

OSHA's Silica Rule Enforcement Update

Adele L. Abrams, Esq. CMSP
Law Office of Adele L. Abrams, PC
safetylawyer@gmail.com



Introduction

- Adele Abrams, Esq., CMSP
 - Certified Mine Safety Professional and Attorney (PA, MD, DC Bars)
 - President of Law Office of Adele L. Abrams PC, with offices in Beltsville, MD; Denver, CO & Charleston, WV
 - Firm provides legal defense in OSHA and MSHA matters nationwide
 - Firm provides safety & health consulting and training on MSHA and OSHA issues, including IH field work, development of silica exposure controls and OHP for construction, concrete and mining companies



Overview

- Final OSHA rule: March 25, 2016 Fed Reg 606 pp long!
 - 30 pp of actual reg text - rest is preamble/explanation
 - Draft enforcement guidance 9/27/16 was 100+ pages long
 - Revised Interim guidance issued 10/19/17:
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=31349
 - 8/18 FAQ interpretative guidance (53 FAQ):
https://www.osha.gov/dsg/topics/silicacrystalline/additional_info_silica.html
 - 1/19 FAQ interpretative guidance for general industry (64 FAQ):
https://www.osha.gov/dsg/topics/silicacrystalline/generalindustry_info_silica.html



Litigation Outcome: Rule Upheld!

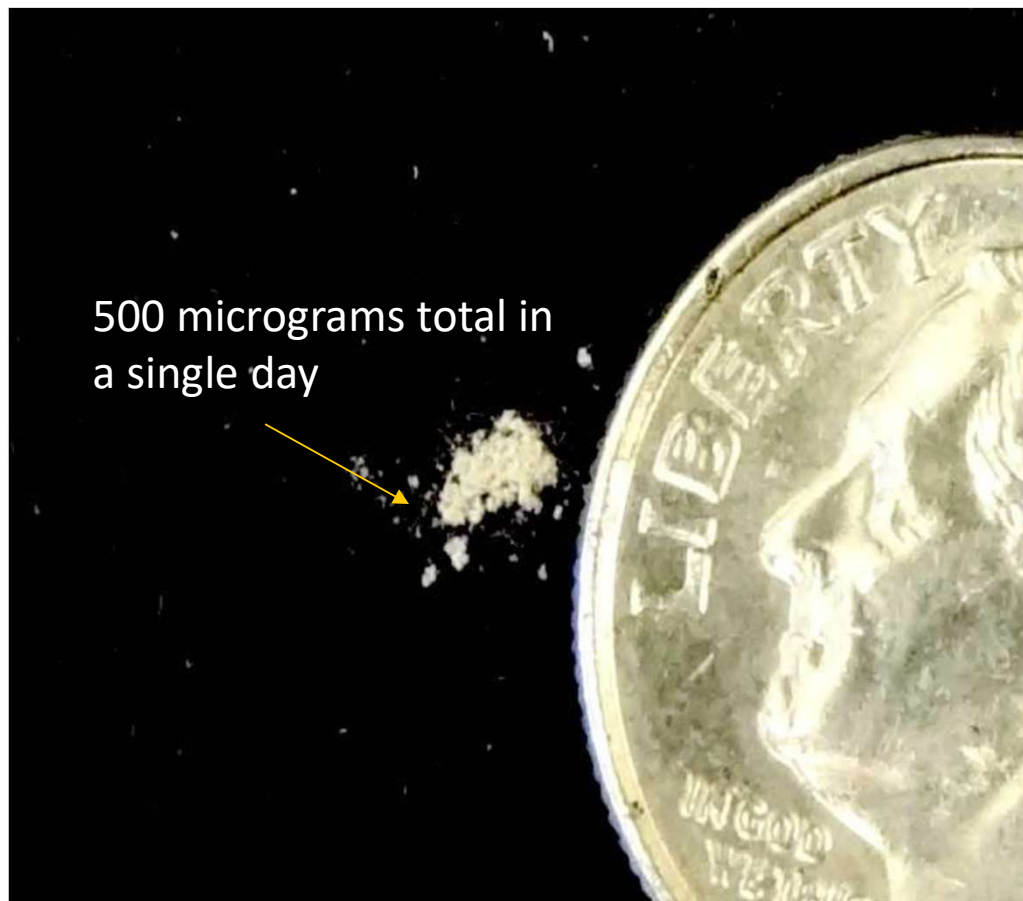
- Industry challenged rule on 5 grounds: Court found OSHA provided “substantial evidence” that the rule:
 - 1) would reduce a “significant risk of material impairment or harm”;
 - 2) is technologically feasible for the foundry, hydraulic fracturing, and construction industries;
 - 3) is economically feasible for the foundry, hydraulic fracturing, and construction industries;
 - 4) OSHA can prohibit housekeeping methods that cause silica exposure, such as dry sweeping or using compressed air; and
 - 5) OSHA complied with the Administrative Procedure Act
- Court panel (led by M. Garland) rejected all, and remanded rule, at Union request, for consideration of “medical removal” provision



