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FINAL STATEMENT OF REASONS

CALIFORNIA CODE OF REGULATIONS

TITLE 8: Section 5204 of the General Industry Safety Orders

Occupational Exposures to Respirable Crystalline Silica

UPDATED INFORMATION

There are no modifications to the information contained in the Initial Statement of Reasons except for the following substantial, non-substantial or sufficiently related modifications that are the result of public comments, Office of Administrative Law (OAL) decision, and evaluation by the Occupational Safety and Health Standards Board (Board) and the Division of Occupational Safety and Health (Division or Cal/OSHA) staff.

MODIFICATIONS AND RESPONSE TO COMMENTS RESULTING FROM THE 45-DAY PUBLIC COMMENT PERIOD (May 3, 2024 – June 20, 2024)

The 45-day public comment period began May 3, 2024, and ended June 20, 2024. The Board held a public hearing on June 20, 2024, in Vacaville, California. The Board received 11 written comments during the 45-day comment period and 12 oral comments at the public hearing. The Board issued the first 15-day Notice of Proposed Modifications on September 12, 2024, and received 14 written comments. A second 15-day Notice of Proposed Modifications was issued on October 18, 2024, and the Board received five written comments. The purpose of the modifications was to improve the overall clarity, specificity and consistency, and respond to comments pertaining to the proposed regulations in the subsections listed below.

Subsection (a) Scope and Application

Under the EXCEPTION to subsection (a)(2), the Board modified the proposed regulation by removing the phrase, "…as defined in subsection (b)." The Board determined that this phrase was unnecessary.

Under subsection (a)(3), the Board added four exceptions to the new requirements, along with the following new sentence: "*High-exposure trigger task requirements do not apply to the following."* The pre-existing exception for geologic field research was previously placed under the definition of "high-exposure trigger task." The Board added this sentence and the following four exceptions to subsection (a) because employers will look to the Scope and Application subsection in determining which industry sectors are exempted from the new requirements. Employers are less likely to look to

subsection (b), Definitions, for this information. This change therefore improves the clarity and precision of the regulation.

The exception under (a)(3)(A) for geologic field research was moved from subsection (b)(8), where it was placed under the definition of high-exposure trigger task, and the phrase, “is not considered a high-exposure trigger task” was removed. High-exposure trigger tasks are now referenced in the first sentence under which the four exceptions follow.

An exception under (a)(3)(B) for quarries, mines, and concrete and cement manufacturing facilities was added because the primary focus of the new requirements for high-exposure trigger tasks is to protect workers in the artificial stone fabrication industry. As of November 14, 2024, over 200 of these workers have developed silicosis due to exposure to respirable crystalline silica (RCS) in their workplace. Fourteen of these workers have died of massive pulmonary fibrosis, and more than 20 others are awaiting lung transplantation. In contrast, the Board is not aware of any cases of silicosis among workers in quarries, mines and concrete and cement manufacturing facilities. It is therefore unnecessary to introduce new regulatory requirements in these sectors. Reconsideration of this exemption would be necessary if new information emerges regarding RCS exposures or silicosis in these sectors.

An exception under (a)(3)(C) for “fired ceramic or fired porcelain tiles or panels in a manufacturing facility” was added because this work is typically enclosed and automated, thereby reducing the likelihood of worker exposures to RCS. While such factories engage in fabrication and automated finishing activities using materials containing crystalline silica, these factories use engineering controls and typically maintain air exposure levels of RCS below the action level of 25 ug RCS/m^3. As such, these operations are unrelated to the rise in silicosis in California. The Board is not aware of any cases of silicosis among workers in this industry; it is therefore unnecessary to introduce new regulatory requirements in this sector. Reconsideration of this exemption would be necessary if new information emerges regarding RCS exposures or silicosis in these sectors.

An exception under (a)(3)(D) for natural stone tombstones, monuments and related items was added, along with a requirement that the exception only applies where the employer *“*demonstrates that employee exposures are continuously maintained below the action level, through representative air sampling conducted by a qualified person at least once every six months, in accordance with subsection (d)(3).” Adding this exception is appropriate because the Board is not aware of any cases of silicosis among workers in this sector; however, this caveat to the exception is necessary because RCS is generated during the production of tombstones, monuments and related items, and the effects of silicosis from natural stone can take several years to become evident. Reconsideration of this exemption would be necessary if new information emerges regarding RCS exposures or silicosis in this sector.

Subsection (b) Definitions

(b)(2) “Artificial Stone.” In the first sentence of this definition, the phrase, “porcelain, or quartz” was removed. Porcelain is not considered to be artificial stone, and quartz is a naturally occurring crystalline mineral composed of silicon and oxygen (silicon dioxide). While quartz countertops are considered to be an artificial stone product, quartz itself is not. The word “product” was added to this sentence to clarify that “artificial stone” is a “stone product,” not a stone itself. The phrase “binding, crushed or pulverized” was removed from the second sentence and replaced with the phrases, “combining natural” stone “or other crystalline silica-containing materials.” This change ensures that this definition captures the full scope of artificial stone products. A final sentence was added to this definition to exempt fired ceramic and porcelain tiles and panels from the definition. These products are created using entirely different methods from those used to create artificial stone and therefore they are not considered artificial stone.

(b)(8) “High-Exposure Trigger Task.” The phrase “…other silica containing products, including…” needed to be added to this definition to capture the full scope of products for which the requirements of high-exposure trigger tasks apply. The exception for geologic field work was moved to subsection (a), Scope and Application, as noted above. A new exception also needed to be added to ensure that the requirements for high-exposure trigger tasks are applied specifically to the fabrication of “countertops, backsplashes, walls, flooring, waterfall countertop edges, and other products from slabs or panels.” This helps ensure that the new requirements for high-exposure trigger tasks are not inadvertently applied in other industry sectors where workers perform work on stone or silica-containing materials, such as in ceramic art studios, but where no cases of silicosis have occurred. However, to provide for worker protection, the caveat to this exception requires employers to demonstrate that employee exposures in these other sectors are below the action level for RCS, “through representative air sampling conducted by a qualified person.” Reconsideration of this exemption would be necessary if new information emerges regarding RCS exposures or silicosis among workers performing tasks with silica-containing materials outside those listed under this definition.

(b)(11) “Qualified Person.” The term “person” was replaced with the phrase “third party independent of the employer.” This change was requested specifically by members of the Board. This addition is necessary to help ensure the validity of sampling results for RCS. These results are critical to preventing silicosis and other diseases caused by RCS because, for example, under subsection (h)(3)(A), the employer is able to use a lesser level of respiratory protection if exposure levels are measured and found to be below the action level. It is therefore conceivable that some employers could be motivated to alter production levels or sampling strategies, for example, as a way to generate sampling data that shows very low RCS exposures. An independent evaluation will help curtail this possibility. The Board notes that a qualified person must be competent in industrial hygiene practice, and that a Certified Industrial Hygienist would meet this requirement. This addition helps ensure that the third party is

competent in the technical tasks required to correctly perform RCS sampling in the employer's facility.

(b)(17) "Wet Methods." Under subsection (b)(17)(A), a sentence was added requiring that if water used in tools to suppress dust is recycled, it must be filtered to remove silica prior to reuse. This requirement is necessary because RCS exposures can occur from silica dust that remains on surfaces in the workplace when water evaporates after being used in the work process. This addition reduces or eliminates an important pathway of RCS exposures among workers.

Subsection (d) Exposure assessment
Under subsections (d)(3)(B) and (E), the phrase "…as defined under subsection (b)…" was removed because it is unnecessary.

Subsection (e) Regulated areas
Under subsection (e)(4), a new exception needed to be added that allows individuals to enter a regulated area for five minutes in an eight-hour period if the employer demonstrates that exposures in the regulated areas are less than the action level, as determined by air monitoring conducted every six months by a qualified person. The exception requires the employer to "provide, and encourage the use of, filtering facepiece respirators" for voluntary use by persons who enter the regulated area under this provision. This exception facilitates occasional entry by employees and other individuals who pass through or momentarily enter regulated areas. The Board determined the five-minute exposure limit based on a risk analysis for silicosis and lung cancer at the RCS action level.

Subsection (f) Methods of compliance
Under subsection (f)(2), a new sentence was necessary to clarify that this subsection pertains specifically to engineering and work practice controls that are required when employees engage in high exposure trigger tasks.

At (f)(2)(A) and (f)(3)(D)1., the phrase "…as defined in subsection (b)…" was removed because it is unnecessary.

Subsection (h) Respiratory protection
Under subsection (h)(3)(A), the existing exception was given the number 1, and a new sentence was added requiring a HEPA, N100, R100 or P100 filter. This change is necessary to ensure that workers are protected from inhaling RCS particles when the employer provides them with a respirator with an APF of 25 or 50. Because 90% of RCS particles are in the respirable range (0.19 to 0.83 μm), they will be effectively removed by the types of filters listed here.

The phrase, "…as defined under subsection (b)…" was removed from this subsection because it is unnecessary.

Under subsection (h)(3)(A), a new exception 2 was added that allows employers to use a less protective respirator with an APF of 10, along with the filters noted above, if the employer meets two conditions: (1) employee exposures are below the action level, as demonstrated through representative air sampling conducted by a qualified person at least every six months; and (2) all employees are fully participating in the medical surveillance program, and no employee, either currently or previously employed, has been diagnosed with silicosis, and no current employee meets the definition of suspected silicosis. Sentence number three states that this new exception is not allowed if a PLHCP or specialist recommends a more protective respirator. This change is necessary because it reduces the costs associated with respiratory protection and encourages employers to reduce RCS exposure levels and enroll all their employees in the medical surveillance program. The medical surveillance program is able to catch early signs of silicosis before the disease becomes evident to the employee. Enrollment by all employees is therefore an important prevention strategy.

(j) Medical surveillance

Under subsection (j)(1)(B), the phrase "…as defined in subsection b…" was removed because it is unnecessary.

Under subsection (j)(2)(A), the time period for employees who perform high-exposure trigger tasks (and which requires an initial medical exam) was extended from 10 days to 30 days per year. This change was necessary based on a review of the medical literature and consultation with CDPH physicians, who determined that exposure to HETTs of less than 30 days during a one-year period would be unlikely to result in silicosis or other health effects. This 30-day time period is also consistent with the 30-day time period required under subsection (j)(2)(B) for employees who are exposed to RCS but who do not perform high-exposure trigger tasks. This is also complicated by the fact that most workers in this industry work with artificial stone along with other types of stone products throughout a work week, such that tracking the number of days a worker works with artificial stone can be challenging for employers. Because 30 days represents about 11.5% of one year of 160 workdays, the Board believes that the 30-day timeline is short enough that it will safely capture all workers who handle artificial stone. This simplifies the regulation for employers, who are now required to provide initial medical exams for any employee who is exposed to RCS for more than 30 days per year, irrespective of whether the employee performs high-exposure trigger tasks.

Also, under subsection (j)(2)(A), the phrase, "…regardless of exposure assessments or objective data…" was added. This statement is necessary to clarify the meaning of "exposure" as used earlier in this sentence, which is otherwise unclear. With the addition of this phrase, and for purposes of medical surveillance, exposure to RCS is assumed for those workers who perform high-exposure trigger tasks. This assumption cannot be superseded by exposure assessments or objective data obtained by the employer, including when those assessment are made by a qualified person. This approach improves worker safety because RCS exposure assessments and objective data can be highly variable across tasks and workdays. An artificially low exposure

finding could result in the erroneous conclusion that workers who perform high-exposure trigger tasks are not exposed to RCS.

Under subsection (j)(3)(A), the indicator "(j)(2)(B)" was added, and the phrase "…once every year…" was amended to "…once every three years." These changes are necessary to simplify the periodic medical exam requirements for employers, who are now simply required to provide periodic medical exams for all employees who are exposed to RCS for 30 or more days per year, irrespective of whether or not those employees perform high-exposure trigger tasks. This change acknowledges that in many shops, employees perform high-exposure trigger tasks on some days and none on other days. The addition of (j)(2)(B) to this subsection allowed for both the exception under (j)(3)(A) and subsection (j)(3)(B) to be removed. These changes substantially simplify the medical surveillance subsection without reducing worker safety. Simplifying this subsection will improve compliance with the medical surveillance requirements by employers.

Subsection (j)(4)(B) was amended to require a chest CT scan at the lowest dose possible (in place of a chest X-ray) for both the initial and period medical exams, under three conditions, listed as 1, 2, and 3. Conditions 1 and 2 are unchanged. Condition 3 was amended to require a chest CT for any employee covered by subsection (j)(2)(A); that is, any employee who engages in high-exposure trigger tasks for at least 30 days each year, regardless of exposure assessments or objective data. The exception under condition 3 was removed. It previously allowed employers to forego the chest CT scan if RCS levels were continually maintained below the action level for a period of three years. These changes are necessary to simplify the regulation by requiring chest CT scans during initial and period exams for all employees that engage in high-exposure trigger tasks for at least 30 days a year, without exception. This change was recommended by CDPH physicians.

Under subsection (j)(6)(E), the term "…lung diffusing capacity exam..." was removed because it was removed from the list of required tests for initial and periodic medical exams under subsection (j)(4)(A). This test is therefore no longer relevant and is unnecessary. This change was recommended by CDPH physicians. The term "…pulmonary function…" was deleted because "additional testing" might include more than the results of a pulmonary function test. This change was recommended by CDPH physicians.

