October 15, 2019

VIA REGULATIONS.GOV

Loren Sweatt
Principal Deputy Assistant Secretary of Labor
Occupational Safety and Health Administration
U.S. Department of Labor
200 Constitution Avenue, NW
Washington, D.C. 20210

Re: Construction Industry Safety Coalition
Comments to Request for Information; Occupational Exposure to Respirable Crystalline Silica – Specified Exposure Control Methods
Docket No. OSHA-2010-0034; RIN 1218-AD18

Dear Ms. Sweatt:

I write on behalf of the Construction Industry Safety Coalition ("CISC"). The CISC respectfully files the enclosed written comments to OSHA's Request for Information on Occupational Exposure to Respirable Crystalline Silica – Specified Exposure Control Methods, 84 Fed. Reg. 41667 (August 15, 2019). The CISC appreciates OSHA's consideration of the information and data presented in these comments.

Sincerely,

LITTLER MENDELSON, P.C.

Bradford T. Hammock
Melissa Harclerode

Enclosures

Construction Industry Safety Coalition

Response to OSHA's Respirable Crystalline Silica Request for Information

Docket No. OSHA-2010-0034

1. Introduction.

The Construction Industry Safety Coalition ("CISC") respectfully submits these comments in response to the Occupational Safety and Health Administration's ("OSHA") Request for Information ("RFI") on "Occupational Exposure to Respirable Crystalline Silica – Specified Exposure Control Methods," 84 Fed. Reg. 41667 (Aug. 15, 2019). The CISC appreciates OSHA's consideration of the information and data presented in these comments.

The CISC is comprised of 26 trade associations representing virtually every aspect of the construction industry. The CISC was formed several years ago to provide OSHA thoughtful, data-driven comments on regulatory initiatives. By pooling resources and members from the wide range of trades affected by OSHA regulatory actions, the participating construction industry trade associations believe that stronger and more detailed information can be submitted to OSHA during the rulemaking process. The CISC speaks for small, medium, and large contractors; general contractors; subcontractors; union contractors; etc.

The CISC was an active participant during OSHA's initial rulemaking on respirable crystalline silica. The CISC submitted extensive pre-hearing written comments, participated in the public hearing, and submitted post-hearing comments and briefs.

Following publication of the final rule, the CISC worked closely with OSHA and organized labor in the development of numerous Frequently Asked Questions ("FAQs") designed to improve compliance with the rule in the construction industry and address some of the difficult interpretive issues that arose after the rule was finalized. The CISC appreciates the opportunity to work with OSHA to improve compliance with the respirable crystalline silica rule, which touches almost every trade in the construction industry.

The CISC applauds the Agency for issuing this RFI and has been pushing the Agency to do so for over two years. Expanding Table 1 and otherwise improving compliance with the rule is of paramount importance to CISC member associations and contractors across the country. Based upon the feedback the CISC has received from contractors – both large and small – compliance with the rule remains challenging. The CISC encourages OSHA to move quickly with rulemaking to permit contractors additional compliance options and tools.

2. Executive Summary.

OSHA has issued this RFI primarily to gather additional information on engineering and work practice control methods that should be added to Table 1 and other equipment/tasks that might be included, as well. This effort is important to the construction industry and construction workers across the country. While well-intentioned, Table 1 as currently

constituted does not provide contractors a viable compliance option. The allowed controls included in the table are too limiting and the tasks included do not represent the wide range of activities that are commonplace on construction worksites. Expanding Table 1 will result in improved compliance throughout the construction industry.

The CISC recommends that OSHA quickly proceed to rulemaking to improve Table 1 and the overall functioning of the standard. Specifically, the CISC recommends that OSHA consider the following improvements to the respirable crystalline silica rule:

- *First*, OSHA should specifically exclude from coverage of the standard two common construction tasks where the data shows that exposures are consistently and reliably below the action level: mortar mixing and drywall installation/finishing. Requiring contractors to focus compliance resources in these areas given the very low exposures detracts from focusing those same resources where exposures to respirable crystalline silica are apparent and potentially significant.

- *Second*, OSHA should expand Table 1 in three different ways. OSHA should consider adding an "under one hour" column/row or an "under one hour" table that provides for equipment/tasks and controls for short term activities. Such an allowance would provide contractors more flexibility and increase the number and types of control options available. OSHA should also add dry cutting with vacuum attachments to Table 1 for stationary masonry saws and handheld power saws, as the data shows that exposures for this equipment with these controls are under the PEL. OSHA should also allow for the use of standard shop vacuums as part of engineering controls, based on recent data from the National Institute for Occupational Safety and Health ("NIOSH"). In addition, OSHA should explore the use of floor and pedestal fans and air scrubbers as simple compliance solutions either on their own or in conjunction with other control measures. Finally, OSHA should add masonry scrubbers, wire saws, and wall saws to Table 1 based on data showing low exposures when using this equipment.

