

Silica Exposure Control Plan

Job/Task: Drilling
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Prepared by: Archie Varga and Stacy Gallant

Equipment/Materials required: Powered hand tools, drill, drill bits, vacuum with Hepa filter
PPE Required: Eye Protection, Steel Toed Boots, Hard Hat, Respirator P100

Pre-Job Planning

Employees are to conduct a Pre-job Hazard Assessment prior to starting work in order to identify actual and potential hazards that are present and the controls to be applied in order to complete the work safely.

If the work scope identifies the presence of silica, the customer or site owner shall coordinate air quality monitoring in order to determine the levels of silica that are present at the worksite. Continued monitoring will be utilized if occupational exposure limits are exceeded based on the test results.

Employees required to work in an area where silica dust will be generated must take precautions to protect their health and safety from inhaling the dust particulates, and entering their eyes. Engineered, administrative, or PPE controls will be applied to protect the workers as well as members of the public to prevent silica dust exposure.

Job Site Procedures

1. This Safe Work Practice is specific to the task of using a powered hand drill in order to drill into a location that is known to contain silica and will generate silica dust from the operation.
2. Employees will identify and restrict access to the work area with barricades, caution tape, signs, or spotters to ensure that other workers or public do not enter the work area. Keep in mind that scheduling work at low traffic times may be required depending on the location and public access.
3. Set up a vacuum/shop-vac with a HEPA filter in the work area to immediately clean up and capture any silica dust that is generated from the drilling. Ensure the vacuum is placed in close proximity to the work space in order to allow for ease of use.
4. Prior to drilling into the location, employees must conduct a pre-use inspection of their hand tools to confirm they are in good condition and the proper drill bit is being used for the material to be drilled. Mark out the drill locations and prepare to start the work.
5. Employees will wet the surface prior to drilling and continue to apply water to the area while drilling is in progress.

6. Prepare and place water spray bottles with enough water to provide adequate and consistent spray to the drill location. Two employees will be required to complete the work when using spray bottles, one to spray the water and other to carry out the drilling.
7. Employees will start drilling the hole with a smaller bit and gradually increase the bit size as to reduce the amount material being removed at one time, vacuuming between size adjustments.
8. Employees will don dust proof safety glasses and a half mask respirator with a P100 filter to provide added protection from inhaling any silica dust that may become airborne.
9. If drilling overhead or using a ladder to reach the drill location, ensure to stay clear of the area directly below to prevent silica dust from falling into your eyes and breathing zone.
10. Once the drill depth has been reached, use the vacuum to clear away the dust and contain it as best as possible. Use caution around the vacuum as the power cord or extension cable can be a tripping hazard. Continue drilling using water and the vacuum to complete all the drill locations in the area.
11. Upon completion use the vacuum to clean up the work space and any undetected dust in the area. Employees are to ensure they wear their respirator and eye protection when emptying the vacuum and disposing of the dust in a designated bin.
12. Remove all tools and equipment from the work area to maintain housekeeping. Remove the barriers around the space to complete the job.