A new requirement was added at subsection (j)(6)(G) that requires the PLHCP to provide the employee with "any determination of the employee's status regarding silicosis, suspected silicosis, or lung cancer." This addition was necessary because the subsection did not explicitly require the PLHCP to provide the employee with a determination regarding these disease states. The Board concluded that this information is important for the employee to determine if they should take steps to reduce exposure to RCS. This change was also recommended by CDPH physicians.

The text at subsection (j)(7)(F), under information provided by the PLHCP to the employer, was inadvertently removed in the initial proposed regulation and has been restored in this version. This statement is important because it informs the employer of the need for further, more specialized medical evaluation. In addition, the phrase "…if applicable…" has been added because a chest X-ray would not have been conducted in cases where a chest CT scan is required, pursuant to subsection (j)(4)(B)1. 2. and 3.

A new subsection at (j)(9) was added, entitled "PLHCP report to the California Department of Public Health," which requires the PLHCP to submit the following information to the CDPH Occupational Health Branch for each silica medical examination conducted: the patient's name, date of birth and a copy of the written medical report that was provided to the employee. This information will allow CDPH to track the number and severity of actual or suspected silicosis cases before they become fatal. This is a leading public health indicator, whereas fatality reports are a lagging indicator. This information is necessary because it will allow CDPH to adjust their response to emerging silicosis cases much more efficiently and with greater precision. This change was recommended by CDPH physicians.

Subsection (l) Communication of respirable crystalline silica hazards to employees.
Under subsection (l)(3), the symbol for health hazards under the Globally Harmonized System of Classification and Labeling (GHS) was added to the signage that employers are required to post at all entrances to regulated areas. Under GHS, this symbol is recognized internationally as a warning to workers about chemical substances that are causatively linked to carcinogenicity, mutagenicity, reproductive toxicity, respiratory sensitivity, target organ toxicity or aspiration toxicity. This warning helps give workers the information they need to take appropriate protective actions. Requiring this symbol for regulated areas is appropriate because silica is a known carcinogen as well as a target organ toxicant: inhaling it can result in massive pulmonary fibrosis and death.

Under subsection (n), a new provision was added at (n)(1)(B)3., pertaining to the information employers must record as part of exposure measurements. The new provision requires the employer to retain information on the product or materials that are the source of RCS, including the specific crystalline silica content of the product or materials. This addition improves the utility of exposure measurements by illustrating how the crystalline silica content of a product contributes to worker exposures. This information is necessary because it can be used to inform purchasing decisions by employers. It can also support Cal/OSHA's ability to evaluate the validity of sampling data reported by employers. For example, if the sampling data shows very low or "non-detect" exposure levels but the artificial stone handled during the sampling period consists of 94% crystalline silica, the compliance officer will likely be interested in further information on the validity of the sampling methodology and analysis.

APPENDIX B - MEDICAL SURVEILLANCE GUIDELINES (NON-MANDATORY)

Under the final paragraph of the Introduction, the phrase, "…and the written authorization" was removed and the word "and" was added. This is necessary because the following written authorization requirement has been removed from the regulatory text at subsection (7), previously listed as (B): "If the employee provides written authorization, the written opinion shall also contain either or both of the following." This change therefore coincides with the regulatory text.

Under subsection 1.1.1, Exceptional risk of artificial stone, the following sentence was added: "Styrene and phthalic anhydride are asthmagens according to the Association of Occupational and Environmental Clinics." This addition is needed because styrene and phthalic anhydride and other hazardous organic compounds (VOCs) are released from artificial stone during cutting, grinding, and polishing. These hazardous VOCs are released from the resins that make up the binding agent in artificial stone and are not present in natural stone.

Under subsection 2.2.1, INITIAL EXAMINATIONS, the exposure period for workers performing high-exposure trigger tasks was extended from 10 days to 30 days each year. This change coincides with the regulatory text.

Under subsection 2.2.1, PERIODIC EXAMINATIONS, the time period for the medical examination was changed from "once a year" to "once every three years." This coincides with the regulatory text.

Under subsection 2.4.1, the text referring to pulmonary function testing was amended to require that this test be performed on the initial examination and every three years thereafter. This change coincides with the regulatory text.

Under subsection 2.6, references to a lung diffusing capacity from carbon monoxide test and pulmonary function testing were removed. This coincides with the regulatory text. Similarly, the phrase, "when deemed appropriate by the PLHCP, for any employee" was added to coincide with the regulatory text. The phrase, "unless detailed exposure data is available as outlined in EXCEPTION under subsection (j)(4)(B)(3)" was removed to coincide with the regulatory text. The phrase, "as defined in the standard," was removed because it is unnecessary.

Under subsection 3.1, the phrase, "as defined in the standard," was removed because it is unnecessary. References to a "lung diffusing capacity exam" and to "pulmonary function" testing were removed to coincide with the regulatory text. The sentence, "The report to the employee must also disclose if any determination is made regarding silicosis, suspected silicosis, or lung cancer" was added to coincide with the regulatory text. The phrase, "and the written authorization" was removed because written authorization is no longer required by the regulatory text.

Under subsection 3.1.1.5, references to a "lung diffusing capacity exam" and to "pulmonary function" testing were removed to coincide with the regulatory text.

Under subsection 3.1.1.7, the sentence, “any determination of the employee’s status regarding silicosis, suspected silicosis, or lung cancer” was added to coincide with the regulatory text.

Under subsection 3.1.2.7, the sentence, “if the employee provides the PLHCP with written authorization, the written opinion for the employer shall also contain either or both of the following” was removed to coincide with the regulatory text.

Changes to subsections 3.2.2 and 3.2.3 pertaining to written authorization were made to coincide with the regulatory text.

Changes to subsection 3.2.4.4 pertaining to “a lung diffusing capacity exam” and “pulmonary function” were made to coincide with the regulatory text.

A new subsection 3.2.4.6 was added to reflect this addition in the regulatory text.

A new subsection 3.2.8 was added to coincide with the new CDPH reporting requirement of PLHCP in the regulatory text.

Under subsection 4, Medical Removal, the phrase, “as defined in the Standard” was removed because it is unnecessary.

SUMMARY AND RESPONSE TO WRITTEN AND ORAL COMMENTS

RESULTING FROM THE 45-DAY COMMENT PERIOD, AND THE FIRST AND SECOND 15-DAY COMMENT PERIODS

I. Written Comments

1. Chris Culhane, Outreach Coordinator, Consumer Notice, by email dated May 14, 2024

Comment 1.1:
The commenter states that silica is a mineral found in many common products and fine silica dust particles can penetrate the lungs, leading to a variety of health complications such as COPD, lung cancer, and more. Certain occupations such as construction workers, masons, potters, and more are the most at risk for exposure due to their use of products containing silica dust. According to OSHA, over 2 million people are exposed to silica dust at work. Consumer Notice created a guide on silica dust to help educate the public, https://www.consumernotice.org/environmental/silica-dust/ and a guide on silicosis, a lung disease caused by silica: https://www.consumernotice.org/environmental/silica-dust/silicosis/. The commenter hopes the Board will share these resources with the community and add them to their website to better inform people about the risks of silica dust.

Response to Comment 1.1
The Board appreciates the commenter's efforts to provide information and education to workers and employers.

2. Derek Engard, Area Director, U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), by letter sent via email, dated May 21, 2024

Comment 2.1:
The commenter states that the proposed occupational safety and health standard appears to be at least as effective as the federal standard.

Response to Comment 2.1:
The Board appreciates OSHA's recognition of the proposal as being at least as effective as the federal standard

3. Guy Renkert, Ironrock, by email, dated June 19, 2024

Comment 3.1
The commenter is a 6th generation brick and tile manufacturer and supports the statement from the Tile Council of North America comment letter dated June 18, 2024.

Response to Comment 3.1
Please see the responses to Comment 7

4. James Hieb, Natural Stone Institute, by letter dated June 18, 2024 and sent via email on June 19, 2024

Comment 4.1
The commenter states that it is imperative that the regulations are synchronized with the statutory framework (referring to assembly bill 3043 (2024)), and that this alignment will significantly strengthen regulatory oversight and enforcement that will protect workers in this industry. Commenter suggests extending the Silica ETS for additional time to allow for coordination with the bill that has not yet passed.

Response to Comment 4.1
The Board is unable to further extend the ETS, as Government Code section 11346.1 only allows for two, 90 day readoptions of an emergency regulation, which have already been used in this rulemaking. The Board declines to synchronize regulations with proposed bills that are not law. The Board will ensure the proposal is consistent with existing law.

Comment 4.2
The commenter states that the creation of a statutory licensure framework and program will ensure that Cal/OSHA will better be able to track, monitor, inspect, and enforce health and safety requirements within the industry. A licensure program will provide

improved understanding and recognition of those entities that are complying with health and safety standards, and the “bad actor” entities that are continuing to place the health of California workers at risk. Further, a licensure program will allow Cal/OSHA to better manage fabrication shops and activities in the state, by ensuring strict compliance with health and safety requirements and standards as a function of the licensure program.

Response to Comment 4.2
Please see the response to Comment 4.1.

Comment 4.3
The commenter states that the creation of a publicly-accessible database on the Department of Industrial Relations’ website will ensure transparency and accountability in the industry by allowing all parties – manufacturers, distributors, fabricators, retailers, and consumers – to have access to timely information regarding the entities performing fabrication activities in the state. The database envisioned in AB 3043 will also include an online reporting tool to provide assistance to Cal/OSHA in the identification of potential violations of health and safety requirements, reinforcing the improvements in regulatory oversight and enforcement and the protection of workers.

Response to Comment 4.3
Please see the response to Comment 4.1.

Comment 4.4
The commenter states that AB 3043 contains important provisions that will ensure that slab products are only distributed for fabrication to those entities that have a valid license, and will impose requirements on manufacturers, distributors, and resellers to help enforce these supply chain provisions. These provisions of AB 3043 will have the effect of cutting off supply of product to unlicensed entities – those that are typically considered to be “bad actors” and that are not complying with statutory and regulatory requirements to protect workers.

Response to Comment 4.4
Please see the response to Comment 4.1.

Comment 4.5
The commenter states that AB 3043 will contain a licensure fee structure to ensure that there is a satisfactory revenue stream for Cal/OSHA and the Department of Industrial Relations to implement this program to protect the health and safety of workers in this industry. Absent AB 3043, there is no similar revenue structure in place to fund the regulatory oversight and enforcement of the industry.

Response to Comment 4.5
Please see the response to Comment 4.1.

Comment 4.6
The commenter states that the proposed permanent regulation requires air testing. The test results should be the determining factor in triggering requirements for additional safety protocols. Workplaces that can demonstrate that employee exposure to respirable crystalline silica is consistently and regularly below the action level should not be treated the same as workplaces that cannot demonstrate that they are minimizing and mitigating employee exposure.

Response to Comment 4.6
The Board notes that the proposal already uses air test results as a determining factor to trigger safety protocols. The proposal currently includes exceptions and reduced requirements for respiratory protection and regulated areas if the employer demonstrates through air testing every six months that employees are not exposed to respirable crystalline silica over the action level of 25 micrograms per cubic meter. These exceptions incentivize employers to reduce exposures and conduct air testing. Workplaces that demonstrate that employee exposures to respirable crystalline silica are consistently and regularly below the action level are treated differently than workplaces that do not demonstrate that they are minimizing and mitigating employee exposures.

The Board declines to further reduce protections based on air sampling because studies from NIOSH listed in the documents relied upon demonstrate that even with wet methods and local exhaust ventilation, exposures frequently exceed the action level and permissible exposure limit and also show that exposures can be highly variable. Cal/OSHA Enforcement experience also supports the NIOSH studies. Due to the lack of the reliable effectiveness of engineering controls and the high variability of exposures, worker protections should not be removed based on air sampling. Silicosis is a deadly and untreatable disease that continues to worsen even after exposures are stopped. Because sampling is not 100% reliable, removing exposure protections based on air sampling results could place workers lives at risk.

Comment 4.7
The commenter states that under the proposed regulation, there is no consideration if an employer addresses such hazards (with wet cutting) and reduces airborne crystalline silica levels to acceptable levels, as determined by Federal OSHA’s Final Quantitative Risk Assessment and Significance of Risk (Federal Register# 81:16285-16890). The proposed regulation requires a range of safety protocols, regardless of the results of mandatory testing, which is a disincentive to innovation of new safety controls.

Response to Comment 4.7
The Board disagrees that there is no consideration in the proposal of whether an employer addresses hazards and reduces respirable crystalline silica levels. The Board also disagrees that the safety protocols are the same in the proposal regardless of the results of mandatory testing. Please see the response to Comment 4.6.

Comment 4.8
The enhanced protections required for work environments with non-hazardous air will come at great – unnecessary – cost. The regulated areas, PAPRs, and PPE will present significant expense and divert employers' resources from health efforts protecting employees against actual hazards. Burdensome and unnecessary costs could drive the safe and compliant fabricators out of California, while shifting the work to the few non-compliant fabricators who fail to follow recognized practices and expose their employees to unsafe levels of airborne crystalline silica.

Response to Comment 4.8
Please see the response to Comment 4.6 and 4.7.