- *Third,* OSHA should examine additional changes to the standard that will ease compliance while maintaining employee safety and health. This includes an exception to the hierarchy of controls for tile cutting on steep slope roofs, given the greater hazards posed by using engineering controls in this environment. In addition, OSHA should permit the use of respiratory protection in lieu of engineering and work practice controls for very short duration work (under 30 minutes) when isolated from other employees. Similarly, OSHA should consider an exception to the prohibition on dry sweeping and dry brushing for employees performing that work for less than 30 minutes and where the employees do not have any other exposure to respirable crystalline silica.

- *Fourth*, the CISC recommends that the Agency standardize a process, which establishes set criteria and relies on interim final rulemaking, to update and expand Table 1 in the future. This proposed process will allow for expeditious changes to the table so as to continue to push and recognize technological improvements.

- *And finally*, the CISC discusses feedback received on the costs and impacts of the current rule and how the recommendations included in this response will result in significant cost savings without compromising employee health.

3. Background on RFI.

In this RFI 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." 84 Fed. Reg. at 41667. In addition, the RFI seeks "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." *Id*.

The RFI includes over 30 questions regarding types of control methods about which the Agency is specifically interested in receiving information, a variety of tasks that could potentially be added to Table 1, and other miscellaneous information, including information related to the costs and benefits of the respirable crystalline silica rule and Table 1.

From the outset of OSHA's initial rulemaking on respirable crystalline silica, the CISC has been generally supportive of the Table 1 approach. Listing specified control measures for contractors to use to be in compliance with the monitoring requirements and the permissible exposure limit ("PEL") is – in theory – very useful to contractors and should result in improved compliance. As the CISC stated in its very first comments to OSHA on the respirable crystalline rule:

> At the outset, the CISC wants to emphasize that it appreciates OSHA's attempt in Table 1 to craft a performance-based tool for use in the construction industry. The associations participating in the CISC have for some time urged OSHA to consider the unique aspects of construction work *vis-à-vis* silica exposures and, certainly, applauds OSHA for including Table 1 in the proposal.

Unfortunately, for several reasons the use of Table 1 is not as pervasive as it could or should be. First, several tasks on the table do not allow for multiple control options. For example, with respect to five of the first six tasks on the table, an integrated water delivery system is the only option provided. 29 C.F.R. § 1926.1153(c)(1)(i)-(vi). When performing those tasks in conditions that do not permit the introduction of water to the work environment, use of the table is not possible. Similarly, for handheld and stand-mounted drills and dowel drilling rigs for concrete, the use of wet methods is not permitted for those following Table 1.

29 C.F.R. § 1926.1153(c)(1)(vii), (viii). The failure to include multiple control options for compliance with Table 1 significantly restricts its use.

CISC member companies have repeatedly described the limitations on the use of wet methods. For example, in very cold work environments wet methods can often not be used. Introducing water at heights (when working on scaffolds or on steep slope roofs) can introduce greater hazards to employees performing the work. Work in health care environments often prohibit the use of wet methods. Many state and local governments also prohibit the use of wet methods when performing road construction and maintenance. And these are just a few of the limitations on the use of wet methods.

Expanding Table 1 to provide for both a wet and a dry control option for as many equipment/tasks as possible would significantly improve the utility of the table.

Second, there are several common construction tasks that are not included on Table 1. During the initial rulemaking, OSHA predicted that virtually all construction operations would be covered by tasks listed on Table 1, with very few exceptions. Unfortunately, there are several tasks/equipment that were not included on the Table. This limits the utility of the table. As one member stated to a CISC-participating trade association: "The current Table 1 is exclusive to a select few tasks that do not encompass the broader numerous equipment and task-related exposure in the construction environment. My communication with other contracting companies is that Table 1 is their "bible" for controls, but there is not enough tasks on the list."

Third, many owners and developers in commercial construction are requiring contractors to comply with the PEL or even ensure that any exposure to respirable crystalline silica is below the action level of 25 $\mu g/m^3$, irrespective of whether they are able to comply with Table 1. This is obviously not a specific requirement from the standard, but many stakeholders predicted this would occur when OSHA was developing the final rule. As a result, many contractors do not even attempt to comply with Table 1, instead they are following – or attempting to follow – the "Alternative Exposure Control Methods" portion of the rule. This significantly hinders compliance as compliance with the Alternative Exposure Control Methods section of the rule is very difficult in construction, given the wide variety of tasks and the unpredictability of silica exposure in the industry.

The current obstacles to the use of Table 1 are hampering overall compliance with the standard. Construction tasks are often of short duration and are highly variable, as the rulemaking record made clear while OSHA was promulgating the initial rule. Attempting to monitor exposures for these short duration tasks on multiple jobsites and on a regular basis simply does not make sense. But the limited utility of Table 1 is causing contractors to comply in that way. Expanding Table 1 with more tasks and more options will improve compliance with the rule.

