
ESSENTIAL
MINERALS
ASSOCIATION

September 11, 2023

Ms. Aromie Noe
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–2023–0001, Lowering Miners’ Exposure to Respirable Crystalline Silica and Improving Respiratory Protection, Comments of the Essential Minerals Association

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

Dear Ms. Noe:

Please find below comments from the Essential Minerals Association (EMA) on MSHA’s Proposed Rule on Lowering Miners’ Exposure to Respirable Crystalline Silica and Improving Respiratory Protection, published at 88 FR 44852 et seq. (July 13, 2023).

EMA is the representative voice of nearly 40 major companies whose minerals are vital to the manufacturing processes for virtually all products we use each day, and nearly as many members who provide equipment and services to the industry. These minerals are used in the food supply chain (agricultural feed, baking products, and water purification needs), batteries, protective masks, dialysis machines, semiconductors, solar panels, glass, ceramics, paper, plastics, rubber, detergents, insulation, pharmaceuticals, cosmetics, paints, filtration, and so much more. Every industry relies on these essential minerals to generate end products, and our members enable a robust, stable supply chain crucial to the continued growth and success of our economy as well as our national security. The safety and health of employees is paramount to EMA’s members, and we welcome the opportunity to submit these comments on their behalf.

EMA supports the crux of MSHA’s proposed rule: a permissible exposure limit (PEL) of respirable crystalline silica at 50 micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$). EMA agrees that this measure is long overdue. Since 1996, the agency has started and restarted its rulemaking efforts for silica regulations at least six times across four prior administrations representing both political parties—starting with the Advisory Committee on the Elimination of Pneumoconiosis Among Coal Miners in 1996, and again in 1998, 2003, 2010, 2014, and 2019.

EMA agrees with the proposal to halve MSHA’s current PEL and harmonize it with the Occupational Safety and Health Administration’s (OSHA) [2016 final rule establishing a PEL of 50 \$\mu\text{g}/\text{m}^3\$ for general industry, construction and maritime](#). As the Department of Labor Office of

Inspector General (OIG) [noted following a 2020 audit of MSHA](#), in 2016 “OSHA indicated that after evaluating the best available evidence it was uncertain if there was any limit that would result in zero harm to workers,” but that “both OSHA and NIOSH warned that 50 µg/m³ is the lowest feasible limit.”

EMA questions, however, the necessity and prudence of applying an Action Limit of 25 µg/m³ equally in both the coal and metal/nonmetal sectors of the mining industry. It has been exhaustively documented and universally accepted that pneumoconiosis and progressive massive fibrosis—the worst form of the disease—have been on the increase, especially through the Central Appalachia region and among younger miners with relatively short periods of exposure and accelerated latency periods. It is equally demonstrable, however, that the metal/nonmetal sector is not similarly afflicted with silicosis or pneumoconiosis. Indeed, witness after witness at MSHA’s three public hearings either reinforced the dire trend in pneumoconiosis and progressive massive fibrosis among coal miners, or contended that while silica exposure is not nonexistent in metal/nonmetal mines, the incidence of silica-related illnesses is dramatically less in the latter sector and the risk has proven to be manageable.

Regarding silicosis, at the August 30, 2023 Small Business Labor Safety Roundtable on MSHA’s Proposed Respirable Crystalline Silica Rule, the U.S. Small Business Administration Office of Advocacy heard testimony that since January 2013, mine operators reported (via MSHA Form 7000-1) a total of 1,160 silicosis diagnoses in coal miners—versus just 20 in the metal/nonmetal sector. Regarding pneumoconiosis, in 2020 the Centers for Disease Control & Prevention (CDC) published an article in its *Morbidity and Mortality Weekly Report* titled [“Trends in Pneumoconiosis Deaths—United States, 1999–2018.”](#) In it, the CDC reported that the top three industries associated with pneumoconiosis deaths among persons aged ≥15 years were coal mining, construction, and nonpaid workers. The top three occupations were coal mining machine operators; laborers and freight, stock, and material movers; and homemakers. The only mention of non-coal mining appears under the category of Unspecified Pneumoconiosis, with 34 deaths in metal ore mining, versus 508 in coal mining.

