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BIE SAFETY ADVISOR

OSHA Announces Final Rule on Crystalline Silica

The Occupational Safety and Health Administration has issued a final rule to curb lung cancer, silicosis, chronic obstructive pulmonary disease and kidney disease in America's workers by limiting their exposure to respirable crystalline silica. The rule is comprised of two standards, one for Construction and one for General Industry and Maritime. OSHA estimates that the rule will save over 600 lives and prevent more than 900 new cases of silicosis each year.

About 2.3 million workers are exposed to respirable crystalline silica in their workplaces, including 2 million construction workers who drill, cut, crush, or grind silica-containing materials such as concrete and stone, and 300,000 workers in general industry operations such as brick manufacturing, foundries, and hydraulic fracturing, also known as fracking. Responsible employers have been protecting workers from harmful exposure to respirable crystalline silica for years, using widely available equipment that controls dust with water or a vacuum system.

Why a New Rule?
The U.S. Department of Labor first highlighted the hazards of respirable crystalline silica in the 1930s, after a wave of worker deaths. The department set standards to limit worker exposure in 1971, when OSHA was created. However, the standards are outdated and do not adequately protect workers from silica-related diseases. Furthermore, workers are being exposed to silica in new industries such as stone or artificial stone countertop fabrication and hydraulic fracturing. A full review of scientific evidence, industry consensus standards, and extensive stakeholder input provide the basis for the final rule, which was proposed in September 2013.

Key Provisions of the Standard
- Reduces the permissible exposure limit (PEL) for respirable crystalline silica to 50 micrograms per cubic meter of air, averaged over an 8-hour shift.
- Requires employers to: use engineering controls (such as water or ventilation) to limit worker exposure to the PEL, provide respirators when engineering controls cannot adequately limit exposure, limit worker access to high exposure areas, develop a written exposure control plan, offer medical exams to highly exposed workers, and train workers on silica risks and how to limit exposures.
- Provides medical exams to monitor highly exposed workers and gives them information about their lung health.
- Provides flexibility to help employers, especially small businesses, protect workers from silica exposure.

Compliance Schedule Both standards contained in the final rule take effect on June 23, 2016, after which industries have one to five years to comply with most requirements, based on the following schedule:

Construction - June 23, 2017, one year after the effective date.

General Industry and Maritime - June 23, 2018, two years after the effective date.

Hydraulic Fracturing - June 23, 2018, two years after the effective date for all provisions except Engineering Controls, which have a compliance date of June 23, 2021.

For more detailed information about the rule, visit OSHA's Silica Webpage at:
www.osha.gov/silica/index.html

OSHA Fact Sheets can be found at
www.osha.gov/Publications/OSHA3681.pdf for construction and
www.osha.gov/Publications/OSHA3682.pdf for general industry

Additional information can be found at:
http://www.silica-safe.org/

Monthly Toolbox Talk

Silica Awareness

Silica is found in many materials common on construction sites, including: sand, concrete, rock, mortar, and brick. When workers cut, grind, abrasive blast, jackhammer or perform other tasks that disturb these materials, dust containing crystalline silica can be released into the air. Workers who inhale this dust are at risk. Silica can cause serious, sometimes fatal illnesses including a lung disease called silicosis, lung cancer, and chronic obstructive pulmonary disease (COPD). It has also been linked to other illnesses such as kidney disease.

Why is silica hazardous?

Silica, often referred to as quartz, is a very common mineral. It is found in many materials common on construction sites, including soil, sand, concrete, masonry, rock, granite, and landscaping materials. The dust created by cutting, grinding, drilling or otherwise disturbing these materials can contain crystalline silica particles. These dust particles are very small. You cannot see them. This respirable silica dust causes lung disease and lung cancer. It only takes a very small amount of airborne silica dust to create a health hazard.

What is the risk?

A worker's chance of becoming ill from exposure to silica dust depends on the tasks performed, the amount of dust they are exposed to, and the frequency of the exposures. Each exposure to silica adds into the total load of silica in the lungs – in other words, each exposure adds to the lung damage.

How to Prevent Health Problems from Silica:

- Use vacuums or water to reduce or eliminate the dust at the source, before it becomes airborne. When these controls are not enough, use respiratory protection. Routinely maintain dust control systems to keep them in good working order.

- Do not use sand or other substances containing more than 1% crystalline silica as abrasive blasting materials. Substitute less hazardous materials.

- Wear disposable or washable work clothes and shower if facilities are available. Vacuum the dust from your clothes and change into clean clothing before leaving the work site. **Do not brush or blow the dust off! Do not bring dust home!**

- Avoid eating, drinking and smoking in areas where silica dust is present. Wash your hands and face outside of dusty areas before performing any of these activities.

- Create a Plan -There are ways contractors can reduce the dust and reduce the hazard. There are easy to use planning tools, http://plan.silica-safe.org, which takes you step-by-step through conducting a job hazard analysis for silica, selecting appropriate controls, and creating a job-specific plan to eliminate or reduce silica hazards. You can save as a pdf, print and/or email your plan.