

State of California
Department of Industrial Relations
Occupational Safety and Health Standards Board

Petition File No. 597

Board Staff Evaluation
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State of California
Gavin Newsom, Governor

INTRODUCTION

Petition File No. 597 (Petition) was received from R. Terrazas, MD MPH, President, Western Occupational and Environmental Medical Association (WOEMA, Petitioner), on March 13, 2023. The Petition requests the Occupational Safety and Health Standards Board (Board) adopt an emergency temporary standard (ETS) regarding silica dust in the artificial stone industry.

REQUESTED ACTION

The Petitioner requests the Board adopt an ETS to control the hazards of airborne silica dust in shops that fabricate engineered, or artificial, stone.

PETITIONER'S ASSERTIONS

The Petitioner asserts:

- Engineered stone slabs appear to pose increased risk of silicosis because they contain a higher percentage of silica compared with other types of stone such as granite, quartz or marble.
- The binders in the engineered materials may be toxic as well as the silica.
- The current general industry safety order (title 8, section 5204) for silica is insufficiently protective in the setting of engineered stone fabrication.
- According to recent publications, regulatory agencies and public health officials have had difficulty in preventing unsafe workplace exposures to engineered stone.
- Controlling silica dust levels in fabrication shops has proved to be technically difficult.
- Current requirements for the use of dust masks or other respirators are grossly deficient to protect against clouds of fine airborne dust.
- Few workers are receiving mandated medical surveillance exams.
- Employers encounter only negligible punitive or other financial incentives to comply with silica standards.
- The emerging epidemic of advanced silicosis cases is a public health problem of great urgency because irreversible end-stage lung disease has now been shown to develop in fabrication workers after only a few years of poorly controlled occupational exposure.

DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (Cal/OSHA) REPORT

Cal/OSHA's report, dated May 17, 2023, recommends the Board grant the Petition and request Cal/OSHA initiate emergency rulemaking as requested by the Petitioner. In support of its recommendation, Cal/OSHA reports that a special emphasis program (SEP) focused on the fabricated stone industry found widespread non-compliance, which Cal/OSHA claims is the result of market forces, unique hazards of the product with limited effectiveness of exposure control options, "inability or unwillingness of employers...to install well-recognized engineering and work practice controls" and vulnerability of the workforce.

To ensure the effectiveness of the ETS, Cal/OSHA recommends several additional provisions be included to strengthen each subsection of section 5204. Instead of applying to workplaces with greater than 50%-65% silica content in engineered stone as requested by the Petitioner, Cal/OSHA proposes the ETS apply to workplaces with a silica content above 1%. Instead of requiring exposure assessments as contained in the existing regulation, Cal/OSHA proposes to require controls, protective equipment, regulated areas and annual medical exams regardless of employee airborne silica exposure levels. Finally, if after the ETS is in force, substantial compliance in the industry is not demonstrated, including zero new cases of silicosis, Cal/OSHA proposes to initiate discussions to ban engineered stone from California workplaces.

STAFF EVALUATION

The National Institute for Occupational Safety and Health (NIOSH) website states that "millions of U.S. workers are exposed to respirable crystalline silica in a variety of industries...including construction, mining...stone countertop fabrication...and other manufacturing settings." The website also states that "Silicosis, an irreversible but preventable lung disease, is caused by inhalation of respirable silica dust. Work exposures to silica dust also cause other serious diseases, including lung cancer."¹

According to a safety bulletin published by the California Department of Public Health, Occupational Health Branch (CDPH), and referenced by the Petitioner, two countertop fabricators working on engineered stone, aged 36 and 38, died from severe silicosis. Since those deaths, CDPH has learned of "dozens of other workers in California who are suffering from severe or 'accelerated' silicosis from their work in [the] industry."²

¹ <https://www.cdc.gov/niosh/topics/silica/default.html>. "Crystalline Silica." Accessed 5/9/2023.

² <https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/OHB/Pages/SilicaStoneFabricators.aspx>. "Workers in California are getting silicosis – a deadly disease – doing stone countertop fabrication." Accessed 5/5/2023.