It is also important to put these figures into perspective. According to [MSHA’s data](#), in 2022 the ratio of metal/nonmetal mines to coal mines was nearly twelve to one. Because the majority of metal/nonmetal mines are small operations, the ratio of metal/nonmetal miners to coal miners is lower, yet metal/nonmetal miners still outnumber their coal counterparts almost four to one (inclusive of operator and contractor employees).

Again, OSHA and NIOSH determined that 50 µg/m³ is the “lowest feasible limit,” and a much lower incidence of silica-induced illnesses in the metal/nonmetal sector reflects that miner exposure is less than in the coal sector, which confirms that MSHA has been successful in controlling for silica dust within our sector. Accordingly, EMA respectfully submits that the compliance measures, and associated costs in terms of time and resources, required by the Action Level for the metal/nonmetal sector are vastly disproportionate to the actual real-world incidence of the diseases that the proposed rule is intended to prevent. We therefore urge MSHA to consider applying the recommended new PEL of 50 µg/m³ to coal and metal/nonmetal mines alike—but only apply the Action Level of 25 µg/m³ to coal mines.

Instead, MSHA could continue the approach it has employed for at least the past six years: scrutinize each exceedance above the PEL (at the new 50 µg/m³ level, once a final rule goes into

effect); offer expert compliance assistance through Mine Safety & Health Enforcement, Technical Support, and Educational Field & Small Mine Services; and ultimately hold the operator accountable if they do not comply with the PEL in a timely manner, up to and including section or mine closure if warranted. Provided that MSHA establishes the proposed lower PEL, this approach would enhance worker protection and not result in a diminution of safety to the miners in such mines.

In the event that MSHA does publish a final rule that treats coal and metal/nonmetal equally in terms of an Action Level, EMA offers the following comments:

Mandatory Citations Based on First Operator Sample

At the [August 21, 2023 Public Hearing on Silica NPRM held in Denver, CO](#), MSHA's opening remarks included the following (pp. 8-9 of transcript):

“Further, if an operator's sample is above the proposed PEL, the mine operator would be required to take immediate corrective actions to reduce miners' exposure to below the PEL, make the record of the overexposure which would have to be posted and made available to miners' representatives and re-sampled to ensure that the corrective action is effective and that miners' exposures are, in fact, reduced to at or below the PEL. And if the miners' exposures exceed the PEL, MSHA would issue a citation. MSHA has received comment on the recordkeeping requirement.

“Some commenters recommend that exposure records be kept for longer than two years. At this point in the rulemaking process, MSHA is considering to require that when an operator's sample is over the PEL, that operator send the record of that overexposure to the MSHA district manager. This exposure data will allow MSHA to immediately take appropriate enforcement action and provide any necessary compliance assistance to operators.”

As we read the proposed rule, the requirement to take immediate corrective actions, and the requirement to make a record of the overexposure and post it, are fully consistent with its text. Nowhere, however, does the text provide that an operator must notify the District Manager of an exceedance and that “MSHA would issue a citation based on an operator sample.”

The first paragraph could be read generously to require a citation only if a second or third sample reveals that immediate corrective actions failed to reduce miners' exposure to below the PEL. The second paragraph, on the other hand, suggests that an operator's first sample would invite a citation, stating unambiguously that “when an operator's sample is over the PEL, that operator [shall] send the record of that overexposure to the MSHA district manager. This exposure data will allow MSHA to immediately take appropriate enforcement action.” “Appropriate enforcement action,” according to the first paragraph, means an automatic citation.

EMA's view—which is consistent with MSHA's current enforcement approach in the metal/nonmetal sector—is that a citation should only follow a subsequent (second or third) sample that shows an exceedance. EMA submits that immediate enforcement action before providing “any necessary compliance assistance to operators” puts the cart before the horse. Will it no longer be MSHA's practice to assist operators with achieving compliance before peremptorily issuing a citation when the operator is demonstrating a good-faith effort to comply?

