Insight

IN-DEPTH DISCUSSION

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# OSHA's Final Rule on Crystalline Silica Standards

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Earlier this year, the Occupational Safety and Health Administration (OSHA) published its long-awaited final rule (https://www.gpo.gov/fdsys/pkg/FR-2016-03-25/pdf/2016-04800.pdf) setting new workplace permissible exposure limits (PELs) for respirable crystalline silica. The new rule includes one standard for the construction industry and a separate standard for general industry and maritime employment. While the rule took effect on June 23, 2016, employers have some time to adjust. Compliance dates for different requirements are staggered, with a June 23, 2017 deadline for employers in the construction industry, and a June 23, 2018 deadline for those in general industry and maritime operations.

In addition to considerably tightening exposure limits, the new rule outlines methods to control silica exposure, procedures for conducting medical exams for workers with high exposure, training obligations for workers about silica-related hazards, and record keeping requirements related to crystalline silica quantities. Under the new rule, the PEL is now 50 micrograms of respirable crystalline silica per cubic meter of air (μmg/m3), averaged over an eight-hour day. This article provides key information about the new standards, and outlines specific action items to help employers timely meet OSHA's new requirements.

## What Is Crystalline Silica and What Industries Does It Affect?

Crystalline silica is a mineral found in everyday materials such as those used in roads, buildings, and sidewalks. It is a common component of sand, stone, rock, concrete, brick, block, and mortar. Occupational exposure to airborne silica dust occurs in operations involving cutting, sawing, drilling, and crushing of concrete, brick, block, and other stone products, and in operations using sand products, such as in glass manufacturing, foundries, and sand blasting. Studies have shown that exposure to respirable crystalline silica can cause silicosis, lung cancer, other respiratory diseases, and kidney disease.

OSHA estimates that two million construction workers today are exposed to respirable crystalline silica in over 600,000 workplaces nationwide – about 840,000 of those workers, OSHA estimates, are currently exposed to silica levels that exceed the new PEL of 50 μg/m3. In general industry and maritime workplaces, OSHA estimates that about 295,000 workers are exposed in over 75,000 workplaces nationwide, with over 100,000 currently exposed to silica levels exceeding the new PEL.

Examples of industry operations impacted by exposure to respirable crystalline silica include:

- Asphalt Roofing Materials
- Concrete Products
- Construction
- Cut Stone and Stone Products
- Dental Laboratories
- Foundries
- Glass Manufacturing
- Hydraulic Fracturing and Other Support Activities for Oil and Gas Operations
- Jewelry
- Oil and Gas Operations
- Paintings and Coatings
- Porcelain Enameling
- Pottery
- Railroads
- Ready-Mix Concrete
- Refractory Furnace Installation and Repair
- Refractory Products
- Shipyards
- Structural Clay Products

## What Do the New Standards Require?

OSHA has published two fact sheets summarizing the requirements of the new standards: a Construction Fact Sheet at https://www.osha.gov/Publications/OSHA3681.pdf; and a General Industry and Maritime Fact Sheet at https://www.osha.gov/Publications/OSHA3682.pdf. Key points of each are highlighted below.

## Standards for Construction Employers

For employers in the construction industry, OSHA is providing what it describes as "flexible alternatives." Employers may measure workers' exposure to silica and use whatever methods are effective to ensure that exposure remains under the new PEL of 50 μg/m3; or follow specified exposure control methods outlined for specific tasks, laid out in a table referred to as "Table 1" (https://www.osha.gov/silica/

SilicaConstructionRegText.pdf). Employers that follow Table 1 correctly are not required to measure workers' exposure to silica and are not subject to the PEL.

As one example of the methods provided for in Table 1, for the task of operating a handheld power saw, an employer can opt to equip workers with saws having integrated water delivery systems (that continuously feed water to the blade and minimize dust emissions), in addition to ensuring that workers are wearing respiratory protection under certain conditions (e.g., when using the saw indoors or in an enclosed area), and operating and maintaining the saw in accordance with the manufacturer's instructions for minimizing dust emissions.

If a construction employer opts not to follow Table 1, the employer must:

- Measure the amount of respirable crystalline silica to which workers are exposed if it may be at or above an action level of 25μg/m3, averaged over an eight-hour day;
- Protect workers from respirable crystalline silica exposures above the permissible exposure limit of 50 μg/m3, averaged over an eight-hour day;
- Use dust controls to protect workers from respirable crystalline silica exposures above the PEL; and
- Provide respirators to workers when dust controls cannot limit exposures to the PEL.