The Petitioner also cited a bulletin published by the Los Angeles County Department of Health and Safety, which points out that the patients with silicosis are “predominantly Mexican and Latin American immigrant men... [who] work as stone cutters in the San Fernando Valley.” According to the bulletin, “a proper diagnosis [of silicosis] requires a chest x-ray, CAT scan, often a lung biopsy and a thorough evaluation to exclude—or identify—other coexisting conditions.”³

Petitioner requests the following elements in an ETS that will apply specifically to workplaces using engineered stone with a high silica content:

- 1) Regulated areas to limit employee access to areas where artificial stone is fabricated.
- 2) Prohibition on fabrication without the use of water to suppress dust.
- 3) Requirement for airline respirators or power air-purifying respirators (PAPRs) for all work involving fabrication of artificial stone.
- 4) Documentation indicating that the employer has sent a letter to Cal/OSHA reporting the use of a respirable crystalline silica (RCS), as required by section 5203 “Carcinogen Report of Use Requirements.”
- 5) Strengthened penalty structure so that violations of the ETS result in citations classified as serious.
- 6) Updated guidance prepared by Cal/OSHA with information on CT exams and other diagnostic studies.
- 7) Reporting requirement for physicians or other licensed health care professionals to inform Cal/OSHA of any silicosis diagnoses of moderate severity or worse.

Relevant Standards

Federal Standards

29 CFR 1910.1053 – Respirable crystalline silica

The regulation was promulgated in March of 2016 and applies to all RCS exposures with some exceptions. Because the regulation was more protective than California’s equivalent regulations at the time, California was required to adopt the same requirements.

³ <https://dhs.lacounty.gov/olive-view-ucla-silicosis/>. “Vigilant Olive View-UCLA Medical Center Physicians Identify Rare Occupational Lung Disease.” Accessed 5/9/2023.

California Standards

Title 8, section 334 “Classification of Violations and Definitions” provides that any violation of a standard respecting the use of a carcinogen is classified as a serious violation with some exceptions.

Title 8, section 5145 “Media for Allaying Dusts, Fumes, Mists, Vapors, and Gases” requires:

When practicable, use shall be made of water, oil or chemicals in such noninjurious quantities, and with such frequency, as may be necessary to suppress and allay harmful dusts, fumes, mists, vapors, and gases wherever the provisions of 5141, 5143 and 5144 are impracticable or inadequate to prevent harmful exposure. The use of allaying media may also be supplementary to, or may be substituted for, other provisions of these orders when such allaying media alone would prevent harmful exposure.

“Harmful exposure” is defined in section 5140 as:

Harmful exposure. An exposure to dusts, fumes, mists, vapors, or gases:

- (a) In excess of any permissible limit prescribed by [s]ection 5155; or
- (b) Of such a nature by inhalation as to result in, or have a probability to result in, injury, illness, disease, impairment, or loss of function.

Title 8, section 5204 “Occupational Exposures to Respirable Crystalline Silica” contains the same requirements as the corresponding federal regulation, including an action level of 25 micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$) as an 8-hour time-weighted average (TWA) and a permissible exposure limit (PEL) of 50 $\mu\text{g}/\text{m}^3$ as an 8-hour TWA. The standard also contains provisions for regulated areas, engineering and work practice controls, and respiratory protection where feasible engineering and work practice controls do not control exposures to below the PEL. Non-mandatory medical surveillance guidelines are provided in Appendix B to section 5204.

Title 8, section 5208 “Asbestos” in relevant part prohibits employers from providing filtering facepiece respirators to employees for protection against asbestos fibers. The section explicitly requires an employer to provide a PAPR upon request to an employee who chooses the respirator as long as the respirator provides adequate protection. The requirement for “airline respirators or PAPRs” in section 5208 is dependent upon airborne asbestos concentrations, which is typical for airborne contaminants regulated by Cal/OSHA.

Title 8, section 14003 “Physician” in article 1 “Reporting of Occupational Injury or Illness” under requirements for the Division of Labor Standards and Research requires that physicians report occupational injuries and illnesses to the injured employee and the employer’s insurer.

Consensus and Other Standards

Cal/OSHA, CDPH and various other organizations publish information on working with silica in the stone countertop fabrication industry in several languages. The information can be useful for complying with the general industry or construction RCS regulations, informing workers about the hazards of RCS and controlling employee exposures to RCS^{4,5,6}. Information for PLHCPs working with employees to diagnose silica related illness is also available.^{7,8}

Staff Analysis

On October 17, 2016, section 5204 “Occupational Exposures to Respirable Crystalline Silica” became effective for general industry processes with the potential for exposure to RCS to exceed 25 µg/m³ as an 8-hour TWA under any foreseeable conditions. The regulation is based upon an equivalent Federal OSHA standard, promulgated to reduce “significant risk [of exposure to RCS] to the extent that it is technologically and economically feasible to do so.” Although federal OSHA considers the level of risk remaining at the new PEL to be significant, it determines that “a PEL of 50 µg/m³ is appropriate because it is the lowest level feasible for all affected industries.”⁹

The Petitioner requests an ETS that will apply specifically to employers using engineered stone. Although the ETS would only apply to a limited number of employers, many of its proposed provisions are already contained in the existing section 5204.