This policy also would represent a departure from current practice by relying on the operator's sample. For enforcement of its Final Rule to Lower Miners' Exposure to Respirable Coal Mine Dust, [MSHA explains](#) that "Compliance is determined based on a single, full-shift sample *obtained by MSHA*. A citation for noncompliance with the respirable dust standards will be issued when *a single MSHA sample* shows excessive levels of dust, rather than an average of samples." [emphasis added] This is consistent with [Section III of the Final Dust Rule](#), which states: "The single sample provision in this final rule is changed from the proposal and *only applies to MSHA inspector samples*. MSHA does not anticipate that this final provision will, over the long term, increase the number of operator citations." [emphasis added]

Prudently, the final Dust Rule also provides for measurement uncertainty: "The Secretary must show to a certain level of confidence that there has been an overexposure before issuing a citation. The final rule is consistent with generally accepted industrial hygiene principles for health standards that include an error factor in determining noncompliance to account for measurement uncertainty. The [excessive concentration values] were calculated to ensure that, if an ECV is met or exceeded, MSHA can determine noncompliance with the applicable dust standard with at least 95 percent confidence." It continues, "Each ECV in final Table 70-1 was calculated to ensure that citations would be issued only when a sample measurement from a single shift demonstrates, with at least 95 percent confidence, that the applicable dust standard has been exceeded." How can the Secretary "with at least 95 percent confidence" show that there has been an overexposure to the PEL when the sample was not collected by the Secretary's Authorized Representative?

We acknowledge that in the second paragraph of MSHA's Denver opening statement, the hearing chair said that the agency is "considering" this change. But this would represent a substantive addition to the proposed rule, made public 39 days after publication and 21 days before the comment period ends, that deviates from current MSHA practice in metal/nonmetal mines and the Final Dust Rule effective in coal mines, and would have a profound impact on the metal/nonmetal sector that EMA represents.

Objective Data

EMA appreciates that MSHA is proposing to allow mine operators to use objective data instead of a second baseline sample, and to forgo periodic sampling if the operator has objective data demonstrating that miner exposure to respirable crystalline silica will remain below 25 µg/m³ as an 8-hour time-weighted average under any foreseeable conditions (which OSHA also allowed in its final rule: See 29 CFR 1910.1053(a)(2)). The proposed rule's definition of objective data is: "...information such as air monitoring data from industry-wide surveys or calculations based on the composition of a substance that indicates the level of miner exposure to respirable crystalline silica associated with a particular product or material or a specific process, task, or activity. Such data must reflect mining conditions closely resembling, or with a higher exposure potential than, the processes, types of material, control methods, work practices, and environmental conditions in the operator's current operations. Some examples of information that would qualify as objective data under this definition include historical MSHA sampling data, NIOSH Health Hazard Evaluations and other published scientific reports, and industry-wide surveys compiled from mines with similar mining conditions, geological composition, work processes, miner tasks, and the same commodities."

We further appreciate that the definition provides examples of the type of information that might qualify as objective data. We believe, however, that the industry and MSHA alike would benefit from further detail on the objective data process. OSHA's silica rule, for example, requires that the employer must "have objective data demonstrating that employee exposure to respirable crystalline silica will remain below 25 mg/m³ as an 8-hour TWA under any foreseeable conditions, and must provide this data to the Assistant Secretary upon request," and that "any objective data relied upon must be maintained and made available in accordance with the [rule's] recordkeeping requirements." Further, OSHA did "not find that an independent audit of employers' objective data is necessary to assure proper compliance."

MSHA's proposed rule states, "The mine operator would have the burden of showing that the objective data characterizes miner exposures to respirable crystalline silica with sufficient accuracy." The proposed rule further states, "Proposed paragraph (a)(2) would allow mine operators to use objective data to confirm the baseline sample result. Under this proposal, objective data must demonstrate that respirable crystalline silica would not be released in airborne concentrations at or above the action level under any expected conditions."

Does MSHA intend to employ an approach similar to OSHA's, or will the operator be required in each instance to provide objective data to MSHA "showing that the objective data characterizes miner exposures to respirable crystalline silica with sufficient accuracy"? Nowhere in the proposed rule does MSHA appear to explicitly state who would review objective data and determine its validity and acceptability. Elsewhere in the text, there are several references to District Managers being responsible for other aspects of the proposed rule. Would District Managers be responsible for determining the validity of objective data? This would be consistent with other MSHA protocols, such as District Manager review of underground ventilation plans. On that note, according to [MSHA Handbook Number PH20-V-1: Mine Ventilation Plan Review Procedures](#), "Only the District Manager or his or her designee" can approve ventilation plans. Would a District Manager be authorized to delegate objective silica data determinations to a subordinate? If the responsibility would not lie with the District Managers, who would make such determinations? Would Mine Safety & Health Enforcement's Health Division be responsible?

