



# Crystalline Silica: What's Next with OSHA and MSHA

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# Overview: MSHA Rulemaking & Enforcement

- MSHA's Spring 2022 regulatory agenda calls for a NPRM for Respirable Crystalline Silica -- due September 2022
- Silica rule is a wild card in that MSHA currently does not credit PPE such as respirators as a control, making adoption of OSHA's rule (particularly "Table One") in its analogous construction rule challenging legally
  - Will potentially generate confusion for contractors accustomed to following the OSHA construction/general industry silica rules
- The current MSHA permissible exposure limit is the equivalent of 100 ug/m<sup>3</sup>, twice the 50 ug/m<sup>3</sup> level (as 8-hour TWA) allowed by OSHA under its 2016 rule
- On 6/10/22, MSHA launched a silica enforcement program, targeting mines with histories of overexposures or MSHA citations for silica violations
- Section 104(b) withdrawal orders will be issued if silica citations are not timely abated – MSHA is very directive in terms of engineering controls they will accept
- Worker rotation may be issue in MSHA rulemaking b/c of silica's classification as a Group 1 Human Carcinogen
- MSHA is demanding historical sampling data, occupational health program info, medical surveillance, worker chest X-rays, worker's comp files on silica-related illness, and current/former workers' contact info – has 5 year statute of limitations

# Overview – MSHA Rulemaking

- MSHA's metal and nonmetal mine standards are based on the 1973 American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values formula:  $10 \text{ mg/m}^3$  divided by the percentage of silica plus 2.
  - MSHA's existing coal mine standards evaluate miners' exposure to quartz in relation to the respirable dust standard. When respirable coal mine dust samples are analyzed for quartz and exceed  $0.1 \text{ mg/m}^3$  (100 micrograms per cubic meter of air or  $\mu\text{g/m}^3$ ), the Agency reduces the applicable respirable dust standard for sections of the mine represented by the sample data.
- Metal and nonmetal miners and coal miners exposed to quartz in respirable dust can develop lung diseases such as chronic obstructive pulmonary disease, and various forms of pneumoconiosis, such as silicosis, coal workers' pneumoconiosis, progressive massive fibrosis, and rapidly progressive pneumoconiosis. These lung diseases are irreversible and may ultimately be fatal.

# MSHA Rulemaking Issues

- MSHA RFI comments closed 10/28/19 – proposal now due 9/2022
  - Legal issues surrounding the strict liability issues
  - MSHA demands for historical sampling data, medical surveillance and more
- Key MSHA issues
  - Whether to adopt a universal PEL of 50 ug/m<sup>3</sup> across OSHA/MSHA (coal and MNM) and whether to include an action level of 25 ug/m<sup>3</sup>
  - Whether to adopt a “Table 1” approach for common high exposure tasks or require individualized periodic sampling
  - Whether to allow the use of respiratory protection or require exposure to be limited solely through engineering/work practice/ administrative controls (Mine Act issues)
  - Whether to issue overexposure citations based solely on operator’s own sampling results (current document/data requests underway)
  - Whether to require medical surveillance (what trigger), medical removal for workers with Chest X-rays of 1/0 or worse by an ILO certified B-Reader

# MSHA Silica Enforcement Emphasis Program

*Initiative has four components: (1) inspections, (2) sampling, (3) compliance assistance, and (4) miners' rights.*

## **Inspections**

- MSHA will conduct spot inspections for silica at coal and MNM mines in accordance with section 103(i) of the Mine Act.
- At mines with repeated overexposures to silica, mines may be inspected every 15-days at irregular intervals.
- Where there are overexposures above 100 micrograms per cubic meter (existing PEL):
  - For MNM mines, abatement within a period of time.
    - For overexposures not abated, MSHA will issue a 104(b) withdrawal order.
  - For coal mines, MSHA will encourage mine operators to change the dust control and mine ventilation plans and review plans/exposures after changes are made.
- MSHA will take additional dust samples for miners who are overexposed
- MSHA District Managers will review approved plans (underground mines) to determine if the plans are appropriate when MSHA's samples indicate silica overexposures

# MSHA Silica Enforcement Program

## **Sampling**

- MSHA will collect respirable dust samples from occupations known to have a high-risk of exposures to silica. This will include:
  - MNM miners involved in overburden removal.
  - Coal miners involved in the construction of a shaft or slope.

