

19 88 *Fed. Reg.* at 44906.

The objective of sampling should be to determine the level of anticipated exposure for each role/SEG. Once the representative samples have been taken, ongoing sampling should be done periodically to monitor for changes or a resampling should be done if significant changes in process/equipment occur. AEMA's concerns about MSHA's proposed approach to sampling and resampling are explained below.

a) Sampling Required Every Three Months if AL is Exceeded

MSHA proposes to require periodic sampling if the most recent sample shows exposure at or above the AL but at or below the proposed PEL. The periodic sampling is required every three months until two consecutive sample analyses showed miners' exposures below the AL. While OSHA's 2016 Silica Rule has a similar requirement, periodic sampling is required only every six months. With the inclusion of an AL in the proposal, sampling every three months is not necessary. MSHA has miscalculated the burdens related to the requirement to sample every three months, particularly for smaller operators that are more likely going to need to rent pumps. Renting pumps, collecting samples, calibrating pumps, recording data, conducting quality assurance of data samples, sending to the lab for analysis, and awaiting lab results may not be technically or economically feasible for all operations within that timeframe.

However, for miners that are in roles that are likely always above the AL, rather than an endless cycle of resampling, the focus should be on the use of PAPRs or respiratory protection to help mitigate the impacts of dust. MSHA needs to recognize that taking hundreds of samples and then resampling does not lower the dust levels nor does it protect miners. Focus on reducing exposures should be paramount to confirming exposures that are already known. Such an approach better protects workers and more appropriately allocates industry and MSHA resources.

b) Semi-annual Evaluations

MSHA is proposing that mine operators conduct semi-annual evaluations to evaluate whether any changes in production, processes, engineering controls, personnel, administrative controls, or other factors may reasonably be expected to result in new or increased exposures. OSHA's 2016 Silica Rule has an annual requirement of reviewing the adequacy of the written exposure control plans. But additionally, OSHA requires "the employer shall reassess exposures whenever a change in the production, process, control equipment, personnel, or work practices may reasonably be expected to result in new or additional exposures at or above the action level, or when the employer has any reason to believe that new or additional exposures at or above the action level have occurred."[20] Rather than following OSHA's lead, MSHA has doubled up OSHA's requirements with a quantitative and qualitative obligation. An evaluation would be warranted during the six-month period only if production or processes change.

c) Mineral Interference with Analysis for Silica Content

[20] 81 *Fed. Reg.* at 16863.

MSHA needs to factor in that many minerals interfere with the lab's analysis for silica content. OSHA has established a fully validated silica analytical method that lists 18 different mineral types that will interfere with the analytical peaks when analyzing the amount of silica collected during sampling which can erroneously elevate the amount of silica on a sample.[21] By erroneously elevating the silica result, mine operators face the potential of exceeding the AL and PEL, requiring they spend resources on controls, sampling, etc. to lower dust levels on low-risk exposure groups when those resources should be spent on higher risk exposure groups.

4. Availability of Service Providers and Accredited Laboratories

a) B Readers

MSHA would require all medical examinations to include a chest X-ray classified by a NIOSH-certified B Reader, in accordance with the *Guidelines for the Use of the International Labour Office International (ILO) Classification of Radiographs of Pneumoconioses*. In the proposal, MSHA preliminarily concludes that the number of B readers in the U.S. is adequate to classify chest X-rays conducted as part of the respirable crystalline silica rule. Furthermore, MSHA dismisses concerns about access to B Readers for remote mining operations by pointing to the capability for electronic submission of digital X-rays.

MSHA does not acknowledge, however, the fact that there are only a limited number of B Readers across the United States. According to the Center for Disease Control website, as of May 2023, there were only 189 physicians from inside the United States that have who have demonstrated competence in applying the ILO classification by successfully completing the NIOSH B Reader examination within the last 4 years.[22] MSHA contends the number of certifications will rise as demand grows with the promulgation of the new silica rule but provides no support for this contention. Regardless, the growth may not be in time to accommodate the new entries to the medical surveillance program.

b) NIOSH-Approved Spirometry Technicians

The proposed rule also requires that pulmonary function testing (including spirometry) be part of every medical examination and that the test must be administered by a spirometry technician with a current certificate from a NIOSH-approved Spirometry Training Sponsorship. AEMA has concerns about the availability of NIOSH-approved certified technicians, particularly in remote locations. Presumably, additional spirometry technicians will obtain the NIOSH

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[21] *See* OSHA ID142 Table B.1 available at: https://www.osha.gov/sites/default/files/methods/osha-id142.pdf.

