Nos. 24-1889, 24-2661, 24-2663

United States Court of Appeals for the Eighth Circuit

No. 24-1889

Sorptive Minerals Institute,

Petitioner,

v.

Mine Safety and Health Administration and Vincent N. Micone, III,[1] Acting Secretary of Labor, United States Department of Labor,

Respondents.

No. 24-2661

National Stone, Sand, and Gravel Association, et al.

Petitioners,

v.

Mine Safety & Health Administration, et al.,

Respondents.

No. 24-2663

Sorptive Minerals Institute, et al.

Petitioners,

v.

Mine Safety & Health Administration, et al.,

Respondents.

[1] As noted in Respondents' Brief filed January 29, 2025, under Fed. R. App. P. 43(c)(2), Vincent N. Micone, III was automatically substituted for Julie A. Su.

On Petition for Review of a Rule
of the Mine Safety and Health Administration

Brief of Amici Curiae
THE AMERICAN COLLEGE OF CHEST PHYSICIANS, THE AMERICAN LUNG ASSOCIATION, THE AMERICAN THORACIC SOCIETY, AND THE ASSOCIATION OF OCCUPATIONAL AND ENVIRONMENTAL CLINICS IN SUPPORT OF RESPONDENTS

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DISCLOSURE STATEMENT

Pursuant to Rule 26.1 of the Federal Rules of Appellate Procedure, the amici curiae here, the American College of Chest Physicians ("CHEST"), the American Lung Association ("ALA"), the American Thoracic Society ("ATS"), and the Association of Occupational and Environmental Clinics ("AOEC"), through their undersigned counsel, each certify that they do not have a parent corporation and that no publicly held corporation own 10% or more of their stock.

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AMICI STATEMENT

Pursuant to Federal Rule of Appellate Procedure 29(a)(4)(E), Amici certify that no counsel of a party to this case authored this brief in whole or in part. Amici further certify that no party or their counsel contributed money intended to fund preparing or submitting this brief. Amici finally certifies that no person—other than the amicus curiae, its members, or its counsel—contributed money that was intended to fund preparing or submitting this brief.

INTEREST OF AMICI CURIAE

Amici are medical professional, occupational and public health organizations dedicated to improving health outcomes for patients with lung diseases and preventing future development of lung disease through initiatives including education, research, and advocacy.

The American College of Chest Physicians ("CHEST") is a leading professional organization, serving as a professional home to over 21,000 pulmonary, critical care, and sleep medicine specialists. It is dedicated to advancing innovative, life-saving care grounded in evidence-based practices. Its mission focuses on preventing, diagnosing, and treating chest diseases, with a strong emphasis on ensuring and improving access to care for all patients, particularly those in underserved and high-need communities.

The American Lung Association ("ALA") is a leading organization committed to saving lives by promoting lung health and preventing lung disease through education, advocacy, and research. Importantly, ALA is focused on improving the quality of life for individuals living with lung disease, including silicosis.

The American Thoracic Society ("ATS") is a medical professional organization of nearly 17,000 physicians, scientists, researchers, nurses, respiratory therapists, and allied health professionals. The mission of ATS is to prevent, detect, treat, and cure respiratory diseases, critical care illnesses, and sleep-disordered breathing. To put it simply, they are lung experts. Of significant importance to this Petition, ATS medical professionals are focused on occupational and respiratory diseases and have specific insight into, and knowledge of, the health harms associated with and resulting from silica exposure.

The Association of Occupational and Environmental Clinics ("AOEC") supports communication among clinics and clinicians dedicated to providing high-quality, worker and patient-centered care to people with work-related injuries and illnesses or with exposures to environmental hazards. As occupational and environmental health experts, AOEC's members have significant experience treating miners with occupational silica-related diseases.

Collectively, CHEST, ALA, ATS, and AOEC ("Amici") have direct experience with the adverse health consequences of exposure to silica to metal and non-metal ("MNM") miners.

SUMMARY OF ARGUMENT

Supported by ample scientific literature and tailored to protect MNM miners from unnecessary silica[1] exposure, on April 18, 2024, MSHA published its amended standard for respirable crystalline silica for MNM miners, titled "Lowering Miners' Exposure to Respirable Crystalline Silica and Improving Respiratory Protection" (the "Final Rule"). 89 Fed. Reg. 28,218 (Apr. 18, 2024).