Health Findings in OSHA Rule

- ❑ Over 600 deaths/yr and 900 new silicosis cases prevented by rule
- ❑ Crystalline Silica categorized as respiratory toxin that causes silicosis, COPD and lung cancer
 - ❑ Three types of silicosis: Chronic (15-20+ yrs), Accelerated (5-10 yrs), and Acute (months-2 yrs)
- ❑ OSHA also links occupational silica exposure with kidney disease and auto-immune disorders
- ❑ Rule states more than 50 peer-reviewed studies were evaluated and found links between silica exposure and lung cancer in at least 10 industries
 - Worker's comp cases already being filed by current & retired workers

What is the OSHA Permissible Exposure Limit (PEL) for Respirable Crystalline Silica (RCS)?



OSHA Permissible Exposure Limit (PEL) = 0.05 mg/m³ TWA

Calculated as an 8-hour Time Weighted Average

0.05 mg/m³ = 50 micrograms (µg)/m³

1 m³ of air = 1,000 liters


Normal breathing rate (moderate work, 1 work day) = 10 m³ (10,000 liters of air)

50 micrograms x 10 m³ = 500 µg ₆

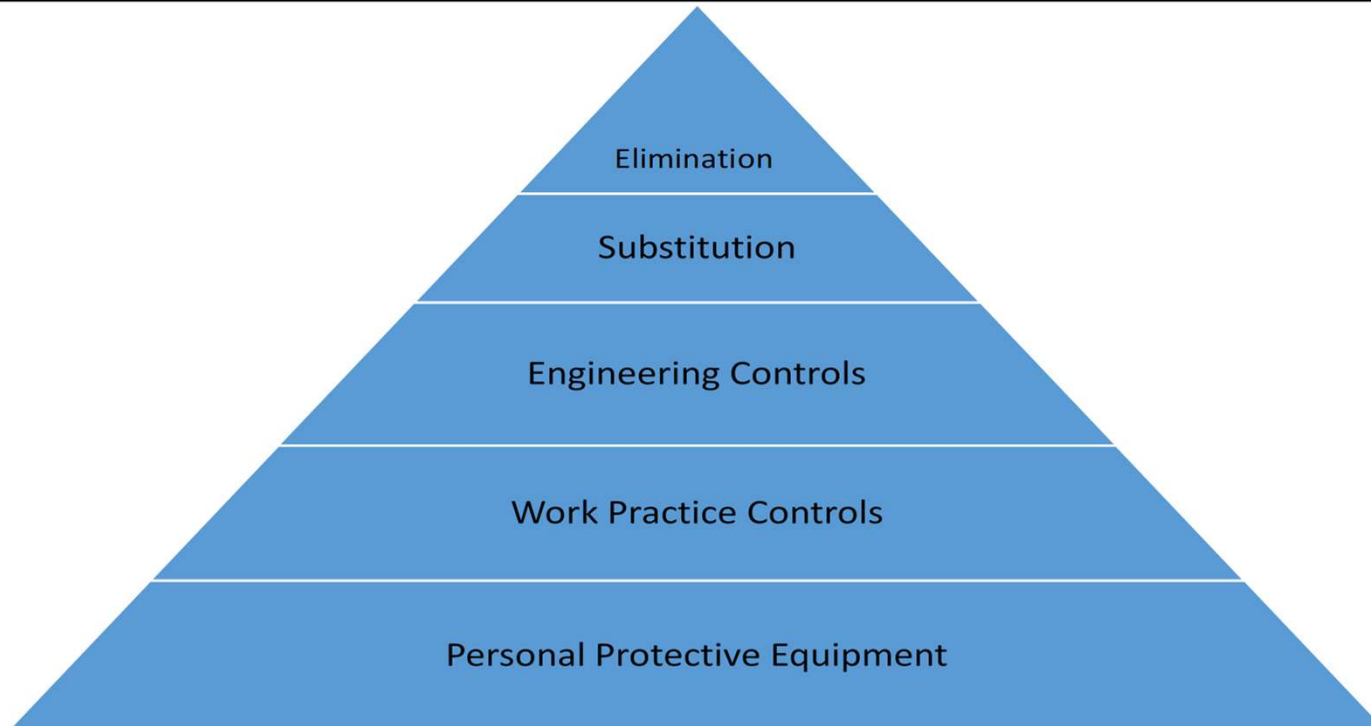


Where do we find silica?

- Crystalline silica is present as an ingredient in the following:
 - brick; block (50 – 60% with block up to 90%)
 - concrete and mortar (25 – 70%)
 - slate (20 – 40%, but can be up to 80%)
 - dimensional stone (granite, sandstone) (70 – 90%)
 - engineered stone products (countertops etc.) (70 – 90%)
 - stone aggregate (60 – 95%)
