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DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Parts 1910, 1915, and 1926

[Docket No. OSHA-2010-0034]

RIN: 1218-AD18

Occupational Exposure to Respirable Crystalline Silica – Specified Exposure

Control Methods

AGENCY: Occupational Safety and Health Administration (OSHA), Department of Labor.

ACTION: Request for Information (RFI).

SUMMARY: OSHA is requesting information on the effectiveness of engineering and work practice control methods not currently included for the tasks and equipment listed on Table 1 of the Respirable Crystalline Silica standard for construction. The agency is also requesting information on tasks and equipment involving exposure to respirable crystalline silica that are not currently listed on Table 1, along with information on the effectiveness of engineering and work practice control methods in limiting worker exposure to respirable crystalline silica when performing those tasks. Finally, OSHA is requesting information and comment on whether there are additional circumstances where it would be appropriate to permit employers covered by the Respirable Crystalline Silica standards for general industry and maritime to comply with the silica standard for construction. This RFI requests comment and information, including exposure data,

which could assist the agency in assessing whether revisions to the standards may be appropriate.

DATES: Submit comments on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Submit comments and additional materials using any of the following methods:

Electronically: You may submit comments and attachments electronically via <https://www.regulations.gov>, which is the Federal eRulemaking Portal. Follow the instructions online for making electronic submissions.

Facsimile: If your submission, including attachments, does not exceed 10 pages, you may fax it to the OSHA Docket Office at (202) 693-1648.

Regular mail, express mail, hand delivery, or messenger/courier service (hard copy): You may submit your comments and any additional materials to the OSHA Docket Office, Docket No. OSHA-2010-0034, Occupational Safety and Health Administration, U.S. Department of Labor, Room N-3653, 200 Constitution Avenue, NW, Washington, DC 20210; telephone: (202) 693-2350 (TTY (877) 889-5627). OSHA's Docket Office accepts deliveries (hand deliveries, express mail, and messenger/courier service) from 10 a.m. to 3 p.m. ET, weekdays.

Because of security-related procedures, submission by regular mail may result in significant delay. Please contact the OSHA Docket Office (telephone: (202) 693-2350; email: technicaldatacenter@dol.gov) for information about security procedures concerning delivery of materials by express mail, hand delivery, and messenger service.

Instructions for submitting comments: All submissions must include the agency's name (OSHA), the title of this RFI (Occupational Exposure to Respirable Crystalline Silica – Specified Exposure Control Methods), and the docket number for this RFI (OSHA-2010-0034). OSHA will place all comments and other materials, including any personal information you provide, in the public docket without revision, and these materials will be available online at <https://www.regulations.gov>. Therefore, OSHA cautions you about submitting statements that you do not want made available to the public, or submitting comments that contain personal information such as Social Security numbers, birth dates, and medical data.

Docket: To read or download submissions or other material in the docket, go to <https://www.regulations.gov> or the OSHA Docket Office at the above address. The <https://www.regulations.gov> index lists all documents in the docket. However, some information (e.g., copyrighted material) is not available to read or download through the website. All submissions, including copyrighted material, are available for inspection at the OSHA Docket Office. Contact the OSHA Docket Office for assistance in locating docket submissions.

FOR FURTHER INFORMATION CONTACT:

Press Inquiries: Frank Meilinger, Director, OSHA Office of Communications, telephone: 202-693-1999; email: meilinger.francis2@dol.gov.

General and technical information: William Perry or David O'Connor, Directorate of Standards and Guidance, telephone: 202-693-1950; email: silica@dol.gov.

Copies of this Federal Register notice: Electronic copies of this Request for Information are available at <https://www.regulations.gov>. This Federal Register notice, as

well as news releases and other relevant information, is also available at OSHA’s webpage at <https://www.osha.gov>.