Comment 4.9
The commenter proposes the following change to the definition of "Artificial Stone":

> (b)(2) "Artificial stone" means any reconstituted, artificial, synthetic, composite, engineered, or manufactured stone**~~, porcelain, or quartz~~**. It is commonly made by binding crushed or pulverized stone**, quartz, porcelain, or other crystalline silica-containing materials** with adhesives, polymers, epoxies, resins, or other binding materials to form a slab.

Response to Comment 4.9
The Board changed the definition of artificial stone to expressly exclude fired ceramic and porcelain tiles and panels. The Board also simplified the definition of artificial stone to improve clarity. Please also see the response to comments 7.2 and 7.3.

Comment 4.10
The commenter proposes the following exception to the definition of "High Exposure Trigger Task":

> **Exception: Fabrication or finishing of fired ceramic or porcelain tiles or panels in a tile manufacturing facility is not considered a high-exposure trigger task where the employer demonstrates that employee exposures, as defined in subdivision (b)(7), are below the action level for respirable crystalline silica.**

Response to Comment 4.10
The Board changed the definition of artificial stone such that that work on fired ceramic or porcelain tile or panels is not a high-exposure trigger task. Please also see the response to Comment 7.2 and 7.3.

Comment 4.11
The commenter proposes the following change to subsection (e) Regulated areas:

> (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. All high-exposure trigger tasks shall be conducted within a regulated area ~~**regardless of employee exposures, exposure assessments, or other objective data**~~ **unless the employer can demonstrate through sampling every six months that exposure to respirable crystalline silica remains below the action level**.

Response to Comment 4.11
The Board declines to make the suggested change. Please see the response to comment 4.6 and 4.7.

Comment 4.12
The commenter proposes the following change to subsection (f)(2)(B) Housekeeping and Hygiene:

(f)(2)(B) Housekeeping and Hygiene.

1. Wastes, dusts, residues, debris, or other materials that are generated from high-exposure trigger tasks or that otherwise contain or are contaminated with respirable crystalline silica shall be promptly and properly cleaned up and placed into leak-tight containers, bags, or equivalent. At a minimum, all such wastes, dusts, residues, debris, or other materials shall be cleaned up at the end of each shift or more frequently as needed to ensure there is no visible dust build-up in the workplace. **This subparagraph does not apply to a workplace where the employer can demonstrate through sampling every six months that exposure to respirable crystalline silica remains below the action level.**

3. Employees engaged in housekeeping tasks **pursuant to subparagraph (1)** shall use respirator protection in accordance with subsection (h)(3).

Response to Comment 4.12

The Board declines to make the suggested change from the commenter as dust and debris on floors and other surfaces can vary significantly. Air sampling every six months is insufficient to quantify the variability and statistically ensure that employees will not be endangered from respirable crystalline silica. Please also see the response to comment 4.6 and 4.7.

Comment 4.13
The commenter proposes the following change to subsection (h)(3) respiratory protection:

(h)(3) When employees perform high-exposure trigger tasks or work within a regulated area where high-risk exposure tasks occur a**nd where an employer**

can demonstrate through sampling every six months that exposure to respirable crystalline silica remains below the action level, the employer shall provide, and shall ensure that employees properly use**~~, the following~~** respiratory protection, in accordance with Section 5144**. For all other workplace conditions, the following respiratory protection requirements shall apply**:

~~EXCEPTION: The employer may provide employees with a loose-fitting PAPR (APF of 25), a half-face PAPR (APF of 50), a full facepiece air-purifying respirator (APF of 50), or another respirator providing equal or greater protection where the employer demonstrates that employee exposures to respirable crystalline silica are continuously maintained below the action level through representative air sampling conducted by a qualified person, as defined under subsection (b), at least once every six months, in accordance with subsection (d)(3)(A). This exception does not apply if the PLHCP or specialist recommends use of a full face, tight-fitting PAPR or other more protective respirator.~~

Response to Comment 4.13
The Board declines to make the suggested change. Please see the response to Comment 4.6 and 4.7.

Comment 4.14
The commenter states that they strongly encourage the Board to pause the completion of this permanent regulatory process to ensure that a final, permanent regulation is fully informed and guided by any statutory changes that may be advanced pursuant to AB 3043. Approving a final, permanent regulation in this space now would be premature given the statutory direction that may very well be provided by the California Legislature on this issue within the coming months.

Response to Comment 4.14
Please see the response to Comment 4.1.

Comment 4.15
The commenter states that they strongly believe the permanent regulations should be fully shaped in a manner that is consistent with the statutory framework in AB 3043 to ensure a robust and sustainable regulatory oversight and protection program that is protective of countertop fabrication workers.

Response to Comment 4.15
Please see the response to Comment 4.1.

5. Don Haynes, Florim USA, by email, dated June 19, 2024

Comment 5.1

The commenter manufactures porcelain tile that he states controls silica exposures well below the 25 microgram action level. He states they fully support the comments submitted by the Tile Council of North America and Natural Stone Institute, which would relieve employers of certain requirements if exposure levels are below the 25 microgram action level.

Response to Comment 5.1
Please see the response to Comment 7 and 4.

6. Tomas Aragon, California Department of Public Health (CDPH), by letter sent via email, dated June 18, 2024

Comment 6.1
CDPH strongly supports adoption of these revised regulations to improve protection of workers using engineered stone in the countertop fabrication industry from this serious occupational hazard.

Response to Comment 6.1
The Board thanks the commenter for their support.

Comment 6.2
CDPH identified the first cases of silicosis, an incurable, life-threatening occupational lung disease, among California engineered stone countertop fabrication workers in 2019, including two worker deaths. Since then, CDPH has continued to identify increasing numbers of cases among workers in this industry, suggesting an ongoing, uncontrolled workplace hazard. As of May 30, 2024, CDPH has identified 141 cases of silicosis among engineered stone countertop fabrication workers in California, including at least 13 deaths and 18 individuals who have undergone lung transplant. Most of these workers are young Latino immigrants, diagnosed in their 30s or 40s with a debilitating, incurable disease acquired due to hazardous silica dust exposures in their workplaces.

Response to Comment 6.2
The Board acknowledges the gravity of the current silicosis crisis and epidemic in California and thanks the commenter for the data.

Comment 6.3
CDPH research has emphasized the ongoing risks posed by engineered stone countertop fabrication work. Our analysis of data from Cal/OSHA's 2019-2020 countertop fabrication shop inspections showed that workers were exposed to silica dust at levels above the Permissible Exposure Limit (PEL) in more than half of the inspected workplaces, and 72% of workplaces were cited for at least one violation of the section 5204 silica regulation. In addition, interviews conducted with workers during those inspections indicated that many were not using adequate respiratory protection, and nearly all had not undergone silica medical examinations required under existing regulations.

Response to Comment 6.2
The Board acknowledges that the version of section 5204 that existed prior to the emergency regulation was insufficient to protect workers and not well designed for small businesses that represent a large portion of countertop fabrication shops. The Board's proposal is designed to make the silica regulation easier for employers to understand and follow while also allowing Cal/OSHA to enforce it more effectively and efficiently.

Comment 6.3
As a result of this uncontrolled workplace hazard, engineered stone countertop workers are developing silicosis at alarming rates. Our review of silicosis medical surveillance records from a large California countertop employer revealed that 12% of their current workers had silicosis. In Australia, where over 1,500 current and former engineered stone countertop workers have undergone government-sponsored silicosis screening, more than 25% of workers have been diagnosed with silicosis.

Response to Comment 6.3
Please see the response to comment 6.2.

Comment 6.4
The proposed revisions to the silica regulation will help address this emerging epidemic by closing current gaps in worker protections. By requiring higher levels of protection for high-risk work with engineered stone ("high-exposure trigger tasks") and prohibiting certain work practices that generate high levels of silica dust, such as dry cutting and finishing, these regulations will help protect workers from silica dust exposure. Importantly, the designation of imminent hazards in section 5204(g) would give Cal/OSHA the ability to immediately protect workers from clearly hazardous work environments.

Response to Comment 6.4
The Board thanks the commenter for their support.

Comment 6.5
The proposed updates to medical surveillance requirements in section 5204(j) would improve the accuracy of silicosis screening and diagnosis for high-risk workers. In particular, recent evidence has demonstrated that chest x-ray and spirometry alone are insufficiently sensitive for diagnosis of silicosis, particularly in the disease's early stages. Adding a requirement for chest CT in workers with higher levels of exposure will help ensure that workers with silicosis are diagnosed in a timely manner; early diagnosis can help reduce additional silica dust exposures and connect workers to appropriate care, including possible referral for lung transplantation.

Response to Comment 6.5
The Board thanks the commenter for their support.

Comment 6.6

Silicosis is a devastating disease, but it is preventable through reduction or elimination of workplace silica dust exposure. As demonstrated by the increasing numbers of California workers diagnosed with silicosis, along with the additional research cited above, current regulations offer inadequate protection from the hazards associated with engineered stone fabrication work. The proposed revisions to the silica regulations under consideration by the Standards Board are a critical step in protecting vulnerable workers from hazardous exposure to respirable crystalline silica.

Response to Comment 6.6
The Board thanks the commenter for their support.

Comment 6.7
Following CDPH's identification of the first cases of silicosis among engineered countertop workers in California in 2019, Cal/OSHA initiated its Silica Special Emphasis Program focused on the industry. Since then, CDPH has continued to provide technical input to Cal/OSHA on this issue. CDPH is grateful for the role that Cal/OSHA and the Standards Board have played, and can continue to play, in protecting the health and wellbeing of California workers.

Response to Comment 6.7
The Board thanks the commenter for their support.

7. Eric Astrachan, Tile Council of North America, by letter sent via email, dated June 18, 2024

Comment 7.1
Section 5204 applies to tile factories that manufacture fired ceramic and porcelain tiles, and while such factories engage in fabrication and automated finishing activities using materials containing crystalline silica, these factories are well-regulated, use engineering controls, and maintain air exposure levels of respirable crystalline silica (RCS) well below the action level of 25 ug RCS/m^3. As such, these operations are unrelated to the rise in silicosis in California.

Response to Comment 7.1
Please see the response to Comments 7.2 through 7.7

Comment 7.2
The commenter requests the following change to the definition of artificial stone in subsection (b)(2)**:**

> **(b)(2) "Artificial Stone"** to clarify the definition of artificial stone as follows: "Artificial Stone" means any reconstituted, artificial, synthetic, composite, engineered, or manufactured stone, ~~porcelain, or quartz~~. It is commonly made by binding crushed or pulverized stone, quartz, porcelain, or other crystalline silica-containing materials with adhesives, polymers, epoxies, resins, or other binding materials to form a slab.

Response to Comment 7.2
The Board changed the definition of artificial stone to expressly exclude fired ceramic and porcelain tiles and panels.

Comment 7.3
The commenter requests the following exception be added to the definition of high exposure trigger task in subsection (b)(9):

> Exception: Fabrication or finishing of fired ceramic or porcelain tiles or panels in a tile manufacturing facility is not considered a high-exposure trigger task where the employer demonstrates that employee exposures, as defined in subsection (b)(7), are below the permissible exposure limit for respirable crystalline silica.

Response to Comment 7.3
The Board changed the definition of artificial stone such that work on fired ceramic and porcelain tiles and panels is not a high-exposure trigger task.

Comment 7.4
Add a new definition for "Fabrication activities" consistent with the definition in AB 3043. Specifically, from Chapter 2.2, Section 6359.1, subsection (E)(1) '"Fabrication activities' means machining, crushing, cutting, drilling, abrading, abrasive blasting, grinding, chiseling, carving, gouging, polishing, buffing, fracturing, intentional breaking, or intentional chipping of slab products. (2) "Fabrication activities" does not include onsite construction work covered by Section 1532.3 of Title 8 of the California Code of Regulations."

Response to Comment 7.4
Please see the response to Comment 4.1.

Comment 7.5
Add a definition for "Fabrication shop" consistent with the definition in Assembly Bill (AB) 3043. Specifically, from Chapter 2.2, Section 6359.1, subsection (F)(1), '"Fabrication shop' means a location where fabrication activities are undertaken on slab products. (2) "Fabrication shop" does not include facilities where slab products are manufactured, including, but not limited to, quarries, concrete manufacturing facilities, or tile manufacturing facilities."

Response to Comment 7.5
Please see the response to Comment 4.1.

Comment 7.6
Add a definition for "Slab product" consistent with the definition in AB 3043. Specifically, from Chapter 2.2, Section 6359.1, subsection (i), '"Slab product' means a thick, flat piece of a solid stone substance, including artificial, engineered, or natural stone that is used for countertop installation or customization."

Response to Comment 7.6
Please see the response to Comment 4.1.

Comment 7.7
The commenter strongly supports the other comments and proposals of the Natural Stone Institute to further protect workers in the countertop fabrication industry and to regulate those workplaces maintaining exposure to respirable crystalline silica below the Action Level (25 ug RCS/m^3) differently from those workplaces that are not maintaining exposure to RCS below the Action Level.

Response to Comment 7.7
Please see the response to Comment 4.6 and 4.7.

8. Paulo Mularoni, Del Conca USA, by email, dated June 20, 2024

Comment 8.1
The commenter supports the comments from the Tile Council of North America. The commenter notes that it is very important to avoid any possible confusion between "Porcelain" and "Artificial Stone," which is made using adhesives to bind together crushed or pulverized materials. It is also essential to highlight the difference between factories that use highly automated machinery, including engineering controls to keep Respirable Crystalline Silica in the air under Action Levels, and fabrication workshops, where activities are often carried out on an artisanal level, to customize the industrially made slabs.

