

How OSHA's New Crystalline Silica Rule Will Affect Your Operations

November 17, 2017



Josh Schultz | Law Office of Adele L. Abrams
jschultz@aabramslaw.com | (303) 228-2170



This is Why You are Here Today; The Tone Must be Set At the Top

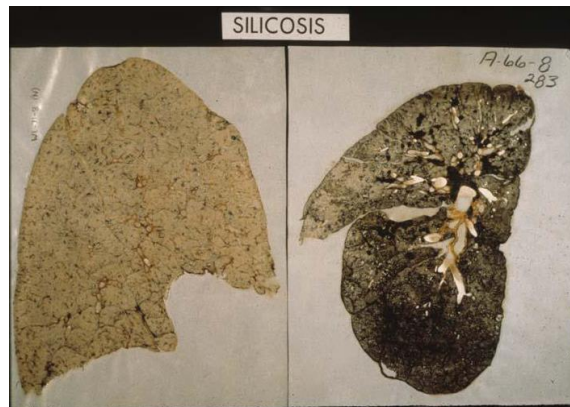
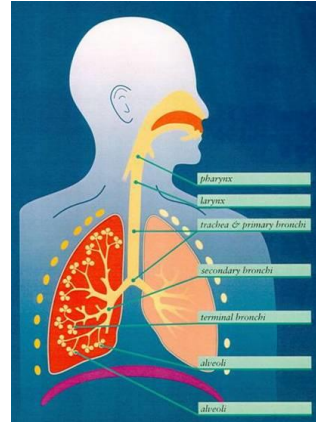


Photo: Val Vallyathan, Ph.D. NIOSH



How Are Workers Exposed?

- Respirable dust means the particle is small enough to penetrate the respiratory system (can't be expelled)
- Inhaled when cutting, sawing, grinding, drilling, and crushing the materials.
- Also present during extraction, processing, transfer for storage and transit, or use during fracking
- "Silicosis" is caused by breathing of dust containing silica
- The dust causes "fibrosis" or scar tissue formation in the lungs
- This reduces the lung's ability to extract oxygen from the air



WWW.SAFETY-LAW.COM



LAW OFFICE OF
ADELE L. ABRAMS P.C.

COLORADO | MARYLAND
WEST VIRGINIA

Final Rule Published on March 25, 2016



WWW.SAFETY-LAW.COM



LAW OFFICE OF
ADELE L. ABRAMS P.C.

COLORADO | MARYLAND
WEST VIRGINIA

The Silica Rule is Here

- Final OSHA Silica Rule Became Effective
 - **March 25, 2016**
- Construction Job Sites (29 CFR 1926.1153) must Comply by
 - **June 23, 2017** → **September 23, 2017**
- General Industry (mfg) / Maritime (29 CFR 1910.1053) must Comply by
 - **June 23, 2018**
- Will affect 2 million construction workers and 300,000 in general industry and maritime sectors



General Outline of the Standards

- (1) Scope
- (2) Definitions
- (3) Permissible exposure limit (PEL)
- (4) Exposure assessment
- (5) Regulated areas
- (6) Methods of compliance
 - (i) Engineering and work practice controls
 - (ii) Written exposure control plan
- (7) Respiratory protection
- (8) Housekeeping
- (9) Medical surveillance
- (10) Communication of silica hazards
- (11) Recordkeeping
- (12) Dates



Must Comply with Respirable Silica “Permissible Exposure Limits” (PEL)

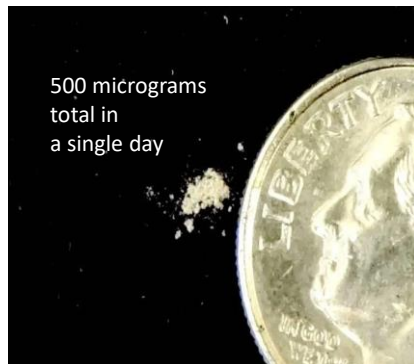
- OSHA Construction Job Sites
 - ☐ Current (from 1971) September 23, 2017
250 $\mu\text{g}/\text{m}^3$ 50 $\mu\text{g}/\text{m}^3$ (80% ↓)

- ☐ OSHA General Industry (Mfg) and Maritime
 - ☐ Current (from 1971) June 23, 2018
100 $\mu\text{g}/\text{m}^3$ 50 $\mu\text{g}/\text{m}^3$ (50%↓)

- ☐ If less than the 25 $\mu\text{g}/\text{m}^3$ Action Level (AL), then rule does not apply



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



- OSHA Permissible Exposure Limit (PEL) = 0.05 mg/m^3 TWA
- **Calculated as an 8-hour Time Weighted Average**
- $0.05 \text{ mg}/\text{m}^3 = \underline{50}$ micrograms (μg)/ m^3
- 1 m^3 of air = 1,000 liters
- Normal breathing rate (moderate work, 1 work day) = 10 m^3 (10,000 liters of air)
- $50 \text{ micrograms} \times 10 \text{ m}^3 = 500 \mu\text{g}$