SUPPLEMENTARY INFORMATION:

I. Background

On March 25, 2016, OSHA published a final rule regulating occupational exposure to respirable crystalline silica (81 FR 16286). The final rule established a new permissible exposure limit (PEL) for respirable crystalline silica of 50 micrograms per cubic meter of air ($50 \mu\text{g}/\text{m}^3$) as an 8-hour time-weighted average in all industries covered by the rule. The rule also included other provisions, such as requirements for exposure assessment, methods for controlling exposure, respiratory protection, medical surveillance, hazard communication, and recordkeeping. OSHA issued two separate standards—one for construction (29 CFR 1926.1153) and one for general industry and maritime (29 CFR 1910.1053).¹

The construction standard provides employers with two options to limit worker exposures to respirable crystalline silica. Employers can assess employee exposures to silica and implement control measures that limit such exposures to the PEL (29 CFR 1926.1153(d)). But employers may instead choose to fully and properly implement the requirements in Table 1 for employees engaged in the 18 common construction tasks therein (29 CFR 1926.1153(c)). Table 1 lists each task’s corresponding engineering and work practice control methods and respiratory protection requirements, if any.

¹ “Maritime” refers collectively to shipyards, marine terminals, and longshoring. While the shipyard standard is technically a separate standard, it is identical to the general industry standard. See 29 CFR 1915.1053 (cross-referencing 29 CFR 1910.1053). Marine terminals and longshoring are covered under 29 CFR 1910.1053. See 29 CFR 1917.1(a)(2)(xiii) and 29 CFR 1918.1(b)(9)).

For some Table 1 tasks, there was substantial evidence in the rulemaking record that exposure to respirable crystalline silica would be limited to the PEL most of the time using the specified engineering and work practice controls, so no respiratory protection is required. For the other Table 1 tasks, available evidence indicated that exposures would remain above the PEL after implementation of engineering and work practice controls, so respiratory protection is required. Several tasks listed on Table 1 provide a choice of compliance methods because each can consistently reduce exposures to the PEL or below, or are equally effective in limiting exposure. For example, for jackhammers and handheld powered chipping tools, employers can satisfy Table 1's requirements by using either a tool with a water delivery system that supplies a continuous stream or spray of water to the point of impact, or a tool equipped with a commercially available shroud and dust collection system.

OSHA developed Table 1's list of controls using data from sources including National Institute for Occupational Safety and Health reports, OSHA compliance case files, published literature, and unpublished information submitted to the rulemaking docket. These data sources encompassed several types of studies assessing the effectiveness of control methods, including air-sampling studies performed during normal work activities and experimental studies performed in controlled environments.

OSHA concluded that Table 1 was the best approach for protecting employees exposed to respirable crystalline silica and also simplified compliance and reduced burdens on employers in the construction industry. Table 1's approach further recognizes and avoids the challenges of accurately assessing employee exposures to respirable

crystalline silica in construction work due to frequent changes in workplace conditions, such as environment and location.

During the rulemaking process, some stakeholders urged OSHA to consider how to update Table 1 in the future to include new control methods that might be developed. OSHA responded that it saw the value in periodically updating Table 1 and that a static Table 1 could discourage the development of new control technologies for reducing silica exposure. OSHA is now requesting information on additional engineering and work practice control methods that could limit exposures generated by the equipment and tasks currently listed on Table 1. The agency is also requesting information on engineering and work practice control methods that could limit exposures generated by equipment or tasks not already included on Table 1. This information will help OSHA decide whether to revise Table 1.

During the rulemaking, some commenters expressed concerns about determining which standard—general industry or construction—applies to certain activities. OSHA recognized that in some circumstances, general industry activities may be indistinguishable from the construction tasks listed on Table 1, and may be performed in varied environments and conditions. To address those circumstances, OSHA included paragraph (a)(3) in the general industry and maritime standard. Paragraph (a)(3) permits general industry and maritime employers to follow the construction standard when (1) the task performed is indistinguishable from a construction task listed on Table 1, and (2) the task will not be performed regularly in the same environment and conditions. The second requirement recognizes that Table 1 was intended, in part, to accommodate situations where tasks will be performed in different environments and conditions. OSHA is

interested in information and comment on whether there are additional circumstances where similar flexibility would benefit employers while maintaining protections for workers, such as when Table 1 tasks are regularly performed in general industry or maritime in a relatively stable and predictable environment.

If the information submitted in response to this RFI indicates that revisions to the silica standards may be appropriate, OSHA will publish a Notice of Proposed Rulemaking and provide an opportunity for public comment on the proposed revisions before making any changes to the standards.

II. Request for Data, Information, and Comment

A. Questions Regarding Possible Additions to Table 1

OSHA requests data, information, and comment on possible additions to Table 1. The agency is especially interested in responses to the numbered questions presented below. OSHA requests that comments reference the numbered questions to the extent possible. Commenters should explain their rationale and, if possible, provide information and data to support their comments and recommendations.

