OSHA’s New Silica Standard for Construction: Are You Equipped to Comply?

September 18, 2017
Overview

• Litigation update
• Introduction to silica
• Summary of requirements
• Contractor testimony
• Resources
Litigation Status and Other Efforts

• Louisiana AGC filed a petition to challenge the rule in the 5th Circuit on April 4, 2016.
  – AGC along with 22 other national associations joined the petition for review on May 2, 2016.

• The challenge is based on:
  – Technological infeasibility
    • In our view OSHA has not demonstrated that the proposed exposure limit can be met consistently.
  – Economic infeasibility
    • OSHA’s analysis states that the estimated cost of compliance will be approximately $1 billion per year
    • Our independent analysis shows compliance costs to be nearly $5 billion per year.

• Recent efforts to stop the rule
  – On March 10, 2017, AGC and its coalition partners submitted a letter to Acting Sec. of Labor Edward Hugler requesting an extension to the compliance date to June 23, 2018.
  – On May 3, 2017, AGC and its coalition partners submitted a letter to Sec. of Labor Alexander Acosta requesting the agency consider a limited reopening of the rule and administratively staying the rule’s requirements during this process.

• Oral arguments scheduled for September 26
  – Judges Panel
    • Merrick Garland: appointed by President Bill Clinton in 1997
    • Karen Henderson: appointed by President George H.W. Bush in 1990
    • David Tatel: appointed by President Bill Clinton in 1994
• The AGC-backed silica litigation is funded by the AGC Construction Advocacy Fund (CAF).

• CAF is supported by contributions from members and member firms.

• For more information and to contribute:
  – [constructionadvocacyfund.agc.org](http://constructionadvocacyfund.agc.org)
Respirable Crystalline Silica

- Three main forms of crystalline silica:
  - Quartz (most common)
  - Cristobalite
  - Tridymite

- Respirable dust fraction of crystalline silica which enters the body by inhalation.

- Very small particles – typically at least 100 times smaller than ordinary sand found on beaches or playgrounds.

- Present in many naturally occurring and man-made materials used at construction sites.
<table>
<thead>
<tr>
<th>Examples of Silica-containing Construction Materials</th>
<th>Examples of Silica-generating Construction Tasks</th>
<th>Examples of Industries/Operations in which Exposure to Silica can Occur</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Asphalt</td>
<td>• Grinding</td>
<td>• Construction</td>
</tr>
<tr>
<td>• Brick</td>
<td>• Crushing</td>
<td>• Glass products</td>
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<tr>
<td>• Cement</td>
<td>• Hauling</td>
<td>• Pottery products</td>
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<tr>
<td>• Concrete</td>
<td>• Chipping</td>
<td>• Structural clay products</td>
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<tr>
<td>• Concrete Block</td>
<td>• Hammering</td>
<td>• Concrete products</td>
</tr>
<tr>
<td>• Drywall</td>
<td>• Drilling</td>
<td>• Foundries</td>
</tr>
<tr>
<td>• Fiber Cement products</td>
<td>• Sawing</td>
<td>• Dental laboratories</td>
</tr>
<tr>
<td>• Grout</td>
<td>• Blasting</td>
<td>• Paintings and coatings</td>
</tr>
<tr>
<td>• Gunite/Shotcrete</td>
<td>• Dry sweeping</td>
<td>• Jewelry production</td>
</tr>
<tr>
<td>• Mortar</td>
<td>• Compressed air</td>
<td>• Refractory products</td>
</tr>
<tr>
<td>• Plaster</td>
<td>• Mixing mortar or concrete</td>
<td>• Ready-mix concrete</td>
</tr>
<tr>
<td>• Refractory Mortar &amp; Units</td>
<td></td>
<td>• Cut stone and stone products</td>
</tr>
<tr>
<td>• Rock</td>
<td></td>
<td>• Refractory installation and repair</td>
</tr>
<tr>
<td>• Roof Tile</td>
<td></td>
<td>• Railroad track maintenance</td>
</tr>
<tr>
<td>• Sand</td>
<td></td>
<td>• Hydraulic fracturing for gas and oil</td>
</tr>
<tr>
<td>• Soil</td>
<td></td>
<td>• Abrasive blasting in</td>
</tr>
<tr>
<td>• Stone</td>
<td></td>
<td>– Maritime work</td>
</tr>
<tr>
<td>• Stucco/EIFS</td>
<td></td>
<td>– Construction</td>
</tr>
<tr>
<td>• Terrazzo</td>
<td></td>
<td>– General industry</td>
</tr>
<tr>
<td>• Tile</td>
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</tr>
</tbody>
</table>
Health Effects of Silica Exposure

- Silicosis, a disabling, non-reversible and sometimes fatal lung disease
  - Chronic/classic: occurs after 15–20 years of moderate to low exposures
  - Accelerated: can occur after 5–10 years of high exposures
  - Acute: occurs after a few months or as long as 2 years following exposures to extremely high concentrations

- Respiratory diseases

- Lung cancer

- Kidney disease
Overview of the Final Rule

• Final rule issued on March 25, 2016
• The final rule includes:
  – Permissible exposure limit (PEL) of 50 µg/m$^3$ (down from 250 µg/m$^3$) with an action level (AL) of 25 µg/m$^3$
  – Specified and Alternative Exposure Control Methods
  – Respirator use when dust control systems or work practices are not sufficient to meet PEL
  – Written exposure control plan implemented by a competent person(s)
  – Housekeeping requirements that prohibit dry brushing or sweeping unless wet sweeping and HEPA vacuuming are infeasible
  – Medical surveillance (chest x-ray, pulmonary function test, TB test, etc.) of workers that wear respirators more than 30 days out of a year
  – Communication of silica hazards through existing HazCom standard by way of labels and safety data sheets and employee training
  – Maintaining employee air monitoring and medical surveillance records for the duration of employment plus 30 years
Meeting the Requirements of the Standard

**Step 1:** Determine if the silica standard applies to your employees.
Could employees be exposed at or above the AL, under any foreseeable conditions?

- **NO**
  - No further action is required under the standard.

- **YES**
  - Select a compliance pathway:
    - Specified Exposure Control Methods (Table I)
    - Alternative Exposure Control Methods

**Step 2:** Determine the requirements of the selected compliance pathway.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specified Exposure Control Methods (Table I)</th>
<th>Alternative Exposure Control Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>Exposure Assessment</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>Respiratory Protection</td>
<td>✓ Where required by Table I</td>
<td>✓  For exposures possibly above the AL.</td>
</tr>
<tr>
<td>Exposure Control Plan</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Housekeeping</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Medical Surveillance</td>
<td>✓</td>
<td>✓  For employees wearing a respirator 30+ days for a year.</td>
</tr>
<tr>
<td>Hazard Communication</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Recordkeeping</td>
<td>✓ Medical examinations</td>
<td>✓ Exposure assessments and medical examinations</td>
</tr>
</tbody>
</table>
Q & A

Moderator

Kevin Cannon | Senior Director, Safety & Health Services, AGC of America

Panel

Rick Reubelt | Director of Environmental Health & Safety, Haselden Construction

Rocky Rowlett | Vice President of Safety, Faith Technologies

Nick Vranak | VP Safety, Kokosing Construction Company
Resources

• Silica Construction Standard Summary
• Webinar: OSHA's “New” Silica Standard
• Compliance Flowchart
• Air Monitoring and Objective Data Collection Form
• Silica Webpage
  agc.org → Industry Priorities → Safety & Health → Respirable Crystalline Silica in Construction
• AGC Chapters Resources
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