[22] https://wwwn.cdc.gov/niosh-rhd/cwhsp/ReaderList.aspx?formid=USReaders&lastname=&state=&sortkey=state&format=table&btnSubmit_US=Submit.

certification over time, but increase may not be in time to meet the new and significant demand by the MNM sector per the rule's requirements.

c) NIOSH-Approved Facilities

MSHA requests comments on whether MNM operators should be required to use NIOSH-approved facilities for medical examinations. Such requirements are already in place for coal because NIOSH administers medical surveillance for coal miners. As mentioned above, it may be very difficult to even find the required NIOSH-approve spirometry technicians. Forcing all medical exams to be performed only in NIOSH-approved facilities place hardships on many MNM operators that are located far from existing NIOSH facilities. The list of NIOSH-approved facilities for medical examinations identifies only 151 facilities credentialed to do chest X-rays. These facilities exist only in 23 states. No such facilities have been identified by NIOSH in the remaining 27 states, including several states in which AEMA members have operations.

Even with the expansion of mobile laboratories, there will not be sufficient capacity within reasonable proximity of many remote MNM mine sites to support the mandatory use of NIOSH-approved facilities. For example, in one state with significant MNM mining operations there is only one NIOSH-approved facility for radiographs and the closest NIOSH-approved facility for spirometry is 582 miles (and two states) from the largest city in the state. The proposed rule would require current miners to travel, in many cases, hundreds of miles for their appointments, which will have a significant adverse impact on recruitment, retention, and productivity of affected mine workers. Mobile health units are not a viable option for the rate of new hires some companies are currently managing; fixed locations are the ideal option. It is likely that existing NIOSH-approved facilities will not be able to accommodate the high number of new MNM miners and keep up with new hire exams within the 30-day proposed window for initial exams. We recommend MNM mining companies continue to be allowed to use contracted physicians or other licensed health care professionals ("PLHCPs") that maintain current spirometry certificates from NIOSH-approved spirometry courses, even if these PLHCPs may not be NIOSH-approved facilities.

d) Availability of Sampling Technology and Lab Capacity

In the proposal, MSHA indicates it has preliminarily determined that technology is commercially available to conduct required sampling and analysis. Based on MSHA's assessment of how many samples will need to be analyzed, labs may not be able to handle the increase in sampling demand. MSHA's good faith conclusions that labs will be able to increase capacity is premised on its likely significant underestimation of the number of samples that will need to be analyzed. This sampling requires more than handing out a sampling pump for a full shift sample and then collecting it at the end of the day. If the results are above the action level and/or the PEL, they are worthless without observation of what occurred during the sampling. Therefore, all

sampling will need to be monitored for typical activity. Depending on the interpretation of who falls into the category of "is or may be reasonably expected to be exposed to respirable crystalline silica," there could be hundreds of samples needed to be taken for baseline sampling but the mines currently do not have the equipment or personnel to get this much sampling done within the required timeframe.

Regarding availability of sampling technology, the AEMA encourages MSHA to further clarify that any sampling technology that meets the characteristics for respirable-particle-size-selective samplers that conform to the ISO 7708:1995 standard is permissible. MSHA's proposal specifically mentions only cyclones and elutriators, perhaps implying that only those two types of samplers are suitable for use. As SKC Inc. explained to MSHA, other samplers meet the required characteristics including SKC's impactor-based parallel particle impactor sampler.[23]

5. Eight-Hour Average Shift Length

AEMA's primary concern with MSHA's proposed approach to shift length is the concentration for a sample gathered over an extended shift is calculated as if it were collected during an eight-hour period. The majority of AEMA's producing members utilize 9–12-hour shifts. Using an eight-hour shift to calculate the concentration based on 9–12-hours of sampling is not appropriate. For every hour over eight hours, the PEL is reduced by 6.25 $\mu g/m^3$ so a 10-hour shift translates to a PEL that is approximately 40 micrograms and an AL that is approximately 20 micrograms. MSHA has justified the lowering of the PEL on the basis that stopping the sampling after eight hours does not give a true reflection of the worker's exposure, but neither does the artificial construction of a sample that is deliberately enhanced and unrepresentative of an eight-hour period.[24] The most straightforward solution to appropriately account for shift length is to use the actual minutes or entire duration worked. This is the current construct for coal mines, as MSHA explains when discussing differences between the calculations for coal and MNM.[25] Additionally, this approach is more consistent with NIOSH's REL, which is 50 ug/m3, but calculated to a 10-hour shift.