The CISC understands that virtually all stakeholders support an expanded Table 1, from industry, to organized labor, to the public health community. Furthermore, OSHA has stated

repeatedly that its determination as to whether to proceed to revise and expand Table 1 should be based on good data. The CISC supports OSHA making a data-based decision in this regard. However, the CISC was extremely disappointed that OSHA did not grant an extension of time to submit these comments to the record, instead only providing stakeholders with 60 days to draft comments, develop and organize data, and submit it to the Agency.

The CISC and many individual member associations submitted requests to the Agency to extend the comment period. The period of time set to submit comments was less than other RFIs put forward by the Agency, including the recent RFI for lockout/tagout that included a 90-day comment period. 84 Fed. Reg. 22756 (May 20, 2019). As a result of the Agency's decisionmaking, the data that is gathered and submitted will not be as robust as it should and the Agency will be forced to make important decisions about whether to proceed with rulemaking in this area without the best information. That is unfortunate, as this is an incredibly important issue to employee safety and health in the construction industry. The CISC, however, reserves the right to submit further data to the Agency after the comment period ends and hopes that the Agency will consider that information in its decisionmaking process.

4. Tasks that Should be Specifically Exempt from the Respirable Crystalline Silica Standard.

Before discussing an expanded Table 1 and the data supporting it, the CISC believes that certain activities should be exempt from coverage of the standard altogether. These activities have been shown consistently to result in *de minimis* exposure to respirable crystalline silica. The CISC believes that the standard, as currently configured, takes resources away from contractors focusing on where silica exposures *actually are* and instead forces them to devote resources to assessing tasks where the data shows consistently that exposure is not a problem. This simply does not make sense.

In an FAQ issued after publication of the final rule, OSHA stated as follows:

> Has OSHA identified specific tasks that are likely to be outside the scope of the standard because they typically generate exposures below the AL of 25 µg/m^3 as an 8-hour TWA under all foreseeable conditions?
>
> Yes. When the following tasks are performed in isolation from other silica-generating tasks, they typically do not generate silica at or above the AL of 25 µg/m^3 as an 8-hour TWA under any foreseeable conditions: mixing small amounts of mortar; mixing small amounts of concrete; mixing bagged, drywall compound containing trace amounts of silica; mixing bagged exterior insulation finishing system (EIFS) base and finish coat; and removing concrete formwork. In addition, tasks where employees are working with silica-containing products that are, and are intended to be, handled while wet, are likely to generate exposures below the AL under any foreseeable conditions (examples include

finishing and hand wiping block walls to remove excess wet mortar, pouring concrete, and grouting floor and wall tiles).

The CISC appreciates this guidance from OSHA and many contractors have used it to help inform their own silica control efforts. However, there is still ambiguity with the FAQ. It states that performing this work will *likely* be outside the scope of the standard, but it does not state so definitively. These tasks also are not on Table 1. Thus, many contractors are required to devote resources assessing this type of work to determine exposures, approach to engineering controls, personal protective equipment ("PPE"), etc. In at least two areas – mortar mixing and drywall installation/finishing – the CISC believes that data is sufficient for OSHA to exempt the tasks altogether. The CISC discusses this below.

a. Mortar Mixing

One of the most common tasks on construction sites is the mixing of mortar. Frequently this task is performed in silos of differing sizes and dimensions. These silos are at least partially enclosed and provided with various mechanisms to limit any dust generated by adding the mortar to the water in order to mix the product. When this task is performed in a silo under certain conditions, the data demonstrates that exposures are reliably under the action level. As a result, the CISC believes that this task should be excluded from the standard when performed in this manner.

Attached as Exhibit 1 is data from three industrial hygiene assessments of employee exposure to respirable crystalline silica when performing mortar mixing in an enclosed or partially-enclosed silo. Assessments were conducted in three states: Illinois; Arizona; and Georgia and the work performed was representative of standard masonry job site mortar mixing conditions. The two-day average exposure for each project was well below the action level. The highest average exposure was below 13 $\mu g/m^3$.

In performing the work, the employees had been trained on how to properly mix the mortar and use the equipment. In addition, they were directed to stay upwind of the mortar-mixing process. The CISC believes that these parameters could be incorporated into the scope section of the rule, as appropriate, and for contractors that do not follow these parameters, exclusion from the standard would not be provided.

Furthermore, OSHA could consider combining the mortar mixing process with a workstation that uses a floor fan or pedestal fan to disperse any respirable crystalline silica away from the employee mixing the mortar. (*See* below for a broader discussion of the use of floor fans or pedestal fans.). Provided the workstation was not situated near other employees performing construction tasks, such a practice could further ensure that exposures to employees are safely below the action level.

