



RESPIRABLE CRYSTALLINE SILICA EXPOSURE CONTROL PLAN

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A. INTRODUCTION AND SCOPE

Introduction

(Insert Name) hereby adopts this Written Respirable Crystalline Silica Exposure Control Plan for all employees and personnel under the supervision and responsibility of this organization who are potentially exposed to airborne respirable crystalline silica particles. This may include contractors, sub-contractors, consultants and temporary workers as defined by the Department of Labor (DOL) and the Occupational Safety and Health Administration (OSHA) if applicable.

The OSHA regulations require the company to limit worker exposures to respirable crystalline silica and to take other steps to protect workers where concentration of silica is at or could exceed the regulatory limits and action levels as defined by the Final Rule on Silica. This regulation provides flexible alternatives. Construction employers can use a control method listed in Table 1 of the construction standard or measure workers' exposure to silica and independently decide which dust controls work best to limit exposures to the permissible exposure limits (PELs) in their workplaces.

Regardless of which exposure control method is used, all construction employers covered by these regulations are required to:

- Establish and implement a written exposure control plan that identifies tasks that involve exposure and methods used to protect workers, including procedures to restrict access to work areas where high exposures may occur.
- Designate a competent person to implement the written exposure control plan.
- Restrict housekeeping practices that expose workers to silica where feasible alternatives are available.

- Offer medical exams—including chest X-rays and lung function tests—every three years for workers who are required by the standard to wear a respirator for 30 or more days per year.
- Train workers on work operations that result in silica exposure and ways to limit exposure.
- Keep records of workers' silica exposure and medical exams
- Employers who choose the specified exposure controls option must fully and properly implement protections for the tasks or equipment listed in Table 1 of the standard. Employers who fully and properly implement the controls in Table 1 do not have to assess employees' silica exposure levels or keep employee exposures at or below the permissible exposure limit (PEL).

Employers who follow alternative exposure control methods must:

- Determine the levels of respirable crystalline silica that employees are exposed to;
- Limit employee exposures to a PEL of 50 micrograms per cubic meter of air (50 $\mu\text{g}/\text{m}^3$) as an 8-hour time-weighted average (TWA);
- Use engineering and work practice controls, to the extent feasible, to limit employee exposures to the PEL, and supplement the controls with respiratory protection when necessary.
- Keep records of employee exposure to respirable crystalline silica.

(Insert Name) intends to comply with 29 CFR 1926.1153 Table 1 requirements and controls as part of this company's written silica exposure control plan.

Scope

This plan identifies the following activities that potentially have an exposure to airborne respirable crystalline silica. They include, but are not limited to, the following:



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- Drilling concrete, masonry block or gypsum board to install approved anchoring mechanisms used for mounting and securing electrical equipment in a safe and secure location.
- Using Core-Drilling machines to create access and pathways for electrical raceways and cabling as permitted by the National Electrical Code, NFPA-70.
- Using handheld, stationary or walk behind saws used for the cutting asphalt, concrete, masonry block, gypsum board and other material containing any silica or quartz product that could generate airborne respirable crystalline silica particles.
- Mixing, setting and finishing of any concrete mixture containing respirable crystalline silica material.
- Excavations in areas that contain natural concentrations of quartz that exceed or could potentially exceed the permissible exposure limits as promulgated by OSHA regulations.
- Installation, preparation, finishing and demolition operations where sheet rock is found including tapping, mudding, and texturizing work is performed.
- Using Jack-hammers or other impact tools used for chipping or demolition of concrete or other masonry material.
- All clean-up and housekeeping activities used in conjunction or as a result of the above activities listed above.

Workers and personnel in areas where these activities are or could be present shall be familiar with the proper safe work practices, engineering controls and precautions associated with respirable crystalline silica.

B. REGULATIONS

Occupational Safety and Health Administration (OSHA) 29 CFR 1926.1153: Respirable Crystalline Silica (Construction Industry) and 29 CFR 1910.1053: Respirable Crystalline Silica (General Industry), contain regulatory requirements specific to respirable crystalline silica. This Written Exposure Control Plan is developed in accordance with the requirements in 29 CFR 1926.1153(g).