Response to Comment 8.1
Please see the responses to Comment 7.

9. Arthur Mintie, LATICRETE International, Inc., by letter sent by email, dated June 19, 2024

Comment 9.1
The commenter strongly support the proposed changes and comments from Tile Council of North America (in their letter dated June 18, 2024) and the Natural Stone Institute to further protect workers in the tile and stone trades and countertop fabrication industry and to regulate those workplaces maintaining exposure to respirable crystalline silica below the Action Level (25 ug RCS/m^3) differently from those workplaces that are not maintaining exposure to RCS below the Action Level.

Response to Comment 9.1

Please see the responses to Comments 4 and 7.

10. Eric Astrachan, Tile Council of North America, draft of oral testimony sent via email, dated June 20, 2024

Comment 10.1
Tile companies in California are regulated under Section 5204 and use engineering controls to operate below the Action Level of 25 ug RCS/m^3. Where operations exist that the Silica ETS rule would characterize as high-exposure trigger tasks, these operations are done by automated machines with extensive vacuum and filtration equipment. These are not countertop fabrication operations at all, and as such should be exempted from the high-exposure trigger task requirements developed for countertop fabrication, in line with the exceptions provided for geologic field research, mining in quarries, or the fabrication and finishing of natural stone tombstones and monuments.

Response to Comment 10.1
Please see the response to comment 7.4.

Comment 10.2
We also request that the definition of artificial stone be rewritten to avoid confusion between adhesive - agglomerated engineered quartz slabs that may also contain porcelain powder (porcelain powder may be used to lower the overall quartz content) and fired porcelain tiles made by the ceramic tile industry. We have submitted separate comments to make that distinction clear.

Response to Comment 10.2
Please see the response to Comment 7.2.

Comment 10.3
The commenter supports efforts to harmonize Section 5204 with the efforts with AB 3043 and the comments of the Natural Stone Institute.

Response to Comment 10.3
Please see the response to Comment 7.2.

11. Pamela Murcell, California Industrial Hygiene Council, by letter sent via email, dated June 20, 2024

Comment 11.1
The commenter states that exposure to respirable crystalline silica has centuries old, well-documented potential adverse health effects, including various types of silicosis. Control of exposure is critical. CIHC understands that the proposed permanent changes are intended to ensure that employers with fabrication operations using artificial stone are implementing protective measures to control the impact on workers. The goal of these requirements needs to assure that effective exposure controls can be consistently and correctly implemented.

Response to Comment 11.1
The Board agrees that the proposal is needed to implement effective exposure controls.

Comment 11.2
The commenter is concerned that even with the permanent changes and these additional requirements for fabrication activities with artificial stone, there is not going to be sufficient impact to lessen the clearly serious exposures to workers in this industry without enhanced enforcement and extensive outreach for training and education of both employers and workers. The commenter would gladly step up to assist with outreach for employer and worker education and training if such opportunities are available.

Response to Comment 11.2
The Board agrees that enforcement and outreach is important and thanks the commenter for their offer of assistance.

Comment 11.3
Regarding the definitions in section 5204(b)(8) “High exposure trigger task (HETT)” – CIHC submitted this comment during the emergency regulation, and we still have the same question. What is the basis for these percentages? The use of 0.1% by weight crystalline silica for artificial stone and 10% by weight crystalline silica for natural stone in this definition of HETT effectively captures almost all operations where materials with crystalline silica content are being manipulated. Is this really the intent of these changes – to capture almost all fabrication (manipulation) operations with virtually all source materials that have a crystalline silica content? CIHC recommends that the definition be changed to address only a definition of artificial stone with a percentage that is more realistic of typical artificial stone source material crystalline silica content.

Response to Comment 11.3
The Board set the amount of silica in products that are covered by the definition of high-exposure trigger tasks to address the severity and irreversibility of silicosis in workers and because there is currently a critical silicosis epidemic in California that is resulting in the death or permanent disability of many countertop fabrication workers. The percent of silica in artificial stone is set lower than the percent of silica in natural stone because the dust from the fabrication artificial stone products is more harmful than the dust from the fabrication of natural stone products. The use of artificial stone has resulted in a faster onset and severity of silicosis. In a study comparing exposures from artificial stone to natural stone, Wu et al. found that workers exposed to artificial stone had a median exposure duration to onset of silicosis of 6 years, 40 percent required a lung transplant, and 28 percent died. The same study found that workers exposed to natural stone had a median exposure duration to onset of silicosis of 30 years, three percent required a lung transplant, and there were no deaths.[1] A study from Leon-Jimenez, et al. found that 35 percent of workers with silicosis from artificial stone advanced from

[1] Wu N, et al. Artificial stone-associated silicosis in China: A prospective comparison with natural stone-associated silicosis. *Respirology* (2020) 25, 518–524. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7187561.

simple pneumoconiosis to progressive massive fibrosis over a mean of four years after removal from exposure to artificial stone dust. For granite and could miners, 10 percent of workers advanced from simple pneumoconiosis to progressive massive fibrosis over a mean of 22 years.[2] A 2023 study from Ramkissoon found that hazardous volatile organic compounds that are respiratory irritants and other carcinogens were released during fabrication of artificial stone products, which are not present in natural stone.[3] A 2022 study from Ramkissoon found that particles generated from fabricating artificial stone had a greater percentage of sharp edges, spikes, and fractures compared to natural stone, making artificial stone particles more likely to cause lung tissue damage.[4]

There are natural stones that contain less than 10 percent silica, such as marble, whose use would not fall under the definition of high-exposure trigger tasks. Please also see Comments 6.1 through 6.6.

The Board has introduced new exceptions under subsection (a), Scope and Application, in response to comments that exempt certain industry sectors from the high-exposure trigger task requirements. In some cases, this exemption is contingent on the employer demonstrating that employee exposures are below the action level.

Comment 11.4
CIHC recommends a requirement be added to have a small sample (bulk sample) of source materials analyzed to determine if the percentage of crystalline silica content falls within the application of the HETTs or the more general application of section 5204. This is a straightforward and relatively inexpensive analysis that is readily available. This information would go a long way to helping employers understand their obligation to comply with section 5204 whether due to fabrication involving artificial stone, natural stone, or other source materials.

Response to Comment 11.4
The Board declines to make the requested change as fabrication shops work on many different types of slabs, each with different silica content. Each slab is required to be accompanied with a safety data sheet from the manufacturer or distributor which lists the approximate percentage of silica in the product. The Board will recommend that Cal/OSHA include certain best practices in its guidance documents, including the use of bulk sampling to determine the percent of silica in all the slab types handled by an employer. In addition, the Board has added a new requirement in response to comments that requires employers to retain information on the product or materials that are the source of RCS, including the specific crystalline silica content of the product or

[2] León-Jiménez A, et al. Artificial stone silicosis: rapid progression after exposure cessation. *Chest* (2020);158(3):1060-1068. https://pubmed.ncbi.nlm.nih.gov/32563682.
[3] Ramkissoon C, et al. Engineered Stone Fabrication Work Releases Volatile Organic Compounds Classified as Lung Irritants. Annals of Work Exposures and Health. February 13, 2023); 67(2) 288–293. https://pubmed.ncbi.nlm.nih.gov/36239208/
[4] Ramkissoon C, et al. Characterisation of dust emissions from machined engineered stones to understand the hazard for accelerated silicosis. *Nature Portfolio* 12:42351 (2022). https://www.nature.com/articles/s41598-022-08378-8.

materials. This addition improves the utility of exposure measurements by illustrating how the crystalline silica content of a product contributes to worker exposures. This information can be used to inform purchasing decisions by employers. It can also support Cal/OSHA's ability to evaluate the validity of sampling data reported by employers.

Comment 11.5
CIHC recommends that the proposed definition of "qualified person" be deleted, and instead use the same language as in 5155(e)(3) with the addition of "for example, a Certified Industrial Hygienist (CIH) as codified in California's Business and Professions (B&P) Code Sections 20700-20705". The benchmark for competence in industrial hygiene is this certification by the Board for Global EHS Credentialing (formerly the American Board of Industrial Hygiene). The definition of "specialist" in 5204(b)(14) provides a very specific definition: "Specialist means an American Board-Certified Specialist in Pulmonary Disease or an American Board-Certified Specialist in Occupational Medicine". Why can't the "qualified person" definition provide analogous specificity?

Response to Comment 11.5
The Board agrees in part with the commenter's suggestion and changed the definition of qualified person to include language from section 5155(e)(3).

> (b)(11) "Qualified Person", for purposes of this section only, means a ~~person~~ third party independent of the employer who, by extensive instruction, knowledge, training, and experience, has demonstrated their ability to effectively perform, and interpret the results of, representative air monitoring for occupational exposure to respirable crystalline silica. The qualified person shall be knowledgeable in this standard and shall be competent in industrial hygiene practice. A Certified Industrial Hygienist as codified in California's Business and Professions Code Sections 20700-20705 is considered competent in industrial hygiene practice.

II. Oral Comments

Oral comments received at the June 20, 2024, Public Hearing in Vacaville, California.

12. Nola Kennedy, Occupational Safety and Health Standards Board

Comment 12.1
Any shop using manufactured or engineered stone with more than one tenth of one percent crystalline silica content or any shop using natural stone with more than ten percent crystalline silica content are covered. Are there any stone fabrication shops that would not be included?

Response to Comment 12.1
Stone fabrication shops that use only in natural marble, which typically contains much less than 10 percent crystalline silica would be excluded from the proposed changes to

the regulation. Also, shops that only use new artificial stones (called "zero-silica engineered stone") that contain no crystalline silica would be excluded from the proposal. The Board does not know how many stone fabrication shops would be excluded.

Comment 12.2
If the regulated area which is demarcated by the employer as the area where someone either is working or conducting the work or in the area where the work is being conducted, how is an employer supposed to identify the regulated area? What guidance is going to be provided by Cal/OSHA? Or what are the expectations by inspectors who are going to be going out in the field and doing inspections on what the regulated areas are -- or should be? And I can see that an employer might have trouble, if they are not taking air samples, determining what the regulated area is. So that's going to require guidance for employers.

Response to Comment 12.2
Requirements regarding air sampling have not been eliminated or reduced in the proposed changes to the regulation. As a result, employers can use such air sampling to establish the regulated area.

Comment 12.3
In your presentation, you mentioned that respirable crystalline silica in fabricated stone is more toxic than respirable crystalline silica in natural stone. I have a little bit of trouble understanding that. I can understand that as a composite product, engineered stone might contain components that are toxic. Monomers might be released when it's ground or cut. But I don't know why the crystalline silica is more toxic or hazardous in engineered stone than crystalline silica anywhere else.

Response to Comment 12.3
Epidemiological evidence shows that the median time from first silica exposure to silicosis diagnosis for workers exposed to silica from artificial stone is significantly shorter than the latency of silicosis resulting for exposure from natural sources of silica.[5,6] Silicosis from exposure to artificial stone is also more aggressive and progresses faster than silicosis from natural stone.[7] During cutting, grinding, and polishing, and other fabrication tasks, hazardous volatile organic compounds, including substances that are respiratory irritants, are released from artificial stone.[8] These

[5] Hoy RF, et al. Identification of early-stage silicosis through health screening of stone benchtop industry workers in Victoria, Australia. Occup Environ Med. 2021;78(4):296-302. https://pubmed.ncbi.nlm.nih.gov/33115923/.
[6] Wu N, et al. Artificial stone-associated silicosis in China: A prospective comparison with natural stone-associated silicosis. Respirology (2020) 25, 518–524. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7187561/.
[7] León-Jiménez A, et al. Artificial stone silicosis: rapid progression after exposure cessation. Chest (2020);158(3):1060-1068. https://pubmed.ncbi.nlm.nih.gov/32563682/.
[8] 7 Ramkissoon C, et al. Engineered Stone Fabrication Work Releases Volatile Organic Compounds Classified as Lung Irritants. Annals of Work Exposures and Health (2023); 67(2) 288–293. https://pubmed.ncbi.nlm.nih.gov/36239208/.

hazardous volatile organic compounds are released from the resins that make up the binding agent in artificial stone and are not present in natural stone. Cutting engineered stones generates higher concentrations of very fine particles (< 1 µm in diameter), which can penetrate much deeper into the lungs than large particles and cause greater damage. Artificial stone particles also have more irregular shapes, and a larger surface area compared to natural stone dust particles, with sharp edges and fractures along the surfaces. This can increase the rate at which artificial stone silica particles cause cell damage in the lungs, which produces scarring and, eventually, silicosis.[9] Respirable crystalline particles generated from artificial stone are more reactive and fibrogenic (likely to break into fibers, which are more harmful to the lungs than other shapes), compared to natural stone. Artificial stone particles contain higher levels of metal transition ions. Dry cutting of artificial stone produced carboxyl radicals in dusts that were up to 10 times more reactive than the dust produced from dry cutting natural quartz. [10] Please also see the response to comment 11.3. Finally, as of November 18, 2024, CDPH has reported a total of 219 confirmed cases of silicosis among workers in the fabricated stone industry, including 14 deaths and 26 workers who are awaiting lung transplantation. At this time, the Board is not aware of silicosis cases in industries outside of the fabricated stone industry.

