

TABLE 1: Specified Exposure Control Methods 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
(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

The next Table 1 entry is **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**. These include activities such as fracturing or abrading rock and soil; demolishing concrete or masonry structures; and loading, dumping, and removing demolition debris.

The operator must be in an enclosed cab. Modern heavy equipment already comes equipped with enclosed, filtered cabs that meet the requirements of Table 1. See the section on [Enclosed Cabs](#) for more information on how to make sure that the cab meets the requirements of the rule. When other employees are engaged in the task, water, dust suppressants, or both must also be applied as necessary to minimize dust emissions.

Respiratory protection is not required for heavy equipment operators and laborers who assist heavy equipment operators during demolition activities involving silica-containing materials or activities where silica-containing materials are abraded or fractured, regardless of the duration of the task.

NOTE: When the operator exits the enclosed cab and is no longer actively performing the task, the operator is considered to have stopped the task. However, if other abrading, fracturing, or demolition work is performed by other heavy equipment and utility vehicles in the area while an operator is outside the cab, that operator is considered to be an employee “engaged in the task” and must be protected by the application of water and/or dust suppressants.



Excavator equipped with an enclosed cab and hoe-ram demolishing a concrete wall.

Photo courtesy of CPWR.