

**Crystalline Silica Dust Exposure Reduction Plan**

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# **Crystalline Silica Dust Exposure Reduction Plan**

# **Purpose**

This plan was created to provide our employees with procedures and policies to properly protect them against the effects of crystalline silica dust exposure. Crystalline silica is a common material found in materials such as sand, stone, concrete, brick, and mortar and exposures may occur during common construction tasks performed by the *city, county or landfill* such as using masonry saws, grinders, drills, jackhammers and handheld powered chipping tools. Exposures may also occur during earth-moving operations, mining and road maintenance.

**Leadership and Accountability**The **Name or Position** shall be responsible for ensuring that employees are trained on **Name of the Organization’s** crystalline silica dust exposure plan (CSDEP), equipped and following the plan’s procedures. The plan administrator shall oversee the site administrators to ensure the CSDEP is followed and effectively prevents overexposure.

The plan and site administrators shall be responsible for developing and updating Job Hazard Analysis for Crystalline Silica Dust Exposure forms for each task that may generate silica dust.

**Requirements**The ***Name of the Organization*** has determined that based on available resources that it is the administrator’s responsibility to limit the employees’ exposure using the guidelines set in **Table 1** of 1926.1153 Respirable Crystalline Silica.

A site administrator shall issue a permit that identifies the task being performed, including the location, exposure potential and employees performing the task using the Job Hazard Analysis for Crystalline Silica Dust Exposure forms. The permit shall cover the allowable time for employees to perform the task if there is a limit set in **Table 1**.

If exposures are for more than the allowable limits set in Table 1 per day, or anytime indoors, employees would need to wear a respirator with an assigned protection factor (APF) of at least a 10, such as a NIOSH-certified facepiece respirator that covers the nose and mouth, also known as a dust mask. Only employees medically cleared and fit-tested under the city’s ***Respiratory Protection Plan*** will be allowed to wear the dust mask and work beyond the 4-hour limit.

Expired permits shall be retained for two years at ***Name of Office/Location***.

# **Outside Contractors**

The on-site administrator shall inform all contractors of the elements of this program. Contractors must also make a copy of their silica program available to the on-site administrator. Contractors who fail to follow the program requirements will be asked to leave the premises. Contractors with an insufficient program will not be allowed to begin work until their program meets or exceeds this plan’s requirements.

**Crystalline Silica Exposure Control Permit**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Site Administrator’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Persons Performing Task:**

**Location of Task Being Performed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**PPE Used:** Check those that apply

**□ Eye Protection □ Face Protection**

**□ Hearing Protection □ Foot Protection**

**□ Hand Protection □ Respirator- Type \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Work to be done:**

*Remove cement around potholes.*

**Equipment to be used:**

*Jackhammer with water delivery system and vacuum*

**Table 1—Specified Exposure Control Methods When Working with Materials Containing Crystalline Silica**

|  |  |  |
| --- | --- | --- |
| **Jackhammers and Handheld Chipping tools** |  **Water delivery system < 4 hours**  |  **Water delivery system > 4 hours**  |
|  | **No respirator required** | **APF 10 respirator required** |

**Traffic Control Measures (If applicable):**

**Time Started: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Permit Terminates: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** Permits shall not exceed 4 hours in an 8-hour workday unless the employee(s) are using respirators.

**Site Administrator’s Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Job Hazard Analysis for Crystalline Silica Dust Exposure**

**Department:** *Secondary Roads*

**Task Involving possible Silica Exposure:**
*Saw concrete/cement*

**Equipment used for task:**
*Water supplied cement saw*

**Personal Protection Equipment**:
*Safety glasses, face shield, ear muffs rated 33db NR, safety-toed boots, N95 respirators as needed.*

**Operators:** *Bob Brown – Medically cleared for respirator use*

 *Joe Smith - Medically cleared for respirator use*

**Process:**

*The foreman shall issue a Crystalline Silica Exposure Control Permit before the work begins.*

*Bob and Joe are cleared to saw cement/concrete using the water supplied saw for a maximum time of 4 hours per 8-hour day.*

*If that maximum time has to be exceeded, both Bob and Joe will wear N95 respirators as allowed in the County’s respiratory protection plan.*

*At the completion of the task, the Crystalline Silica Exposure Control Permit shall be terminated by the foreman and filed in the Engineer’s office.*

**Table 1- Specified Exposure Control Methods When Working with Materials Containing Crystalline Silica**

|  |  |  |
| --- | --- | --- |
| **Jackhammers and Handheld Chipping tools** |  **Water delivery system < 4 hours**  |  **Water delivery system > 4 hours**  |
|  | **No respirator required** | **APF 10 respirator required** |

**Job Hazard Analysis for Crystalline Silica Dust Exposure**

**Department:** *Landfill*

**Task Involving possible Silica Exposure:** *Stockpiling/Spreading Sand for Cell Drainage Layer*

**Equipment used for task:**

*End Loader/Excavator/Haul Truck/Dozer. Machines shall be equipped with positive pressure cabs equipped with cabin filtration.*

*Motor vehicle (i.e., pickup, SUV, etc.): When entering loading and spreading work areas, air vents shall be closed. If using air conditioning, it shall be set to “Max (internal) A/C” while in a work area that could generate dust.*

**Personal Protection Equipment**:
*Safety glasses, hearing protection (as needed), safety-toed boots.*

**Project Personnel:** *Bob Brown, Sally Smith; Joe Green, Linda Jones*

**Process:** *Personnel are cleared to load and spread sand using the above equipment. No personnel are to be in the work areas where dust is present if not in the above equipment unless specifically authorized by the foreman/on-site administrator under a separate JHA and permit.*

*Equipment shall be washed down following the completion of each workday to remove accumulations of silicate dust.*

*After completing the task, the Crystalline Silica Exposure Control Permit shall be terminated by the foreman and filed in the Director’s office.*

**Table 1- Specified Exposure Control Methods When Working with Materials Containing Crystalline Silica**

|  |  |  |
| --- | --- | --- |
| **(xviii) Heavy equipment and utility vehicles** | Apply water and/or dust suppressants as necessary to minimize dust emissions | When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab |
|  | **No respirator required regardless of time** | **No respirator required regardless of time** |