If MSHA does not adopt an approach based on the entire duration worked, alternatively MSHA should use OSHA's standard of an 8-hour TWA since its preliminary risk analysis specifically relies on the risk models that OSHA used in support of its 2016 Silica Rule. The full-shift requirement is the way MSHA has always calculated it for MNM but that does not make it right for MNM or coal operators. If MSHA is unwilling to accept the 8-hour TWA as OSHA

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[23] *See* SKC's July 28, 2023, letter to MSHA available at: https://arlweb.msha.gov/REGS/Comments/2023-1219/AB36-COMM-67-1.pdf.

[24] 88 *Fed. Reg*. at 44903.

[25] *See* 88 *Fed. Reg.* at 44863.

did, then MSHA needs to consider the use of respirators as a supplemental control measure as did OSHA.

D. Vagueness of Key Terms and Action Criteria

1. Terms Needing Additional Clarification

a) "Reasonably Be Expected" Threshold for Baseline Sampling

The proposal requires operators to perform baseline sampling within 180 days after the rule becomes effective to assess the silica exposure of each miner who is or may "reasonably be expected" to be exposed to respirable crystalline silica. The "reasonably be expected" threshold needs to be quantified as even the general public would meet a "reasonably be expected" threshold unless a target level is identified.[26] As MSHA acknowledges in the proposal, quartz comprises 12% of the earth's crust and the overwhelming majority of naturally occurring crystalline silica is quartz.[27] Given the ubiquitous nature of crystalline silica, AEMA proposes that this threshold should be the same AL as the OSHA 2016 Silica Rule. Acceptable language would read: 60.12 (a) *Baseline sampling.* (1) The mine operator shall perform baseline sampling within the first 180 days after [date 120 days after publication of the final rule] to assess the full shift, 8-hour TWA exposure of each miner reasonably expected to be exposed to respirable crystalline silica at or above the AL.

b) "Typical Mining Activities" for Sampling Purposes

MSHA proposes to require mine operators to collect a respirable dust sample for the duration of a miner's regular full shift and during typical mining activities. MSHA does not need to consider "typical conditions" for sampling purposes. Rain, snow, and wind are present in a miner's regular full shift during typical mining activities and thus represent typical exposures. Dictating weather conditions for sampling is not a viable option as some mines operate in areas where rain, snow, and wind are commonplace and requiring sampling events to be taken in their absence is not feasible. Furthermore, the timeline for sampling is already aggressive and requiring operators to void samples because an afternoon rain, snow, or windstorm moves through is unrealistic.

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26 U.S. Environmental Protection Agency, Ambient Levels and Noncancer Health Effects of Inhaled Crystalline and Amorphous Silica: Health Issue Assessment, EPA/600/R-95/115, Nov. 1996.

27 88 *Fed. Reg.* at 44859.

2. Triggers for Receipt of Citation

Parts 70, 71, and 90 all define when noncompliance occurs for the operator sampling program. The proposed rule does not define if and when a citation would be issued if a sample indicates an overexposure, whether taken by MSHA or the mine operator. Part 72 also defines that MSHA can issue a citation for respirable dust based on a single sample. Will MSHA also use the result of a single shift sample to issue a citation for silica exposure? Baseline and periodic sampling all require multiple samples below the action level to ensure the levels are actually below the PEL; therefore, multiple samples above the PEL should be required to definitively determine levels are actually above the PEL. A sampling and citation flow chart similar to the one used for Part 62 should be developed to further define actions required for both operators and MSHA.[28] There are many scenarios that could create confusion. If, for instance, an operator has completed sampling an occupation and all samples are below the action level and MSHA then comes in and takes a sample that is over the PEL, is a citation warranted if all previous sampling was below the action level? Once a citation is issued, what is required to gain compliance and have the citation terminated? Once again Parts 70, 71, and 90 all define this scenario, but there is no similar guidance in the proposed rule.