 - tile (30 – 45%)
 - asphalt filler (<5%)
 - roofing granules (50 – 75%)
 - plastic composites (varies)
 - soils (varies)
 - wallboard joint compounds, paint, plaster, caulking and putty (<5%)



Hierarchy of Controls





Engineering Control Options

- Local Exhaust Ventilation – Negative Pressure and Blowing Ventilation
 - Tools, hoods, venturi fans
- Water, water, and more water
 - (Integrated – no water hoses or bottles/nail in the pail)
- Enclosure – HEPA intake filter and HVAC (windows and doors must remain closed)
- Barrier – physical barrier or distance



Table 1 is based on Work Tasks & Equipment

1. Stationary masonry saws
2. Handheld power saws
3. Handheld power saws for cutting fiber-cement board (blade diameter of 8” or less)
4. Walk-behind saws
5. Drivable saws
6. Rig-mounted core saws or drills
7. Handheld and stand-mounted drills
8. Dowel drilling rigs for concrete
9. Vehicle-mounted drilling rigs for rock and concrete
10. Jackhammers and handheld powered chipping tools
11. Handheld grinders for mortar removal (i.e., tuck pointing)
12. Handheld grinders for uses other than mortar removal
13. Walk-behind milling machines and floor grinders
14. Small drivable milling machines
15. Large drivable milling machines
16. Crushing machines
17. Heavy equipment and utility vehicles used during demolition
18. Heavy equipment and utility vehicles for grading & excavating¹⁰

