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WHAT'S THE BIG DEAL **with Silicia Dust?**

On June 8, 2022 MSHA announced an increase in enforcement of OHSA's Respirable Crystalline Silica (RCS) dust standard at mining sites and other facilities involved in processing, cutting, drilling, and grinding rock and stone.

This proposed standard affects plants and facilities performing manufacturing of cement, artificial stone, glass, steel, brick, ceramics, and industrial sands (including frac sand).

MSHA's current RCS limit of **100 µg/m³* was updated in 1985** but has not been revised since that time.

In 2019, the OSHA standard for RCS exposure limits were revised with a new Action Level (AL) and Permissible Exposure Limit (PEL) for respirable crystalline silica to **25 µg/m³ and 50 µg/m³**, respectively.

The June 8th news release implied that MSHA is considering a revised silica dust standard, and many industry experts believe that MSHA will eventually establish a RCS limit that mirrors the OSHA limit. For now, **MSHA will be increasing oversight and enforcement of the current 100 µg/m³ standard**.

Rock or mining processing sites need to be aware of an increase of MSHA spot inspections that could result in fines, or operational shutdowns, if compliance is not met within their determined period of time.

RCS Facts

- Inhalation of Respirable Crystalline Silica (aka. silica dust) is a common occupational hazard faced by miners.
- In nearly all mining operations at metal and nonmetal (MNM) and coal mines, crystalline silica is present in the form of quartz.
- Respirable crystalline silica is an occupational carcinogen that puts workers at risk for developing preventable, severe diseases including:
  - Silicosis (acute silicosis, accelerated silicosis, simple chronic silicosis, and progressive massive fibrosis)
  - Non-malignant respiratory diseases (e.g., emphysema and chronic bronchitis)
  - Lung cancer
  - Kidney disease
- Exposure to mixed coal mine dust containing respirable crystalline silica can lead to the development of coal workers' pneumoconiosis, progressive massive fibrosis, and multi-dust pneumoconiosis.
- Each of these illnesses is chronic, irreversible, and potentially disabling or fatal.

RESOURCES:

https://www.msha.gov/news-media/special-initiatives/2022/06/08/silica-enforcement-initiative

https://www.msha.gov/silica-rulemaking

https://www.federalregister.gov/documents/2023/07/13/2023-14199/lowering-miners-exposure-to-respirable-crystalline-silica-and-improving-respiratory-protection

** Micrograms of gaseous pollutant per cubic meter of ambient air*

Areas where dusting and dust buildup is readily noticeable could be subject to increased MSHA inspection.

Benetech's Dust Suppression

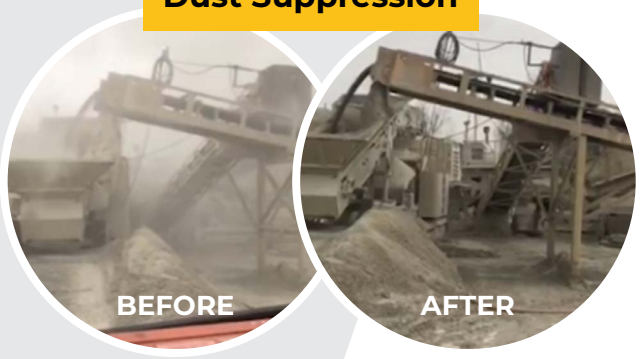

Table III-1: Number of Mines and Miners by Commodity in 2021

	Number of Mines	Number of Miners
MNM Mines		
Metal	264	35,864
Nonmetal	549	15,736
Stone	2,320	33,031
Crushed Limestone	1,866	23,691
Sand and Gravel	6,232	33,296
MNM Contract Workers	–	57,426*
MNM Subtotal	11,231	199,044
Coal Mines		
Underground	211	21,108
Surface	720	17,571
Coal Contract Workers	–	16,151*
Coal Subtotal	931	54,830
Grand Total	**12,162**	**253,874**

* The number of MNM and coal contract workers is presented in aggregate because commodity data for contract workers is unavailable.
Source: MSHA MSIS Data (reported on MSHA Form 7000-2).

Table IV-2: MNM Respirable Dust Samples by Commodity, 2005-2019

Commodity	Number of Samples	Number of Samples with Respirable Crystalline Silica Concentration Greater than 100 µg/m³	Percent of Samples with Respirable Crystalline Silica Concentration Greater than 100 µg/m³
Metal Mines	3,499	376	10.8%
Nonmetal Mines	5,165	232	4.5%
Stone Mines	15,415	1,134	7.4%
Crushed Limestone Mines	15,184	434	2.9%
Sand and Gravel Mines	18,506	1,363	7.4%
Total	**57,769**	**3,569**	**6.1%**

Source: MSHA MSIS respirable crystalline silica data for the MNM industry, January 1, 2005, through December 31, 2019 (version 20220812).

WHAT YOU CAN EXPECT TO HAPPEN

*** Section 103(i) of the Federal Mine Safety & Health Act*

- ☑ Increased MSHA spot inspections
- ☑ Expansion of sampling areas at sites
- ☑ Spot inspections every 15 days at irregular intervals at mines with "repeated overexposures to silica" **
- ☑ Requirement of abatement "within a period of time" if compliance is not met
- ☑ Section 104(b) withdrawal orders may be issued for "overexposures not abated"

WHAT YOU CAN DO TO PREPARE

Eliminate dust before MSHA arrives!

Benetech can help. (800) 843-2625

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