



Purpose

Respirable crystalline silica (RCS) presents significant health hazards, including silicosis, lung cancer, and kidney disease. Crystalline silica is present in many construction materials, including sand, gravel, concrete and mortar. [WAC 296-840](#) went into effect in April 2018, addressing RCS. Employers engaged in construction work were given until October 1, 2018 to fully comply with the requirements of the new law.

WSDOT is committed to ensuring a safe workplace for our employees as well as a partnering with Contractors to communicate these changes to all workers and working together to maintain a safe and healthy work environment.

Guidance

Employers must protect employees from being exposed to RCS dust above the permissible exposure limit. As a first step, employers should consider implementing engineering controls to remove or isolate silica dust at the point where it is generated. To be considered engineering controls, the dust suppression must be a commercially available product or mechanism and integrated into the work activity, *no onsite improvisation is allowed*. Work practice controls should be considered next, such as doing tasks in ways that reduce exposure. This could include wet sweeping to reduce the amount of dust present or scheduling dusty tasks when other employees are not around. Personal protective equipment (PPE), such as respirators should be used last, if engineering and work practice controls are not sufficient.

[WAC 296-840](#) requires employers to have a written exposure control plan and to have a competent person to make frequent job site inspections to implement the plan. Procedures should be in place to minimize the number of employees exposed to RCS dust, including exposures generated by other employers.

Region Construction Engineers are encouraged to consult with their region safety and health department for competent person training of their employees and help reviewing or updating the written exposure control plan.

Standard Specification 1-07.1 requires Contractors to submit all safety plans to WSDOT as Type 1 Working Drawings. Project engineering field staff should familiarize themselves with the elements of the contractor's written exposure control plan so they can both minimize their exposure to RCS and adjust to the site conditions.



Implementation Plan

Competent person training is available to WSDOT project office staff through their Region Safety and Health offices and available on LMS. Silica exposure control plan forms are available at the link listed in the Resources section.

Requirements to use dry sweeping or brushing methods or compressed air to clean surfaces are being removed from the Specifications and will be replaced with performance specifications prescribing the desired level of cleanliness. This will allow Contractors to determine the best method to achieve the desired product while minimizing exposure to RCS.

Resources

Respirable Crystalline Silica Exposure Control Plan (attached)

[Custom Silica Exposure Control Plan](#)

OSHA Information, Training Materials and Factsheets:

<https://www.osha.gov/dsg/topics/silicacrystalline/construction.html>

[WAC 296-840](#)

Contact Information

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Maintenance, Operations, Construction, Work Group (May be left blank if included in attached PASP)

Operation

Date

Location

Competent Person (Must always include)

Employees (May be left blank if included in attached PASP)

Affected Employees

Identify Sources that Could Generate Dust

- | | | |
|-----------------------------------|--|---|
| <input type="checkbox"/> Asphalt | <input type="checkbox"/> Concrete block | <input type="checkbox"/> Mortar |
| <input type="checkbox"/> Brick | <input type="checkbox"/> Drywall | <input type="checkbox"/> Rock (granite, sandstone, limestone) |
| <input type="checkbox"/> Cement | <input type="checkbox"/> Fiber cement products | <input type="checkbox"/> Sand |
| <input type="checkbox"/> Concrete | <input type="checkbox"/> Grout | <input type="checkbox"/> Soil |
| | | <input type="checkbox"/> Other |

Work Tasks Being Performed

- | | | |
|---|---|---|
| <input type="checkbox"/> Abrasive blasting | <input type="checkbox"/> Grinding | <input type="checkbox"/> Sanding |
| <input type="checkbox"/> Bushhammering | <input type="checkbox"/> Jackhammering | <input type="checkbox"/> Scrabbling |
| <input type="checkbox"/> Cutting/sawing | <input type="checkbox"/> Milling | <input type="checkbox"/> Scarifying |
| <input type="checkbox"/> Demolishing/disturbing | <input type="checkbox"/> Mixing/pouring | <input type="checkbox"/> Scraping |
| <input type="checkbox"/> Drilling/coring | <input type="checkbox"/> Polishing | <input type="checkbox"/> Sieving |
| <input type="checkbox"/> Earthmoving | <input type="checkbox"/> Sacking/patching | <input type="checkbox"/> Sweeping/cleaning up |
| | | <input type="checkbox"/> Other |

Dust Controls & PPE

- | | | | |
|--|---|---|---|
| <input type="checkbox"/> Equipped with HEPA vacuum | <input type="checkbox"/> Equipped with water flow rate: _____ | <input type="checkbox"/> Operating from closed, filtered cab (with HEPA filter) | <input type="checkbox"/> Respiratory protection used: _____ |
|--|---|---|---|

Restricted Access, Training, Medical Surveillance

How will the work area restrict access to minimize the number of employees exposed to silica:

Have all employees completed required silica training?
 Yes
 No (if no, untrained employees are not allowed to work in areas with possible silica exposure)

Are all employees aware/understand the medical surveillance requirements for silica work?
 Yes
 No (if no, untrained employees are not allowed to work in areas with possible silica exposure)

Housekeeping Measures

- | | | |
|---------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> Wet sweeping | <input type="checkbox"/> HEPA vacuum | Dry sweeping and the use of compressed air to clean surfaces/clothing containing silica is not allowed. |
|---------------------------------------|--------------------------------------|---|