EMA recognizes that MSHA's fifteen District Managers and their subordinate teams have extensive general mining experience. Yet it is reasonable to wonder whether every District has the level of certified industrial hygiene expertise to make such determinations. Mine Safety & Health Enforcement's Health Division, on the other hand, specializes in industrial hygiene and is recognized for its in-house expertise. The Health Division is small, however, and easily could be overwhelmed if required to review all data submissions. To clarify the objective data provision and its execution, EMA suggests that in a final rule, MSHA provide greater detail on the mechanics of the intended process, and ensure that the agency has the resources and relevant expertise to ensure timely decisions on the validity of data submitted by mine operators.

Table 1

EMA supports adopting the concept of Table 1 in OSHA's rule to the mining industry as one means of complying with the PEL. An MSHA Table 1 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 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.

EMA encourages NIOSH to work with MSHA and its stakeholders to identify equipment, tasks, and work practices appropriate to include in a comparable Table 1 for the mining sector. Possibilities for a Table 1 could include processes with consistent/predictable dust generation characteristics, such as mobile equipment cabs, control rooms with proper ventilation and seals on doors and windows, utility vehicles, handheld power tools such as jackhammers, and tasks performed in potentially high exposure areas, such as crushing or bagging.

EMA submits that many engineering and administrative controls or work practices can be gleaned from the updated [*Dust Control Handbook for Industrial Minerals Mining and Processing, Second Edition*](#), NIOSH Mining Program Report of Investigation RI 9701. The *Dust Control Handbook* is an excellent resource and could reduce the amount of research necessary to create a usable Table 1.

Sorptive Minerals

EMA is disappointed that MSHA elected not to mirror OSHA's exception for exposures that result from the processing of sorptive clays (See 29 CFR 1910.1053(a)(1)(iii)). In the proposed rule, MSHA acknowledges that silica exists in crystalline and amorphous states, and that "silica in the crystalline state is the focus of" its rulemaking, yet the proposed rule does not contemplate surface characteristics of crystalline silica and how they relate to toxicology. Silica in sorptive clays exists as either amorphous silica or as geologically ancient, occluded quartz, neither of which poses the health risk identified in MSHA's risk assessment.

The Mine Act states, "In addition to the attainment of the highest degree of health and safety protection for the miner, other considerations shall be the latest available scientific data in the field..." (Sec. 101. (a)(6)(a)). We urge MSHA to evaluate and consider, in service of its statutory mandate, the medical studies that informed OSHA's rulemaking, and the more recent studies ("the latest available scientific data") that in retrospect validated OSHA's decision. EMA supports the Sorptive Mineral Institute's comments as presented during the August 21, 2023 Public Hearing on Silica NPRM held in Denver, urging MSHA to exempt sorptive minerals from a final rule. Doing so would not result in a diminution of safety to the miners in such mines, nor would it unduly tax MSHA's resources, as OSHA concluded that this "very small" sector "can be readily segregated from other industry sectors covered by [its] rule."

Use of Respirators

Universal industrial hygiene practice identifies five major categories in the hierarchy of control measures: elimination, substitution, engineering controls, administrative controls, and personal protective equipment (PPE). The proposed silica rule expressly disallows use of respiratory protection to comply with the standard except in limited circumstances, such as during the installation of engineering controls, and proposes to incorporate by reference ASTM F3387-19 for respiratory protection program requirements. It is entirely reasonable to require operators to

deploy engineering controls and administrative controls to the extent technologically and economically feasible—but to disregard critical control measures such as respiratory protection abridges the hierarchy of controls long recognized by safety and health professionals.

In [comments](#) it submitted to the proposed rule on August 9, 2023, the American Industrial Hygiene Association argues: “AIHA concurs that feasible engineering and administrative controls be used to keep miners’ exposures to respirable crystalline silica below the proposed PEL . . . The required use of respirators is the last line of defense against workplace respirable crystalline silica exposures . . . Respirators should only be used as a control method when data from baseline and periodic breathing zone air samples show that the coal mining or [metal/nonmetal] operator cannot keep exposures below [a PEL or AL] using feasible engineering or administrative controls . . . Mine operators should have the flexibility to choose the ASTM F3387–19 elements that are appropriate for their mine-specific hazards because the need for different types of respirators (e.g., half face versus full face respirators) may vary due to the variability of mining processes, work activities, airborne silica hazards, and commodities mined.” The last line of defense, yes, but an effective and necessary one where the other four major categories in the hierarchy of control measures cannot achieve compliance.