After the final rule is complete, establishment of a joint silica working group would be an effective means for MSHA and mine operators to develop a guidance document with questions, concerns, and responses that would be made available to the mining community. This approach was a successful feature used by MSHA and mine operators for complying with the Respirable Coal Dust rule in 2014.

3. Application of Rule to Contractors

The proposed rule does not specifically address the use of contractors and their role and responsibilities in sampling and compliance. If a contract miner being sampled is a member of a crew made up primarily of production workers, the application of the rule may be straightforward. However, if the contractor is performing independent work on site, such as drilling, the independent work is not addressed in either the proposed rule or the preamble.

E. Implementation Issues

AEMA recognizes the importance of acting as expeditiously as possible to protect miners' health, but a new evaluation method requiring different equipment, more personnel, additional sampling, and different sampling methodologies cannot be completely and properly implemented

[28] The MSHA Health Handbook PH20-V-4 addresses part 62 on the noise Action Level (Dose) Results and enforcement with flow charts. The same approach for sampling and enforcement should be included in MSHA guidance documents to address the (CSR). Mine operators need clear guidance to ensure compliance and the action they must take to address non-compliance.

within the proposed timeframe of 120 days. AEMA strongly urges a longer phased-in implementation timeframe for the silica standard like OSHA's approach in the 2016 Silica Rule and MSHA's approaches in the 2001 MNM Diesel Particulate Matter ("DPM") Rule and the 2014 Coal Dust Rule.

When OSHA published its respirable silica standards, the agency allowed for an extended and phased-in two-year period for general compliance with all provisions except medical surveillance, which was based on exposure level. OSHA gave more time for industry to comply with the medical surveillance provision. MSHA's DPM rule for underground MNM mines also allowed for a phased approach to compliance by gradually reducing the final concentration limit over a period of several years. The DPM final rule was published on January 19, 2001.[29] The provision establishing the interim PEL did not become effective until 18 months after the publication of the final rule. The provision establishing an initial final PEL was effective five years after the publication of the final rule, and the effective date of the final reduced PEL was seven years and four months after the publication of the final rule. Further, the rule gave mine operators the opportunity to file an application with the District Manager for a special extension when an operator required additional time to come into compliance with the final DPM limit due to technological or economic restraints. Even MSHA's respirable coal mine dust rule allowed for a phased approach and an 18-month implementation period for a revised monitoring and sampling program, with the reduced standard effective 24 months after the effective date.

The 120 days is insufficient for a number of reasons, many of which are outside the control of mine operators, as noted below:

- The window to try to make effective engineering control changes in 120 days is too short;
- It is not known whether the appropriate implementation and guidance documents will be available;
- There are potential constraints on rental equipment, medical professionals, imaging technology, and pulmonary function testing technology, especially at geographically remote locations;
- There may be significant difficulty in conducting baseline sampling within the first 180 days after the rule takes effect, especially with the need to sample everyone that "is or may be reasonably expected to be exposed to respirable crystalline silica," as there could be hundreds of samples required to be taken for baseline sampling but the mines currently do not have the equipment or personnel to get this much sampling done that quickly;
- Post-pandemic supply chain issues are continuing and, in some cases, escalating. Operators are finding long lead times in procuring critical

[29] 66 *Fed. Reg.* 5706 (Jan. 19, 2001).

infrastructure items including those that are essential for mandatory health and safety requirements.

III. Comments to MSHA's Requests for Comments Not Previously Addressed in the General Comments Section

A. Request No. 6 re: Costs and Benefits

AEMA disagrees that MSHA's cost projection models are accurate. Various mines of different sizes and complexities will have drastically different cost models. The model predicts fixed costs based on gross proceeds and not net; revenue vs. profit is a completely different analysis. These costs will be different for every mine producing every commodity.

