**SILICIA EXPOSURE CONTRL PLAN**

**Prepared for:**

**(INSERT YOUR AGENCY HERE)**

Reviewed by (print name): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_

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# PURPOSE

The purpose of this document is to establish and implement a written exposure control plan that identifies tasks involving silica exposure and methods used to protect employees. **INSERT YOUR AGENCY** units are required to implement the components of the Plan to ensure compliance with the applicable state and federal regulations. The Occupational Safety and Health Administration (OSHA) standards applicable for respirable crystalline silica are:

* General Standard 29 CFR 1910.1053
* Construction Standard 29 CFR 1926.1153

# SCOPE

The Silica Exposure Control Plan applies to all **INSERT YOUR AGENCY** employees who are expected to be exposed to respirable crystalline silica and their managers.

# RESPONSIBILITIES

Department Heads

* Ensure supervisor(s) understand their responsibilities for the preparation and implementation of the Silica Exposure Control Plan within each work unit.
* Actively support this Plan within individual units.
* Review the Plan on at least an annual basis or when new equipment / procedures are introduced.

Supervisors

* Implement and ensure procedures are followed in accordance with this Plan.
* Ensure that staff is aware of this Plan, instructed on the details of implementation, and provided with equipment, and methods of control (e.g. engineering controls, work practice controls and respirators).
* Request technical assistance, and to evaluate health and safety concerns within their department.

Employees

* Comply with this Plan and any further safety recommendations provided by supervisors regarding the Silica Exposure Control Plan.
* Contact supervisor to request technical assistance.
* Employees who are potentially exposed to respirable crystalline silica while engaged in a task using equipment and machines not identified in the list above, contact **INSERT TITLE OF** **RESPONSBILE PERSON** for an exposure assessment to determine the engineering controls, work practices, and respiratory protection requirements to safely do your job.

# SPECIFIED EXPOSURE CONTROL METHODS

For each employee working with materials containing crystalline silica and engaged in a task using the equipment and machines listed below, the employer shall fully and properly implement the engineering controls, work practices, and respiratory protection specified.

Operations that produce respirable silica shall not be performed without the controls and respiratory protection specified below.

All equipment and control measures will be inspected before first daily use. Deficiencies or concerns shall be brought to the attention of **INSERT TITLE OR NAME OF RESPONSBILE PERSON**. Equipment that does adequately control airborne silica shall not be used.