Table 1 Equipment/Task Example – *Indoor & Outdoor Use*

Equipment/Task	Engineering & Work Practice Control Methods	Required Respiratory Protection & Minimum APF
<p>(xii) Handheld grinders for uses other than mortar removal</p>	<p>For tasks performed <u>OUTDOORS</u> only:</p> <ul style="list-style-type: none"> • Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface. • Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions. <p>OR</p> <ul style="list-style-type: none"> • Use grinder equipped with commercially available shroud and dust collection system. • Operate maintain tool in accordance with manufacturer's instructions to min. dust emissions • Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism. <p>– When used Outdoors</p> <p>– When used Indoors or in an Enclosed Area</p>	<p>Outdoors</p> <p>≤ 4 hours / shift = NONE</p> <p>≥ 4 hours / shift = NONE</p> <p>≤ 4 hours / shift = NONE</p> <p>≥ 4 hours / shift = NONE</p> <p>≤ 4 hours / shift = NONE</p> <p>≥ 4 hours / shift = APF 10¹¹</p>



Exposure Monitoring Must be Performed

- Exposures must be determined when:
 1. Equipment/Tasks not listed in Table 1, or
 2. Employer does not fully implement controls and PPE required by Table 1

- Prove compliance by exposure monitoring:
 1. **Performance** option (*Air Monitoring or Objective Data*),
or
 2. **Scheduled Monitoring** option

Goal = verify no equipment/task exposes employees above PEL of $50 \mu\text{g}/\text{m}^3$ 8-hour TWA



Performance Option

aka “Air Monitoring” or “Objective Data”

The employer shall assess the 8-hour TWA exposure for each employee on the basis of any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures to respirable crystalline silica. Burden is on employer.

- 1. “Air Monitoring Data”** is not well-defined, but could include historical data provided tasks are the same. Employer has flexibility.
- 2. “Objective Data”** could include industry-wide surveys, NIOSH surveys, OSHA data, use of direct read instruments or other methodologies. Must reflect workplace conditions closely resembling or with a higher exposure potential than the processes, types of material, control methods, work practices, and environmental conditions in the employer's current operations.



Scheduled Monitoring Option

1926.1153(d)(2)(ii)(A)

- ❑ Initial monitoring to assess the 8-hour TWA exposure for each employee on the basis of one or more personal breathing zone samples that reflect the exposure of employees on each shift, for each job classification, in each work area. Sample employees expected to have the highest exposure to silica.
- ❑ The employer may rely on existing data to satisfy this initial monitoring requirement. Preamble mentions 12 months look back. (81 FR 16759).
- ❑ Employers will have to conduct some level of monitoring in the early stages of implementation of the rule because sufficient data to fall under the Performance Option does not exist.

Ongoing Exposure Monitoring Obligations

Silica Exposure Monitoring Results	Required Action
< Action Level 25 $\mu\text{g}/\text{m}^3$	No Additional Monitoring
\geq Action Level 25 $\mu\text{g}/\text{m}^3$ but < PEL 50 $\mu\text{g}/\text{m}^3$	Monitor again \leq 6 months
\geq PEL 50 $\mu\text{g}/\text{m}^3$	Monitor again \leq 3 months

- Next steps are determined by monitoring results
- Goal is to use all feasible controls to reduce exposure < PEL of 50 $\mu\text{g}/\text{m}^3$, or better yet < AL of 25 $\mu\text{g}/\text{m}^3$



WECP required

- Have a copy onsite, implemented by Competent Person, readily available to all employees & OSHA
- Description of Equipment/Task involving exposure to respirable crystalline silica (RCS)
 - **Use Table 1 language and add to it if task applies**
- Description of Engineering Controls, Work Practices and Respiratory Protection
 - **Use Table 1 language and add to it if task applies**
- Description of Housekeeping Measures
- Description of Procedures used to Restrict Access
 - Restricted access is data and objectivity driven based on potential exposure. If potential exposure exists, then access should be restricted.¹⁶



Proving Silica Exposure on Site

- ❑ OSHA will review the employer's WECP.
- ❑ If following Table 1, OSHA will review tasks to ensure compliance with Table 1 and WECP – Will not sample.
- ❑ If employer is not under Table 1 – OSHA will sample and compare results with employer's samples and review effectiveness of control measures (and what was considered)
- ❑ OSHA recognizes that small amounts of dust can be expected from equipment operated according to manufacturer's recommendations, but an increase in dust generation during operation of tool indicates controls are not operating correctly
- ❑ If not complying with WECP, then OSHA can issue citation.



