Silica Control Plan

Introduction

J&M Constructions written Crystalline Silica Exposure Control Plan is designed to prevent health effects from respirable crystalline silica exposures. This plan follows the requirements of the OSHA Construction Rule (29 CFR 1926.1153) as employees may be involved in activities that are covered under the rule relative to potential crystalline silica exposures.

The requirements in this plan apply to all J&M employees who are exposed to respirable crystalline silica at or above the action level or permissible exposure limit or perform construction-related tasks which are identified in Table 1 of the standard, as determined by Environmental Health and Safety.

Responsibilities

Various J&M Construction Company employees have responsibilities under this plan:

Safety Manager

- Providing program oversight and consultation to J&M employees regarding potential risks, exposure prevention, and training relating to potential crystalline silica dust exposures.
- Implementing a suitable respirable crystalline silica exposure monitoring program, or otherwise ensuring representative exposure monitoring results are available.
- Designating a "competent person" and defining/assigning appropriate responsibilities.
- Ensuring project and/or task specific Exposure Control Plans (ECPs) are developed, communicated, and effectively implemented as appropriate.
- Ensuring that all affected employees and their managers or supervisors receive the necessary training related to this plan, as well as task specific ECPs.
- Maintaining applicable records, i.e. exposure sampling, respirator fit tests, training, etc. in accordance OSHA regulations.
- Conducting a review of this plan annually and updating it as necessary.
- Conducting medical surveillance in accordance with 1910.1053 and 1926.1153.
- Maintaining records of the physical examinations, x-rays and tests.

Foreman

- Acting as the "Competent Person" as appropriate, including:
    - Inspecting job sites, materials and equipment on a regular and frequent basis
    - Identifying existing and foreseeable respirable crystalline silica hazards and taking prompt corrective action to minimize or eliminate these hazards
    - Being familiar with the Silica Exposure Control Plan;

    - Notifying the Safety Manager when problems arise, when there is a change in engineering controls and work practices, or in situations of uncontrolled releases of visible dust in occupied buildings.
- Providing affected new employees with informal on-the-job training about this plan.
- Notifying the Safety Manager about workplace conditions and potentially affected employees.
- Making information and training materials available to potentially affected employees.
- Supplying appropriate equipment and personal protective equipment (PPE) to affected employees free-of-charge.
- Requiring affected employees to wear personal protective equipment as outlined in the plan.
- Ensuring that affected employees receive medical surveillance and attend required training.

Affected Employees

- Observing the procedures and requirements outlined in this plan.
- Attending training sessions.
- Complying with medical surveillance requirements.
- Wearing respiratory protection, and other PPE, as required.
- Notifying supervisors of changes in the workplace that could cause an increase in exposures to respirable crystalline silica.

Requirements

Specified Exposure Control Methods

Potential silica-containing substrates and materials encountered include brick, cement, concrete, concrete block, drywall, grout, plasters, stucco, and various types of tile. Activities impacting these materials also vary, including cutting/sawing, demolishing/disturbing, drilling/coring, grinding, mixing/pouring, sanding, scraping, and even clean-up activities such as sweeping and vacuuming.

OSHA has published a list of typical equipment and tasks, and necessary engineering controls and respiratory protection (Table 1 of the standard). Exposure monitoring is not required when following the provisions of Table 1.

The table also includes the methods of control applicable to that tool/task that J&M employees will follow to ensure their respirable crystalline silica exposures are minimized. Integrated water delivery systems and shrouded power equipment with HEPA exhaust are the primary methods of control for all activities that disturb silica-containing materials. Table 1 is located in the silica standard (29 CFR 1926.1153).

Task		Equipment / Controls	Comments
Cement	Drilling / Coring	• HEPA vacuum • Dust removal system • Hammer drill	When preforming hammer drilling task, handheld drill with a HEPA Vacuum shall be used. Refer to Table 1 (vii)
Cement	Grinding	• 4.5” Handheld grinder • HEPA vacuum • Dust shroud	When performing grinding task • Outdoors: 4.5" handheld grinder with dust shroud, with HEPA Vacuum. No respiratory protection needed. • Indoors: 4.5” handheld grinder with dust shroud, with HEPA Vacuum. Task < 4 hours no respiratory protection needed. Task > 4 hours APF10 shall be used. Dust wall may be needed to control dust. Refer to Table 1 (xii)
Cement	Mixing / Pouring	• Drill • Bucket shroud • HEPA vacuum	When preforming mixing tasks in buckets, use a bucket shroud with a HEPA Vacuum.
Cement	Sacking / Patching	• HEPA vacuum	When performing patching, a HEPA vacuum shall be used to clean surface.
Cement	Sweeping / Cleaning	• Broom • Sweeping compound • HEPA vacuum • Water	When performing sweeping / cleaning up, sweeping compound, HEPA vacuum, or water shall be used.
Concrete	Drilling / Coring	• HEPA vacuum • Dust removal system • Hammer drill	When preforming hammer drilling , a handheld drill with a HEPA vacuum shall be used. Refer to Table 1 (vii)
Concrete	Mixing / Pouring	• Drill • Bucket shroud • HEPA vacuum	When preforming mixing tasks in buckets, use a bucket shroud with a HEPA Vacuum.