OSHA requests that submissions of exposure monitoring data include the following information, where possible:

- *Description of task:* A description of the task(s) performed and work practices followed during the exposure monitoring, including any housekeeping measures, as well as job titles and number of workers monitored during the task(s). The description should also include information regarding the frequency and duration of the task being performed. For example, the description should report the

number of times a task (e.g., drilling holes in concrete) was performed during the exposure monitoring period.

- *Description of equipment:* Indicate the make and model of the equipment used to perform the task. Provide a copy of equipment manufacturer's instructions, if available.
- *Description of engineering and work practice control methods:* Indicate the make and model of any equipment used to control exposures, as well as information on the condition (e.g., intact hoses, connections) and maintenance of the equipment. For vacuum dust collection systems, indicate the air flow rate, type of filter, and filter cleaning mechanism, if any. For water delivery systems, indicate the water source, volume, and flow rate. Provide a copy of the control equipment manufacturer's instructions, if available. If a work practice control was used to control exposures, describe the work practices that were implemented in as much detail as possible.
- *Description of materials:* Describe the material worked on during the task(s) and indicate its crystalline silica content, if possible. When working with concrete or other materials with characteristics that may change over time, please note how long a substrate was cured before starting work.
- *Description of environmental conditions:* Characterize the environmental conditions during monitoring, such as whether the work was performed outdoors, indoors, or in an enclosed area with restricted air flow. For work performed indoors, describe the size of the room. For work performed outdoors, note weather conditions such as temperature, humidity, and precipitation, as well as the

presence of water in the soil or on surfaces. Also note the presence of natural or mechanical ventilation, such as air movement caused by the wind; doors or windows (open or closed and their number and sizes); or ventilation systems for heating and cooling and whether they were operational during monitoring.

- *Sampling and analytical procedures:* Describe sampling results, sampling and analytical methods (e.g., OSHA ID-142; NMAM 7500), and the devices used to obtain samples. Indicate the sampling duration and whether the samples represent a personal breathing zone or a well-defined area. While OSHA requests all sampling results, it is especially interested in personal breathing zone samples with a duration of 120 minutes or greater. Report the detection limit and air volume where the concentration of respirable crystalline silica falls below the limit of detection. Indicate whether a laboratory that analyzes air samples for respirable crystalline silica in accordance with Appendix A of the silica standards evaluated the samples. Please present sample results in units of micrograms of respirable crystalline silica per cubic meter of air.

Additional Exposure Control Methods for Equipment or Tasks Listed on Table 1.

OSHA requests information and data on the effectiveness of the following control methods for reducing respirable crystalline silica exposure for equipment and tasks listed on Table 1:

1. Commercially available dust collection systems for stationary masonry saws;
2. Commercially available dust collection systems for handheld power saws (any blade diameter), including handheld masonry saws;

3. Commercially available dust collection systems for walk-behind saws, including “soft cut” saws used for cutting “green” concrete (i.e., concrete that has set but has not fully cured);
4. Commercially available dust collection systems for drivable saws;
5. Commercially available dust collection systems for rig-mounted core saws or drills;
6. Integrated water delivery systems for handheld and stand-mounted drills (including impact and rotary hammer drills);
7. Commercially available dust collection systems incorporating hollow drill bits for handheld and stand-mounted drills (including impact and rotary hammer drills), including information on any relationship between the drill bit size and the amount of airborne respirable crystalline silica generated or the performance of engineering controls;
8. Commercially available dust collection systems, with or without filter-cleaning mechanisms, for cordless handheld drills;
9. Integrated water delivery systems for dowel drilling rigs for concrete, including information on any relationship between drill bit size and the amount of airborne respirable crystalline silica generated or the performance of engineering controls;
10. Commercially available dust collection systems with general purpose filters instead of filters with 99% or greater efficiency;
11. Commercially available dust collection systems equipped with cyclonic pre-separators—instead of filter-cleaning mechanisms—for handheld power saws (any blade diameter), handheld and stand-mounted drills (including impact and rotary hammer

drills), jackhammers and handheld powered chipping tools, and walk-behind milling machines and floor grinders;

12. Floor fans or pedestal fans positioned to disperse dust away from workers when using handheld power tools, including handheld power saws (any blade diameter), handheld and stand-mounted drills (including impact and rotary hammer drills), and jackhammers and handheld powered chipping tools; and

13. Any other exposure control methods that you believe should be included for equipment or tasks listed on Table 1.

Additional Equipment or Tasks to Include on Table 1.