B. Request No. 7 re: Regulatory Alternatives

It is AEMA's position that Regulatory Alternative #1, which provides changes to the sampling and evaluation requirements, is a more appropriate regulatory approach than that which is provided for in the proposed rule. AEMA agrees with the 50 $\mu g/m^3$ PEL, which would remain unchanged in Alternative #1. If baseline sampling is to be required, AEMA supports Regulatory Alternative #1's requirement for baseline sampling for those miners whose exposure to respirable crystalline silica is at or above the proposed AL of 25 $\mu g/m^3$ in lieu of the requirement for baseline sampling of "each miner who is or may reasonable be expected to be exposed to respirable crystalline silica" of any level. As well, the periodic sampling requirement of twice per year for miners between the AL and the PEL proposed in Regulatory Alternative #1 is more in line with established industrial hygiene guidelines and will allow the mine operator to allocate industrial hygiene resources to those areas where they are better used, including areas where there is higher risk of exposure at or above the PEL. Finally, Regulatory Alternative #1 requires an annual evaluation of mine processes or conditions that would reasonably be expected to result in new or increased exposures instead of the current semi-annual review proposed in the rule. Given that mining processes and conditions are relatively stable and non-changing, the requirement for an annual evaluation provides an equal amount of protection to miners while lowering the costs of compliance for mine operators.

C. Request No. 9 re: Unified Regulatory and Enforcement Framework

AEMA agrees that separate standards should be developed for coal and MNM. The basis of the proposed rule and the studies referenced regarding silica exposure are coal focused. Testimony at the public hearings held by MSHA was heavily weighted toward coal. As well, the prior Administrator for MNM has gone on public record to assert that these should be two distinctly different rulemakings. By having two separate standards, MSHA can incorporate the existing sampling and medical surveillance requirements for respirable coal dust to protect against

respirable crystalline silica at coal mines, thereby avoiding the requirement for coal mine operators to develop and implement different protocol. MSHA is currently proposing that miners' exposures are measured using personal breathing-zone air samples for MNM operations and occupational environmental samples collected in accordance with §§ 70.201(c), 71.201(b), or 90.201(b) for coal operations. This is further support for two separate standards.

With regard to MNM operators, this is an instance where the frequency of sampling and evaluation as set forth in Regulatory Alternative #1 would be more appropriate based on risk for MNM miners.

D. Request No. 11 re: Proposed Action Level

AEMA does not believe that an AL is appropriate or necessary in the regulation of exposure to respirable crystalline silica. MSHA has never used an AL in any other air contaminant exposure rule, and there is no demonstrated need to use one here. The use of an AL is a significant departure from previous MSHA rulemakings, and its use here would trigger action be taken based on a single sampling result at or above the AL. While OSHA has an AL in its silica rule, it requires 30 days or more of an exposure over the AL before initiation of additional monitoring. Eliminating the requirement for periodic sampling based on exposures at or above the AL and at or below the PEL will allow mine operators to allocate resources to those areas that need it.

As set forth in the proposed rule, the current AL formula results in an action level of 16.7 $\mu g/m^3$ on a 12-hour shift, given that the 25 $\mu g/m^3$ is based on an 8-hour TWA. This AL will lead to many sampling results exceeding the 25 $\mu g/m^3$ action level simply because of the formula not calculating properly for longer shifts. As noted elsewhere in AEMA's comments, NIOSH uses 50 $\mu g/m^3$ with a 10-hour TWA, and if an AL is mandated, it should be calculated based on a 10-hour TWA and should be set at 80% of the PEL, or 40 $\mu g/m^3$.

Alternatively, if MSHA determines that an AL is necessary, AEMA supports the use of the AL to trigger the periodic sampling requirement of two times per year set forth in Regulatory Alternative #1.

E. Request No. 12 re: Use of Objective Data to Support Baseline Sampling

The proposed rule lists sources for objective data that can supplement baseline sampling and be used to comply with the exposure monitoring provision. AEMA supports including these alternative methods to achieve compliance with baseline and other types of sampling. Many members implement existing monitoring programs using this valuable data which has helped the industry understand where overexposures are and where PPE may be necessary. Currently, as the proposed rule reads, only internal monitoring conducted within the last 12 months meets the definition of objective data. AEMA supports the use of past monitoring results beyond 12 months

conducted by operators and also supports the use of objective data from industry-wide surveys to assist operators in complying with the baseline sampling requirements.

