Silica in Construction
Best Practices
Silica Rule – Timeline

29 CFR 1926.1153

- June 23\textsuperscript{rd} 2017 - Original effective date of Silica Standard
- Sept. 23\textsuperscript{rd} 2017 - Enforcement delayed until this date
- Oct 19\textsuperscript{th} 2017 - Interim Enforcement guidelines issued
- Oct. 23\textsuperscript{rd} 2017 - Last day of extremely limited enforcement
- Dec 22\textsuperscript{nd} 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.
Saw and Seal
Enclosed Cab protects operator.

Employee On Foot cannot be exposed.

Water can protect operator, and employees on foot.
Gang Drill
Large Mills

Follow Table 1

Vacuum System

Additional Water Sprays, Surfactant
Jack Hammers

Air Line

Vacuum Line

Slurry Collection
Leaf Blowers???
Air Monitoring

Sample Cassette

Cyclone Assembly

Sampling Pump
Silica’s PEL
50 µg/m³ $\times$ APF of 10
= Allowed to work in
500 µg/m³ 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.
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 MSDS)
  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:
- Administrative 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
  Harmful dust: ____________________________________________________________
    Type: ____________________________________________________________
    Fit test confirmed: ____________________________________________________
  Full-face respirators: ___________________________________________________
    Type: ____________________________________________________________
    Fit test confirmed: ____________________________________________________
  Powered air units: _____________________________________________________
    Type: ____________________________________________________________
    Other means:
  Coversalls required: ____________________________________________________
- Hygiene and decontamination options (reducing exposure after work has stopped or during breaks)
  Water or washing facilities on site:
  Vacuuming clothing/self:
  Safe work procedures and other details:

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 [X]. [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 [X]. [If yes, explain what is required and when]:

This task specific, exposure control plan must be reviewed annually and used in conjunction with the following sections of the HRI Safety Manual #217 Respiratory Protection, #32 Silica.
Medical Surveillance

- Evaluate in first 30 days, then every 3 years.
- Your Occupational Health Clinic won't 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.