Comment 12.4

I don't think it's necessary that the person be external to the company. I think with the qualifications that are stated, any person in that position with that background and knowledge should be and would be expected to be ethical in their measurements and their reporting.

Response to Comment 12.4
The Board, based on the totality of all input and extensive enforcement experience of the Division of Occupational Safety and Health, decided to amend the proposal to require the qualified person to be a third party independent of the employer. Because the results of air sampling allow the employer to reduce the assigned protection factor (APF) of respirators used by workers, and because sampling is required only every six months, it is essential that the sampling be conducted independently of the employer and in accordance with best practices. For this reason, the Board is requiring that sampling be conducted by a third party who meets the definition of “qualified person.”

[9] Ramkissoon C, et al. Characterisation of dust emissions from machined engineered stones to understand the hazard for accelerated silicosis. Nature Portfolio 12:42351 (2022). https://www.nature.com/articles/s41598-022-08378-8.
[10] Pavan C, et al. Abrasion of Artificial Stones as a New Cause of an Ancient Disease. Physicochemical Features and Cellular Responses. Toxicological Sciences. (2016) 153(1), 4–17. https://academic.oup.com/toxsci/article/153/1/4/2223603

Comment 12.5
For health care providers, is an in-house person able to do the work required in this proposal?

Response to Comment 12.5
Physicians or Other Licensed Health Care Professionals, who employers must consult with in this proposal for the medical surveillance of exposed employees, are allowed to be an in-house person employed by the employer.

13. Chris Laszcz-Davis, Occupational Safety and Health Standards Board

Comment 13.1
Regarding the regulated area in stone fabrication shops, you can't assume that you've got a static situation in the workplace. That's going to change daily, let alone weekly. You've got another set of dynamics to consider as you try to respond to the need for guidance in setting the regulated area.

Response to Comment 13.1
The Board acknowledges that crystalline silica air levels in a stone fabrication workplace are highly variable and will change from day to day. However, that challenge existed in the pre-emergency version of the proposed regulation, which required the regulated area be determined solely by air sampling results. The proposed changes for the regulated area do not affect the challenge created by highly variable silica air levels.

Comment 13.2
A number of standards use the term "qualified." I assumed it would be somebody who was professionally competent and received a license or a certificate after some very targeted training. Have you guys defined that or are you leaving it open?

Response to Comment 13.2
The definition of qualified person was changed to require the qualified person to be knowledgeable of the proposed regulation and competent in industrial hygiene practice. The definition further states that a “Certified Industrial Hygienist as codified in California's Business and Professions Code sections 20700 - 20705 is considered competent in industrial hygiene practice.” This does not require the qualified person to be a certified industrial hygienist but sets a preference and an incentive for the employer to use an industrial hygienist.

Comment 13.3
The direction that the legislature is going, at least as contemplated by the assembly bill, is through a third party. It's very clear. It's in the text. Verification for the quality of air monitoring is by a third party.

Response to Comment 13.3
Please see the response to Comment 12.4 and 15.1.

14. Joseph Alioto, Occupational Safety and Health Standards Board

Comment 14.1
Will the existing exemptions in the emergency regulation be continued in the proposed regulation?

Response to Comment 14.1
Yes, exceptions similar to what are in the emergency regulation were added to this proposal in the 15-day Notice. The Board has moved and clarified the exceptions to subsection (a), Scope and Application that exempt certain industry sectors from the high-exposure trigger task requirements. The Board has also added a new exception from the definition of high exposure trigger task, which exempts work that does not involve the fabrication of slabs or panels. In some cases, exemptions are contingent on the employer demonstrating that employee exposures are below the action level.

Comment 14.2
Regarding the qualified person, how is objectivity going to be preserved and how can you provide confidence to the public in the regulation that there will not be a conflict of interest among the testing and the entity being tested? Allowing an in-house person to be qualified persons would put a larger company at a distinct advantage over a much smaller one. And that raises its own concerns for me. Because if you have small businesses disadvantaged because they don't have the resources to be able to keep somebody like this on staff, where as you might have this huge, larger corporate entity that can and they pay them a lot of money and there might be pressure on that employee to provide the result that its employer wants. We should at least attempt to provide some comfort that the data is pure.

Response to Comment 14.2
Please see the response to Comment 15.1.

15. David Thomas, Occupational Safety and Health Standards Board

Comment 15.1
Is the qualified person, is that an outside vendor that comes into test always? It seems like in-house is a little too close. I'd prefer a third party because that would seem to provide much more reliable air monitoring results.

Response to Comment 15.1
The Board modified the proposal to require the qualified person to be a third party independent of the employer. Please also see the response to comment 12.4.

16. David Harrison, Occupational Safety and Health Standards Board

Comment 16.1
The employer is released from important provisions if they have valid air sampling data showing that their exposure levels are below the action level. It does come down to a

question of the validity of those results. We share your concern about the qualified person being independent.

Response Comment 16.1
Please see the response to Comment 15.1.

17. Mark Mulliner, California State Building Trades

Comment 17.1
The California State Building Trades represents 480,000 construction workers throughout the state; 80,000 of them are apprentices. This proposal is not only going to help our members, but it's going to help all construction workers in the state. We support the permanent regulation. I ran a lot of fab shops with hexavalent chromium. I was the general superintendent, and I wasn't going to do air testing for everybody in the whole facility; I was only going to test the production workers. A third party did air monitoring, and they made everybody wear air monitoring equipment, including office staff, which I would never have done because they are not in the production facility. The result showed that the office staff were exposed ten times greater than the welders because the ventilation from production was drawing air into the office. A third party is the way to go.

Response to Comment 17.1
The Board appreciates the commentator's support for the proposal. Regarding third parties, please see the response to comment 12.4 and 15.1.

18. Maegan Ortiz, Instituto de Educación Popular del Sur de California

Comment 18.1
My staff and I have been to stone fabrication shops. Dust is pervasive in these shops. Wet cutting is very well described in the emergency regulation and the proposal. However, we have seen that shops are interpreting this as having a water bottle and squeezing. Regarding training the proposal states that information and signage is in the language and appropriate to the literacy level of the employee. Imagery and pictograms should also be considered. Speaking Spanish and reading Spanish, speaking English and knowing English is very different than understanding the very technical language that says, "using this product, cutting this product, could cause you to die." I want to highlight and encourage something that includes the usage of some sort of imagery in outreach and education materials. I'm happy to see the clarification of employee exposure, because we've seen how pervasive the dust is in these shops. The workers, despite changes in Medi-Cal in California, have incredible difficulty accessing health care. Many community health clinics that workers use don't ask questions like "what kind of job do you do?" Coughing is attributed to asthma, but it could be silicosis. There's a lot of education and outreach that is needed for medical providers about the risk of silicosis. This proposal does not address workers who demolish silica materials, workers that go to home and cut to fit.

Response to Comment 18.1
The Board changed subsection (l)(3) to include the health hazard pictogram on signs at the entrance to regulated areas. The pictogram is incorporated from title 8 section 5194 Hazard Communication Appendix C. The Board recommends the commenter work with the Division of Occupational Safety and Health regarding additional outreach and education for the workforce.

19. Grant Davidson, Tile Council of North America

Comment 19.1
We understand the urgency to develop this permanent regulation for the countertop fabrication industry. However, it's worth noting that section 5204 also applies to tile factories manufacturing ceramic and porcelain tiles. While such factories engage in fabrication and automated finishing activities using materials containing crystalline silica, these factors are well-regulated. They use engineering controls, and they maintain air exposure levels of RCS well below the action level of 25 micrograms per cubic meter. As such, these operations aren't related to the rise in silicosis cases in California. I wanted to talk to our two main points in our comments. Number one, we proposed editing subsection (b)(2) 1 of 5204, the definition for artificial stone. To add clarity and avoid confusion with products manufactured through the ceramic firing process. These materials don't contain adhesives, polymers, et cetera, and are entirely different from the resin agglomerated products. And they are used differently in application. And certainly, none of the documents relied upon by Cal/OSHA upon review have in any way stated that use of these types of products has contributed to the rise in silicosis in California. Accordingly, we ask that that definition be modified as proposed in our written comments. And then, two, our second main point, to add an exception to the subsection (b)(9) for high-exposure trigger tasks. To exempt fabrication or finishing of fired ceramic or porcelain tiles or panels in tile manufacturing facilities where the employer demonstrates that employee exposure, as defined in subsection (b)(7), is below the PEL for respirable crystalline silica. We believe that is in keeping with the three prior exemptions that have been issued that are unrelated to stone countertop fabrication. I'll also lastly and quickly just add that we support NSI's position in adding definitions consist with the statutory provisions and definitions in AB 3043, to harmonize the non-emergency regulation for respirable crystalline silica with AB 3043.

Response to Comment 19.1
Please see the response to comment 7.2 and 7.3.

20. Eric Astrachan, Tile Council of North America

Comment 20.1
We represent both the very largest tile manufacturers in the country and some of which are largest in the world, but also many, many artisanal manufacturers. All of these

companies are regulated under section 5204. They all use engineering controls to operate below the action level of 25 micrograms of RCS per cubic meter. Some of these factories do have operations that would fall under the high-exposure trigger task definition. These operations are done by automated machines. They have extensive vacuum and filtration equipment. Some cases, these machines are state-of-the-art from Italy and use dry processing-type equipment. But there's no human exposure whatsoever. These are not countertop fabrication operations at all. And as such, we believe they should be exempted from the high-exposure trigger task requirements. The definition for artificial stone is confusing as written. Agglomerated engineered slabs, some of which may contain porcelain powder are completely different from fired porcelain tiles from the ceramic tile industry. And we want to avoid the confusion between a fired porcelain tile and a resin agglomerated engineered slab.

Response to Comment 20.1
Please see the response to Comments 7.2 and 7.3.

21. Mark Meriaux, Natural Stone Institute

Comment 21.1
We represent over 2,000 member companies worldwide, including over 200 stakeholder businesses within the State of California, many of which who employ countertop fabrication workers. The proposed 5204 permanent standard is a huge step in the right direction to prevent additional cases of workplace silicosis in California. We have submitted written comments separately and look forward to working with the Division of Occupational Safety and Health.

Response to Comment 21.1
Please see responses to Comment 4

22. Alice Berliner, Los Angeles County Department of Public Health, Office of Worker Health and Safety

Comment 22.1
We want to express our strong support for adopting the permanent general industry standard for exposure to respirable crystalline silica. So as of June 10th, 2024, there have been 154 confirmed cases of silicosis in California, with 60 percent, about 92 of those cases located in Los Angeles County. Our jurisdiction is at the epicenter of this emerging epidemic and really see it impacting primarily low wage and immigrant workers with limited access to health care as expressed by Maegan Ortiz. We're at the forefront of deploying a coordinated multi-pronged and multi-agency response and are developing and disseminating educational resources, trainings, and outreach to the most impacted communities, in close partnership with community-based organization such as IDEPSCA and Pacoima Beautiful. We've seen and heard directly from workers

that few shops use the wet method to cut stone and often don't provide appropriate respirators to workers. We want to emphasize the importance of broadening efforts across the state to educate workers and employers of the grave risks of long-term silica exposure and how to implement preventative measures to mitigate risk. We fear that many more workers are sick with silicosis than we are aware of and see a permanent standard as an important and much needed component to addressing this emerging crisis. We would also urge the consideration of the need for resources and implementation of mass scale screening and testing to identify workers that have silicosis early on so they can be connected with medical care and necessary resources, improving their chances of survival and quality of life. Currently, there is no free or low-cost mechanism to screen workers. We see this as a huge impediment to addressing the epidemic of silicosis in our state and county. The County of Los Angeles looks forward to continuing our partnership with the state, Cal/OSHA, other local jurisdictions, community-based organizations, workers, industry representatives, and the medical community to develop the most sound, equitable, and effective approaches possible to reduce exposure to respirable crystalline silica and protect the most vulnerable workers from developing silicosis.

Response to Comment 22.1
The Board thanks the commenter for their support of the proposal and recommends the commenter works with the Division of Occupational Safety and Health on further outreach efforts to the workforce.

23. Robert Harrison, Occupational Health Surveillance and Evaluation Program, California Department of Public Health.

Comment 23.1
I'm speaking in favor and in support of the Cal/OSHA revisions to the permanent regulation for silica dust. We're up to over 150 cases of silicosis and counting. I think we have 11 counties that have reported cases, at least 13 deaths, 17 lung transplants. We are not yet seeing a stop to this rise in the increased number of cases. They've all been in young immigrant workers. Most are doing a lot of dry cutting and few consistently use respiratory protection. There's some good data coming out of Australia on the prevalence or how often this disease occurred. And when they did a widespread testing campaign, they found about 25 percent of exposed workers have silicosis. So undoubtedly we're just seeing the tip of an iceberg in California because very few workers have yet to be tested. This current rule that's before you is necessary to address this severe preventable lung disease.

Response to Comment 23.1
The Board thanks the commenter for their support of the proposal and acknowledges the severity of the silicosis crisis in California.