OSHA requests information and data on the effectiveness of the following exposure control methods for equipment or tasks not listed on Table 1:

14. Commercially available dust collection systems for power sanders (e.g., belt sanders, orbital sanders);

15. Commercially available dust collection systems for power paint scrapers;

16. Commercially available hoods with dust collection systems for reciprocating saws;

17. Integrated water delivery systems for wire saws; and

18. Wet methods, commercially available dust collection systems, commercially available dust suppression compounds, or work practices that minimize generation of dust for clean-up tasks, including changing or cleaning filters in dust collection systems.

OSHA requests information and data on the effectiveness of any exposure control methods for the following equipment or tasks not listed on Table 1:

19. Mixing of dry materials containing crystalline silica (e.g., mortar, plaster, drywall compound, fireproofing, exterior insulation and finishing system base and finish coats);

20. Application of shake (e.g., coloring and/or texturizing material) on poured concrete floors;

21. Use of chainsaws to cut silica-containing materials;

22. Use of powered sweepers (e.g., trucks equipped with rotating brushes) to clean surfaces;

23. Application of dry-mix or wet-mix shotcrete;

24. Drywall finishing; OSHA did not include drywall finishing on Table 1 because use of drywall compounds containing silica only as a trace contaminant was generally expected to result in low exposures even without additional controls. However, the agency recognizes that some drywall finishing may involve compounds with higher or unknown silica content, or circumstances that may warrant concern for exposure above the PEL;

25. Demolition of silica-containing materials using manual tools (e.g., sledgehammer, mason hammer, pry bar, chisel); and

26. Any other equipment or task you believe should be included on Table 1.

B. Additional Requests

27. OSHA requests information on stakeholders' experience with Table 1 controls, including any challenging aspects of implementing specified controls; situations where specified controls were not available; and situations where specified controls were infeasible, but alternative controls were feasible and effective;

28. OSHA requests any alternative names used by workers or manufacturers to describe the tasks and equipment on Table 1 in different industry sectors or areas of the country;

29. Employers covered by the respirable crystalline silica standard for general industry and maritime have the option to follow Table 1 and the standard for construction where the task performed is indistinguishable from a construction task listed on Table 1, and the task will not be performed regularly in the same environment and conditions (29 CFR 1910.1053(a)(3)). Are there any other circumstances where similar flexibility would benefit employers while maintaining protections for workers? Describe those circumstances, state your reasoning, and include any relevant data;

30. OSHA requests information on any economic impacts that should be considered in determining whether to update Table 1 or broaden the circumstances under which general industry and maritime employers could comply with the silica standard for construction. Include quantitative safety and health benefits (e.g., information on the duration and magnitude of workers' silica exposure), cost savings (e.g., lower operations costs, more efficient use of capital, less expensive equipment, increased productivity, decreased need for exposure monitoring), and costs (e.g., increased compliance costs, decreases in productivity, increased need for exposure monitoring); and

31. The Regulatory Flexibility Act (5 U.S.C. 601, as amended) requires OSHA to assess the impact of proposed and final rules on small entities. How many and what kinds of small businesses, or other small entities, could be affected if OSHA decides to revise Table 1 and related provisions in 29 CFR 1910.1053, 1915.1053, or 1926.1153? Describe any such effects, including the size and scope of operation for affected small entities and

the likely technical, economic, and safety impacts for those entities. Explain how answers to any of the questions in this RFI would be different for small entities, and describe any problems or issues related to Table 1 that are unique to small entities.

Authority and Signature

Loren Sweatt, Principal Deputy Assistant Secretary of Labor for Occupational Safety and Health, authorized the preparation of this notice pursuant to 29 U.S.C. 653, 655, 657; 33 U.S.C. 941; 40 U.S.C. 3704 et seq.; Secretary of Labor’s Order 1-2012 (77 FR 3912, 1/25/2012); and 29 CFR Part 1911.

Signed at Washington, DC, on August 9, 2019.

Loren Sweatt,

Principal Deputy Assistant Secretary of Labor for Occupational Safety and Health.

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