Amici agree with the Respondents: MSHA's Final Rule—supported by the best available evidence on silica toxicity—is rationally designed to protect MNM miners and promote their wellbeing. Drawing from extensive medical experience in diagnosing and treating MNM miners for illnesses resulting from the impacts of silica exposure, as well as researching and investigating methods to prevent pulmonary disease, Amici agree that the Final Rule provides important baseline protection for MNM miners' health and reduces the likelihood of preventable, incurable, and debilitating life-threatening diseases. Amici write in support of Respondents' brief and to emphasize four points.

[1] Throughout this brief, Amici refer to "silica" when discussing MSHA's regulation of the substance. Unless otherwise noted, Amici are referring to respirable crystalline silica.

First, extensive scientific research shows that silica exposure is linked with adverse health outcomes. Second, silica exposure is the prime culprit behind the rise in progressive massive fibrosis. Third, MSHA's Final Rule will provide MNM miners baseline protection from preventable exposure to silica. Fourth, MSHA's Final Rule is anchored in MSHA's statutory authority. As such, the Final Rule was appropriately crafted to protect MNM miners, and the Petitions challenging the Final Rule should be denied.

ARGUMENT

I. Comprehensive and well-established scientific research shows that silica exposure is a known and deadly occupational health hazard.

Silica[2] exposure is one of the oldest known occupational health hazards. Shilpi Misra et al., *Occupational Exposure to Respirable Crystalline Silica Among US Metal and Nonmetal Miners, 2000–2019*, 66 Am. J. Ind. Med. 199, 200 (Mar. 2023). In the 1930s, silica-related diseases reached the national stage after the Hawks Nest

[2] Silica is an odorless chemical compound composed of silicon and oxygen with the chemical formula SiO2. *Silicon Dioxide*, PubChem, https://pubchem.ncbi.nlm.nih.gov/compound/Silicon-Dioxide (last modified Feb. 1, 2025). Silica compounds are divided into two groups based on atom arrangement: crystalline silica and amorphous silica. *Id.* Silica is most commonly found in its crystalline form in materials such as sand, soil, and clay. Barbara W. Alexander et al., *Engineering Controls for Respirable Crystalline Silica Hazards*, The Synergist (Apr. 2022), https://synergist.aiha.org/202204-engineering-controls-silica. Most importantly, it is frequently found alongside deposits of ores and other resources that are mined, such as coal. *Id.*

Tunnel disaster in Gauley Mountain, West Virginia, which stemmed from the creation of a tunnel through a mountain to permit water diversion through the mountain. Adelina Lancianese, *Before Black Lung, The Hawks Nest Tunnel Disaster Killed Hundreds*, NPR (Jan. 20, 2019, 8:01 AM ET), https://www.npr.org/2019/01/20/685821214/before-black-lung-the-hawks-nest-tunnel-disaster-killed-hundreds. The drilling and blasting caused significant release of silica which was breathed in by workers. *Id.* Estimates on worker death from this incident varies. *Id.* At the time, congressional testimony reported up to 300 deaths from silicosis due to silica dust exposure, but other estimates place the death toll at more than 750 workers. *Id.*

After this incident, awareness began to grow as to how silica causes disease. Though silica exposure exists in various occupations, mining of various types presents a particularly high risk of exposure due to the processes required. During mining operations, the abrasive processes, including sawing, grinding, drilling, and crushing rocks, can lead to suspended silica particles in the air. *Silica Dust in the Mining and Quarrying Industry*, Lung Found. Austl., at 2, https://lungfoundation.com.au/wp-content/uploads/2023/09/Silicosis-Pamphlet_Mining_updated.pdf (last visited Feb. 4, 2025). While most silica particles are too large to enter the lungs, modern mining techniques have resulted in both increased respirable silica dust and larger volumes of extraction, resulting in

increased MNM miners' exposure to silica during operations. Robert A. Cohen et al., *Pathology and Mineralogy Demonstrate Respirable Crystalline Silica is a Major Cause of Severe Pneumoconiosis in U.S. Coal Miners*, 19 Annals Am. Thoracic Soc'y 1469, 1470 (Sept. 1, 2022); Emily Sarver et al., *Particle Size and Mineralogy Distributions in Respirable Dust Samples from 25 US Underground Coal Mines*, 247 Int'l J. Coal Geology (Nov. 1, 2021); Victoria Johann-Essex et al., *Respirable Coal Mine Dust Characteristics in Samples Collected in Central and Northern Appalachia*, 182 Int'l J. Coal Geology 85, 85 (Sept. 1, 2017).