SUMMARY AND RESPONSE TO WRITTEN COMMENTS RESULTING FROM THE FIRST 15-DAY COMMENT PERIOD

24. Michael Ware and Robert Phillips, MB's Exodus dba Exodus Designs & Surfaces by letter sent via email, dated September 27, 2024

Comment 24.1
The commenter recommends the proposal be rejected unless modified as follows:

> (1) Develop and implement a "TSA pre-check model" to guide prioritization of regulatory oversight, enforcement, and application of the new proposed permanent regulations that extend beyond the requirements included in Section 5204 as of July 1, 2023.
>
> (2) Modify the application of the "regulated areas" provisions of the proposed permanent regulations to reflect implementation of the "TSA pre-check model" for fabrication shops.
>
> (3) Modify the application of the "housekeeping and hygiene" provisions of the proposed permanent regulations to reflect implementation of the "TSA pre-check model" for fabrication shops.
>
> (4) Modify the application of the "respiratory protection" provisions of the proposed permanent regulations to reflect implementation of the "TSA pre-check model" for fabrication shops.
>
> (5) Create a streamlined registration program for fabricators and fabrication shops.

Response to Comment 24.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 24.2
The commenter states that there are many compliant fabrication companies across California that adhere to the existing regulations. These companies utilize exclusively wet methods, conduct air monitoring on a regular basis, deploy engineering controls where appropriate, facilitate training, and care deeply about their employees. While the Emergency Temporary Standard had some much-needed help for Cal/OSHA enforcement staff – such as eliminating all dry fabrication and cleaning – it grouped previously compliance and non-compliant fabrication shops into the same bucket,

requiring the same respirator, designated area, and housekeeping/hygiene regulations, regardless of air monitoring results or employee medical testing.

Response to Comment 24.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 24.3
The commenter states that a consequence of the proposal is that fabrication shop workers at compliant companies will end up leaving to work at other fabrication shops that don't require respirators, because the respirators are considered too uncomfortable to wear all day long.

Response to Comment 24.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

25. Greg Segaar, Segar Company, by letter sent via email, dated September 27, 2024

Comment 25.1
The commenter recommends the proposal be rejected unless modified as follows:

> (1) Develop and implement a "TSA pre-check model" to guide prioritization of regulatory oversight, enforcement, and application of the new proposed permanent regulations that extend beyond the requirements included in Section 5204 as of July 1, 2023.
>
> (2) Modify the application of the "regulated areas" provisions of the proposed permanent regulations to reflect implementation of the "TSA pre-check model" for fabrication shops.
>
> (3) Modify the application of the "housekeeping and hygiene" provisions of the proposed permanent regulations to reflect implementation of the "TSA pre-check model" for fabrication shops.
>
> (4) Modify the application of the "respiratory protection" provisions of the proposed permanent regulations to reflect implementation of the "TSA pre-check model" for fabrication shops.

(5) Create a streamlined registration program for fabricators and fabrication shops.

Response to Comment 25.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 25.2
The commenter states that there are many compliant fabrication companies across California that adhere to the existing regulations. These companies utilize exclusively wet methods, conduct air monitoring on a regular basis, deploy engineering controls where appropriate, facilitate training, and care deeply about their employees. While the Emergency Temporary Standard had some much-needed help for Cal/OSHA enforcement staff – such as eliminating all dry fabrication and cleaning – it grouped previously compliance and non-compliant fabrication shops into the same bucket, requiring the same respirator, designated area, and housekeeping/hygiene regulations, regardless of air monitoring results or employee medical testing.

Response to Comment 25.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 25.3
The commenter states that a consequence of the proposal is that fabrication shop workers at compliant companies will end up leaving to work at other fabrication shops that don't require respirators, because the respirators are considered too uncomfortable to wear all day long.

Response to Comment 25.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

26. Chad Thomspon, Redding Countertops, by letter sent via email, dated September 27, 2024

Comment 26.1
The commenter recommends the proposal be rejected unless modified as follows:

(1) Develop and implement a "TSA pre-check model" to guide prioritization of regulatory oversight, enforcement, and application of the new proposed

permanent regulations that extend beyond the requirements included in Section 5204 as of July 1, 2023.

(2) Modify the application of the “regulated areas” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.

(3) Modify the application of the “housekeeping and hygiene” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.

(4) Modify the application of the “respiratory protection” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.

(5) Create a streamlined registration program for fabricators and fabrication shops.

Response to Comment 26.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 26.2
The commenter states that there are many compliant fabrication companies across California that adhere to the existing regulations. These companies utilize exclusively wet methods, conduct air monitoring on a regular basis, deploy engineering controls where appropriate, facilitate training, and care deeply about their employees. While the Emergency Temporary Standard had some much-needed help for Cal/OSHA enforcement staff – such as eliminating all dry fabrication and cleaning – it grouped previously compliance and non-compliant fabrication shops into the same bucket, requiring the same respirator, designated area, and housekeeping/hygiene regulations, regardless of air monitoring results or employee medical testing.

Response to Comment 26.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 26.3
The commenter states that a consequence of the proposal is that fabrication shop workers at compliant companies will end up leaving to work at other fabrication shops

that don't require respirators, because the respirators are considered too uncomfortable to wear all day long.

Response to Comment 26.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

27. Cary Hitsman, Pyramid Marble Tile Masonry, by letter sent via email, dated September 27, 2024

Comment 27.1
The commenter recommends the proposal be rejected unless modified as follows:

> (1) Develop and implement a "TSA pre-check model" to guide prioritization of regulatory oversight, enforcement, and application of the new proposed permanent regulations that extend beyond the requirements included in Section 5204 as of July 1, 2023.
>
> (2) Modify the application of the "regulated areas" provisions of the proposed permanent regulations to reflect implementation of the "TSA pre-check model" for fabrication shops.
>
> (3) Modify the application of the "housekeeping and hygiene" provisions of the proposed permanent regulations to reflect implementation of the "TSA pre-check model" for fabrication shops.
>
> (4) Modify the application of the "respiratory protection" provisions of the proposed permanent regulations to reflect implementation of the "TSA pre-check model" for fabrication shops.
>
> (5) Create a streamlined registration program for fabricators and fabrication shops.

Response to Comment 27.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 27.2
The commenter states that there are many compliant fabrication companies across California that adhere to the existing regulations. These companies utilize exclusively wet methods, conduct air monitoring on a regular basis, deploy engineering controls

where appropriate, facilitate training, and care deeply about their employees. While the Emergency Temporary Standard had some much-needed help for Cal/OSHA enforcement staff – such as eliminating all dry fabrication and cleaning – it grouped previously compliance and non-compliant fabrication shops into the same bucket, requiring the same respirator, designated area, and housekeeping/hygiene regulations, regardless of air monitoring results or employee medical testing.

Response to Comment 27.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 27.3
The commenter states that a consequence of the proposal is that fabrication shop workers at compliant companies will end up leaving to work at other fabrication shops that don't require respirators, because the respirators are considered too uncomfortable to wear all day long.

Response to Comment 27.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

28. Nate Kolenski, Block Tops, by letter sent via email, dated September 27, 2024

Comment 28.1
The commenter recommends the proposal be rejected unless modified as follows:

> (1) Develop and implement a "TSA pre-check model" to guide prioritization of regulatory oversight, enforcement, and application of the new proposed permanent regulations that extend beyond the requirements included in Section 5204 as of July 1, 2023.
>
> (2) Modify the application of the "regulated areas" provisions of the proposed permanent regulations to reflect implementation of the "TSA pre-check model" for fabrication shops.
>
> (3) Modify the application of the "housekeeping and hygiene" provisions of the proposed permanent regulations to reflect implementation of the "TSA pre-check model" for fabrication shops.

(4) Modify the application of the “respiratory protection” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.

(5) Create a streamlined registration program for fabricators and fabrication shops.

Response to Comment 28.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 28.2
The commenter states that there are many compliant fabrication companies across California that adhere to the existing regulations. These companies utilize exclusively wet methods, conduct air monitoring on a regular basis, deploy engineering controls where appropriate, facilitate training, and care deeply about their employees. While the Emergency Temporary Standard had some much-needed help for Cal/OSHA enforcement staff – such as eliminating all dry fabrication and cleaning – it grouped previously compliance and non-compliant fabrication shops into the same bucket, requiring the same respirator, designated area, and housekeeping/hygiene regulations, regardless of air monitoring results or employee medical testing.

Response to Comment 28.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 28.3
The commenter states that a consequence of the proposal is that fabrication shop workers at compliant companies will end up leaving to work at other fabrication shops that don’t require respirators, because the respirators are considered too uncomfortable to wear all day long.

Response to Comment 28.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

29. Bill Kammerer, American Marble, by letter sent via email, dated September 27, 2024

Comment 29.1
The commenter recommends the proposal be rejected unless modified as follows:

> (1) Develop and implement a “TSA pre-check model” to guide prioritization of regulatory oversight, enforcement, and application of the new proposed permanent regulations that extend beyond the requirements included in Section 5204 as of July 1, 2023.
>
> (2) Modify the application of the “regulated areas” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.
>
> (3) Modify the application of the “housekeeping and hygiene” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.
>
> (4) Modify the application of the “respiratory protection” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.
>
> (5) Create a streamlined registration program for fabricators and fabrication shops.

Response to Comment 29.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 29.2
The commenter states that there are many compliant fabrication companies across California that adhere to the existing regulations. These companies utilize exclusively wet methods, conduct air monitoring on a regular basis, deploy engineering controls where appropriate, facilitate training, and care deeply about their employees. While the Emergency Temporary Standard had some much-needed help for Cal/OSHA enforcement staff – such as eliminating all dry fabrication and cleaning – it grouped previously compliance and non-compliant fabrication shops into the same bucket, requiring the same respirator, designated area, and housekeeping/hygiene regulations, regardless of air monitoring results or employee medical testing.

Response to Comment 29.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 29.3
The commenter states that a consequence of the proposal is that fabrication shop workers at compliant companies will end up leaving to work at other fabrication shops that don't require respirators, because the respirators are considered too uncomfortable to wear all day long.

Response to Comment 29.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

30. Robert Dugan, California Construction and Industrial Materials Association, by letter sent via email, dated September 27, 2024

Comment 30.1
The commenter requests that mining operations with high-exposure trigger tasks where exposures are above the PEL be excepted from the requirements of 5204(f)(2) and be required to continue to comply with 5204(f)(1).

Response to Comment 30.1
The Board has modified the proposal such that quarry and mine operations are exempt from high exposure trigger tasks. As a result, quarry and mine operations are required to follow subsection 5204(f)(1) and are not covered by subsection 5204(f)(2).

Comment 30.2
The commenter states that the change in the definition for a "qualified person" to require a third party independent of the employer does not credit the mining employers with the ability to perform this monitoring. It is understandable for industries, such as the countertop fabricators and installers, who lack this expertise in-house. A third party independent of the employer to conduct this monitoring at a mine site will be burdensome where there are operations at some mines that operate on multiple shifts. The number of workers who may need to be monitored would add significant costs to conduct this monitoring. The commenter suggests it be permitted for the employer to hire a qualified person to oversee and coordinate the use of in-house resources to conduct the on-site monitoring, if not already permitted under this revision.

Response to Comment 30.2
The Board has modified the proposal such that quarry and mining operations are not required to use a qualified person for air monitoring.

Comment 30.3
The commenter requests clarity regarding the definition of "quarries and open pit mines". There are areas outside of the "open pit" where processes, such as crushing,

are located on a mine site. The commenter is asking to clarify if the exception is limited to just the “quarry” or “open pit”, or all areas on the mine site. It is the commenter’s understanding that “High-Exposure Trigger Task” is limited strictly to the tasks in the list: machining, crushing, cutting, drilling, abrading, abrasive blasting, grinding, chiseling, carving, gouging, polishing, buffing, fracturing, intentional breaking or intentional chipping.

Response to Comment 30.3
The Board has modified the proposal to clarify that all quarry and mining operations are exempted from being high-exposure trigger tasks.

31. Jeanie Trojanowski, Emerald Tile and Stone, by letter sent via email, dated September 27, 2024

Comment 31.1
The commenter recommends the proposal be rejected unless modified as follows:

> (1) Develop and implement a “TSA pre-check model” to guide prioritization of regulatory oversight, enforcement, and application of the new proposed permanent regulations that extend beyond the requirements included in Section 5204 as of July 1, 2023.
>
> (2) Modify the application of the “regulated areas” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.
>
> (3) Modify the application of the “housekeeping and hygiene” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.
>
> (4) Modify the application of the “respiratory protection” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.
>
> (5) Create a streamlined registration program for fabricators and fabrication shops.

Response to Comment 31.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 31.2
The commenter states that there are many compliant fabrication companies across California that adhere to the existing regulations. These companies utilize exclusively wet methods, conduct air monitoring on a regular basis, deploy engineering controls where appropriate, facilitate training, and care deeply about their employees. While the Emergency Temporary Standard had some much-needed help for Cal/OSHA enforcement staff – such as eliminating all dry fabrication and cleaning – it grouped previously compliance and non-compliant fabrication shops into the same bucket, requiring the same respirator, designated area, and housekeeping/hygiene regulations, regardless of air monitoring results or employee medical testing.

Response to Comment 31.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 31.3
The commenter states that a consequence of the proposal is that fabrication shop workers at compliant companies will end up leaving to work at other fabrication shops that don't require respirators, because the respirators are considered too uncomfortable to wear all day long.