## **Compliance Assistance**

- MSHA will work with stakeholders including mine operators, industry, and labor.
- MSHA will share additional information through stakeholder calls and to MSHA grantees.
- All information will be posted on the Agency's website.
- MSHA will distribute materials related to this initiative and provide compliance assistance through Educational Field and Small Mine Services staff.

## **Miners' Voice**

- MSHA will reinvigorate efforts to educate miners about their rights to make hazardous condition complaints and their protections against retaliation and discrimination.
- MSHA will ensure that miners are aware of their right to:
  - Accompany an MSHA inspector, obtain an immediate MSHA inspection if they believe safety or health hazards exists, identify hazardous conditions, and refuse unsafe work without fear of retaliation and discrimination
  - Compliance assistance materials will be provided through the Educational Field and Small Mine Services staff and [www.msha.gov](http://www.msha.gov)

# IG Report on MSHA & Silica

- US DOL Inspector General issued a report in 12/20, calling MSHA's current silica exposure limit is out of date
- IG notes: "When adopting 50  $\mu\text{g}/\text{m}^3$  limits, both OSHA and NIOSH warned that 50  $\mu\text{g}/\text{m}^3$  is the lowest feasible limit, not the safest"
  - *OSHA says (after evaluating the best available evidence) that it was uncertain if there was any limit that would result in zero harm to workers, but such a limit would likely be lower than 50  $\mu\text{g}/\text{m}^3$*
- IG states: "a significant body of evidence shows that lowering the silica limit would be a major factor in preventing coal workers' deaths and illnesses caused by silica exposure."
- IG recommends that MSHA adopt a lower legal exposure limit for silica in **coal mines** based on recent scientific evidence.
- IG states that respirable crystalline silica may be responsible for the recent increase in black lung disease among coal miners
  - More than three times as many coal miners were found to have black lung disease during 2010–2014 compared to 1995–1999

# Overview: OSHA Rulemaking

- Final OSHA rule: March 25, 2016 Fed Reg 606 pp long!
  - 8/18 FAQ interpretative guidance (53 FAQ):  
[https://www.osha.gov/dsg/topics/silicacrystalline/additional\\_info\\_silica.html](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](https://www.osha.gov/dsg/topics/silicacrystalline/generalindustry_info_silica.html)
  - Two new Letters of Interpretation (LOI) issued 7/25/19
  - **Spring 2022 Reg Agenda:** Occupational Exposure to Crystalline Silica (NPRM due 5/23 to address court-ordered review of whether to include medical removal protection)
    - Previous agendas had stated that OSHA was interested in information on the effectiveness of control measures not currently included for tasks and tools listed in Table 1. The agency was also interested in tasks and tools involving exposure to respirable crystalline silica that are not currently listed in Table 1
    - As of 2021, OSHA said it intended to evaluate the available information to determine if revisions to Table 1 may be appropriate but **that is not included on 2022 agenda!**

# Litigation: 2016 OSHA 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

# OSHA Silica National Emphasis Program

- On 2/4/20, OSHA launched new NEP for silica (CPL 03-00-0023) across all industries – 2% of ALL OSHA inspections must target RCS
  - [https://www.osha.gov/sites/default/files/enforcement/directives/CPL\\_03-00-023.pdf](https://www.osha.gov/sites/default/files/enforcement/directives/CPL_03-00-023.pdf) - state plan participation is mandatory
- *General Industry*: NEP contains updated NAICS list –sectors with the largest numbers of workers performing tasks with RCS overexposures
- *Construction*: Will use OSHA Construction Inspection Targeting Application (C-target), CSHOs' observations of area construction sites (i.e., knowledge gathered by CSHO “drive-bys”), and local knowledge (e.g., lists of projects from the local DOT)
  - See also CPL 02-00-155, Inspection Scheduling for Construction.
  - Appendix A also lists construction operations likely to have RCS exposures, provided as an aid for compliance officers
  - If worksite is also selected for inspection under SST initiative – inspections will be conducted concurrently (expands scope)