Respirable silica dust is hazardous to human health because, when MNM miners breathe in clouds of silica dust, silica deeply penetrates into their lungs, eventually leading to one of many pneumoconiosis diseases. *Silica Dust in the Mining and Quarrying Industry*, *supra*.; Victoria Johann-Essex et al., *supra* at 85. Though Amici refer to multiple pulmonary diseases throughout this brief, it is imperative to understand the diseases are interconnected, with silica exposure as the root cause of each. Pneumoconiosis broadly refers to a group of lung diseases caused by inhaling dust particles, such as silica. *Pneumoconiosis*, Johns Hopkins Medicine, https://www.hopkinsmedicine.org/health/conditions-and-diseases/pneumoconiosis (last visited Feb. 4, 2025). This brief specifically discusses three types of pneumoconiosis. First, black lung disease, which is a form of pneumoconiosis that develops from prolonged inhalation of coal dust, leading to the accumulation of coal

dust that blackens the lungs. Maggie L. Shaw, *The Persistent, and Rising, Threat of Black Lung Disease*, Am. J. Managed Care (Aug. 26, 2024), https://www.ajmc.com/view/the-persistent-threat-of-black-lung-disease.

A second form of pneumoconiosis is silicosis. *Id.* Silicosis is a specific type of pneumoconiosis, which can develop gradually and appear decades after initial silica exposure. *Id.*; Carrie A. Redlich et al., *Silicosis*, Merck Manuals (last modified Nov. 2023), https://www.merckmanuals.com/professional/pulmonary-disorders/environmental-and-occupational-pulmonary-diseases/silicosis.

Third, progressive massive fibrosis is an advanced stage pneumoconiosis, marked by extensive masses of fibrosis, predominately in the upper lung zones. *Id.* Unfortunately, these are incurable, progressive lung diseases that can result in significant disability and premature death. *Silica, Crystalline*, OSHA, https://www.osha.gov/silica-crystalline/health-effects (last accessed Feb. 5, 2025). Around two million workers in the U.S. have been exposed to silica, many of whom are MNM miners now at risk for developing lung disease due to silica exposure. Takashi Sato et al., *Silicosis and Lung Cancer: Current Perspectives*, 9 Lung Cancer: Targets and Therapy 91, 91 (2018).

In sum, silica exposure poses a grave danger to MNM miners. Peer-reviewed scientific studies and compelling data demonstrate the prevalence and impact of silica-related diseases, with numerous studies documenting their causes,

progression, and health consequences. Silica-related diseases can be fatal. However, these diseases are preventable with the proper safeguards in place—safeguards which are available now and able to be implemented to protect MNM miners and save lives.

II. Extensive scientific research indicates that silica exposure is the leading factor driving the surge in progressive massive fibrosis.

Scientists are seeing a surge in cases of silica-related diseases, including one of the most advanced and severe forms: progressive massive fibrosis. Progressive massive fibrosis is a severe, incurable, progressive lung disease, that can result in permanent disability or death. Concerningly, cases of progressive massive fibrosis are rising particularly rapidly amongst young coal miners and in areas where silica exposure is concentrated, suggesting that the higher volume of respirable silica produced by advanced coal mining technology is to blame.

Studies and diagnoses by medical professionals focused on silica-related diseases have shown that these cases are rising. One way to monitor the increase of silica-related lung disease is to track the number of lung transplants for patients with occupational lung diseases. David J. Blackley et. al, *Rise in Lung Transplantation for Coal Workers' Pneumoconiosis and Silicosis*, Am. J. Respiratory Critical Care Med. (2025). From 1991 to 2023, researchers identified 105 probable lung transplants for patients diagnosed with black lung disease nationally and 109 for

silicosis, with the highest number of transplants for both conditions—sixteen—in 2023. *Id.*

A separate way to track the increase in progressive massive fibrosis is by monitoring the proportion of coal miners with progressive massive fibrosis who file for federal black lung benefits. A comprehensive review of Department of Labor ("DOL") records on MNM miners seeking federal benefits revealed a rise in the proportion of coal miners with progressive massive fibrosis filing for federal black lung benefits. Kirsten S. Almberg et al., *Progressive Massive Fibrosis Resurgence Identified in U.S. Coal Miners Filing for Black Lung Benefits, 1970-2016*, 15 Annals Am. Thoracic Soc'y 1420, 1422–23 (2018).