F. Request No. 14 re: Requirements Triggered by Exposure at or Above the Proposed Action Level

For many mine operators, the proposed AL, in combination with the TWA formula, will almost always result in meeting the AL of 25µg/m^3 and trigger the periodic sampling requirements of the proposed rule. A sampling result at or above the AL requires the mine operator to sample the miner again within three months of that sampling and continue to sample within three months of the previous sampling until two consecutive samplings indicate that miner exposures are below the AL. AEMA's position is that there should be no AL. Action levels are typically internal controls within a mining operation's safety and health plan which trigger internal actions to reduce or mitigate exposures. Having this as a portion of the compliance piece should not be the standard, as stated in AEMA's comment to Request No. 11, above.

AEMA does not believe an AL of 25µg/m^3 provides any measure of safety. As proposed, sampling results at or above the AL will trigger significant periodic sampling obligations. If this component of the rule is maintained, it should be modified to permit the mine operator to cease periodic sampling after one sample is under the AL. If MSHA intends to rely on a single sample result over the AL to trigger action, it should also rely on a single sample result under the AL to cease the periodic sampling. Similarly, if an AL must exist and be part of this rulemaking, it would make more sense to set the AL closer to the PEL.

G. Requests No. 20 and No. 22 re: Baseline Sampling

AEMA's primary concern is related to the requirement that "each miner" would require baseline sampling if a potential exposure is possible. Some of the states in which AEMA's members operate (*e.g.*, Nevada) have a higher-than-average ambient silica, due to geography. AEMA believes that MSHA should consider significant exposure groups, job tasks, or some type of other criteria to trigger baseline sampling or adopt the approach stated in Regulatory Alternative #1, which requires baseline sampling for miners who may be exposed to respirable crystalline silica at or above the proposed AL.

Likewise, mine operators have many individuals employed at mining operations in administrative or support roles that do not have the same potential for exposure that miners doing daily mining related tasks would be exposed to. MSHA's inclusion of a Table 1 chart that identifies tasks and mitigation methods would be an asset to mine operations.

H. Request No. 21 re: Semi-annual Evaluation Requirements

A requirement for operators to qualitatively evaluate any changes in production, processes, engineering controls, personnel, administrative controls, or other factors every six months is excessive given the lack of frequency with which these types of changes occur at mining operations and the typically slower pace at which they occur. Moreover, when a mine operator implements an engineering, administrative, or process change, risk assessments are typically performed in conjunction with the planning and implementation of such change. Having to evaluate for changes of this nature twice a year places an undue burden on operators, while providing no additional health benefit to miners because miners working with an increased exposure potential will already be monitored by other sections of this rulemaking. AEMA supports the adoption of Regulatory Alternative #1, which includes the requirement for an annual evaluation.

I. Requests No. 24 and No. 25 re: Periodic Sampling Triggered by the Action Level

AEMA strongly believes that MSHA should not implement an AL, however, MSHA should urge mine operators to implement internal action level actions. Sampling does not mitigate the exposure; it simply provides a data marker for tracking over time. This approach makes sense when an individual is at or near the PEL exposure but does not make sense at an "action level." Companies should be at liberty to develop their own internal action level based on mine exposures, geology, processing, and controls. In the event the final rule contains the requirement for periodic sampling at or above the AL, we believe that six-month follow-up sampling is appropriate, as proposed in Regulatory Alternative #1. Further, a mine operator should be permitted to discontinue periodic sampling after one sample demonstrates the miner's exposure is below the AL.

Moreover, sampling each miner whose exposure is at or above the AL but at or below the PEL every three months is excessive and will cause undue burden on the mine operator. For example, Nevada Gold Mines, an AEMA member, has 650 job classifications that have been sampled in the past three years. The job classifications are sampled on a risk basis. Higher risks are sampled more often than lower risks. Changing this to mandatory sampling with two samples at a time every quarter would increase the number of samples from 1,900 to 5,200 samples per year. This increase is sampling numbers would be significantly higher given the proposed rule's requirement that individual miners be periodically sampled as opposed to job classifications. The OSHA rule requires one sample per job classification every six months, reducing the number of required samples down to two per year per job classification instead of eight as MSHA's rule would do.

J. Request No. 28 re: Use of Representative Sampling

AEMA agrees with the use of representative sampling; however, not every task at a mine operation will have another employee assigned who can be sampled at the same time, in the same area, and performing the same task under the same conditions. This scenario is unlikely to happen except perhaps for haul truck operators. Consequently, MSHA's proposed qualifications to use representative sampling are too stringent. It is unlikely that most mine operators will have multiple employees doing the same task in the same work area during the same shift. Representative sampling should be accepted using miners performing the same task even if the work is done on a separate shift or in a different location in the mine (*e.g.*, drillers working in different headings on different shifts should be considered appropriate for representative sampling). This approach will allow for a more comprehensive picture of potential exposure levels rather than a single snapshot in time of one miner's exposure.