1) Scope - Workplaces using engineered stone with a high silica content (greater than 50% to 65%, in order to assure a margin of safety) should be subject to this more stringent standard.

The scope of existing section 5204 reads as follows:

(a) Scope and application.

⁴ https://www.dir.ca.gov/dosh/dosh_publications/Engineered-stone-counters.pdf. Safety & Health Hazard Alert. “Engineered Stone Countertop Fabrication”. Accessed 5/10/2023.

⁵ <https://www.cdph.ca.gov/Programs/CCDC/DEOD/DCDC/Pages/SilicaStoneFabricators.aspx>. “Silica Safety Resources for Stone Fabricators”. Accessed 5/10/2023.

⁶ <https://www.silica-safe.org/>. CPWR – Center for Construction Research and Training. “Work Safely with Silica”. Accessed 5/10/2023.

⁷ <https://www.cdc.gov/niosh/topics/silica/medical.html>. Medical Monitoring. Accessed 5/10/2023.

⁸ <https://www.silica-safe.org/know-the-hazard/body/PhysiciansAlert-Silica.2018.pdf>. CPWR – Center for Construction Research and Training. “Physicians’ Alert: Occupational Silicosis and Silica-Related Illnesses among Construction Workers”. Accessed 5/10/2023.

⁹ <https://www.osha.gov/laws-regs/federalregister/2016-03-25-1>. “Occupational Exposure to Respirable Crystalline Silica.” Accessed 5/5/2023.

(1) This section applies to all occupational exposures to respirable crystalline silica, except:

(A) Construction work covered under Section 1532.3;

(B) Agricultural operations covered under Section 3436; and

(C) Exposures that result from the processing of sorptive clays.

(2) This section does not apply where the employer has objective data demonstrating that employee exposure to respirable crystalline silica will remain below 25 micrograms per cubic meter of air (25 $\mu\text{g}/\text{m}^3$) as an 8-hour time-weighted average (TWA) under any foreseeable conditions.

(3) This section does not apply if the employer complies with Section 1532.3 and:

(A) The task performed is indistinguishable from a construction task listed on Table 1 in subsection (c) of Section 1532.3; and

(B) The task will not be performed regularly in the same environment and conditions.

Objective data is defined in the standard as:

Objective Data means information, such as air monitoring data from industry-wide surveys or calculations based on the composition of a substance, demonstrating employee exposure to respirable crystalline silica associated with a particular product or material or a specific process, task, or activity. The data must reflect workplace conditions closely resembling or with a higher exposure potential than the processes, types of material, control methods, work practices, and environmental conditions in the employer's current operations.

As stated, section 5204 applies to all occupational exposure to RCS with limited exceptions for construction and construction-like work, agriculture, sorptive clay work and where objective data shows that exposures to RCS will remain below 25 $\mu\text{g}/\text{m}^3$ as an 8-hour TWA under any foreseeable conditions. The Petitioner intends for the proposed ETS to apply only to workplaces using engineered stone with a silica content greater than 50%-65%, which would be a small subset of the workplaces covered by section 5204.

2) Regulated areas to limit employee access to areas where artificial stone is fabricated.

Existing section 5204 provides the following requirements for a regulated area:

Under subsection (b), a regulated area is defined as:

Regulated Area means an area, demarcated by the employer, where an employee's exposure to airborne concentrations of respirable crystalline silica exceeds, or can reasonably be expected to exceed, the PEL.

Subsection (e) provides the requirements for maintaining a regulated area:

(e) Regulated areas.

(1) Establishment. The employer shall establish a regulated area wherever an employee's exposure to airborne concentrations of respirable crystalline silica is, or can reasonably be expected to be, in excess of the PEL.

(2) Demarcation.

(A) The employer shall demarcate regulated areas from the rest of the workplace in a manner that minimizes the number of employees exposed to respirable crystalline silica within the regulated area.

(B) The employer shall post signs at all entrances to regulated areas that bear the legend specified in subsection (j)(2).