Excluding mortar mixing from the standard altogether would allow contractors to shift resources from this task – which is incredibly common in both residential and commercial construction – to other tasks that involve silica exposure. It would also provide contractors

certainty that if they are mixing mortar according to certain specifications, they are *not* covered by the standard.

b. Drywall Installation/Finishing

Another task that the CISC believes should be specifically excluded from the standard relates to drywall installation and finishing with drywall joint compound containing trace amounts of silica. This again, is a common task in residential and commercial construction.

In a letter of interpretation, OSHA addressed coverage of the respirable crystalline silica standard for work on or with drywall and drywall compound containing trace amounts of silica:

> Drywall and drywall joint compound frequently contain only trace amounts of silica (frequently less than 1 percent). Is work on or with such materials covered by the standard?
>
> The RCS standard does not include an exemption based on the silica content of materials used. However, OSHA anticipates that employee exposures will typically remain below 25 μg/m^3 as an 8-hour TWA when working with drywall or sanding joint compound that contains crystalline silica only as a trace contaminant, provided that the sanding is performed in isolation from other silica-generating tasks. Therefore, these tasks will generally be excluded from the scope of the standard per 29 CFR 1926.1153(a). However, employers should be aware that exposures *could* reach or exceed 25 μg/m^3 as an 8-hour TWA in situations where employees are working with drywall or sanding joint compound for long periods of time in very dusty conditions. In such cases, employers must comply with the silica standard, including paragraph (d) ("alternative exposure control methods"), which requires employers to assess and limit the silica exposures of affected employees. See 29 CFR 1926.1153(d). Letter from Kapust to Day, July 25, 2019.

Attached as Exhibit 2 is data demonstrating that when work on or with drywall occurs under various conditions, exposures are well below the action level. This data includes the following:

- Drywall installation

  28 samples

  Average exposure of 15 μg/m^3

- Drywall finishing with vacuum equipped tool

  4 samples

Average exposure of 10 µg/m^3

- Drywall finishing with pole sander

  4 samples

  Average exposure of 22 µg/m^3

- Drywall finishing with hand sander

  2 samples

  Average exposure of 5 µg/m^3

- Drywall finishing with combination of pole, vacuum throughout the test time

  13 samples

  Average exposure of 19 µg/m^3

- Applying joint compound

  3 samples

  Average exposure of 12 µg/m^3

As with mixing mortar, the data shows that when performing work with drywall and drywall joint compound containing trace amounts of silica, exposures are consistently below the action level. The CISC recommends that OSHA exclude drywall installation and finishing from coverage of the standard, provided the following criteria are met: (1) the work is performed with drywall joint compound containing trace amounts of silica; (2) the work is performed apart from other silica generating tasks; and (3) the work is performed in combination with the control measures set forth in the data included in Exhibit 2.

Shifting compliance resources from assessing and controlling for drywall installation and finishing to other areas of significant respirable crystalline silica exposure will help further employee safety and health. In the areas of mortar mixing and drywall installation/finishing, exposures are *de minimis* and when performed under certain conditions are reliably under the action level. OSHA should move to exclude these tasks, thereby helping employees and providing compliance certainty to employers.

5. Additions to Table 1.

As currently configured, Table 1 includes 18 types of equipment or tasks with specified engineering controls and any required respiratory protection. The 18 equipment/tasks are stationary masonry saws; handheld power saws (any blade diameter); handheld power saws

for cutting fiber-cement board (with blade diameter of 8 inches or less); walk-behind saws; drivable saws; rig-mounted core saws or drills; handheld and stand-mounted drills (including impact and rotary hammer drills); dowel drilling rigs for concrete; vehicle-mounted drilling rigs for rock and concrete; jackhammers and handheld powered chipping tools; handheld grinders for mortar removal (i.e., tuckpointng); handheld grinders for uses other than mortar removal; walk-behind milling machines and floor grinders; small drivable milling machines (less than half-lane); large drivable milling machines (half-lane and larger); crushing machines; heavy equipment and utility vehicles used to abrade or fracture silica-containing materials (e.g., hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials; and heavy equipment and utility vehicles for tasks such as grading and excavating but not including: demolishing, abrading, or fracturing silica-containing materials.

Depending upon the task, contractors may be able to choose from multiple control options (for example, handheld grinders for uses other than mortar removal) or in some instances only one control option (e.g., stationary masonry saws). The table also is bifurcated into two time periods, 4 hours or less and greater than 4 hours to dictate the need for respiratory protection.

The CISC recommends that the Agency expand Table 1 in three separate ways. First, the CISC recommends that OSHA consider adding an "under one hour" column/row to the table (or a separate table) that lists the tasks and control measures to be followed if a contractor only performs the task for less than one hour a day. Expanding the table in this way would open up the possibility of numerous additional control measures that are not currently allowed for contractors to utilize when performing very short duration work. Second, the CISC recommends the addition of other control measures for equipment/tasks currently on the table to integrate into the table as it is now configured. For example, the CISC has data demonstrating that exposures for stationary masonry saws are well below the PEL when cutting dry with a vacuum system. And third, the CISC recommends that additional tasks be added to the table to include as many tasks as possible for contractor compliance.

a. <u>One Hour Exposure Option</u>

The CISC recommends that OSHA consider adding an additional column/row to Table 1 that lists equipment/tasks and control measures that are allowable when the tasks are performed for less than one hour a day. Alternatively, OSHA could develop a "Table 2" or some other supplement to Table 1 that sets forth required controls for tasks when performing the work for less than one hour a day.