In particular, the heart of Appalachia is facing a concerning rise in progressive massive fibrosis cases. Analyses of over 300,000 samples from over 5,000 underground U.S. coal mines revealed that higher silica exposure was consistently noted in Central Appalachia (defined as Kentucky, West Virginia, and Virgina), the epicenter of the country's progressive massive fibrosis crisis. Yuan Shao et al., *Thin Seams and Small Mines are Associated with Higher Exposures to Respirable Crystalline Silica in US Underground Coal Mines,* 81 Occupational & Env't Med. 308, 308 (2024). Mines play a pivotal role in the economy in Central Appalachia, and another study determined that one in twenty long-tenured MNM miners have developed progressive massive fibrosis. David J. Blackley et al., *Continued Increase*

in Prevalence of Coal Workers' Pneumoconiosis in the United States, 1970-2017, 108 Am. J. Pub. Health 1220, 1221 (2018).

In the article cited previously for the significant increase in black lung transplants for patients diagnosed with black lung disease nationally, nearly all the lung transplant recipients with black lung disease—ninety of the 105 recipients—were residents of Kentucky, Virginia, or West Virginia. David J. Blackley, *Rise in Lung Transplantation for Coal Workers' Pneumoconiosis and Silicosis*, Am. J. Respiratory Critical Care Med. (2025). This alarming trend of increased lung transplants, particularly in Central Appalachia, highlights the increased prevalence of severe black lung disease and the dire need for more protective rules to ensure the safety and well-being of MNM miners. Saskia Bos et al., *Survival in Adult Lung Transplantation: Where are we in 2020?*, 25 Current Op. Organ Transplantation 268 (June 2020). Again, the increase seen in filing for black lung benefits in the Almberg study was most pronounced in Central Appalachia. Kirsten S. Almberg et al., *Progressive Massive Fibrosis Resurgence Identified in U.S. Coal Miners Filing for Black Lung Benefits, 1970-2016*, 15 Annals Am. Thoracic Soc'y 1420, 1423 (2018). For example, seventeen percent of claimants in Virginia received a determination of progressive massive fibrosis. *Id.* at 1424.

In one specific example, there has been a sizable spike in MNM miners developing progressive massive fibrosis in a single clinic in Kentucky. David J

Blackley et al., *Resurgence of Progressive Massive Fibrosis in Coal Miners – Eastern Kentucky, 2016*, 65 Morbidity & Mortality Wkly. Rep. 1385 (Dec. 16, 2016). Notably, and of serious concern, most of these cases were not detected through the national surveillance system, but rather through the clinic, meaning that screening records alone may be underestimating the number of progressive massive fibrosis cases. *Id.* As discussed, *infra*, the Final Rule would enable earlier detection of these cases through changes in medical examination procedure and could prevent them by enforcing more protective action levels and permissible exposure limits.

Worse still, scientists have seen a spike in progressive massive fibrosis among younger MNM miners, something not previously described in medical literature. Medical professionals have witnessed firsthand the devasting rise in these cases. Maeve MacMurdo, an occupational pulmonologist at the Cleveland Clinic and American Thoracic Society member since 2017, has seen increasing numbers of young miners presenting with severe disease requiring lung transplant. Telephone Interview with Maeve MacMurdo, MD, Cleveland Clinic (Feb. 1, 2025).

Between 2017 and 2023, medical professionals diagnosed over 1,000 new cases of progressive massive fibrosis at fifteen clinics. Drew A. Harris et al., *Progressive Massive Fibrosis Identified at Federally Funded Black Lung Clinics in the US*, 331 JAMA 438, 439 (2024). Of the miners diagnosed, seventy were under the age of fifty, and seventy-nine had worked less than fifteen years as an MNM

miner. *Id.* Numerous studies indicate that this rise in cases of progressive massive fibrosis, particularly among young coal miners, is attributable to increased silica exposure. Scientists reviewed lung tissue samples from the National Coal Workers' Autopsy Study for the presence of three classifications of progressive massive fibrosis: coal-type, mixed-type, and silica-type. Leonard H.T. Go et al., *Historical Shift in Pathological Type of Progressive Massive Fibrosis Among Coal Miners in the USA*, 80 Occupational & Env't Med. 425, 427 (Aug. 2023). Out of the three cohorts, scientists noticed an increase in the proportion of silica-type progressive massive fibrosis among the younger coal miners, indicating that silica is a prime suspect behind the increase in progressive massive fibrosis cases. *Id.* at 425, 428–29.