In its [2019 Request for Information for Respirable Silica \(Quartz\)](#), the agency admits, “MSHA is aware that there may be conditions where existing engineering or environmental controls may not be adequate to continuously protect miners’ health in areas where there are high levels of quartz dust.” At the same time, MSHA asserts that it lacks the authority to accept personal protective equipment as a means of compliance. EMA supports OSHA’s acceptance of the hierarchy of controls approach and maintains that MSHA has parallel statutory authority in the metal/nonmetal industry sector under 30 CFR Parts 56/57, to allow the use of respirators in the metal/nonmetal sector after exhaustively implementing technically and economically feasible engineering and administrative controls, which if done properly would not result in a diminution of safety to the miners in such mines.

There is precedent for exercising this authority: the [2006 Final Rule on Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners](#). 30 CFR § 57.5060(d) Limit on exposure to diesel particulate matter states, “The mine operator must install, use, and maintain feasible engineering and administrative controls to reduce a miner's exposures to or below the applicable DPM PEL established in this section. When controls do not reduce a miner's DPM exposure to the PEL, controls are infeasible, or controls do not produce significant reductions in DPM exposures, controls must be used to reduce the miner's exposure to as low a level as feasible and must be supplemented with respiratory protection in accordance with § 57.5005(a), (b), and paragraphs (d)(1) through (d)(8) of this section.” In the accompanying [Metal and Nonmetal Diesel Particulate Matter \(DPM\) Standard Compliance Guide Q&As](#), the agency clearly states, “Respiratory protection for compliance would be permitted only after feasible engineering and administrative controls have been implemented.”

EMA also notes that the proposed rule only allows for 100 series filters: “When air-purifying respirators (elastomeric respirators, FFRs, and PAPRs) are used, under proposed paragraph (c)(1), the mine operator would be required to select only high-efficiency NIOSH-certified particulate protection (i.e., 100 series or HE filters) for respirable crystalline silica protection.” For many years, surface metal/nonmetal mines have effectively relied on NIOSH’s [Respirator Recommendations for a 50 µg/m³ PEL \(APF = 10\)](#): “Any particulate respirator equipped with an

N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.” EMA suggests that MSHA continue to allow all filters on this list which, according to NIOSH, would not result in a diminution of safety to the miners.

Continuing to allow a range of filters also would hedge against the type of supply chain disruptions that can result from pandemics, labor strikes at U.S. ports, foreign trade disputes, etc. MSHA could incorporate NIOSH’s recommendations by reference, just as the agency did with ASTM F3387–19 Standard Practice for Respiratory Protection, into the proposed rule. Short of that, we urge MSHA at least to continue allowing N99, R99, and P99 filters which, according to NIOSH, are only 0.97 percent less efficient than N100, R100, and P100 filters ([42 CFR § 84.170 Air-purifying particulate respirators](#)).

Duration of Shift

The proposed rule embraces full-shift exposure calculated as an 8-hour time-weighted average. EMA notes, however, that metal/nonmetal miners often work longer than an 8-hour shift, which has the effect of lowering the PEL. One EMA member company, for example, has employees who are scheduled for four twelve-hour shifts. It is important to note that for every hour a miner works beyond 8 hours, the PEL is effectively reduced by $6.25 \mu\text{g}/\text{m}^3$. In 1974, NIOSH evaluated respirable crystalline silica as a workplace hazard and issued criteria for a recommended standard (29 U.S.C. 669, 671; Document ID 0388). Specifically, NIOSH recommended that exposure to silica be controlled so that no worker is exposed to a time-weighted average of greater than $50 \text{ mg}/\text{m}^3$ as determined by a full-shift sample for up to a 10-hour workday over a 40-hour workweek. We suggest that MSHA reflect in a final rule the effect that shifts longer than 8 hours has on the PEL.

Effective Date & Compliance Timeline

EMA believes that the proposal for a final rule to become effective 120 days after its publication is too abbreviated. In its final silica rule, OSHA allowed 90 days but for practical considerations delayed enforcement in the construction industry until approximately 16 months after the effective date. For general industry and maritime, OSHA delayed enforcement until approximately 24 months after the effective date. EMA recommends at least 15 months, to allow for sufficient time to implement, and for operators to absorb the cost across one budget cycle (i.e., CAPEX spending).