(3) Access. The employer shall limit access to regulated areas to:

(A) Persons authorized by the employer and required by work duties to be present in the regulated area;

(B) Any person entering such an area as a designated representative of employees for the purpose of exercising the right to observe monitoring procedures under subsection (d); and

(C) Any person authorized by the Occupational Safety and Health Act or regulations issued under it to be in a regulated area.

(4) Provision of respirators. The employer shall provide each employee and the employee's designated representative entering a regulated area with an appropriate respirator in accordance with subsection (g) and shall require each employee and the employee's designated representative to use the respirator while in a regulated area.

Absent any information to the contrary, the regulated area requested by the Petitioner would be identical to the regulated area required by the existing regulation. The Petitioner's regulated area however is triggered by the presence of any work involved in the fabrication of engineered stone, regardless of the actual amount of RCS in the air or the presence of effective engineering or administrative controls. Anyone entering the regulated area would be required to wear a respirator and be included in the employer's respiratory protection program. Section 5204 requires a regulated area everywhere an employee's exposure to RCS exceeds or is reasonably expected to exceed the PEL.

In effect, both regulations would likely protect workers equally, depending on how the requirement for the regulated area is interpreted by employers and enforced by Cal/OSHA. The potential increase in regulated areas would not necessarily better protect employees who are already protected by effective engineering and administrative controls. Requiring all employees to participate in a respiratory protection program (RPP) could provide additional protection to some employees if executed properly, but an overly broad expansion of respiratory protection does not come without potential consequences such as additional stress on the heart and lungs, feelings of anxiety and claustrophobia.^{10,11} Further, employee compliance with an RPP can be significantly impacted by perception (whether or not PPE is needed), use training, and comfort.¹²

For the employers in the industry complying with the existing regulation, the requested ETS will impose additional burdens (e.g. unnecessarily increasing regulated area space, the number of employees included in a RPP, etc.) without necessarily producing better safety and health outcomes. For the majority of employers, who are not currently following the existing regulation, according to the May 15, 2023 Cal/OSHA report, the requested ETS will remove the need to evaluate the workplace to determine which controls and protective equipment are necessary. However, without understanding why some employers are complying with the existing regulation and some are not, Board staff cautions that additional regulation may not result in increased compliance.

¹⁰ <https://www.ehs.washington.edu/workplace/respiratory-protection>. Respiratory Protection. "Medical clearance is required before you can wear a respirator. Wearing respirators can put additional stress on the heart and lungs, and may cause some to feel anxiety or claustrophobia." Accessed 6/26/2023.

¹¹

https://www.osha.gov/publications/respiratory_protection_bulletin_2011#:~:text=Breathing%20through%20a%20respirator%20is,full%20facepiece%20or%20hooded%20respirator. OSHA Bulletin: General Respiratory Protection Guidance for Employers and Workers. Accessed 6/26/2023.

¹² <https://www.infectioncontroltoday.com/view/addressing-challenges-ppe-non-compliance>. Infection Control Today. Accessed 6/25/2023.

Staff notes that if the Board decides to grant the Petition and pursue an ETS, Cal/OSHA would likely need to use a different term than “regulated area” to avoid confusion with the existing definition which incorporates RCS exposure levels into its definition.

3) Prohibition on fabrication without the use of water to suppress dust.

Although section 5204 prohibits dry sweeping, brushing and the use of compressed air where such activities can contribute to employee exposure to RCS, the ETS would prohibit all fabrication activities that do not use water to suppress dust. Instead of listing each step of the fabrication process where dust suppression is required or prohibiting specific activities, section 5204 requires that employee exposures be controlled to the extent feasible, potentially allowing dry fabrication for those processes which cannot feasibly be done using wet methods or local exhaust ventilation (LEV). Regardless of the feasibility of the control method, however, section 5204 still requires employers to protect employees from exposures above the PEL.

Instead of relying upon employers to determine which controls are needed and for which processes, the requested ETS would require wet methods for all fabrication processes regardless of the level of RCS produced by the process. Dust control would also be limited only to wet methods and not LEV. When properly implemented, section 5204 can provide the same protections as the requested ETS, but with less burden on the employer by leaving the decision making regarding dust control methods in the employer’s hands.