# Revised RCS Inspection Procedures

- OSHA issued new enforcement CPL 6/25/2020 - references FAQs extensively
  - GI employers' requirement to offer medical surveillance is now triggered by exposure above 25 ug/m<sup>3</sup> AL for 30+ days/yr rather than the PEL, effective 6/23/2020
  - Requirement for hydraulic fracking operations to implement engineering and work practice controls becomes enforceable on 6/23/2021
  - OSHA stresses that CSHOs should question employees in detail including work tasks that may generate RCS, knowledge of Exposure Control Plans, training received, knowledge of respirator use, etc. If CSHO receives inadequate responses, employer will be cited for training violations
  - OSHA confirms permissible use of operator rotation as administrative control
  - Employers must have processes in place for the retention of records for medical surveillance opinions and exposure assessments
  - OSHA notes that citations related to overexposures will generally be cited as Serious (can also be willful or repeat, or egregious)

➤ [https://www.osha.gov/sites/default/files/enforcement/directives/CPL\\_02-02-080.pdf](https://www.osha.gov/sites/default/files/enforcement/directives/CPL_02-02-080.pdf)

# OSHA Enforcement Highlights

- CSHOs are expected to:
  - Collect breathing zone samples on 1<sup>st</sup> 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.

# Employee Training: Legal Pitfalls

- 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
- **NOTE: MSHA also has HazCom standard (30 CFR Part 47) and requires training on silica to be included in New Miner Training and Task Training (for silica-exposing tasks)**

# OSHA Enforcement: Proving Silica Exposure

- OSHA will review the employer's WECP.
- Construction: 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.

# Medical Surveillance: Legal Issues

- **OSHA and MSHA are exempt from HIPAA as “public health agencies” and can review health records from M.S.**
- 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**
- BUT ... Worker/PLHCP will not disclose adverse health conditions to employer without signed waiver – possible “term & condition” of employment?
- 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.

# OSHA FAQ: Construction Highlights

- 8/18: OSHA issued 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/m<sup>3</sup> 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

# Construction 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

# Construction 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

# Construction 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

# OSHA: General Industry Guidance

- 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

# OSHA General Industry Guidance

- 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/m<sup>3</sup>, 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

# OSHA: General Industry Guidance

- 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/m<sup>3</sup> (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

# Conclusion

- MSHA rulemaking is likely to mirror OSHA requirements – but will subject operators to greater scrutiny due to 2/4 mandatory inspections and strict liability (enforcement on single sample)
  - MSHA will continue compiling operator data where available to help build rulemaking record (enforcement for data provision through Sec. 103(a) and Sec. 108(a)(1)(E) of Mine Act) – unclear whether this data will be public facing
  - Open question of whether such data can trigger citations (due to lack of statute of limitations, operator sampling and strict liability) or be used to show “pattern or practice”
  - Considerable WC and tort liability if mine operators with “knowledge” fail to protect miners from adverse health effect ... and Dept. of Labor says that this occurs above 50 ug/m<sup>3</sup>!
  - MSHA defines reportable silicosis as a 1/0 or worse Chest X-ray by B reader (even without symptoms)
  - Will workers with “long COVID” be at greater risk of silica-related illness due to compromised lungs?
- ***BE PROACTIVE AT MIXED OPERATIONS ... DON'T WAIT for MSHA to regulate or for final OSHA provisions to take effect!***

# Questions???

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