Additional regulations applicable to this written program are (OSHA) 29 CFR 1910.134, Respiratory Protection Standard and (OSHA) 29 CFR 1910.1200, the Hazard Communication Standard. The respiratory program may include but is not limited to medical evaluations, fit testing and the proper selection and use of respirators. The hazard communication program must include training, labeling and access to safety data sheets (SDS) for associated hazards.

C. TRAINING

(_____Insert Name_____) will train all employees who will be working in areas where respirable crystalline silica could be present and a possible exposure could occur. This training will include methods to identify possible silica containing material, the means to mitigate exposure and the proper personal protective equipment that must be used when a possible exposure could exist.

(_____Insert Name_____) will also train employees on the requirements found in 29 CFR 1926.1153 Table 1 and the activities, hazards and control methods listed to be in compliance with the regulation.



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D. COMPETENT PERSON

Competent person - means an individual who is capable of identifying existing and foreseeable respirable crystalline silica hazards in the workplace and who has authorization to take prompt corrective measures to eliminate or minimize them. The competent person must have the knowledge and ability necessary to implement the written exposure control plan required under the standard.

(Insert Name) shall identify a competent person responsible for the inspection and management of this written silica exposure control program and identifying any possible activities where an exposure could occur. The Competent Person,

(Insert Name) will be responsible for oversight and implementation of the company's written silica exposure control plan and shall be trained in the regulations found in (OSHA) 29 CFR 1926.1153 standards. The competent person will also be trained in the inspection process of work areas and equipment that is or could be related to airborne respirable crystalline silica and associated activities.

E. MEDICAL SURVEILLANCE REQUIREMENTS

(Insert Name) shall institute medical surveillance for any employees required by this Plan to wear a respirator 30 or more days per year. By definition, if a respirator is worn for any portion of a day, it counts as 1 day for the purpose of this 30- day provision. Initial medical surveillance consists of medical and work history with emphasis on: past, present, and anticipated exposure to silica, dust and other agents affecting the respiratory system.

This medical surveillance program will follow the guidelines set for in (OSHA) 29 CFR 1926.1153 and all applicable regulations. All subcontractors, consultants and temporary staffing agencies will be responsible for implementing a medical surveillance program for their own employees.

F. EXPOSURE ASSESSMENT

(Insert Name) will comply with and implement all controls required by 1926.1153 Table 1- Exposure Control Methods for Selected Construction Operations or as an alternative conduct an initial determination in accordance with 29 CFR 1926.1153(d)(2).

- The competent person will make an initial assessment of exposure to determine the appropriate Table 1 control method to protect employees and others in the affected area.
- The competent person will inspect the work area and ensure all appropriate personal protective equipment is provided and is in good working order.
- The competent person will determine the appropriate respiratory protection that is required and ensure all workers are properly provided with and trained in the use and care of all respiratory equipment that is used.
- If engineering and control methods are used in silica control and abatement processes, the competent person will ensure these measures offer satisfactory protection for all employees and others that could be in the affected area and that any protection used is maintained in good and proper working order.
- If conditions warrant or alternative measures are employed, the competent person will engage an Industrial Hygienist (IH) to review, inspect and implement proper control measures necessary for



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compliance.

G. ENGINEERING CONTROLS AND WORK METHODS

If silica exposures exceed or are expected to exceed action levels and/or PELs, engineering and work practice control methods will be implemented to reduce all exposures to nonhazardous levels below the PEL.

Engineering Controls include, but are not limited to, the following:

- Water Delivery Systems - Integrated water delivery systems are required for several types of equipment in Table 1. Integrated water systems must be developed specifically for the type of tool in use so they will apply water at the appropriate dust emission points based on tool configuration and do not interfere with other tool components or safety devices. Water systems designed for blade cooling also suppress dust and meet the requirements for Table 1. Any slurry generated when using water to suppress dust should be cleaned up to limit secondary exposure to silica dust when the slurry dries following procedures described in the employer's Written Exposure Control Plan.
- Dust Collection Systems - Commercially available dust collection systems are required for several types of equipment in Table 1. This equipment may be integral to the tool or provided as an external option to comply with the provisions of this engineering control. This requirement ensures that employers use equipment that is designed to effectively capture dust generated by the tool being used and does not introduce new hazards, such as obstructing or interfering with safety mechanisms.
- Enclosed Cabs or Booths - Enclosed cabs or booths are specified for rock drilling, crushers, and heavy equipment and not generally used in

electrical construction.