Housekeeping & Silica Compliance

- ❑ No compressed air or dry broom sweeping, **unless** it is foreseeable under any circumstances that without implementing any controls, the exposure will remain <AL
- ❑ Permissible options:
 - Use HEPA filtered vacuum systems or wet sweeping
 - Riding and walk-behind sweepers that contain HEPA filters
 - Use a water hose – wide spray so as to not kick up dust
 - Spray area using lawn/garden sprayer, then use broom “wet sweeping”
 - Use floor sweeping compound – oil, water, or wax-based (proper disposal) and silica containing (2018 FAQs 26/27)
 - Use rubber scrapper to push material into pile, then shovel, then wet sweep or vacuum the remaining material



Wet Sweeping Exceptions

- OSHA recognizes wet sweeping may be infeasible where:
 - Use of water makes elevated surface slick and creates fall hazard
 - Water could come into contact with electrical panels or outlets or damage equipment
 - Water could come in contact with molten metal and create explosion hazard
 - Water could cause dust to harden (e.g., Portland cement or fly ash)
 - Use of water would adversely affect quality of finished product



Employee Training

- Employer's Written Exposure Control Plan
 - Specific tasks in workplace that could result in exposures
 - Specific measures implemented to reduce/eliminate exposure, including engineering and work practice controls, and any respiratory protection
- OSHA's HAZCOM Standard (*29 CFR 1910.1200*)
 - Hazards of RCS containing products, access to labels and SDS's
- Employees must also be trained on:
 - Contents of OSHA rule
 - Tool/Equipment operation & maintenance in accordance with manufacturer's instructions to minimize dust emissions.
 - Health hazards associated with exposure to RCS
 - If necessary, medical surveillance program elements



Respiratory Protection – 1910.134

- For those tasks where respiratory protection is required, ensure that the designated respiratory protection is used, properly worn and maintained when not in use (i.e. cleaned, stored in protective bags/containers, not exposed to excessive heat/cold).
- Ensure that persons wearing Respiratory Protection have been fit tested and that records can be produced.



OSHA and Facepiece Seal Protection

- OSHA will not intervene in the employer's decision making. They will enforce CPL 02-00-158E dated June 26, 2014 which states:
 - Facepiece Seal Protection. Inspection Guidelines. “The CSHO should be alert for the presence of facial hair (**more than one day's growth**) that comes between the sealing surface of the respirator and the face as well as other conditions that could result in facepiece seal leakage or interfere with valve function of tight-fitting respirators, such as the presence of facial scars, the wearing of jewelry, or the use of headgear that projects under the facepiece seal. Corrective glasses or goggles or other personal protective equipment (such as faceshields, protective clothing, and helmets) must not interfere with the seal of the facepiece to the face of the user. If employees wear other safety equipment with their respirators, the employees must pass an appropriate fit test while wearing the equipment to determine if it interferes with the seal. Employees should be observed to determine if the seal check procedures are being performed each time the respirator is donned.”



Medical Surveillance

- Employer must make medical surveillance available at no cost to employee
 - **Construction - for each worker who uses a respirator for 30 days/yr**
 - **General Industry – for each worker exposed above AL for 30+ days/yr**
- All exams and procedures must be performed by PLHCP – after initial, exam must be repeated every 3 years or more often if recommended Baseline exam includes:
 - past, present and anticipated exposure to RCS, dusts, and other agents affecting respiratory system,
 - history of respiratory system dysfunction and TB,
 - smoking status and history,
 - physical exam,
 - chest X-ray,
 - pulmonary function test,
 - testing for latent TB infection, and
 - any other tests determined appropriate by PLHCP.



What is a “Day” & how is it calculated?