Response to Comment 31.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

32. Matt Trojanowski, Emerald Tile and Stone, by letter sent via email, dated September 27, 2024

Comment 32.1
The commenter recommends the proposal be rejected unless modified as follows:

> (1) Develop and implement a "TSA pre-check model" to guide prioritization of regulatory oversight, enforcement, and application of the new proposed permanent regulations that extend beyond the requirements included in Section 5204 as of July 1, 2023.
>
> (2) Modify the application of the "regulated areas" provisions of the proposed permanent regulations to reflect implementation of the "TSA pre-check model" for fabrication shops.

(3) Modify the application of the “housekeeping and hygiene” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.

(4) Modify the application of the “respiratory protection” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.

(5) Create a streamlined registration program for fabricators and fabrication shops.

Response to Comment 32.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board, and is therefore outside the scope of the third 15-Day Notice.

Comment 32.2
The commenter states that there are many compliant fabrication companies across California that adhere to the existing regulations. These companies utilize exclusively wet methods, conduct air monitoring on a regular basis, deploy engineering controls where appropriate, facilitate training, and care deeply about their employees. While the Emergency Temporary Standard had some much-needed help for Cal/OSHA enforcement staff – such as eliminating all dry fabrication and cleaning – it grouped previously compliance and non-compliant fabrication shops into the same bucket, requiring the same respirator, designated area, and housekeeping/hygiene regulations, regardless of air monitoring results or employee medical testing.

Response to Comment 32.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 32.3
The commenter states that a consequence of the proposal is that fabrication shop workers at compliant companies will end up leaving to work at other fabrication shops that don’t require respirators, because the respirators are considered too uncomfortable to wear all day long.

Response to Comment 32.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

33. Barbara Ferrer, Los Angeles County Department of Public Health by letter sent via email, dated September 27, 2024

Comment 33.1
The commenter notes that as of August 11, 2024, there are 173 confirmed cases of silicosis in CA. With 60% (103) of those cases located in Los Angeles County. Los Angeles County is arguably the epicenter of this emerging public health crisis in the artificial stone fabrication industry. The commenter observes firsthand the impact on primarily low-wage and immigrant workers with limited access to healthcare. Los Angeles County is at the forefront of deploying a coordinated, multi-pronged and multi-agency response, and developing and disseminating educational resources, trainings, and outreach to the most impacted communities, in close partnership with community-based organizations.

Response to Comment 33.1
The Board thanks the commenter for their support of the proposal and recommends the commenter works with the Division of Occupational Safety and Health on further outreach efforts to the workforce.

Comment 33.2
Since June, the commenter's two contracted partner organizations have educated 564 workers and 187 worksites. During their outreach efforts, workers have expressed concerns about their health and safety at work. Cal/OSHA protections safeguard workers' physical health and keep employers accountable for providing a safe working environment. However, the commenter would like to emphasize the importance of broadening efforts across the state to educate workers and employers of the risks of long-term silica dust exposure and how to implement preventative measures to mitigate their risk of contracting silicosis. Many workers continue to report a lack of awareness about the dangers associated with silica dust exposure, and the standards meant to protect them from developing silicosis.

Response to Comment 33.2
The Board thanks the commenter for their support of the proposal and recommends the commenter works with the Division of Occupational Safety and Health on further outreach efforts to the workforce.

Comment 33.3
The commenter supports the following proposed modifications:

- Further clarification on the meaning of "Artificial Stone" (b)(2)
- Further clarification on the meaning of "Wet Methods" to ensure recycled water be filtered (b)(17)

- New subsection to inform employees of their status regarding silicosis, suspected silicosis, or lung cancer (j)(6)().

- New subsection to require Physicians or Licensed Health Care Professionals to submit medical reports to the California Department of Public Health Occupational Health Branch (j)(9). This in particular will help notify our department when new cases emerge and guide our outreach and education efforts.

- New subsection to require that air monitoring records include the silica content of the material or product being handled (n)(1).

Response to Comment 33.3
The Board thanks the commenter for their comments. Changes were made to improve the clarity and effectiveness of the proposal, including:

- Subsection (b)(2): Clarifies the meaning of artificial stone, under subsection (b)(2) to include silica containing products that are made from ingredients other than natural stone;

- Subsection (b)(17): Requires that recycled water used during wet cutting be filtered to prevent reintroduction of silica into the air;

- Subsection (j)(6)(G): Requires PLHCPs to provide employees with information on their status regarding silicosis, suspected silicosis, or lung cancer;

- Subsection (j)(9): Requires PLHCPs to submit the following information to the CDPH Occupational Health Branch: the patient's name, date of birth and a copy of the written medical report that was provided to the employee. This information will allow CDPH to adjust their response to emerging silicosis cases much more efficiently and with greater precision.

- Subsection (n)(1)(B)3: Require employers to retain information on the product or materials that are the source of RCS, including the specific crystalline silica content of the product or materials, under subsection (n)(1)(B)3.

Comment 33.4
The commenter urges the reconsideration of the following proposed modifications:

- The proposed modifications would alter the minimum exposure time to high-exposure tasks which trigger the need for medical surveillance from 10 days to 30 days (j)(2)(A). The commenter recommends keeping the medical surveillance requirement threshold to apply after 10 days, given the high incidence of employer non-compliance, particularly around the lack of worker health

screening. High-exposure trigger tasks, including crushing, cutting, drilling, and other tasks listed, as well as cleaning and handling wastes, dusts, debris, or other materials created during the fabrication processes described in (b)(8), are all common tasks within the artificial stone fabrication industry.

- The proposed modifications reduce the frequency of required medical exams from once a year to once every three years (j)(3)(A). We recommend maintaining the requirement for medical exams every year, given the importance of identifying silicosis early and eliminating any further exposure once a diagnosis is known.

Response to Comment 33.4
The Board thanks the commenter for their comments. The Board has considered the commenter's request to alter the proposed modifications but declines to do so for the following reasons:

- The Board will retain the minimum exposure time to high-exposure tasks which trigger the need for medical surveillance at 30 days, under subsection (j)(2)(A). This is complicated by the fact that most workers in this industry work with artificial stone along with other types of stone products throughout a work week, such that tracking the number of days a worker works with artificial stone can be challenging for employers. Because 30 days represents about 11.5% of one year of 260 work days, the Board believes that the 30-day timeline is short enough that it will safely capture all workers who handle artificial stone.

- The Board will retain the frequency of required medical exams at once every three years, rather than one each year. After consulting with CPDH Occupational Health Branch, the Board believes the three-year period between exams is sufficient to capture emerging cases of silicosis, particularly with the required CT scan.

Comment 33.5
Every month, LA County identifies new cases of silicosis, a preventable disease that can cause significant impairment and death for otherwise healthy workers. Workers' access to medical surveillance is a critical component to understanding the full scope of this emerging crisis and connecting impacted workers to support. During our outreach to stone fabrication businesses, we have found that many employers do not regularly screen their employees. Employers can play a critical role in detecting silicosis early to ensure affected workers receive timely medical care and resources.

Response to Comment 33.5
The Board concurs with the commenter that medical surveillance is a key element in detecting silicosis early. In subsection (j)(4)(B), the Board has included mandatory CT scans as part of medical exams. Subsection (j)(9) requires PLHCPs to submit the

following information to the CDPH Occupational Health Branch for each silica medical examination conducted: the patient's name, date of birth and a copy of the written medical report that was provided to the employee. This information will allow CDPH to track the number and severity of actual or suspected silicosis cases before they become fatal. This is a leading public health indicator, whereas fatality reports are a lagging indicator. This information will allow CDPH to adjust their response to emerging silicosis cases much more efficiently and with greater precision. This change was recommended by CDPH physicians.

Comment 33.6
This standard will provide important guidance to both employers and workers in how best to mitigate risks and protect the health and wellbeing of workers in the industry.

Response to Comment 33.6
The Board thanks the commenter for their support.

34. Eric S. Astrachan, Tile Council of North America by letter sent via email, dated September 27, 2024

Comment 34.1
In addition to countertop fabrication, Section 5204 applies to tile factories that manufacture ceramic and porcelain tiles and panels. The proposed modifications to Section 5204 correctly clarify that fired ceramic and porcelain tiles and panels are not artificial stone. As such, Exception 3 in subsection (b)(8) should be removed as there are no operations within a tile factory that involve artificial stone or natural stone. Hence, there are no operations that constitute high exposure trigger tasks for which an exception would be needed. Leaving the exception in place is problematic as it suggests high exposure trigger tasks occur in a tile factory, when in fact they do not. In a virtual meeting with the commenter and Cal/OSHA, this was discussed, and it is the commenter's understanding that Exception 3 in subsection (b)(8) will be removed and the revised modified proposed standard recirculated.

Response to Comment 34.1
The Board has modified subsection (a)(3) in the proposal to clarify that tile manufacturing is not covered by high-exposure trigger task requirements if the employer demonstrates through representative air sampling that employee exposures are below the action level.

35. Jim Hieb, Natural Stone Institute and Marissa Bankert, International Surface Fabricators Association by letter sent via email, dated September 27, 2024

Comment 35.1
The commenter recommends the proposal be rejected unless modified as follows:

> (1) Develop and implement a "TSA pre-check model" to guide prioritization of regulatory oversight, enforcement, and application of the new proposed

permanent regulations that extend beyond the requirements included in Section 5204 as of July 1, 2023.

(2) Modify the application of the “regulated areas” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.

(3) Modify the application of the “housekeeping and hygiene” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.

(4) Modify the application of the “respiratory protection” provisions of the proposed permanent regulations to reflect implementation of the “TSA pre-check model” for fabrication shops.

(5) Create a streamlined registration program for fabricators and fabrication shops.

Response to Comment 35.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 35.2
The proposed permanent regulations do not fully acknowledge and account for implementation of best management practices to ensure protections against silica exposure for employees. Instead, the proposed permanent regulations reflect a one-size-fits-all approach to regulating the countertop fabrication industry, which effectively dilutes the prioritization of regulatory oversight and enforcement.

Response to Comment 35.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 35.3
The proposed permanent regulation requires air testing. The test results should be the determining factor in triggering requirements for additional safety protocols. Workplaces that can demonstrate that employee exposure to respirable crystalline silica is consistently and regularly below the action level should not be treated the same as workplaces that cannot demonstrate that they are minimizing and mitigating employee exposure. To that end, our proposed modifications to the proposed silica (Section 5204) regulations focus primarily on safe work practices (effective wet methods) and the

demonstration of safe workplace conditions for employees (air quality sampling), following the longstanding and widely-accepted Hierarchy of Controls.

Response to Comment 35.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 35.4
Under the proposed regulation, there is no consideration if an employer addresses such hazards (with wet cutting) and reduces airborne crystalline silica levels to acceptable levels, as determined by Federal OSHA's Final Quantitative Risk Assessment and Significance of Risk (Federal Register# 81:16285-16890). The proposed regulation requires the range of safety protocols, regardless of the results of mandatory testing, thereby disincentivizing the innovation of new safety controls. The enhanced protections required for work environments with non-hazardous air will come at great – unnecessary – cost. The regulated areas, PAPRs, and PPE will present significant expense and divert employers' resources from health efforts protecting employees against actual hazards. Burdensome and unnecessary costs could drive the safe and compliant fabricators out of California, while shifting the work to the few non-compliant fabricators who fail to follow recognized practices and expose their employees to unsafe levels of airborne crystalline silica.

Response to Comment 35.4
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 35.5
Under this proposed "TSA Pre-Check"-Style model, Cal/OSHA would develop a rigorous air quality monitoring program for fabricators and fabrication shops that requires:

- Mandatory air quality monitoring/sampling
- Regular and frequent monitoring/sampling
- The establishment of regulatory parameters to ensure the veracity of monitoring/sampling
- Verification of results by third-party
- Reporting of data to Cal/OSHA

Response to Comment 35.5
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 35.6
The commenter proposes the following change to subsection (e)(1)

(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. All high-exposure trigger tasks shall be conducted within a regulated area **~~regardless of employee exposures, exposure assessments, or other objective data~~ unless the employer can demonstrate through sampling every six months that exposure to respirable crystalline silica remains below the action level**.

Response to Comment 35.6
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 35.7
The commenter proposes the following change to subsection (f)(2)(B)

(B) Housekeeping and Hygiene.

1. Wastes, dusts, residues, debris, or other materials that are generated from high-exposure trigger tasks or that otherwise contain or are contaminated with respirable crystalline silica shall be promptly and properly cleaned up and placed into leak-tight containers, bags, or equivalent. At a minimum, all such wastes, dusts, residues, debris, or other materials shall be cleaned up at the end of each shift or more frequently as needed to ensure there is no visible dust build-up in the workplace. **This subparagraph does not apply to a workplace where the employer can demonstrate through sampling every six months that exposure to respirable crystalline silica remains below the action level.**

* * * *

3. Employees engaged in housekeeping tasks **pursuant to subparagraph (1)** shall use respirator protection in accordance with subsection (h)(3).

* * * *

Response to Comment 35.7
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

Comment 35.8
The commenter proposes the following change to subsection (h)(3) and (h)(3)(A)

(3) When employees perform high-exposure trigger tasks or work within a regulated area where high- risk exposure tasks occur **and where an employer can demonstrate through sampling every six months that exposure to respirable crystalline silica remains below the action level**, the employer shall provide, and shall ensure that employees properly use~~, the following~~ respiratory protection, in accordance with Section 5144**. For all other workplace conditions, the following respiratory protection requirements shall apply**:

(A) A full face, tight-fitting powered-air purifying respirator (PAPR) or a respirator providing equal or greater protection equipped with a HEPA, N100, R100, or P100 filter. For artificial stone, a HEPA, N100, R100, or P100 filter and organic vapor cartridge shall be used.

