

# PA Asphalt Pavement Association

Safety Committee



## Silica in Construction Best Practices

# Silica Rule – Timeline

29 CFR 1926.1153

- June 23<sup>rd</sup> 2017 -Original effective date of Silica Standard
- Sept. 23<sup>rd</sup> 2017 -Enforcement delayed until this date
- Oct 19<sup>th</sup> 2017 -Interim Enforcement guidelines issued
- Oct. 23<sup>rd</sup> 2017 -Last day of extremely limited enforcement
- Dec 22<sup>nd</sup> 2017 -DC court of Appeals upholds Silica Standard

OSHA essentially gave employers an entire extra season achieve compliance. But everything has been resolved at this point, so expect enforcement.

This presentation covers some of the Silica control methods that have been utilized by PAPA members in 2017 to comply with the standard.



**Employee On Foot**

**Cannot be exposed**

**Enclosed Cab**

**protects operator**

**Water**

**can protect operator, and employees on foot**







**Wet  
Cutting**



**Dowel  
Drill**



# Gang Drill



# Large Mills

Follow Table 1

Vacuum System

Additional  
Water Sprays,  
Surfactant







**Jackhammers**  
**Water Spray**

# Jack Hammers

**Air Line**

**Vacuum Line**

**Slurry Collection**







**Skid  
Steer**

# Leaf Blowers???



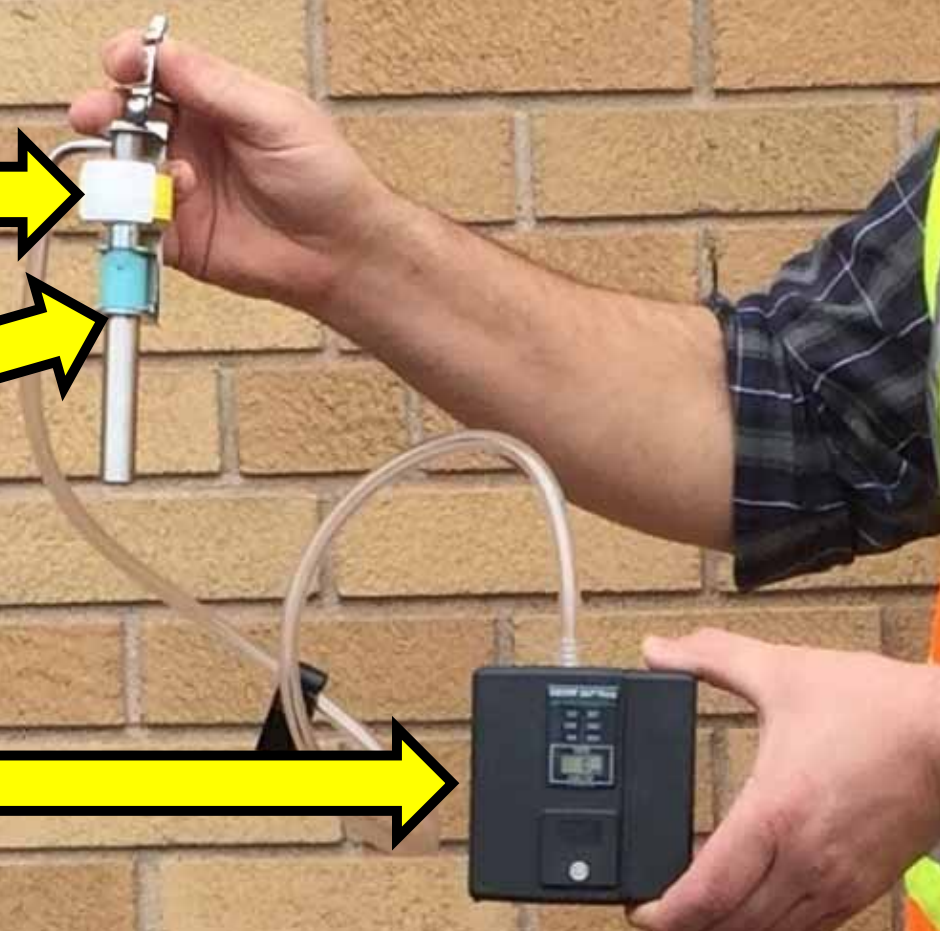


# Air Monitoring

**Sample  
Cassette**

**Cyclone  
Assembly**

**Sampling  
Pump**



# Respirators

OSHA 1910.134



**Silica's PEL**

**50  $\mu\text{g}/\text{m}^3$**



**APF of 10**

*Assigned Protection Factor*



**Allowed to work in**

**500  $\mu\text{g}/\text{m}^3$  environment**



# Respirators

OSHA 1910.134

**1) Written Program**

**2) Medical Evaluation – *before anything***

**3) Training – *Every 12 Months***

**4) Fit Test – *Every 12 Months***

**You must have all 4 if employees wear dust masks or other respirators.**

	<b>LANE CONSTRUCTION</b> Safety Management System	Doc No:	SILICA
		Initial Issue Date:	Insert Date
		Revision Date:	Initial Version
		Revision No.:	0
<b>SILICA CONTROL PROGRAM</b>		Next Review Date:	Insert Date
Preparation: Safety Mgr.	Authority: CEO	Issuing Dept.: Safety	Page: Page 1 of 1

### SITE-SPECIFIC SILICA EXPOSURE CONTROL PLAN

Location: \_\_\_\_\_ Date: \_\_\_\_\_

Work description:

#### Primary silica control options (check those options used and explain use if needed)

- ♦ Substitution controls (using procedures or products that do not create silica; must review MSD/SL)
  - Other means of demo: \_\_\_\_\_
  - Different products: \_\_\_\_\_
  - Other substitutions: \_\_\_\_\_
- ♦ Engineering controls (when using ventilation, draw air out and don't expose others to exhaust dusts)
  - Vacuuming: \_\_\_\_\_
  - Wetting: \_\_\_\_\_