This would substantially improve compliance while maintaining employee safety. The CISC believes that it would also provide contractors with several additional compliance options. OSHA developed Table 1 initially considering the revised PEL. The PEL is based on a time-weighted average, and in analyzing the data submitted to the original rulemaking record, the sampling duration varied considerably. The extent to which an employee is

performing a silica-generating activity during the course of a day will have a significant impact on exposure and the effectiveness of controls.

Allowing employers another option of limiting the performance of a task to an hour could dramatically expand the controls available. For example, OSHA may not have data indicating that use of a shroud and vacuum system for a particular task would result in exposures below the PEL when performed for four hours. However, that same data may demonstrate that performing the task for one hour would be well below the PEL and even the action level. Providing employers the option of using the shroud and vacuum system for even just one hour a day will improve compliance flexibility.

In addition, since the respirable crystalline silica rule was finalized, equipment manufacturers have assembled "objective" data for various types of control measures for silica generating equipment/tasks. *See, e.g.*, objective data included in Exhibit 3. This objective data is helpful to employers attempting to comply with the Alternative Exposure Control Method option of the standard or even meet the action level for Table 1 tasks if otherwise required by a third party. Often, however, this data is based on sampling of approximately an hour with an assumption of no additional silica exposure after the period sampled. In these circumstances, if OSHA allowed for use of the equipment/task as a column/row or alternative table for short duration activities, that data could be used and – more importantly – additional compliance options provided for contractors.

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

OSHA specifically seeks information and data regarding additional exposure control methods that could be added for equipment/tasks listed on Table 1. This is critically important to provide contractors more flexibility to use Table 1 on their jobsites.

i. Commercially available dust collection systems for stationary masonry saws

Table 1 currently only provides for an integrated water delivery system when attempting to use a stationary masonry saw. The CISC has obtained data demonstrating the effectiveness of dry cutting several different types of material with a stationary masonry saw attached to a vacuum system. (*See* Exhibit 4.). In one instance, work was performed at a garage worksite and the sampling was representative of the shift and representative of the employees' regular work. Sampling was performed for three hours total for both saw cutting and rod drilling. The personal air samples were collected with a flow rate of 2.7 liters per minutes and a total volume of 486 liters. The monitoring performed for the employee cutting and the area next to the employee cutting were both below the action level, at < 10 $\mu g/m^3$ and 21 $\mu g/m^3$, respectively.

In another air sampling report, several masonry saws were evaluated under testing laboratory conditions. The saws were equipped with integrated vacuums and dust collection

equipment. Personal breathing zone samples were collected and sampling was performed for 480 minutes. Different masonry units were evaluated. In every instance, the data showed exposures reliably below the PEL, and in one instance below the action level. Adding control measures mirroring the equipment used in these reports would be appropriate for Table 1 and significantly improve contractor compliance.

ii. Commercially available dust collection systems for handheld power saws (any blade diameter), including handheld masonry saws

Table 1 also currently only provides for integrated water delivery systems for employees using handheld power saws (any blade diameter). Handheld power saws are frequently used in both residential and commercial construction. The fact that only wet methods can be used to provide protection to employees under Table 1 is very limiting for a number of contractors.

As with stationary masonry saws, the CISC has obtained data showing that use of vacuum systems can effectively control for exposures to respirable crystalline silica, when dry cutting even in indoor environments. *See* Exhibit 5 and the "Air Sampling Report: Respirable Dust and Crystalline Silica Exposure while Dry Cutting Concrete, Masonry, & Ceramic Tile Materials Utilizing Engineered Controls for Dust Collection" included in Exhibit 4.

iii. Commercially available dust collection systems with general purpose filters instead of filters with 99% or greater efficiency

One of the more expensive aspects of the respirable crystalline silica rule relates to the requirement that dust collection systems and vacuums have a filter with 99% or greater efficiency. These can be very expensive, considering the significant usage on construction sites in very difficult environmental conditions. The ability to use a regular shop vacuum in lieu of a vacuum with filters with 99% or greater efficiency would be extremely helpful for contractors in terms of compliance.

NIOSH recently studied the effectiveness of controlling silica when cutting fiber-cement siding using a regular shop vacuum cleaner. The analyses are attached in Exhibit 6. In one description, "a regular shop vacuum, which had a high efficiency disposable filter bag as a pre-filter and a cartridge filter (not HEPA), was used in these surveys. The survey results showed that the 10-hour time weighted average (TWA) exposure to respirable crystalline silica for workers who mainly cut fiber-cement siding on the job sites was controlled to well below the NIOSH REL." NIOSH states: "This engineering control measure has the potential to provide an effective, simple and low cost (comparing to HEPA vacuums) solution for workers cutting fiber-cement siding."