- Any use counts as a day
 - If an employee uses a respirator for 15 minutes in a day, it counts as a day.
- Should respirator use be based on job description/title?
 - Yes, if employee will be required to wear a respirator for 30 days/year, must provide medical exam within 30 days. Cannot wait until the employee wears respirator for 30 days to offer medical exam.
- For newly hired employees, not required to count days wearing a respirator at previous employer(s)



Enforcement Highlights

- CSHOs should:
 - Collect breathing zone samples on 1st day of inspection,
 - Review written exposure control plan, respiratory protection and HazCom programs,
 - Review ER's own air monitoring records (if any), and
 - Interview affected employees and the competent person to assess implementation of WECP
- Employers must use engineering and work practice controls to reduce & maintain exposures below the PEL unless ER can demonstrate not feasible ... only then can supplement with respiratory protection, or use worker rotation.



Citation Guidance

- If not following Table 1, and no exposure assessment: cite under 1926.1153(c) and 1153(d)(2) as grouped violation, plus any deficiencies in respiratory protection or haz com are to be cited separately
- If not under Table 1 and samples show overexposures, but ER had done exposure assessment:
 - If ER has not instituted all feasible eng & WP controls, or adequately protected with respirators, issue citations
 - If ER's data is not viewed as representative by CSHO, can issue citation 1926.1153(d)(2)
 - If ER has implemented all feasible controls and workers are protected adequately with respirators, NO citation for PEL violation will be issued.
 - Other situation to be cited per OSHA's Field Operations Manual



2018 FAQ Guidance Highlights

- 8/18: OSHA issues 53 FAQ to guide on **construction rule** compliance – developed in conjunction with union and industry stakeholders
- Guidance issues clarifications:
 - Scope: covers all occ. exposures to RCS in construction except where exposures remain below AL of 25 ug/m³ under any foreseeable conditions ... intent is for rule NOT to apply where work results in only minimal silica exposures
 - OSHA says many common construction tasks will be outside scope because silica-containing products are only handled while wet or are performed for 15 minutes per day or less



2018 FAQ Highlights: Exempt Tasks

- Examples of tasks anticipated to be < AL:
 - Mixing small amounts of mortar, concrete, or bagged exterior insulation finishing or silica-free drywall compound
 - Removing concrete formwork
 - Finishing and hand-wiping block walls to remove mortar
 - Pouring concrete
 - Grouting floor and wall ties



2018 FAQ Highlights: Table 1

- For respiratory protection 4 hr triggers, FAQ clarifies that ER does not have to track exact amount of time EE performs job during shift to be in compliance
 - Before task is performed, ER must make “good faith judgment” about whether task will take >4 hr – and if estimates will exceed 4 hrs, utilize protection from the start
- Clarifies that Table 1 requirements to “operate and maintain tools” per manufacturer instruction is aimed at “those related to dust control” and not the other instructions (such as recommended respiratory protection)
- Clarifies that hand-held powered demolition hammers with bushing tools and tile saws are covered by Table 1



2018 FAQ Highlights: Housekeeping

- Clarifies that if EE exposure will remain below AL under foreseeable conditions, prohibition on dry sweeping, brushing, and use of compressed air for cleaning will NOT apply
- Clarifies that the general prohibition on these activities is limited to housekeeping, and not to use of brushes or compressed air to perform a work task
 - Earlier guidance clarified that silica-free sweeping compounds are acceptable, and compressed air can be used IF in conjunction with ventilation system that effectively captures dust, and don't contain silica or add to exposures



2018 FAQ Highlights: WECP

- Clarifies that when silica-generating tasks are performed, standard is not intended to prohibit all employees from entering entire construction area simply because some work generates silica
 - Rule calls for **minimizing** the EE in relevant work areas
- Clarifies that standard does **not** require ER to develop **NEW** written plan for each job or worksite – must only have a plan **applicable** to each worksite
 - ER can have single comprehensive plan that covers all required aspects of plan for all work activities at all worksites