* * * *

~~**EXCEPTION 2: The employer may provide employees with a loose-fitting PAPR, a full facepiece air-purifying respirator, or another respirator providing equal or greater protection where the employer demonstrates that employee exposures to respirable crystalline silica are continuously maintained below the action level through representative air sampling conducted at least once every six months in accordance with subsection (d)(3)(A). This exception does not apply if the PLHCP or specialist recommends use of a full face, tight-fitting PAPR or other more protective respirator.**~~

Response to Comment 35.8
The Board disagrees with the proposed change to subsection (h)(3). Please see the response to comment 4.6. Respiratory protection is necessary because the life of workers cannot be put at risk based on the results of air sampling, which can be highly variable from day to day and which may not represent actual exposures in certain circumstances. Silicosis is a permanent disabling disease with no cure where symptoms continue to worsen even if the person is removed from all silica exposures and can result in death.

The Board disagrees with deleting subsection (h)(3) exception 2 as it allows use of a lower level respiratory protection where representative air sampling demonstrates that exposures are below the action level.

The Board added an additional exemption with (h)(3) exception 3 to allow use of a half-mask respirator where representative air sampling demonstrates that exposures are below the action level and all employees are participating in the medical surveillance program.

Comment 35.9
The commenter proposes the creation of a streamlined registration program for fabricators/fabrication shops and outlines the following proposed modifications:

Cal/OSHA should establish a silica safety registration program – all fabricators/fabrication shops must be registered with the State of California as a countertop fabricator/fabrication shop:

- Must possess valid business license
- Must possess valid state contractors' license
- Must attest to compliance with any occupational safety and health regulations

Regulations should include "supply chain" provisions that would further support regulatory controls:

- Prohibit supplying a slab product to an unregistered fabricator or fabrication shop
- Supplier of slab product to a fabricator or fabrication shop must verify registration
- Supply of slab product to a re-seller or distributor would require a written certification that the person will not engage in fabrication activities without being registered
- Person seeking fabrication services shall verify registration of fabricator or fabrication shop

Regulations should include registration fees that would be sufficient to fund the administrative costs of the registration program and to support regulatory oversight and enforcement.

Regulations should include a provision for the establishment of a publicly accessible database of registered fabricators and fabricator shops to ensure viability of the “supply chain” provisions of the regulations.

Response to Comment 35.9
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

36. David Moore, Intrinsic, by letter sent via email, dated September 27, 2024

Comment 36.1
The commenter says there is a need for sampling data and allowing respirator use below the action level to incentivize sampling. The commenter also had concerns with the references used to support the proposal. Sampling using direct reading instruments would help provide the needed data.

Response to Comment 36.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on September 12, 2024, and is therefore outside the scope of the first 15-Day Notice.

SUMMARY AND RESPONSE TO WRITTEN COMMENTS RESULTING FROM THE SECOND 15-DAY COMMENT PERIOD

37. Giancarlo Crestani, Breton by letter sent via email, dated November 6, 2024

Comment 37.1
The commenter disagrees with the differing percentages of crystalline silica in artificial stone (0.1%) versus natural stone (10%) that trigger the requirements for high-exposure trigger tasks. The commenter believes all crystalline silica is “very dangerous,” so all materials that contain it should be treated equally.

Response to Comment 37.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on October 28, 2024, and is therefore outside the scope of the second 15-Day Notice.

Please see the response to comment 11.1 and 12.3.

Comment 37.2
The commenter recommends retaining ceramics and porcelain in the definition of artificial stone.

Response to Comment 37.2
The Board disagrees with the commenter. Porcelain is not considered to be artificial stone, and quartz is a naturally occurring crystalline mineral composed of silicon and oxygen (silicon dioxide). While quartz countertops are considered to be an artificial stone product, quartz itself is not. Under the definition of "artificial stone," the word "product" was added to the first sentence to clarify that "artificial stone" is a "stone product," not a stone itself. The phrase "binding, crushed or pulverized" was removed from the second sentence and replaced with the phrases, "combining natural" stone "or other crystalline silica-containing materials." This change ensures that this definition captures the full scope of artificial stone products. A final sentence was added to this definition to exempt fired ceramic and porcelain tiles and panels from the definition. These products are created using entirely different methods from those used to create artificial stone and therefore they are not considered artificial stone.

38. Robert Dugan, President and CEO, California Construction and Industrial Materials Association, by letter sent via email, dated November 7, 2024

Comment 38.1
The commenter supports the exception to the requirements of high-exposure trigger tasks for quarries, mines, and concrete and cement facilities.

Response to Comment 38.1
The Board appreciates the commenter's support for this exception.

Comment 38.2
The commenter requests that facilities that perform asphalt and concrete recycling be given a similar exemption. The commenter notes that in these industries, some of the following requirements under subsection (f) are infeasible: use of water to control exposures; containing dust in leak-tight containers; and prohibiting movement through dust that contains RCS. The commenter provides examples regarding the ways in which the industry could not comply with the Engineering Controls, Housekeeping and Hygiene, and Prohibition subsections of (f)(2).

Response to Comment 38.2
The purpose of the revisions to section 5204 is to prevent further cases of silicosis among workers in the artificial stone fabrication industry. To meet this objective, the Board has included a new exception under the definition of high-exposure trigger task at subsection (b)(8) to ensure that the requirements for high-exposure trigger tasks are applied specifically to the fabrication of "countertops, backsplashes, walls, flooring, waterfall countertop edges, and other products from slabs or panels." This addition will help ensure that the new requirements for high-exposure trigger tasks are not inadvertently applicable in other industry sectors where workers perform work on stone or silica-containing materials, such as in ceramic art studios. Asphalt and concrete recycling operations would fall under this exception. The Board is not aware of any cases of silicosis among workers in asphalt and concrete recycling. It is therefore

unnecessary at this time to introduce new regulatory requirements in these sectors; however, to provide for worker protection in these sectors, the caveat to this exception requires employers to demonstrate that employee exposures in these sectors are below the action level for RCS, "through representative air sampling conducted by a qualified person." This caveat applies to employers in the asphalt and concrete recycling industry. The Board notes that reconsideration of this exception to the requirements for high-exposure trigger tasks would be necessary if new information emerges regarding RCS exposures or silicosis among worker in sectors outside those listed under this definition.

39. Erik Christensen, President, Caesarstone, U.S.A, by letter sent via email, dated November 13, 2024

Comment 39.1
The commenter disagrees with the removal of porcelain from the definition of artificial stone and therefore from the requirements of high-exposure trigger tasks because it contains about 20% crystalline silica, which "poses a substantial risk for silicosis and other silica-related illnesses, if appropriate safety measures are not in place." The commenter notes that "exposure levels when fabricating porcelain products can exceed the permissible exposure limit (PEL) if adequate precautions are not in place-just as with quartz and other artificial stones."

Response to Comment 38.1
Under subsection (a)(3), Scope and Application, the Board added an exception to high-exposure trigger tasks for "fired ceramic or fired porcelain tiles or panels in a manufacturing facility" because this work is typically enclosed and automated, thereby reducing the likelihood of worker exposures to RCS. While such factories engage in fabrication and automated finishing activities using materials containing crystalline silica, these factories use engineering controls and maintain air exposure levels of RCS below the action level of 25 ug RCS/m^3. As such, these operations are unrelated to the rise in silicosis in California. The Board is not aware of any cases of silicosis among workers in this industry; it is therefore unnecessary at this time to introduce new regulatory requirements in this sector. In addition, the Board notes that the purpose of the revisions to section 5204 is to prevent further cases of silicosis among workers in the artificial stone fabrication industry. To meet this objective, the Board has included a new exception under the definition of high-exposure trigger task at subsection (b)(8) to ensure that the requirements for high-exposure trigger tasks are applied specifically to the fabrication of "countertops, backsplashes, walls, flooring, waterfall countertop edges, and other products from slabs or panels." This addition will help ensure that the new requirements for high-exposure trigger tasks are not inadvertently applied in other industry sectors where workers perform work on stone or silica-containing materials. However, to provide for worker protection in these sectors, the caveat to this exception requires employers to demonstrate that employee exposures in these sectors are below the action level for RCS, "through representative air sampling conducted by a qualified person." The Board notes that reconsideration of this exemption would be necessary if new information emerges regarding RCS exposures or silicosis in these sectors.

40. Michael Geyer, Project Director, KERNTEC Industries, Inc., by letter sent via email, dated November 13, 2024

Comment 40.1
The commenter disagrees with requirement that a "qualified person" means a "third party independent of the employer." The commenter states that this addition to the definition of "qualified person" is disrespectful to those employers who have developed in-house expertise to conduct exposure assessments for silica, and commenter requests that this requirement be removed.

Response to Comment 40.1
The Board notes that the addition of a "third party independent of the employer" is necessary to help ensure the validity of sampling results for RCS. These results are critical to preventing silicosis and other diseases caused by RCS because, for example, under subsection (h)(3)(A), the employer is able to use a lesser level of respiratory protection if exposure levels are below the action level. It is therefore conceivable that some employers could be motivated to alter production levels or sampling strategies, for example, as a way to generate sampling data that shows very low RCS exposures. An independent evaluation will help curtail this possibility. The Board notes that a qualified person must be competent in industrial hygiene practice, and that a Certified Industrial Hygienist would meet this requirement. This addition helps ensure that the third party is competent in the technical tasks required to correctly perform RCS sampling in the employer's facility. Please also see the response to comment 12.4.

Comment 40.2
The commenter cautions the Board to recognize that high winds in the San Joaquin Valley have sometimes produced silica levels that exceed the Action Level at the property line of places of employment, particularly among facilities that are adjacent to "agricultural fields, a construction site, grazing lands, oil production leases, or other areas with barren soil, which is common in California." The commenter points out that the Board is "dipping into a realm of anthropogenic and nonanthropogenic forces, both contributing to the concentration of airborne silica workers and the public are exposed to."

Response to Comment 40.2
The Board notes that section 5204 does not apply to agriculture or construction pursuant to subsection (a)(1). The purpose of the revisions to section 5204 is to prevent further cases of silicosis among workers in the artificial stone fabrication industry. To meet this objective, the Board has included a new exception under the definition of high-exposure trigger task at subsection (b)(8) to ensure that the requirements for high-exposure trigger tasks are applied specifically to the fabrication of "countertops, backsplashes, walls, flooring, waterfall countertop edges, and other products from slabs or panels." This addition will help ensure that the new requirements for high-exposure trigger tasks are not inadvertently applied in other industry sectors where workers perform work on stone or silica-containing materials. However, to provide for worker

protection in these sectors, the caveat to this exception requires employers to demonstrate that employee exposures in these sectors are below the action level for RCS, "through representative air sampling conducted by a qualified person." The Board notes that reconsideration of this exemption would be necessary if new information emerges regarding RCS exposures or silicosis in these sectors. When worker exposures to silica result from dust blown into the workplace from upwind sources such as construction sites, agricultural fields and others, the employer is obligated to take actions to protect employees from exposure to RCS, pursuant to the requirements of section 5204. In these cases, the requirements for high-exposure trigger tasks would not apply, as noted above.

41. Eric Astrachan, Executive Director, Tile Council of North America, by letter sent via email, dated November 13, 2024

Comment 41.1
The commenter supports the revisions to section 5204 as of October 28, 2024, specifically "as they apply to the manufacture of fire ceramic and fired porcelain tiles and panels."

Response to Comment 41.1
The Board appreciates the commenter's support of the proposed section 5204.

Comment 41.2
The commenter urges the Board to consider the September 27, 2024 comments of the Natural Stone Institute and the September 19, 2024 presentation by the Yale School of Medicine, which show that "silica exposures and silicosis are preventable through implementation of comprehensive best management practices within the countertop fabrication industry."

Response to Comment 41.2
Please see the Board's response to Comment 35.1, submitted by Jim Hieb, Natural Stone Institute and Marissa Bankert, International Surface Fabricators Association, on September 27, 2024.

TECHNICAL, THEORETICAL, AND/OR EMPIRICAL STUDIES, REPORTS, OR DOCUMENTS RELIED ON BY THE BOARD [GC §11346.2(b)(3)]

The Board has relied upon the following additional documents as part of the proposed changes to section 5204:

1. United States Department of Labor. Occupational Safety and Health Administration. Hazard Analysis: Lessons Learned And Initial Findings from OSHA's Emphasis Program On Silica In Engineered Stone (2024). https://www.osha.gov/sites/default/files/publications/silica-hazard-alert.pdf.

2. Freckelton I. Banning Engineered Stone: A Landmark Australian Public Health Law Reform. J Law Med. (May 2024). https://pubmed.ncbi.nlm.nih.gov/38761387

3. Feary J, Devaraj A, Burton M, et al. Artificial stone silicosis: a UK case series. Thorax. 2024; 79: 979-981. https://doi.org/10.1136/thorax-2024-221715

These documents are available for review BY APPOINTMENT Monday through Friday, from 8:00 a.m. to 4:30 p.m., at the Standards Board's office at 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833. Appointments can be scheduled via email at oshsb@dir.ca.gov or by calling (916) 274-5721.