Regardless of whether employers in the construction industry choose to measure and comply with the PEL or follow all of the requirements of Table 1, they must additionally do the following:

- Establish and implement a written exposure control plan that identifies tasks involving exposure and methods used to protect workers, including procedures to restrict access to work areas where high exposures may occur;
- Designate a competent person to implement the written exposure control plan;
- Restrict housekeeping practices that expose workers to respirable crystalline silica when feasible alternatives are available;
- Offer medical exams—including chest X-rays and lung function tests—every three years for workers who are required by the standard to wear a respirator for 30 or more days per year;
- Train workers on work operations that result in respirable crystalline silica exposure and ways to limit exposure; and
- Keep records of workers' respirable crystalline silica exposure and medical exams.

### Standards for General Industry and Maritime Employers

For employers with general industry or maritime operations involving exposure to crystalline silica, standards are similar to those for construction employers, but without the option of following Table 1 in lieu of taking measurements. Employers in general industry and maritime must do all of the following:

- Measure the amount of respirable crystalline silica that workers are exposed to if it may be at or above an action level of 25 μg/m3, averaged over an eight-hour day ("action level");
- Protect workers from respirable crystalline silica exposures above the permissible exposure limit of 50 μg/m3, averaged over an eight-hour day;
- Limit workers' access to areas where they could be exposed above the PEL;
- Use dust controls to protect workers from silica exposures above the PEL;

- Provide respirators to workers when dust controls cannot limit exposures to the PEL;
- Restrict housekeeping practices that expose workers to respirable crystalline silica where feasible alternatives are available;
- Establish and implement a written exposure control plan that identifies tasks involving exposure and methods used to protect workers;
- Offer medical exams—including chest X-rays and lung function tests—every three years for workers exposed at or above the action level for 30 or more days per year;
- Train workers on work operations that result in respirable crystalline silica exposure and ways to limit exposure; and
- Keep records of workers' respirable crystalline silica exposure and medical exams.

## Timetable for Compliance

Under the final rule, construction employers must comply with all requirements by June 23, 2017, except requirements for laboratory evaluation of exposure samples, which begin on June 23, 2018.

For general industry and maritime employers other than those involved in hydraulic fracturing operations in the oil and gas industry, under the final rule, employers must:

- comply with all obligations of the standard, with the exception of the action level trigger for medical surveillance, by June 23, 2018.
- offer medical examinations to employees exposed above the PEL for 30 or more days a year beginning on June 23, 2018.
- offer medical examinations to employees exposed at or above the action level for 30 or more days a year beginning on June 23, 2020.

For companies engaged in hydraulic fracturing operations in the oil and gas industry,[1] under the final rule, employers must:

- comply with all obligations of the standard, except for engineering controls and the action level trigger for medical surveillance, by June 23, 2018.
- comply with requirements for engineering controls to limit exposures to the new PEL by June 23, 2021, and from June 23, 2018 through June 23, 2021, employers can continue to have employees wear respirators if their exposures exceed the PEL.
- offer medical examinations to employees exposed above the PEL for 30 or more days beginning on June 23, 2018.
- offer medical examinations to employees exposed at or above the action level for 30 or more days a year beginning on June 23, 2020.

1 OSHA has stated that the hydraulic fracturing industry is unique because controls for respirable crystalline silica in that industry are still in development, and the deadlines should be different because employers will need more time to take advantage of emerging technologies.

### What Should Employers Be Doing Now?

Employers in any industry involving respirable crystalline silica exposure should designate a competent individual or individuals to do the following as soon as possible:

- Review the full text of the rule (https://www.gpo.gov/fdsys/pkg/FR-2016-03-25/pdf/2016-04800.pdf), as well as OSHA's web page dedicated to crystalline silica that includes further information, tips, and advice (https://www.osha.gov/silica/).
- For construction employers, audit the company's operational practices and procedures in light of Table 1, and make a recommendation as to whether to implement Table 1 or to take measurements of respirable crystalline silica exposure.
- Establish and implement a written exposure control plan that identifies tasks involving exposure and methods used to protect workers, including procedures to restrict access to work areas where high exposures may occur.
- Establish and implement a training program for workers on operations that result in respirable crystalline silica exposure and ways to limit exposure.
- Establish and implement recordkeeping policies and procedures to document the company's compliance efforts, including medical exams.
- Identify workers to whom medical exams must be offered, and establish a timetable for doing so in compliance with the new rule.
- Map out a plan for full compliance with the new rule, on schedule.

Littler's Workplace Safety and Health Practice Group will continue to monitor developments under the new rule and will provide timely updates.