2018 FAQ : Medical Surveillance

- ❑ Initial exam for covered workers must be offered within 30 days of initial assignment unless EE has received medical exam meeting standard's requirements within previous 3 yrs
- ❑ Clarifies that rule does not preclude in-house healthcare providers from performing the required exams
- ❑ Standard does not bar ERs from receiving the same info as EEs from the exam, *if is received for other purposes and through other means such as workers' compensation actions*
- ❑ Standard requires ER to make surveillance available to qualifying EE, but does **not** require EE to participate in surveillance



2019 GI Guidance: Key Points

- ❑ ER does not have to sample every employee; can sample representative # in each task who are expected to have highest exposure, and those results are assigned to others performing that task
- ❑ Gauging what tasks are $< 25 \text{ ug/m}^3$ TWA under “foreseeable circumstances” includes failure/absence of controls, but not substitution of materials, or fixed walls
- ❑ Standard does not specifically exempt tasks with short-term exposure (15 minutes or less) but will not apply if employer has objective data showing EE exposure will be $< 25 \text{ ug/m}^3$ under all foreseeable circumstances
- ❑ ER needs to document its determination of such excluded tasks through objective data, and maintain EE exposure records under 1910.1020
- ❑ ER can mix scheduled monitoring and performance options, depending on which is optimal approach for task
- ❑ ER can start with scheduled monitoring, then switch to objective data once have sufficient info



2019 GI Guidance: Key Points

- ❑ Standard doesn't prohibit ER from requiring workers to wear personal samplers, but other laws or CBA might
- ❑ Sampling results need not be reported to OSHA, but must be made available to EEs under records access rule -period of employment + 30 yrs
- ❑ To protect workers from identity theft, it is now a *de minimis* violation to omit SS# from health records
- ❑ Employees must receive notice of their sampling results within 15 working days (GI) or 5 working days (construction) but the notification period only starts when the employer receives monitoring results
- ❑ If one or more EE will be exposed above 50 ug/m³, area must be “regulated” and all entering must wear respirators, even if they would not be in the area long enough to be overexposed
- ❑ Regulated areas can be temporary, using moveable stanchions, caution tape, cones ... but must have mandatory posted signage