 ***DELETE EQUIPMENT / OPERATIONS YOUR DEPARMENT DOES NOT USE***

**Table 1— Exposure Controls When Working With Materials Containing Crystalline Silica**

| **Equipment/task** | **Engineering and work practice control methods** | **Required respiratory protection and minimum assigned protection factor (APF)** |
| --- | --- | --- |
| **≤ 4 hours/shift** | **>4 hours/shift** |
| (i) Stationary masonry saws | Use saw equipped with integrated water delivery system that continuously feeds water to the bladeOperate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions | None | None |
| (ii) Handheld power saws (any blade diameter) | Use saw equipped with integrated water delivery system that continuously feeds water to the bladeOperate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions: |  |  |
| When used outdoors | None | APF 10 |
| When used indoors or in an enclosed area | APF 10 | APF 10 |
| (iii) Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less) | For tasks performed outdoors only:Use saw equipped with commercially available dust collection systemOperate and maintain tool in accordance with manufacturer's instructions to minimize dust emissionsDust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency | None | None |
| (iv) Walk-behind saws | Use saw equipped with integrated water delivery system that continuously feeds water to the bladeOperate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions: |  |  |
| When used outdoors | None | None |
| When used indoors or in an enclosed area | APF 10 | APF 10 |
| (v) Drivable saws | For tasks performed outdoors only: |  |  |
| Use saw equipped with integrated water delivery system that continuously feeds water to the bladeOperate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions | None | None |
| (vi) Rig-mounted core saws or drills | Use tool equipped with integrated water delivery system that supplies water to cutting surfaceOperate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions | None | None |
| (vii) Handheld and stand-mounted drills (including impact and rotary hammer drills) | Use drill equipped with commercially available shroud or cowling with dust collection systemOperate and maintain tool in accordance with manufacturer's instructions to minimize dust emissionsDust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanismUse a HEPA-filtered vacuum when cleaning holes | None | None |
| (viii) Dowel drilling rigs for concrete | For tasks performed outdoors only: |  |  |
| Use shroud around drill bit with a dust collection system. Dust collector must have a filter with 99% or greater efficiency and a filter-cleaning mechanism | APF 10 | APF 10 |
| (ix) Vehicle-mounted drilling rigs for rock and concrete | Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector | None | None |
| OR |  |  |
| Operate from within an enclosed cab and use water for dust suppression on drill bit | None | None |
| (x) Jackhammers and handheld powered chipping tools | Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact: |  |  |
| When used outdoors | None | APF 10 |
| When used indoors or in an enclosed area | APF 10 | APF 10 |
| OR |  |  |
| Use tool equipped with commercially available shroud and dust collection system |  |  |
| Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions |  |  |
| Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism: |  |  |
| -When used outdoors | None | APF 10 |
| When used indoors or in an enclosed area | APF 10 | APF 10 |
| (xi) Handheld grinders for mortar removal (*i.e.*, tuckpointing) | Use grinder equipped with commercially available shroud and dust collection system | APF 10 | APF 25 |
| Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions |  |  |
| Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism |  |  |
| (xii) Handheld grinders for uses other than mortar removal | For tasks performed outdoors only:Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface | None | None |
| Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions |  |  |
| OR |  |  |
| Use grinder equipped with commercially available shroud and dust collection system |  |  |
| Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions |  |  |
| Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism: |  |  |
| When used outdoors | None | None |
| When used indoors or in an enclosed area | None | APF 10 |
| (xiii) Walk-behind milling machines and floor grinders | Use machine equipped with integrated water delivery system that continuously feeds water to the cutting surface | None | None |
| Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions |  |  |
| OR |  |  |
| Use machine equipped with dust collection system recommended by the manufacturer | None | None |
| Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions |  |  |
| Dust collector must provide the air flow recommended by the manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism |  |  |
| When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes |  |  |
| (xiv) Small drivable milling machines (less than half-lane) | Use a machine equipped with supplemental water sprays designed to suppress dust. Water must be combined with a surfactant | None | None |
| Operate and maintain machine to minimize dust emissions |  |  |
| (xv) Large drivable milling machines (half-lane and larger) | For cuts of any depth on asphalt only:Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust | None | None |
| Operate and maintain machine to minimize dust emissions |  |  |
| For cuts of four inches in depth or less on any substrate: |  |  |
| Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust | None | None |
| Operate and maintain machine to minimize dust emissions |  |  |
| OR |  |  |
| Use a machine equipped with supplemental water spray designed to suppress dust. Water must be combined with a surfactant | None | None |
| Operate and maintain machine to minimize dust emissions |  |  |
| (xvi) Crushing machines | Use equipment designed to deliver water spray or mist for dust suppression at crusher and other points where dust is generated (e.g., hoppers, conveyers, sieves/sizing or vibrating components, and discharge points) | None | None |
| Operate and maintain machine in accordance with manufacturer's instructions to minimize dust emissions |  |  |
| Use a ventilated booth that provides fresh, climate-controlled air to the operator, or a remote control station |  |  |
| (xvii) Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials (*e.g.*, hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials | Operate equipment from within an enclosed cab | None | None |
| When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions | None | None |
| (xviii) Heavy equipment and utility vehicles for tasks such as grading and excavating but not including: Demolishing, abrading, or fracturing silica-containing materials | Apply water and/or dust suppressants as necessary to minimize dust emissions | None | None |
| OR |  |  |
| When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab | None | None |

**HOUSEKEEPING**

The employer shall not allow, nor shall the employee perform dry sweeping or dry brushing where such activity could contribute to employee exposure to respirable crystalline silica. Employees shall use either or both methods below as needed to minimize airborne silica dust:

* Wet sweeping / mopping
* HEPA-filtered vacuuming

The employer shall not allow, nor the employee use compressed air to clean clothing or surfaces where such activity could contribute to employee exposure to respirable crystalline silica.

# MEDICAL SURVEILLANCE

Employees required to use a respirator for exposure to respirable silica for 30 or more days (any part of a day) per year will be provided a medical evaluation and other required medical services at no cost to the employee. The medical evaluation will include medical and work history, a physical examination, chest x-ray, pulmonary function test and other tests as recommended by a qualified healthcare professional.

If a respirator is required to be worn by an employee, that employee must be medically cleared, trained, and fit-tested in accordance with the employer’s Respiratory Protection Program.

# TRAINING

Employees with a potential for occupational exposure to respirable silica will be trained on the OSHA Silica Standards, **INSERT AGENCY’S NAME** policies and procedures, and the proper use of equipment and processes that can create an exposure to respirable silica. Training will be provided before the worker’s first potential for exposure and repeated periodically. Training will be provided during normal work hours and be conducted by a qualified instructor.