K. Request No. 32 re: Mandatory Medical Surveillance for MNM Miners

It is AEMA's position that all medical surveillance should be voluntary for MNM miners. Medical surveillance should be a personal decision made by the miner, not by MSHA or the mine operator. If the proposed requirement of mandatory medical surveillance for new miners who have not previously worked in the industry is in the final rule, mine operators should be permitted to rely on a statement from the new hire as to any prior experience to determine whether mandatory medical surveillance is necessary. As well, all subsequent medical examinations should be voluntary for new miners.

L. Request No. 33 re: Medical Surveillance Requirements

AEMA addresses the following sections of the request:

1) Use of NIOSH-Approved Facilities – The proposed rule requires medical surveillance be conducted by a certified specialist in pulmonary disease or a board-certified occupational physician, and x-rays be taken and reviewed by a NIOSH-certified B reader. Requiring the facilities to be NIOSH-approved is excessive and unnecessary.

2) Need to Submit Plans to NIOSH – Requiring the submission of medical surveillance plans to NIOSH for approval is redundant and unnecessary. The rule sets forth the requirements for medical surveillance, and MSHA inspectors will be reviewing the mine operator's compliance with the rule. Having to submit plans to NIOSH would be redundant and cause an unnecessary burden on the mine operators and on NIOSH. NIOSH is not a regulatory agency and should not oversee mine operator's medical surveillance plans.

M. Request No. 35 re: Communication of Test Results

Test results should be communicated to the physician, the miner, and the mine operator. Where a diagnosis of a silica-related disease is confirmed, the mine operator will be required under 30 C.F.R. Part 50 to report the diagnosis as an occupational illness. The failure to communicate a confirmed diagnosis to the mine operator may inadvertently adversely impact the miner's ability to receive compensation under the relevant workers' compensation program.

N. Request No. 36 re: Medical Removal Option

Upon diagnosis of a silica-related disease and determination that it is an occupational illness, the miner should have the option to request medical removal under a program substantially similar to 30 C.F.R. Part 90.

O. Request No. 39 re: ASTM F3387-19 Elements of Respiratory Protection Requirements

As proposed, it is unclear whether MSHA will require a written respirator program under 30 C.F.R. Part 56/57, Subpart D. If MSHA opts to require certain minimally acceptable respiratory protection program elements of ASTM F3387-19, MSHA needs to clarify in the Final Rule whether a specific written respiratory protection program is required and by which standards.

P. Request No. 40 re: Recordkeeping

AEMA believes that the proposed recordkeeping requirements are appropriate and in accordance with MSHA's requirements for recordkeeping of other health-related records. AEMA seeks clarification in the Final Rule regarding the requirements of proposed § 60.16(a)(3) that records of corrective action "must be stored with the records of related sampling under § 60.12(h)." It is unclear whether MSHA will require mine operators to specifically identify which corrective actions were taken in response to a sampling result. The rule requires immediate corrective action be taken to lower the level of silica, and we read this to require operators show the specific corrective actions for each overexposure. Further clarification is requested in the final rule.

Q. Request No. 41 re: Training Requirements

Training on health effects is already included in Part 48 training requirements. As well, any employee who will be using a respirator is trained in the use, care, and maintenance of the respirator and is fit tested prior to working under a respirator.

R. Request No. 43 re: Approach Similar to OSHA's Table 1

MSHA should consider the implementation of a Table 1 applicable to the mining industry, along the lines of OSHA's Table 1. MSHA should have sufficient data from the industry as a whole to develop a Table 1 appropriate for use with MSHA's rule. Implementation of a Table 1 is protective of miners and allows mine operators to ensure all engineering and work practice control methods are in use based on sampling done that demonstrates these controls work and will keep miners' exposure below the PEL.

IV. CONCLUSION

AEMA appreciates this opportunity to comment on the proposed rule. If any questions or concerns are raised by these comments, please do not hesitate to contact me.

Sincerely,

Mark Compton
Executive Director