STATE OF CALIFORNIA EDMUND G. BROWN, JR. *Governor*

DEPARTMENT OF INDUSTRIAL RELATIONS
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Juliann Sum, Chief

January 2, 2018

James Petri
Safety Manager, CHST, STS-C
Matrix Environmental
2330 Cherry Industrial Circle
Long Beach CA, 90805

Dear Mr. Petri,

I write in response to your letter received on January 31, 2018 regarding protection of employees exposed to silica. In your letter you asked the following:

> "Under the Silica Final rule, if I am working under full containment with negative pressure, and all my employees are wearing respirators and Tyvek suites [sic]/full PPE for asbestos abatement procedures. Do I still need to utilize the tools specified in Table 1of the final rule?
>
> Example: 4 inch grinder with integrated vacuum attachment, and a HEPA vacuum with a self-cleaning mechanism to cut threw [sic] plaster, or since we are working in containment under more stringent engineering, administrative controls and full PPE can I complete this task using a standard grinder?"

Title 8 section 1532.3 contains the requirements to protect employees from respirable crystalline silica during construction work. The regulation allows employers the option of using the control methods in Table 1 of subsection (c) for certain tasks, or, alternatively, to assess and limit exposures in accordance with subsection (d).

Table 1 contains specific engineering controls, work practices, and respiratory protection for the different tasks listed.

Although less prescriptive than Table 1, subsection (d) requires a hierarchy of controls. Employers must use engineering and work practice controls to reduce employee silica exposures to below the PEL. Respiratory protection is additionally required if feasible engineering and work practice controls are not able to reduce employee exposures below the permissible exposure limit (PEL).

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Subchapter 4. Construction Safety Orders
Article 4. Dusts, Fumes, Mists, Vapors, and Gases
§ 1532.3. Occupational Exposures to Respirable Crystalline Silica.
* * * * *
  (c) Specified exposure control methods. (1) For each employee engaged in a
  task identified on Table 1, the employer shall fully and properly implement
  the engineering controls, work practices, and respiratory protection specified
  for the task on Table 1, unless the employer assesses and limits the exposure
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of the employee to respirable crystalline silica in accordance with subsection (d).

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(d) Alternative exposure control methods. For tasks not listed in Table 1, or where the employer does not fully and properly implement the engineering controls, work practices, and respiratory protection described in Table 1:

(1) Permissible exposure limit (PEL). The employer shall ensure that no employee is exposed to an airborne concentration of respirable crystalline silica in excess of 50 µg/m3, calculated as an 8-hour TWA.

(2) Exposure assessment.

(A) General. The employer shall assess the exposure of each employee who is or may reasonably be expected to be exposed to respirable crystalline silica at or above the action level in accordance with either the performance option in subsection (d)(2)(B) or the scheduled monitoring option in subsection (d)(2)(C.

(B) Performance option. The employer shall assess the 8-hour TWA exposure for each employee on the basis of any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures to respirable crystalline silica.

(C) Scheduled monitoring option.

* * * * *

(3) Methods of compliance.

(A) Engineering and work practice controls. The employer shall use engineering and work practice controls to reduce and maintain employee exposure to respirable crystalline silica to or below the PEL, unless the employer can demonstrate that such controls are not feasible. Wherever such feasible engineering and work practice controls are not sufficient to reduce employee exposure to or below the PEL, the employer shall nonetheless use them to reduce employee exposure to the lowest feasible level and shall supplement them with the use of respiratory protection that complies with the requirements of subsection (e).

* * * * *

Therefore, if an employer decides to follow subsection (d) in lieu of Table 1 to cut plaster with a grinder, the employer must use feasible engineering and work practice controls, such as a grinder equipped with an appropriate shroud and dust collection system, to ensure that employee exposures do not exceed the PEL. The employer may use other effective engineering and work practice controls in place of a shroud and dust collection system to ensure that employee exposures do not exceed the PEL, but cannot use respiratory protection in lieu of feasible engineering and work practice controls.

Please note that where two regulated substances such as crystalline silica and asbestos are disturbed simultaneously, the employer must follow the more protective regulation. For example, if a material being cut contains both asbestos and silica, high-speed abrasive disc saws (i.e.

grinders) must always be equipped with and use HEPA filtered exhaust air, regardless of exposures, in accordance with section 1529 Asbestos.

Thank you for your interest in occupational safety and health. Please feel free to contact me if you have any further questions.

Sincerely,

Eric Berg

Eric Berg
Deputy Chief
Research and Standards