Task		Equipment / Controls	Comments
Concrete	Scarifying	• HEPA vacuum • Water	When performing scarifying task, HEPA vacuum or water shall be used.
Concrete	Grinding	• 4.5” Handheld grinder • HEPA vacuum • Dust shroud	When performing grinding task • Outdoors: 4.5" handheld grinder with dust shroud, with HEPA Vacuum. No respiratory protection needed. • Indoors: 4.5” handheld grinder with dust shroud, with HEPA Vacuum. Task < 4 hours no respiratory protection needed. Task > 4 hours APF10 shall be used. Dust wall may be needed to control dust. Refer to Table 1 (xii)
Concrete	Sweeping / Cleaning	• Broom • Sweeping compound • HEPA vacuum • Water	When performing sweeping / cleaning up task, sweeping compound, HEPA vacuum, or water shall be used.
Concrete Block	Cutting / Sawing	• Masonry saw • Water	When performing Concrete block Cutting / sawing task, a handheld masonry saw with water shall be used. Refer to Table 1 (ii)
Concrete Block	Demolishing	• HEPA air scrubber • HEPA vacuum • Water	When performing Concrete block demolition, respiratory protection, HEPA air scrubber, HEPA vacuum, and water shall be used. Temporary dust wall may be needed to control dust.
Concrete Block	Drilling / Coring	• HEPA vacuum • Dust removal system Hammer drill	When preforming hammer drilling, handheld drill with a HEPA Vacuum shall be used. Refer to Table 1 (vii)

Task		Equipment / Controls	Comments
Concrete Block	Grinding	• 4.5” Handheld grinder • HEPA vacuum • Dust shroud	When performing grinding task • Outdoors: 4.5" handheld grinder with dust shroud, with HEPA Vacuum. No respiratory protection needed. • Indoors: 4.5” handheld grinder with dust shroud, with HEPA Vacuum. Task < 4 hours no respiratory protection needed. Task > 4 hours APF10 shall be used. Dust wall may be needed to control dust. Refer to Table 1 (xii)
Concrete Block	Sacking / Patching	• HEPA vacuum	When performing patching task, a HEPA vacuum shall be used to clean surface.
Concrete Block	Scarifying	• HEPA vacuum • Water	When performing scarifying task, a HEPA vacuum or water shall be used.
Drywall	Cutting / Sawing	• Roto zip • Saw • HEPA vacuum	When performing sawing/roto zipping, a HEPA vacuum shall be used.
Drywall	Demolishing	• HEPA air scrubber • HEPA vacuum • Water	When performing drywall demolition, Respiratory protection, HEPA air scrubber, HEPA vacuum, and water shall be used.
Drywall	Drilling / Coring	• Drill • HEPA vacuum	When performing drywall drilling, a HEPA vacuum shall be used.
Drywall	Mixing / Pouring	• Drill • Bucket shroud • HEPA vacuum	When performing Durabond mixing in a bucket, use bucket shroud with a HEPA vacuum.
Drywall	Sanding	• Hand sander • Pole sander • Power sander • HEPA vacuum • Sanding sponge • Water	When performing drywall sanding, drywall power sander with dust collection, Hand sander with HEPA vacuum, Pole sander with HEPA vacuum, Sanding sponge with water shall be used.

Task		Equipment / Controls	Comments
Fiber Cement	Cutting / Sawing	• Circular saw • HEPA vacuum	When performing fiber cement cutting/sawing, outdoors only, Circular saw with dust collection shall be used. Refer to Table 1(iii)
Fiber Cement	Demolishing	• 4.5” Handheld saw • HEPA vacuum • HEPA air scrubber • Water • Dust Shroud	When performing fiber cement demolition, a 4.5" handheld saw with dust shroud, HEPA vacuum, HEPA air scrubber, water, and respiratory protection shall be used. Dust walls may be needed for dust control. Refer to Table 1(xii)
Fiber Cement	Drilling / Coring	• HEPA vacuum • Dust removal system • Hammer drill	When preforming hammer drilling task, handheld drill with a HEPA Vacuum shall be used. Refer to Table 1 (vii)
Fiber Cement	Grinding	• Grinder • HEPA vacuum • HEPA air scrubber • Water • Dust shroud	When performing fiber cement grinding, a grinder with a dust shroud, HEPA vacuum, HEPA air scrubber, water, and respiratory protection shall be used. Refer to Table 1 (xii)
Fiber Cement	Mixing / Pouring	• HEPA vacuum • Bucket shroud	When performing fiber cement mixing/pouring in buckets, use bucket shroud with a HEPA vacuum.
Fiber Cement	Sacking / Patching	• HEPA vacuum	When performing fiber cement sacking/ patching remove dust from surface with HEPA vacuum.
Grout	Demolishing	• HEPA air scrubber • HEPA vacuum • Water	When performing grout demolition, a HEPA air scrubber, HEPA vacuum, water, and respiratory protection shall be used. Dust walls may be needed. Refer to Table 1 (xii)