NIOSH also noted the overall ease of use in this situation: "The shop vacuum and the circular saw can be plugged into an intelligent vacuum switch. This eliminates the distraction for the operator of turning on and off a dust collection system and ensures the vacuum is running while operating the saw, avoiding uncontrolled dust release."

This is important research, which could potentially allow for the use of common shop vacuums as part of engineering control solutions. OSHA should explore this further with an eye toward revising Table 1 to permit the use of shop vacuums to be used as part of dust collection systems.

iv. Floor fans or pedestal fans positioned to disperse dust away from workers when using handheld power tools

One of the challenges to increasing compliance with the standard and Table 1 relates to the complexity of some of the control measures included. For several control measures there must be an "integrated water delivery system." For others, the dust collection systems must "provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency."

In addition, for all equipment/tasks, employees must follow the manufacturer's instructions to minimize dust emissions. This, of course, makes sense in theory. However, manufacturers' instructions are often lengthy and include a lot of information that is irrelevant and confusing to the use of the tool to minimize dust emissions.

Recognizing this, OSHA attempted through its FAQs to help clarify the requirement in a way that would streamline compliance. In FAQ No. 9, OSHA provided the following examples of manufacturer instructions for minimizing dust emissions:

- Instructions on the use of water, water supply, flow rates, etc., including installation and maintenance of integrated water delivery systems;
- Instructions on when to change water, where water supply is reused;
- Instructions on the use, installation, and maintenance of dust collectors or vacuums, including recommended flow rate (cubic feet per minute (CFM)), HEPA filters, and capacity;
- Instructions on the maintenance and replacement of blades; and
- Instructions on the rotation (e.g., speed, direction) of blades.

OSHA also provided manufacturer instructions that are not generally related to minimizing dust emissions:

- Warnings related to electrical hazards, guarding hazards, and noise hazards;
- Instructions regarding the use of personal protective equipment (including respiratory protection);
- Instructions on fueling and refueling; and

- Instructions on transporting the tool from worksite to worksite.

The combination of the complexity of the requirements directly included in Table 1, along with the additional requirements included in manufacturers' instructions, makes compliance difficult, particularly for very small contractors without in-house safety or industrial hygiene support.

Given this, the CISC recommends that OSHA carefully examine control measures to add to the table – either directly or indirectly – to make compliance simpler. Use of shop vacuums attached to tools is one method. Another is the use of floor or pedestal fans that disperse dust away from workers when using power tools. This would be a very simple control measure that would be readily available to contractors. It would also be inexpensive.

James Hardie has examined the effectiveness of the use of a floor fan or pedestal fan in reducing respirable crystalline silica exposures. This analysis involved sampling for respirable crystalline silica in the breathing zone of employees cutting fiber cement board containing crystalline silica, as well as sampling in the general area around the cutting station. The analysis also involved examining multiple styles of fans.

James Hardie concluded that the use of certain fans to disperse the respirable crystalline silica away from the cutting employees was very effective in providing protection to the cutting employees, with results consistently below the PEL. James Hardie also found that when using certain fans the dust would quickly disperse after being blown out of the employee's breathing zone, so that employees outside of the immediate work area would not be significantly exposed.

The CISC urges OSHA to fully consider this evidence and information from James Hardie. The CISC would also welcome the opportunity to meet with OSHA to discuss the findings and any further research needed in this area. This type of control measure – if shown to be effective for even a few of the tasks on Table 1 – would provide a simple, low cost solution for contractors and would significantly improve compliance.

v. Air scrubbers

Finally, the CISC urges OSHA to evaluate air scrubbers for use in conjunction with other control measures to further reduce exposures for interior work, perhaps obviating the need for respiratory protection in some circumstances.

Air scrubbers are pieces of equipment that suck air through the machine, where it passes through a filter that collects dust. The scrubber then recirculates the "filtered" air. Air scrubbers vary in size and are frequently used to reduce visible dust in interior work environments.

CISC member companies report that use of air scrubbers for interior work is increasing. As noted above, the scrubbers help reduce visible dust and some initial sampling suggests that they are also effective at reducing exposure to respirable crystalline silica.

Most of the use, however, has been in conjunction with other control measures, either the use of wet methods or dust collection systems. The air scrubbers serve as another layer of protection to reduce exposures as much as possible.