Regarding cost, during its public hearings MSHA explicitly requested data on cost of compliance. One EMA member mine’s current program for characterizing potential exposures includes quality of ore body; location; duration of exposure; engineering control review; maintenance on engineering controls; and review of any new additions to the process that could change the environmental conditions. The mine regularly performs sampling of bore miners; longwall operators; maintenance workers; electricians; construction, utility, and production operators; processing operators; and crusher operators. The mine reviews its exposure control plans on a quarterly basis. During this century, the mine has had no cases of silicosis or any respiratory disease related to respirable crystalline silica exposure.

The mine currently has 446 employees and estimates that 400 of them would require baseline

sampling under the proposed rule. The mine conservatively estimates that this would equate to 1,200 individual samples. Each sample would incur \$102 in lab fees for standard turnaround time (another EMA member currently pays \$139 in fees), approximately \$10 for shipping, and \$5.50 per cassette. One sampling train would cost approximately \$1,000, plus about \$100 per train per year for wear and tear. A calibrator costs approximately \$2,000, plus annual calibration cost of about \$300. The mine anticipates labor costs to equal 80% of one industrial hygienist specialist's compensation, which Salary.com reported was on average \$94,258 as of July 25, 2023 (not including the cost of benefits).

The mine previously characterized potential exposures for all miners who may be exposed to respirable silica in excess of the PEL using objective (sampling results) and subjective methods. The number of miners who have not been previously sampled but would be sampled under the proposed rule (baseline sampling) is 250. If allowed to use previously obtained data, it would take an estimated one year to perform the above sampling, longer if unable to use previous data. The cost of medical surveillance with certified doctor fees is unknown but potentially substantial.

One way to reduce the administrative, cost, and infrastructure burdens without sacrificing data or accuracy would be through representative sampling by task, applied to all shifts doing the same work in the same environment with the same exposure, versus repetitive testing on all shifts. While some jobs, tasks, or roles change, some remain the same regardless of the shift. For example, a mill operator will have the same exposure at 3:00 a.m. as at 3:00 p.m.

We are further concerned with the proposal that each mine operator perform baseline sampling within 180 days after the rule goes into effect. MSHA correctly points out that operators will need to “acquire necessary sampling devices or sampling services, sample occupations or areas of known or reasonably expected exposures, identify appropriate laboratories, and arrange for analysis of samples” during the proposed 180-day period. MSHA then asserts that, “Given that the mining industry has experience with sampling programs for other airborne contaminants, as well as respirable crystalline silica, MSHA anticipates that the proposed 180 days would provide sufficient time for mine operators to comply with the proposed standard.” It is true that operators have experience with similar sampling programs, and we agree with MSHA that “the proposed rule is technologically feasible for laboratories to conduct baseline sampling analyses.”

However, whether service providers used by mines such as industrial hygiene suppliers and consultants, and accredited laboratories that conduct respirable crystalline silica analysis, will be able to meet the increased demand spurred by the baseline sampling requirements, is a different question. MSHA estimates the need for increased analytical laboratory capacity to be approximately 70,498 sample analyses over 6 months. MSHA expects that laboratories will respond by increasing their analytical capacity. For example, MSHA states, laboratories could acquire additional instrumentation, train additional analysts, or add a second or third operating shift. EMA cannot gauge the accuracy of MSHA's 70,498-sample projection. Throughout the hearings, however, witnesses testified to an already slow turnaround on sample analyses. MSHA suggests that laboratories could train additional analysts, but laboratories face the same labor shortage as other employers, with the latest [Bureau of Labor Statistics Job Openings and Labor Turnover Summary](#) reporting 1,336,000 vacancies in the professional and business services sector. In such a tight labor market, it is unclear whether laboratories will be able to hire and train a sufficient number of analysts within 300 days after a final rule is published.

Thank you for your consideration of these comments. We offer them in the spirit of aiding MSHA's efforts to ensure that all miners, across the coal and metal/nonmetal sectors alike, are protected from the hazards posed by respirable crystalline silica.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Greissing". The signature is fluid and cursive, with the first name "Chris" being more prominent and the last name "Greissing" following in a similar style.

Chris Greissing
President
Essential Minerals Association