  - Ventilation: \_\_\_\_\_
  - Isolation: \_\_\_\_\_
  - Other means: \_\_\_\_\_
- ♦ Administration controls (reducing exposure by work schedules, timing, or planning options)
  - Control points: \_\_\_\_\_
  - Work schedule: \_\_\_\_\_
  - Other means: \_\_\_\_\_

#### Secondary silica control options (check those options used and explain use if needed)

- ♦ Personal protective equipment
  - Half-mask respirators: \_\_\_\_\_ Cartridge type: \_\_\_\_\_ Fit tests confirmed: \_\_\_\_\_
  - Full-face respirators: \_\_\_\_\_ Cartridge type: \_\_\_\_\_ Fit tests confirmed: \_\_\_\_\_
  - Supplied air units: \_\_\_\_\_
  - Coveralls required: \_\_\_\_\_
- ♦ Hygiene and decontamination options (reducing exposures after work has stopped or during breaks)
  - Water or washing facilities on site: \_\_\_\_\_
  - Vacuuming clothing/self: \_\_\_\_\_
  - Safe work procedures and other details: \_\_\_\_\_



## Task Specific Silica Exposure Control Plan

Date: \_\_\_\_\_ Location (For routine tasks write "all locations"): \_\_\_\_\_

Competent Person (If not specified this is the HRI Foreman or Supervisor on site): \_\_\_\_\_

Task Description: \_\_\_\_\_

### Methods we are using to control Silica Exposure

Engineering (physical or mechanical things we use, modify, or change): \_\_\_\_\_

Work Practices (how we do things to minimize exposure): \_\_\_\_\_

Respirators- Is use required? Yes ☐ or No ☐. (If yes, explain the type required and when needed): \_\_\_\_\_

Cleanup (List specific housekeeping procedures required.): \_\_\_\_\_

Access- Does access to the work area need to be controlled to protect employees or individuals from Silica who are not directly involved in the task? Yes ☐ or No ☐.  
(If yes explain what is required and when.): \_\_\_\_\_

This task specific exposure control plan must be reviewed annually and used in accordance with the following sections of the HRI Safety Manual: #27 Respiratory Protection, #32 Silica.



# Medical Surveillance

- Evaluate in first 30 days, then every 3 years.
- Your Occupational Health Clinic wont understand.
- Employer must educate the health care provider.
- Includes: X-Ray, TB test, Spirometry, Check up
- Employer only receives notice that the employee was evaluated.
- Employee receives full report.
- Maintain record 30 years.

# Final Thoughts

- Keep respirator use below 30 days a year.
- Follow table 1 whenever possible.
- Keep your records, training, medical surveillance, fit testing, medical clearance, air monitoring, employee notification.
- Have a simple clear written plan that everyone understands on how silica will be controlled.
- New Products and approaches are appearing daily.