The CISC has not been able to obtain data on the effectiveness of air scrubbers, despite the positive reports received from some member companies. The CISC will continue to try to obtain the data but encourages the Agency to explore the use of air scrubbers in combination with other control measures for interior work. Table 1 is currently configured to require respiratory protection for much of the work that is performed indoors. Air scrubbers may be a means to reduce exposures during interior work to such an extent that, when combined with other control measures, respiratory protection may not be required. This is certainly worth exploring and the CISC encourages OSHA to examine this.

c. Equipment/Tasks to Add to Table 1

In addition to expanding Table 1 to allow for tasks performed for no more than an hour and expanding the controls available to contractors for tasks currently on Table 1, the CISC strongly supports adding other equipment/tasks to the table. As stated above, CISC member companies have routinely informed the CISC that Table 1 is helpful, but it does not include certain equipment/tasks that are frequently used on construction sites.

i. Masonry Wall Scrubbers

One common piece of equipment used in construction is a masonry scrubber. Masonry scrubbers involve rotating discs that scrub masonry walls as part of the finishing process. Masonry scrubbers are not currently listed on Table 1.

Given the frequency that masonry scrubbers are used, the CISC believes that they should be added to Table 1. Attached as Exhibit 7 is data from sampling performed with masonry scrubbers with the application of two types of vacuum systems. Exhibit 7 also includes sampling without the application of controls.

The sampling involved a full shift survey with the work performed indoors. Three employees were sampled. Two of the employees had vacuum systems attached to the scrubbers, with one vacuum involving a HEPA filter. One employee performed the task with no control measures.

According to the data, the employees that used the vacuum systems with the scrubbers were both under the action level. The vacuum system using the HEPA filter had results of "non-detect." The results for the employee performing the work with no controls was exposed

at 110 µg/m^3, significantly over the PEL. This data shows the effectiveness of using a masonry scrubber with an attached vacuum system.

ii. Wire Saws

Yet another common piece of equipment is a wire saw. These saws are typically used for complicated projects where a traditional diamond handheld saw cannot be used. In addition, most wire saws are equipped with an integrated water delivery system and the operation of the machine is *via* remote control away from the point of operation.

When a wire saw is used in this manner, data shows that it is at or below the PEL and even below the action level. Attached as Exhibit 8 is data collected showing the results from the use of wire saws under these conditions. The data supports including wire saws in Table 1 with the listed controls, including an integrated water delivery system and remote operation.

iii. Wall Saws

Wall saws are also frequently used for larger and more complicated concrete sawing operations. As with wire saws, the operation of the wall saws are often remote with the operator located away from the point of operation.

Exhibit 8 also includes data regarding the use of wall saws. The assessment was performed using the saws with wet methods and an air mover (fan) in an enclosed garage. The operator was positioned remotely. Under these circumstances, the data shows exposures reliably below the PEL. As with wire saws, this data supports adding wall saws into Table 1 under the conditions sampled.

6. Other Recommendations.

In addition to the above comments, data, and suggestions, the CISC wishes to make several additional recommendations to ease compliance while maintaining worker safety and health. While OSHA looks to expand Table 1, the CISC strongly encourages it to consider these other recommended changes.

a. <u>Greater Hazard Exception for Steep Slope Roofing</u>

The CISC requests that OSHA implement a specific exception to the PEL and exposure monitoring provisions for work on steep slope roofs.

There are times where tile roofing contractors must cut tiles while working on steep slope roofs (typically during residential construction). This work presents significant fall hazards to those employees. Work on steep slope roofs is hazardous and contractors must take steps to avoid introducing additional hazards into the work that could increase the risk of falling.

Due to the silica exposures and application of the standard to the work, tile roofing contractors must either use wet methods when cutting tile, along with respiratory protection in certain instances, or adopt an alternative exposure control method, presumably a shroud and vacuum system with respiratory protection.

Installing concrete and clay tiles involves occasional cutting for the hips and valleys on the roofs. This task cannot be performed on the ground, as the cuts must be precise for the roof tiles. Using wet methods introduces slip hazards into this work and the hoses also create tripping hazards. Similarly, vacuum systems introduce the same type of trip hazard for these workers on steep slope roofs.

Falls remain the leading cause of fatalities in the construction industry and fall protection in construction constitutes the most frequently cited standard. The construction industry focuses significant resources on fall prevention and protection. Unfortunately, the respirable crystalline silica standard directly increases fall hazards for roofers performing cutting on steep slope roofs.

Given this, the CISC urges the Agency to consider a specific exception to compliance with the PEL and the exposure monitoring provisions for tile cutting on steep slope roofs. Such an exception would be based on the greater hazard from falls created by the use of current silica control technology for tile cutting.

Under the exception, the CISC recommends that OSHA require the use of respiratory protection when cutting tile to ensure that employees are protected from exposure during this work task. Use of respiratory protection does not create the slip and trip hazards inherent in the use of silica control technology.

The CISC emphasizes that this exception would be very limited, i.e., only when cutting tile on steep slope roofs. Cutting tile on other types of roofs would not be impacted by the exception.

b. <u>Permit Use of Respiratory Protection in Lieu of Engineering, Work practice Controls When Performing Tasks for Less than 30 Minutes a Day in Isolation</u>

As set forth above, the CISC believes that the standard, as currently drafted, presents numerous compliance challenges for contractors. The limits of Table 1 combined with the variable nature of construction work has made compliance extremely challenging. Making compliance simpler will result in a safer and more healthful work environment.