Another study pointing to this prevalence of silica-related disease among younger or "contemporary" MNM miners evaluated the lung pathology from eighty-five coal miners with progressive massive fibrosis. The study compared data from the historical category of miners, individuals born between 1910-1930, with the contemporary miner category, meaning those born in or after 1930. Robert A. Cohen et al., *supra* at 1470. The scientists found that there was a significantly higher proportion of silica-type progressive massive fibrosis identified in the lung biopsies of contemporary miners compared with historical controls. *Id.* at 1472. Additionally, analyzing the minerals in their original context showed a significant increase in the

percentage and concentration of silica particles in progressive massive fibrosis lesions of the lungs of contemporary miners. *Id.* at 1473.

Additionally, and regardless of age, it has become clear from medical studies and experiences of physicians that these pervasive diseases continue to impact miners long after they leave the industry. For example, a 56-year-old man who had worked as a coal miner for just eight years and left the industry three decades earlier visited a doctor's office due to a worsening dry cough and breathlessness. Drew A. Harris et al., *A New Era of Coal Workers' Pneumoconiosis: Decades in Mines may not be Required*, 395 The Lancet (May 2, 2020). A lung biopsy revealed that the coal miner had developed progressive massive fibrosis, and doctors were able to see silicate particles in his CT-guided biopsy, tying it to the short period of time he had worked as a coal miner. *Id.*

The impacts on MNM miners and their families, both because of the difficulty of these diseases and also due to the cost of treatment is very concerning. A single transplant alone may cost well over $929,600, but on top of that, survival rates after a transplant are low. *Frequently Asked Questions*, Newark Beth Israel Medical Center, https://www.rwjbh.org/newark-beth-israel-medical-center/treatment-care/transplant-services/lung-transplant/frequently-asked-questions/, (last accessed Feb. 5, 2025). Even following a successful transplant, median survival is 6.7 years

post operation. Saskia Bos et al., *Survival in Adult Lung Transplantation: Where are we in 2020?*, 25 Current Op. Organ Transplantation 268, 269 (June 2020).

This robust body of scientific evidence underscores the significant role that silica plays in the increasing prevalence of progressive massive fibrosis, particularly among young MNM miners and prominently in Central Appalachia. Scientific analyses across a diverse set of mining cohorts all suggest silica is repeatedly emerging as a primary culprit driving the epidemic of progressive massive fibrosis and other progressive lung diseases. This deeply researched and scientifically proven increase in silica-related diseases highlights the necessity of MSHA's Final Rule for more protective silica dust exposure standards.

III. Enforcing MSHA's Final Rule will protect MNM miners from avoidable silica dust exposure.

Amici strongly support MSHA's Final Rule implementing more protective silica exposure regulations.[3] The Final Rule promotes MNM miner health and protects miners from unnecessary silica exposure. As MSHA noted, the Final Rule is feasible for the industry. Respondents' Brief at 117-119. These are not overly difficult

[3] Amici did argue during the rulemaking comment period for a more protective MSHA regulation than the ultimate Final Rule that MSHA promulgated. However, Amici agree that MSHA's Final Rule provides important and necessary baseline protections for MNM miners and is a critical step toward ensuring MNM miners have more protection from preventable illnesses resulting from silica exposures.

measures and will help protect MNM miners while working. Plainly, Amici agree with Respondents that this is low-hanging fruit that will save lives.

For one, the Final Rule reduces MNM miners' exposure to silica dust by implementing a more protective permissible exposure limit and action level for silica. The permissible exposure limit in the Final Rule ensures that no MNM miner is exposed to silica in excess of "50 µg/m^3 for a full-shift exposure."[4] 30 C.F.R. § 60.10. If exposure is found to be in excess of this limit, a mine operator shall take corrective actions. 30 C.F.R. § 60.12(a)(2)(iii). The Final Rule also establishes a protective action level of 25 µg/m^3, which triggers more frequent sampling to ensure compliance. 30 C.F.R. § 60.2. This enhanced protective measure will improve monitoring and increase intervention frequency when silica dust levels exceed these levels. As a result, these provisions will significantly reduce silica exposure risks and help prevent silica-related diseases among MNM miners.