Task		Equipment / Controls	Comments
Grout	Cutting / Sawing	• 4.5” Handheld masonry saw • Dust shroud • HEPA vacuum	When performing grout cutting task, 4.5" handheld masonry saw with dust shroud, and HEPA vacuum shall be used. Dust walls may be needed. Respiratory protection; Task < 4 hours APF 10, Task > 4 hours APF 25. Refer to Table 1 (xi)
Grout	Mixing / Pouring	• Bucket shroud • HEPA vacuum	When performing grout mixing task in buckets, use a bucket shroud with a HEPA vacuum.
Plaster	Cutting / Sawing	• 4.5” Handheld masonry saw • Dust shroud • HEPA vacuum • Water	When performing plaster cutting/sawing, a 4.5" handheld masonry saw with a dust shroud, HEPA vacuum dust collection, water, and respiratory protection shall be used. Temporary dust walls may be needed. Refer to Table 1 (xii)
Plaster	Demolishing	• HEPA air scrubber • HEPA vacuum • Water	When performing plaster demolition, a HEPA air scrubber, HEPA vacuum, water, and respiratory protection shall be used. Temporary dust walls may be needed. Refer to Table 1 (xii)
Plaster	Drilling / Coring	• HEPA air scrubber • HEPA vacuum • Water	When performing plaster drilling/coring, a HEPA air scrubber, HEPA vacuum, water, and respiratory protection shall be used. Refer to Table 1(vii)
Plaster	Scraping	• Water	When performing plaster scraping, scrape when mud is set and still damp, or water-wet surface then scrape.

Task		Equipment / Controls	Comments
Plaster	Grinding	• 4.5” Handheld grinder • HEPA air scrubber • HEPA vacuum • Water	When preforming plaster grinding, a 4.5" grinder with a dust shroud, HEPA vacuum, HEPA air scrubber, water, and respiratory protection shall be used. Temporary dust walls may be needed. Refer to Table 1(xii)
Plaster	Mixing / Pouring	• Drill • Bucket shroud • HEPA vacuum	When performing plaster mixing/pouring task in buckets • Indoors: use bucket shroud with a vacuum dust control • Outdoors: scoop dry material carefully out of bag and place carefully in mixing bucket that has water in it. Then start mixing material in bucket slowly so as not to create dust.
Stucco / EIFS	Demolishing	• 4.5” Handheld grinder • HEPA air scrubber • HEPA vacuum • Dust shroud	When performing Stucco/EIFS demolition • Outdoors: 4.5" grinder with a dust shroud, HEPA vacuum and water. • Indoors: grinder with a dust shroud, HEPA vacuum and water. Task < 4 hours don't need respiratory protection. Task > 4 hours APF 10 respiratory protection. Refer to Table1 (xii)

Task		Equipment / Controls	Comments
Stucco / EIFS	Grinding	• 4.5" grinder • HEPA vacuum • Dust shroud	When performing Stucco/ EIFS grinding • Outdoors: 4.5" grinder with shroud, HEPA vacuum • Indoors: Task < 4 hours no respiratory protection needed, Task > 4 hours APF 10 respiratory protection is needed.
Stucco / EIFS	Mixing / Pouring	• Drill • Bucket shroud • HEPA vacuum	When performing Stucco/EIFS mixing / pouring when using buckets. • Outdoors: no controls needed. • Indoors: use a bucket shroud, and a HEPA vacuum
Stucco / EIFS	Scraping	• Water	When performing Stucco/EIFS-scraping, keep area damp with water where scraping, or respiratory protection will be used.
Tile	Cutting / Sawing	• HEPA vacuum • Water	When performing tile-cutting/sawing. • Outdoors: use a handheld masonry saw with a HEPA vacuum. • Indoors: use a handheld saw with water. Task < 4 hours no respiratory protection. Task > 4. hours APF10 respiratory protection needed. Refer to Table 1 (xii)

Task		Equipment / Controls	Comments
Tile	Drilling / Coring	• HEPA vacuum • Water	When performing Tile drilling/coring task, HEPA vacuum, and water shall be used. Refer to Table1 (vii)
Tile	Grinding	• 4.5” grinder • Dust shroud • HEPA vacuum • HEPA scrubber	When performing Tile grinding • Outdoors: 4.5" grinder with dust shroud, HEPA vacuum. • Indoors: 4.5" grinder with dust shroud, HEPA vacuum, Task < 4 hours no respiratory protection needed. Task > 4 hours need APF 10 Respiratory Protection. Refer to Table 1 (xii)
Tile	Scraping	• Water • HEPA vacuum • HEAP air scrubber	When performing tile scraping. • Outdoors: No respiratory protection needed. • Indoors: HEPA Vacuum, HEPA air scrubber, and water, or respiratory protection, shall be used.