Title 8, Construction Safety Orders, section 1530.1 “Control of Employee Exposures from Dust-Generating Operations Conducted on Concrete or Masonry Materials” is a performance standard that requires “a dust reduction system [to] be applied to effectively reduce airborne particulate” whenever power tools or equipment are used on concrete or masonry materials, which includes manufactured stone. A corresponding, though less-detailed, standard exists in the General Industry Safety Orders as section 5145, which is described in the California Standards section above. Cal/OSHA could explore updates to section 5145 with regard to adding similar protections of section 1530.1 as they relate to the fabrication industry.

4) Requirement for airline respirators or power air-purifying respirators for all work involving fabrication of artificial stone.

The Petition aims to require stronger respiratory protection than is currently provided for in section 5204, referring to section 5208(g), which provides requirements for respiratory protection when working with asbestos in general industry. As shown below, the asbestos standard prohibits the provision of filtering facepiece respirators for employee protection (see 5208(g)(3)(A)) and more explicitly allows an employee to choose a powered air-purifying respirator (see 5208(g)(2)(B)), but otherwise has similar requirements to the existing RCS standard, section 5204, and other regulations requiring respiratory protection.

5208(g)(2) Respirator program.

(A) The employer must implement a respirator program in accordance with section 5144(b) through (d) (except (d)(1)(C)), and (f) through (m).

(B) The employer must provide a tight-fitting powered, air-purifying respirator instead of any negative pressure respirator selected according to subsection (g)(3) when:

1. An employee chooses to use this type of respirator; and
2. This respirator provides adequate protection to the employee.

(C) No employee must be assigned to tasks requiring the use of respirators if, based on their most recent examination, an examining physician determines that the employee will be unable to function normally using a respirator, or that the safety or health of the employee or other employees will be impaired by the use of a respirator. Such employees must be assigned to another job or given the opportunity to transfer to a different position, the duties of which they can perform. If such a transfer position is available, the position must be with the same employer, in the same geographical area, and with the same seniority, status, and rate of pay the employee had just prior to such transfer.

(3) Respirator selection.

(A) The employer shall select, and provide to employees, the appropriate respirators specified in Section 5144(d)(3)(A)1; however, employers must not select or use filtering facepiece respirators for protection against asbestos fibers.

(B) Employers shall provide HEPA filters for powered and non-powered air-purifying respirators.

The respiratory protection requirements in section 5208 are similar to those of section 5204, which are shown below:

5204(g) Respiratory protection.

(1) General. Where respiratory protection is required by this section, the employer must provide each employee an appropriate respirator that complies with the requirements of this subsection and Section 5144. Respiratory protection is required:

(A) Where exposures exceed the PEL during periods necessary to install or implement feasible engineering and work practice controls;

(B) Where exposures exceed the PEL during tasks, such as certain maintenance and repair tasks, for which engineering and work practice controls are not feasible;

(C) During tasks for which an employer has implemented all feasible engineering and work practice controls and such controls are not sufficient to reduce exposures to or below the PEL; and

(D) During periods when the employee is in a regulated area.

(2) Respiratory protection program. Where respirator use is required by this section, the employer shall institute a respiratory protection program in accordance with Section 5144.

Promulgating the requested ETS could require employers to provide employees fabricating engineered stone with respiratory protection in some situations where the existing regulation requires none or more protective respiratory protection than workplace conditions require in others. For example, in a workplace with sufficient engineering controls in place to reduce employee exposure to RCS to below the PEL, the requested ETS would still require employees to use respiratory protection. Or, in a workplace where after all feasible engineering and administrative controls have been implemented, employees are still exposed at twice the PEL, the existing regulation would require a respirator with an assigned protection factor (APF) of 10 or more to be used. The requested ETS would require the employer to place the employee in a PAPR, which has an APF ranging from 25 to 1,000 or a supplied air respirator, which has an APF ranging from 10 to 1,000). Engineering and administrative controls should be implemented fully before relying upon respirators and other personal protective equipment, as is required in the existing regulation.

5) Documentation indicating that the employer has sent a letter to Cal/OSHA reporting the use of a respirable crystalline silica (RCS), as required by section 5203 "Carcinogen Report of Use Requirements."

Petitioner's request to require documentation of compliance with section 5203 already exists for RCS. Section 5203 contains the following, which includes both a requirement to report the use of RCS (and other carcinogens, see section 5203(a) and (d)) as well as a requirement to post the letter in the workplace for 30 days after notifying Cal/OSHA (see section 5203(g)):

(a) Scope. All employers who use a regulated carcinogen shall report that use in writing to the Chief as required by this section. Note: Asbestos has additional report of use and asbestos-related work registration requirements in sections 1529, 5208, and 8358.