- If administrative controls are used to limit exposure, the competent person will establish and implement a job rotation schedule that includes employee identification as well as the duration and exposure levels at each job or work station where each affected employee is located.

Work practice controls involve performing a task in a way that reduces the likelihood or levels of exposure. Work practice controls are often used with engineering controls to protect employees. Employees must know the appropriate work practices for maximizing the effectiveness of controls and minimizing exposures.

Examples of work practice controls include:

- Using water spray nozzles at the point of dust generation as a wet-control method and minimize exposure
- Making sure all hoses for water and dust collection systems are free from any obstructions that could affect proper operation
- Wetting down or using approved material to minimize dust during sweeping and/or clean-up operations
- Scheduling work when no other employees will be exposed to any hazardous dust

Reducing exposures through the primary use of engineering and work practice controls is also known as the hierarchy of controls.

H. PERSONAL PROTECTIVE EQUIPMENT

(Insert Name) will provide Employees, at no cost to the individual, protective work clothing and equipment including cotton coveralls or similar full-body clothing, gloves, hats, shoes or disposable shoe coverlets, face shields, vented goggles, or other



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appropriate PPE where necessary.

Personal protective equipment for the control of respirable crystalline silica includes, but not limited to, the following:

- Respirators – See 29 CFR 1910.134 for requirements of a written respirator program
- Garments or other coveralls that can be worn to prevent contamination of a worker's personal garments and prevent cross contamination
- Gloves
- Eye and Face Protection

Ensure that PPE:

- Is properly evaluated for the exposure and is appropriate for the environment
- Is stored and maintained properly and in good working order
- You have been provided with training and proper instructions on the use and limitation of the PPE that is provided

I. HOUSEKEEPING

(Insert Name) has developed this written plan and procedures to minimize generating airborne respirable crystalline silica. This program generally prohibits dry sweeping, dry brushing or using compressed air when respirable silica particles are present. This program also includes a plan for when other approved methods may not be available. This includes the following:

- Restricting housekeeping practices that expose employees to respirable crystalline silica where feasible alternatives are available
- What methods the employer will permit and prohibit to minimize airborne silica
- Instructions for compliance with manufacturer's instructions and accepted safe work practices used

during the cleanup process

- Not allow dry brushing or dry sweeping, unless methods such as wet sweeping and HEPA-filtered vacuuming are not feasible
- Proper individual hygiene when working with and around respirable crystalline silica
- When and where a respirator required or is there any specific precautions when using a specified housekeeping procedure.
- Not allow cleaning of surfaces or clothing with compressed air, unless the compressed air is used together with a ventilation system that effectively captures the dust cloud or no other cleaning method is feasible.

Description of Procedures to restrict access in detail:

- The company intends to restrict access to other employees and non-employee in areas where exposure levels could exceed permissible limits and where a respirator may be required by using warning signs, barricades and other notification procedures.
- This information will be communicated during job briefings, safety talks and host/employer construction meetings and with all company employees, general contractor employees, sub-contractor employees and temporary workers.
- This procedure may include the scheduling of work when other employees and non-employees would not be in the affected area(s).

Review and Evaluate Effectiveness Annually

This written plan and the procedures found within should be reviewed at least annually and when there is any change in procedure, methods or exposures that could affect employees and non-employees.

A Site-specific Silica Written Control plan should be developed for each job location and a copy of that



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plan should be available in the field office.



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Date of Initial Review_____

Signature of Competent Person_____

Signature of Safety Director_____

Signature of Company Executive_____

See OSHA's Small Entity Compliance Guide for Respirable Crystalline Silica for more information:
<https://www.osha.gov/Publications/OSHA39>