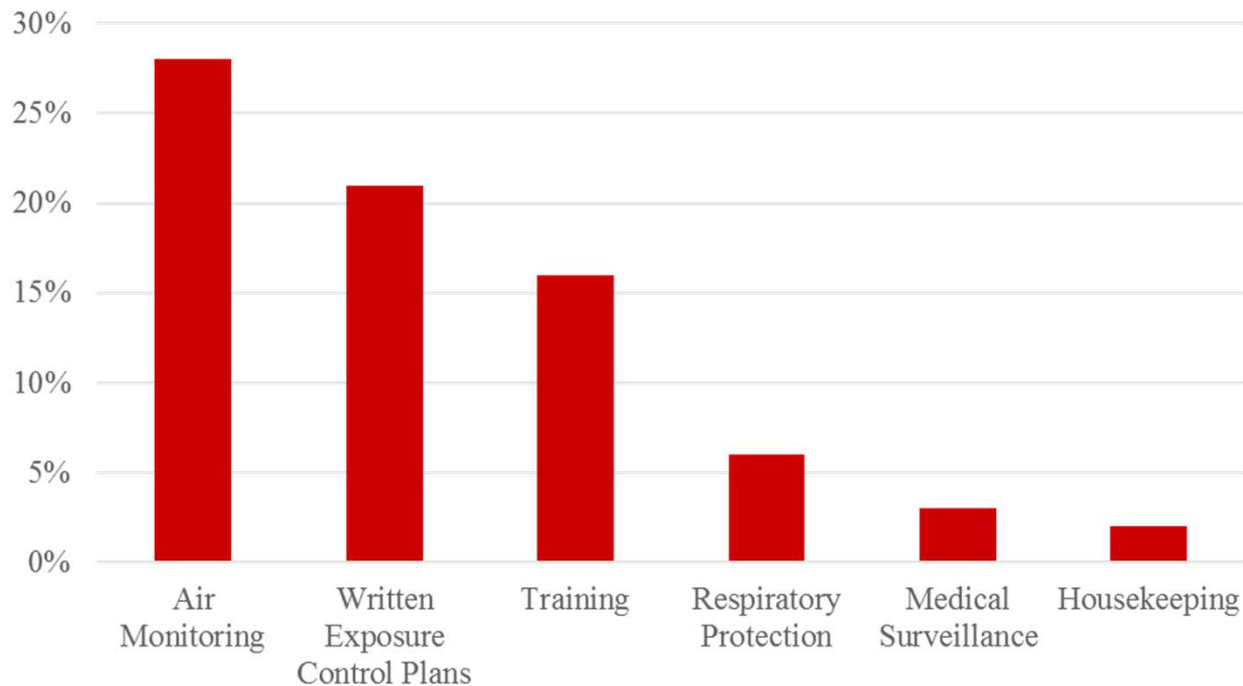


2019 GI Guidance: Key Points

- ❑ Administrative controls are permitted to reduce worker exposure: worker rotation, or schedule high exposure tasks when other workers not near ... but worker rotation may subject additional workers to medical surv.
- ❑ If use of engineering and work practice controls reduce exposures below PEL, then additional controls are not required to reduce exposures even lower (even if feasible)
- ❑ If feasible engineering & work practice controls are not sufficient to reduce exposures below PEL, then ER must use all feasible controls and then provide appropriate PPE
- ❑ Only tasks with foreseeable exposures above 25 ug/m³ (AL) must be listed in WECP
- ❑ ER do not need separate ECP for different operations, processes or shifts at the same worksite (use single comprehensive plan) but terms must be sufficiently descriptive to enable EE to consistently identify and control silica-related hazards

OSHA Silica Enforcement: 640 Construction Citations FY 2018

Percent of all construction silica citations since
9/23/17 – by category





What's Next?

- OSHA has reopened rule to with RFI on expansion of Table 1 and offering that option for general industry
- OSHA will issue a new NEP for respirable silica dust exposure in 2020, but details are still under review by OSHA
 - OSHA had a silica emphasis program for several years, but it expired after the 2016 final rule issued
- Expect higher enforcement rates now that general industry and maritime rules are in effect
 - In FY 2018, Federal OSHA issued 573 construction silica citations in 208 inspections, penalties > \$768,000
 - Federal OSHA issued 39 general industry silica citations in 14 inspections, penalties > \$50,000 (MN issued 7 citations in 1 general industry inspection in FY 2018)



OSHA's RFI

- 8/14/2019 – OSHA issued an RFI regarding expanding Table 1 for Construction and creating a Table 1 for General Industry – comment deadline is 10/15/19
 - <https://www.federalregister.gov/documents/2019/08/15/2019-17450/occupational-exposure-to-respirable-crystalline-silica-specified-exposure-control-methods>
- “Expanding Table 1 to include engineering controls and work practice control methods , equipment, and tasks could provide employers with more flexibility and reduce regulatory burdens while maintaining protections for employees.”



MSHA's RFI

- House FY 2020 Appropriations Report chastised MSHA for failing to move forward on silica rule
- MSHA published RFI on 8/29/19 – comment deadline is 10/28/19
 - MSHA solicits information and data on feasible, best practices to protect miners' health, including examination of “appropriately reduced” PEL, potential new or developing protective technologies & technical/educational assistance
- MSHA PEL currently 100 ug/m³ – bases citations on a single sample and cites even if appropriate PPE used (must reduce below PEL using engineering/admin controls)
 - MSHA published overexposure data on its DRS for mine operators and contractors



LAW OFFICE OF
ADELE L. ABRAMS P.C.

Adele L. Abrams, Esq., CMSP

301-595-3520

www.safety-law.com