(b) Definitions.

Chief means the Chief of the Division of Occupational Safety and Health, or designee.

Emergency means any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which results in an unexpected and potentially hazardous release of a regulated carcinogen.

Regulated carcinogen means a recognized cancer causing substance, compound, mixture, or product regulated by sections 1529, 1532, 1532.2, 1535, 8358, 8359 or Article 110, sections 5200-5220.

Use means any use by an employer that could potentially result in employee exposure to a regulated carcinogen. Use includes, but is not limited to: manufacturing, sale, transfer, storage, disposal, handling, research utilization, and transportation of a regulated carcinogen.

(c) Use that requires reporting.

(1) Regulated area. For all regulated carcinogens that specify a requirement for the employer to establish a regulated area, use of a regulated carcinogen within such a regulated area shall be reported.

(2) For regulated carcinogens that do not have a regulated area requirement, use of the regulated carcinogen shall be reported in the following circumstances:

(A) For chromium (VI) regulated by sections 1532.2 or 8358, reporting is required where an employee's exposure to airborne concentrations of chromium (VI) exceeds, or can reasonably be expected to exceed, the PEL.

(B) For all other regulated carcinogens that do not have a regulated area requirement, reporting is required for any use of a concentration greater than or equal to 0.1% by weight or volume and which results in exposure or potential exposure to employees.

(d) Report of use.

(1) Initial use of a regulated carcinogen shall be reported in writing to the Chief within 15 calendar days of that initial use.

(2) Any changes in the reported information shall be similarly reported in writing within 15 calendar days of such change.

(3) All written reports shall be mailed to:

OCCUPATIONAL CARCINOGEN CONTROL UNIT

DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

POST OFFICE BOX 420603

SAN FRANCISCO, CALIFORNIA 94142

(4) The report shall include:

(A) The name of the employer and address of each workplace where a regulated carcinogen is in use;

(B) An identifying description of where the use of a regulated carcinogen is located in the workplace;

(C) A brief description of each process or operation which creates employee exposure to the regulated carcinogen, including the estimated number of employees engaged in each process or operation; and

(D) The names and addresses of any collective bargaining units or other representatives of the affected employees.

(e) Temporary worksite notification. Employers with temporary worksites need only provide an initial report and changes as specified in subsection (c) for the employer's permanent workplace location. Such employers shall also provide notification of the time and date of commencement of work, the approximate duration of the work, the location, the type of business, and the kind of work for each temporary worksite at least 24 hours prior to the commencement of each job when feasible, to the nearest district office of the Division of Occupational Safety and Health.

(f) Emergency. Any emergency, as defined in subsection (b), shall be reported as follows:

(1) A report of the occurrence of an emergency and the facts obtainable at that time shall be made within 24 hours to the nearest district office of the Division of Occupational Safety and Health.

(2) A written report shall be filed with the Chief within 15 calendar days after the occurrence of an emergency. The written report shall include:

(A) A description of the operation or process involved including its location, the amount of regulated carcinogen released, and the duration of the emergency.

(B) A statement of the known or estimated extent of employee exposure to the regulated carcinogen and area of contamination.

(C) An analysis of the circumstance that led up to the emergency.

(D) A description of the measures taken or to be taken, with specific dates, to prevent further similar emergencies from reoccurring.

(g) Posting. A copy of the applicable written report of use, temporary worksite notification, and emergency report shall be posted where the regulated carcinogen is in use or other appropriate location where the posting is conspicuous to affected employees. The reports shall be posted until the use no longer takes place at the worksite with the exception of emergency reports which shall be posted for at least 30 days after the written report was filed with the Chief.

6) Strengthened penalty structure so that violations of the ETS result in citations classified as serious.

A serious violation in relation to the use of carcinogens is defined in section 334 "Classification of Violations and Definitions" as:

Section 334(c)(4) For Carcinogens - a serious violation is a violation of any standard, order, or special order respecting the use of a carcinogen, as defined in 8 California Code of Regulations 330(f). However, the violation shall not be considered serious if the employer can demonstrate that he did not, and could not with the exercise of reasonable diligence, know of the presence of the violation or he can demonstrate that the Division should have determined that the violation was minor and resulted in no substantial health hazard.

According to the existing regulation, any violation of section 5204, or other sections covering the use of a carcinogen, can result in a serious citation. As described in the Petition, the requested ETS appears similar to the existing requirements.