OSHA's 2016 GI/Maritime Rule

- Includes provisions for:
 - Measuring worker exposures to silica if at or above 25 ug/m³ action level and workers get notification of results within 15 working days;
 - Using engineering controls (e.g., water, ventilation) and work practices to limit exposures from exceeding 50 ug/m³ over 8 hr time-weighted average workday;
 - Limiting access to areas where workers could be exposed above the PEL;
 - Using respirators when necessary after implementing engineering and administrative controls;
 - Restricting housekeeping practices that expose workers to silica if feasible alternatives are available;
 - Medical exams for highly exposed workers;
 - Worker training on work ops that result in exposure and ways to limit exposure; and
 - Recordkeeping of workers' silica exposure and medical exams.



Exposure Monitoring - GI

- Initial monitoring to assess 8 hr TWA for silica exposure of representative employees for each job classification (picking EE with highest expected exposure)
 - If initial monitoring shows below AL, employer may discontinue monitoring for those employees
 - IF most recent monitoring indicates exposure > AL but < PEL, repeat monitoring within 6 mo.
 - IF most recent monitoring indicates exposures > PEL, repeat within 3 mon.
 - Where non-initial monitoring indicates exposures < AL, repeat monitoring within 6 mo. until 2 consecutive are < AL ... then discontinue monitoring.



Exposure Monitoring – GI

- Reassess exposures whenever change in production, process, control equipment, personnel or work practices indicate new or additional exposures above AL, or if ER has reason to believe exposures above AL have occurred.
- Sample analysis must conform to Appendix A.
- Employee representative has right to observe air monitoring and must be provided with appropriate PPE at no cost.
 - Exposure records and medical surveillance must be maintained and made available in accordance with 29 CFR 1910.1020



Medical Surveillance

- ER must make medical surveillance available at no cost to EE for each worker exposed to respirable CS at or 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 resp system dysfunction and TB,
 - smoking status and history,
 - physical exam,
 - chest X-ray,
 - pulmonary function test,
 - testing for latent TB infection,
 - any other tests determined appropriate by PLHCP.



Medical Surveillance

- PLHCP must explain exam results to worker and any limitations on exposure, and provide written medical opinion to ER within 30 days that includes:
 - Date of exam
 - Statement that exam meets requirements of standard
 - Any recommended limitations on worker's use of respirators
 - IF employee provides written authorization, info on any recommended limitations to worker's RCS exposure, a statement that worker should be examined by specialist if chest X-ray is 1/0 or higher by B reader
 - Employer must ensure worker gets copy of written medical opinion within 30 days.



Employee Training

- Each covered employee must be trained, under OSHA's Haz Com Standard (29 CFR 1910.1200) on hazard of RCS containing products and have access to labels and SDSs
- Workers must also be trained on:
 - Health hazards associated with exposure to RCS
 - Specific tasks in workplace that could result in exposures
 - Specific measures ER has implemented to protect EE from exposure, including engineering and WPC, and respirators to be used
 - Contents of OSHA rule
 - Purpose and description of medical surveillance program



Written Exposure Control Plan

- Plan must include following elements:
 - Description of tasks involving exposure to respirable crystalline silica
 - Description of engineering controls, work practices, and respiratory protection used to limit worker exposure for each task – engineering and WPC must be used unless employer demonstrates not feasible.
 - Description of housekeeping measures used to limit employee exposure – dry sweeping, dry brushing, and use of compressed air not allowed (unless compressed air is part of ventilation system that captures dust cloud)
- ER must review and evaluate effectiveness of written plan at least annually and update as necessary
- Plan must be available for exam and copying by OSHA rep



Regulated Areas

- Employer must establish regulated area if worker exposures are expected to be above PEL, and demarcate area from rest of workplace so minimizes number of exposed employees
- Must post signs at all entrances with: DANGER – RESPIRABLE CRYSTALLINE SILICA. MAY CAUSE CANCER. CAUSES DAMAGE TO LUNGS. WEAR RESPIRATORY PROTECTION IN THIS AREA. AUTHORIZED PERSONNEL ONLY.
- Limit access to persons authorized by employer and required by work duties to be present, anyone who is employee’s designated representative to observe monitoring, anyone authorized by OSH Act or regs to be in area
- Each person in regulated area must be provided by employer with appropriate respirator and it must be used while in regulated area.



Questions?

Josh Schultz
(303) 228-2170
jschultz@aabramslaw.com

WWW.SAFETY-LAW.COM



LAW OFFICE OF
ADELE L. ABRAMS P.C.

COLORADO | MARYLAND
WEST VIRGINIA