The Final Rule also addresses some of the preexisting shortcomings in the frequency of and locations where silica sampling is required. The Final Rule now requires mine operators to start sampling where any miners may be "reasonably expected to be exposed to respirable crystalline silica." 30 C.F.R. § 60.12(a). The Final Rule also requires mine operators to take dust collection samples and make

[4] MSHA defines "full-shift exposure" to be an 8-hour time-weight average ("TWA"). 30 C.F.R. § 60.2, 60.10.

records of dust collection sample results, while also requiring the numbers be posted on the mine bulletin board. 30 C.F.R. § 60.12. These requirements ensure that operators promptly address elevated silica levels and will help MNM miners stay informed about their working conditions.

The Final Rule also enhances MNM miners' health by implementing more comprehensive medical examinations. The Final Rule requires operators to provide comprehensive medical examinations to MNM miners at no cost to the miner within sixty days of their start date and a follow up examination no later than three years after the initial exam. 30 C.F.R. § 60.15(c).These examinations include x-rays, a physical examination, a pulmonary function test, and a review of medical history. 30 C.F.R. § 60.15(a)(2). This gives medical professionals an accurate baseline for each MNM miner's health before they begin working. MNM miners can also receive voluntary medical examinations of the same comprehensiveness as the mandatory medical examinations when they are working in the mines. *Id.* § 60.15(b). Importantly, MNM miners must receive their examination results within thirty days, and National Institute for Occupational Safety and Health ("NIOSH") must also be provided with the results of chest X-ray classifications within the same timeframe. § 60.15(d). These required medical examinations are essential for early detection and recognition of disease.

The Final Rule also prevents operators from using respiratory protection as a side-step around compliance. The Final Rule states that MNM miners "shall use respiratory protection as a temporary measure," when working in concentrations of respirable crystalline silica above the permissible exposure limit, not a permanent measure. *Id*. § 60.14(a). Respiratory protection, under the Final Rule, serves as a temporary protective measure while engineering control measures are being developed or implemented. *Id.* § 60.14(a)(1). If MNM miners are unable to wear respiratory protection, then they will be transferred either to work in a separate area of the same mine or to an occupation at the mine where respiratory protection is not required. *Id.* § 60.14(b). Amici strongly support these measures. Respiratory protection and personal protective equipment ("PPE") are the least effective methods of preventing silica from entering miners' lungs and thus are the last lines of defense against silica exposure and should not be used as the main source of protection for miners. *Best Practices for Dust Control in Coal Mining*, CDC, (2d ed. 2021), at 3, https://www.cdc.gov/niosh/docs/2021-119/2021-119.pdf. Even when worn by MNM miners, PPE must be worn diligently and MNM miners still must limit their exposure time. In practicality, this is hard to achieve. Arguably, the biggest problem in relying on respiratory protection and PPE is that it creates a false sense of security in MNM miners, which is why the new Final Rule is so critical to protecting MNM miners. Additionally, because the rule prioritizes better engineering controls for

reducing MNM miners' exposure, it will provide effective, consistent protection to improve dust suppression techniques and more efficiently identify areas in need of further investigation. 89 Fed. Reg. 28,218, 28,284. As such, the Final Rule is critically important for the long-term health of MNM miners and Amici expect it to reduce silica-related disease.[5]

The nation has the tools and capacity to ensure MNM miners are protected. MSHA's Final Rule implements many of these to ensure the health and safety of MNM miners and ensure no shortcuts are taken. A mine's safety measures and protocols should prevent silica exposure, and in turn, silica-related diseases, and the requirements under this Final Rule will advance that goal.

IV. MSHA's Final Rule falls squarely within its statutory authority.

Congress passed the Federal Mine Safety and Health Act of 1977 (the "Mine Act") with the declaration that "the first priority and concern of all in the coal or other mining industry must be the health and safety of its most precious resource—the miner." 30 U.S.C. § 801(a). Congress recognized that "the existence of unsafe and unhealthful conditions and practices in the Nation's coal or other mines is a

[5] A PEL of 50 µg/m³ also aligns the MSHA standard with nearly all other the OSH Act fields such as general industry and construction, meaning it is bringing the mining into the same compliance other industries have long been required to meet. Phil Molé, *Understanding MSHA's 2024 Respirable Crystalline Silica Final Rule*, Velocity EHS (Oct. 10, 2024), https://www.ehs.com/2024/10/understanding-mshas-2024-respirable-crystalline-silica-final-rule/.

serious impediment to future growth of the coal or other mining industry and cannot be tolerated." 30 U.S.C. § 801(d).