7) Updated guidance prepared by Cal/OSHA with information on CT exams and other diagnostic studies.

Appendix B to section 5204 "Medical Surveillance Guidelines (Non-Mandatory)" provides medical information and recommendations to PLHCPs to aid in compliance with the medical surveillance provisions of section 5204. Board staff supports a request to Cal/OSHA to consider updating the appendix with new information that could be helpful in detecting silicosis earlier in exposed workers.

8) Reporting requirement for physicians or other licensed health care professionals to inform Cal/OSHA of any silicosis diagnoses of moderate severity or worse.

As shown below, section 342 "Reporting Work-Connected Fatalities and Serious Injuries" requires employers and fire and police agencies to report work-related injuries or illnesses to Cal/OSHA within eight hours of employer knowledge with some exceptions:

342(a) Every employer shall report immediately to the Division of Occupational Safety and Health any serious injury or illness, or death, of an employee occurring in a place of employment or in connection with any employment. The report shall be made by the telephone or through a specified online mechanism established by the Division for this purpose. Until the division has made such a mechanism available, the report may be made by telephone or email.

Immediately means as soon as practically possible but not longer than 8 hours after the employer knows or with diligent inquiry would have known of the death or serious injury or illness. If the employer can demonstrate that exigent circumstances exist, the time frame for the report may be made no longer than 24 hours after the incident.

Serious injury or illness is defined in section 330(h), Title 8, California Administrative Code.

(b) Whenever a state, county, or local fire or police agency is called to an accident involving an employee covered by this part in which a serious injury, or illness, or death occurs, the nearest office of the Division of Occupational Safety and Health shall be notified by telephone immediately by the responding agency.

(c) When making such report, the reporting party shall include the following information, if available:

- (1) Time and date of accident.
- (2) Employer's name, address and telephone number.
- (3) Name and job title, or badge number of person reporting the accident.
- (4) Address of site of accident or event.
- (5) Name of person to contact at site of accident.
- (6) Name and address of injured employee(s).
- (7) Nature of injury.
- (8) Location where injured employee(s) was (were) moved to.
- (9) List and identity of other law enforcement agencies present at the site of accident.
- (10) Description of accident and whether the accident scene or instrumentality has been altered.

(d) The reporting in (a) and (b) above, is in addition to any other reports required by law and may be made by any person authorized by the employers, state, county, or local agencies to make such reports.

Chapter 7 “Division of Labor Statistics and Research”, subchapter 1 “Occupational Injury or Illness Reports and Records”, article 1 “Reporting of Occupational Injury or Illness”, section 14003, “Physician” requires physicians to report occupational injuries and illnesses to the injured employee and the employer’s insurer. Section 14002 “Insurer”, subsection (b), states “the insurer shall transmit the doctor's report filed in accordance with Section 14003 to the Division within five days of receipt.” Although the Chapter 7 regulations apply only to physicians, and not other licensed healthcare practitioners, the regulations are maintained by Cal/OSHA and can be updated internally without the Board’s involvement.

Cal/OSHA Special Emphasis Program

On November 10, 2020, Cal/OSHA issued a Special Emphasis Program (SEP) for Occupational Exposure to Respirable Crystalline Silica Cut Stone and Stone Product Manufacturing (revised March 21, 2023) in an effort to “identify, and reduce or eliminate as much as practicable, workers’ exposures to [RCS while working with engineered stone].”¹³ SEPs are meant to focus enforcement efforts on particular industries expected to have the highest RCS exposure, but do not impose new requirements on an industry. Cal/OSHA has also issued Hazard Alerts on the topic starting in 2004.¹⁴

Although the cases of silicosis and other silica-related illnesses appear to be happening despite the updated federal regulation and Cal/OSHA SEP, the Petitioner’s request for an ETS is unlikely to effect the changes that would prevent such illnesses in the future as it does not propose anything significantly different from the existing requirements. The requested ETS will impose additional burdens (e.g. increased regulated area space, increased employee inclusion in a RPP, etc.) to employers without any evidence of potential improvements in employee safety and health benefits.

¹³ <https://www.dir.ca.gov/DOSHPol/DOSH-PP-SEP-on-Silica.pdf>. Accessed 5/10/2023.

¹⁴ https://www.dir.ca.gov/dosh/dosh_publications/granitehazardalert.pdf and https://www.dir.ca.gov/dosh/dosh_publications/Engineered-stone-counters.pdf. Accessed 6/15/23.

Existing Hazard

As one of the oldest occupational diseases known, the hazards of silica have been present for hundreds of years.^{15,16} According to the Petition, “engineered stone slabs have emerged onto the home-building market only in the past 10 to 20 years, and have become increasingly popular because of their affordability, durability, and beauty.” Both of these statements support the assertion that the hazards of working with silica are not new or unknown.

Although manufactured stone is increasing in popularity, section 5204 was adopted about seven years ago with the current challenges in mind, as evidenced by the following statement in the federal register announcing the new regulation: “Silica is also used to manufacture artificial stone products used as bathroom and kitchen countertops, and the silica content in those products can exceed 85 percent.” Evidence provided by the Petitioner and confirmed by Cal/OSHA in its May 17, 2023, report appears to show that non-compliance with the current regulation is widespread.

According to its findings from the SEP, Cal/OSHA estimates that almost 600 fabrication shops are likely out of compliance with at least one element of section 5204, leaving about 200 that are in full compliance. Understanding why only 25% of the industry is compliant with the existing regulation, and how to achieve higher compliance, is foundational to any effort to draft more protective regulations, lest new regulations are promulgated with similarly high rates of non-compliance. One way to achieve such understanding may be through increased outreach, such as expanding efforts to ensure employers and workers are aware of existing requirements and resources to help achieve compliance. Results will then inform necessary changes which can be refined and promoted through a rulemaking process that includes discussions in a representative advisory committee.

Stakeholder input from employees, their representatives and their employers provides the opportunity to identify effective solutions to address their workplace hazards and is vital to the success of a regulation because it aids in the understanding of the requirements and results in greater compliance and employee/employer buy-in. Staff asserts that rulemaking efforts using the ETS process may be premature due to widespread non-compliance with existing regulations. However, some programmatic and regular rulemaking efforts with regard to Appendix B in section 5204 and section 5145 as mentioned above can be undertaken by Cal/OSHA to address the rise in silicosis cases.

¹⁵ <https://www.silica-safe.org/regulations-and-requirements/status-of-regulatory-efforts/history>. Status of Regulatory Efforts. Accessed 5/19/2023.

¹⁶ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7907902/>. A Short History of Occupational Disease: Asbestos, Chemicals, Radium and Beyond. National Library of Medicine. Accessed 5/19/2023.

Conclusion

According to federal OSHA, “the level of risk remaining at the [current] PEL [is] significant.” However, the current PEL is “appropriate because it is the lowest level feasible for all affected industries...to the extent that it is technologically and economically feasible to do so.” The existing standard, which includes medical surveillance, engineering and administrative controls, regulated areas and respiratory protection requirements, is designed to address the hazards mentioned in the Petitioner’s request and reduce the risk of illness from exposure to RCS. While all regulations can be improved, widespread non-compliance in the industry makes it difficult to conclude that the current requirements are insufficiently protective of worker health.

Additional regulation will place increased burden on compliant employers without necessarily producing a commensurate increase in employee protection. Opting to create an ETS also denies stakeholders the opportunity to fully participate in the rulemaking process by attending advisory committee meetings to discuss possible amendments to the current regulation.

As highlighted by the Petitioner, cases of silicosis in the industry are a serious cause for concern, but creating new requirements when the existing requirements are not being followed is unlikely to achieve the desired results. Positive outcomes in the industry are more likely to result from a multi-faceted effort which includes the existing regulation, public and private resource material and Cal/OSHA’s education, enforcement and outreach tools. Therefore, it is staff’s opinion that the Petitioner’s request for an ETS is unlikely to effect the changes that would prevent such illnesses in the future as it does not propose anything significantly different from the existing requirements.

STAFF RECOMMENDATION

Consistent with the foregoing discussion, Board staff recommends that Petition File No. 597 be denied with regard to adopting an ETS. The Board should request that Cal/OSHA consider reviewing the need to update section 5145 to more closely match Construction Safety Orders section 1530.1, as well as Appendix B in section 5204 to ensure that it contains the most up to date information for PLHCPs to use in diagnosing silica related illness, as discussed above. Cal/OSHA should be encouraged to increase its efforts in implementing its outreach and SEP to improve compliance in the industry and ensure that employers, employees and their representatives are aware of the many educational resources available to help them. Cal/OSHA can also review the reporting requirements for physicians under Chapter 7 “Division of Labor Statistics and Research” and make necessary adjustments without the Board’s oversight.