The language in the Mine Act is clear in its granting of authority to the Secretary of Labor. The Mine Act authorizes the Secretary of Labor to "develop, promulgate, and revise as may be appropriate, improved mandatory health or safety standards for the protection of life and prevention of injuries in coal or other mines." 30 U.S.C. § 811(a). The Secretary of Labor is authorized to "make such rules as he [or she] deems necessary to establish criteria for determining when a pattern of violations of mandatory health or safety standards exists." 30 U.S.C. § 814(e)(4). The Mine Act is administered through MSHA. *Nat'l Mining Ass'n v. United Steel Workers*, 985 F.3d 1309, 1314 (11th Cir. 2021).

The Secretary of Labor creates rules using "the best available evidence [so] that no miner will suffer material impairment of health or functional capacity even if such miner has regular exposure to the hazards dealt with by such standard for the period of his [or her] working life." *Id.* It is clear based upon scientific and medical research that the problem of exposure to silica for MNM miners is unacceptable. One study that found one in twenty long-tenured MNM miners have developed progressive massive fibrosis explicitly noted that they could "think of no other industry or workplace in the United States in which this would be considered acceptable." David J. Blackley et al., *Continued Increase in Prevalence of Coal*

Workers' Pneumoconiosis in the United States, 1970-2017, 108 Am. J. Pub. Health 1220, 1221 (2018).

The Final Rule is firmly rooted within MSHA's statutory authority and supported by extensive scientific data. The Final Rule produces a more protective standard for MNM miners through a more protective permissible exposure limit and action level. The Final Rule also requires initial health examinations paired with voluntary examinations by medical professionals. Further, this medical data will be made available to medical professionals to track progressive massive fibrosis and other silica-related diseases. These standards align with MSHA's statutory goals and authority because they are aimed at promoting a safer working environment with the best available evidence to prevent MNM miners from exposure to on-the-job health hazards, such as silica dust.

These workplace safety measures, medical examinations, and availability of data are all essential to the future prevention of silica-related diseases. As such, the provisions in the Final Rule align with the Secretary's authority to develop "improved mandatory health or safety standards for the protection of life and prevention of injuries in coal or other mines" 30 U.S.C. § 811(a) and are an important step to ensuring "no miner will suffer material impairment of health or functional capacity." 30 U.S.C. § 811(a)(6)(A). Measures like those included in the Final Rule

will protect miners and save families from experiencing the preventable consequences of silica-related diseases.

CONCLUSION

In sum, medical and scientific evidence strongly supports the connection between increased silica exposure and rising levels of silica-related illnesses, most significantly in the Central Appalachian region. Silica-related diseases adversely affect patient health, leading to a high risk of disease progression, premature death, and substantial healthcare resource and cost burdens on families. For these reasons, it is critical to implement protections such as those in MSHA's Final Rule to reduce the development and worsening of these conditions in miners exposed to silica. MSHA's Final Rule was crafted specifically to address those concerns in a targeted, thoughtful, and effective manner. This Court should deny Petitioners' request and implement the Final Rule as promulgated by MSHA.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

The undersigned certifies that the foregoing brief complies with Fed. R. App. P. 27(a) and the type-volume limitation of Fed. R. App. P. 27(d)(2)(A) because it contains 4,828 words.

The undersigned further certifies that this brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6) because this motion has been prepared in a proportionally spaced typeface using Microsoft Word Version 2501 in Times New Roman 14-point font.

The undersigned further certifies that this filing has been scanned for viruses and is virus-free, pursuant to 8th Cir. R. 28A(h)(2).

Dated: February 5, 2025

/s/ Miranda Leppla
Miranda Leppla
Counsel for Amici Curiae

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on February 5, 2025, an electronic copy of the foregoing brief was filed with the Clerk of the Court for the United States Court of Appeals for the Eighth Circuit by using the CM/ECF system. Participants in the case who are registered CM/ECF users will be served by the CM/ECF system.

/s/ Miranda Leppla
Miranda Leppla
Counsel for Amici Curiae