To that end, the CISC urges the Agency to provide an alternative approach to protection for very short duration exposures. Rather than rely on engineering controls and work practice controls when performing very short duration tasks, OSHA encourages the Agency to consider the use of respiratory protection for these tasks when they are performed in isolation.

Under this approach, when an employee is expected to perform a task that will take under 30 minutes in the course of a day and performs that task in isolation (i.e., not around other employees) the employee would be allowed to perform the task with respiratory protection only.

This furthers the Agency's position as set forth in FAQ No. 2 that very short duration tasks will typically not be an issue with respect to problematic exposures. FAQ No. 2 provides:

> Does the standard cover employees who perform silica-generating tasks for only 15 minutes or less a day?
>
> The standard does not include a specific exemption for tasks with only short-term exposures (e.g., tasks with exposures for 15 minutes a day or less). However, in many cases, employees who perform construction tasks for very short periods of time, in isolation from activities that generate significant exposures to silica (e.g., some tasks listed on Table 1, abrasive blasting), will be exposed below the AL of 25 μg/m^3 as an 8-hour TWA under any foreseeable conditions. Short-term silica exposures must be very high in order for those exposures to reach or exceed 25 μg/m^3 as an 8-hour TWA; for example, if an employee is exposed for only 15 minutes, his or her exposure would have to be higher than 800 μg/m3 for that 15-minute period before the 8-hour TWA exposure would be at or above 25 μg/m^3. See 81 Fed. Reg. at 16706. Some examples of tasks that could generate very high short-term exposures include abrasive blasting and grinding, which are typically associated with high levels of visible dust. OSHA has identified carpenters, plumbers, and electricians as types of workers who may perform tasks (e.g., drilling with a handheld drill) involving occasional, brief exposures to silica that are incidental to their primary work. See 81 Fed. Reg. at 16706. Provided that these employees perform these tasks in isolation from activities that generate significant exposures to silica, and perform them for no more than 15 minutes throughout the work day, their exposures will usually fall below the AL of 25 μg/m^3 as an 8-hour TWA under all foreseeable conditions; when that is the case, these employees will not be covered by the standard.

The CISC's approach here builds upon this FAQ. For short direction tasks – under 30 minutes – where an employee is performing those tasks in isolation, an employee could use respiratory protection, rather than engineering and work practice controls.

The CISC recommends that should an employer choose to adopt such a compliance approach for short duration tasks, the approach be set forth in the employer's Written Exposure Control Plan, so that employees are familiar with the approach, trained in it, and that respiratory protection is available and provided in accordance with OSHA's respiratory protection standard.

c. Permit Dry Sweeping and Dry Brushing When Performing Task for Less than 30 Minutes a Day in Isolation and Where Person Performing the Sweeping/Brushing has had no other Silica Exposure during the Day

One of the more difficult provisions in the respirable crystalline silica rule from a compliance perspective is the prohibition on dry sweeping and dry brushing. Sweeping and brushing is a common occurrence on construction worksites. Particularly in residential construction, sweeping and brushing is commonplace at the end of the day or shift.

OSHA initially included the prohibition because it had evidence that dry sweeping and dry brushing contributed to employee crystalline silica exposure. OSHA allows for wet sweeping or the use of vacuums as an alternative when performing housekeeping, unless the employer can demonstrate that wet sweeping or vacuuming is infeasible.

OSHA has issued some FAQs regarding the prohibition to provide some additional clarity to contractors regarding compliance. FAQ No. 25 states:

> Under the standard, an employer may not allow the use of dry sweeping or dry brushing where such activity could contribute to employee exposure to silica unless wet sweeping, HEPA-filtered vacuuming, or other methods that minimize the likelihood of exposure are not "feasible." 29 C.F.R. § 1926.1153(f)(1). The standard contains a similar prohibition on the use of compressed air to clean clothing or surfaces; such use is prohibited unless the compressed air is used in conjunction with a ventilation system that effectively captures the dust cloud created by the compressed air or "[n]o alternative method is feasible." 29 C.F.R. § 1926.1153(f)(2). What is the definition of "feasible" in this context?
>
> The standard does not require employers to demonstrate that wet methods, a HEPA-filtered vacuum, or other methods are impossible to use in order to establish "infeasibility" for purposes of paragraph (f). As explained in the preamble to the standard, the limited "infeasibility" exceptions included in these housekeeping provisions are intended to encompass situations where wet methods, HEPA-filtered vacuuming, and other exposure-minimizing methods are not effective, would cause damage, or would create a hazard in the workplace. *See* 81 Fed. Reg. at 16795-96. For example, an employer can establish infeasibility for these purposes by demonstrating that wet sweeping, using a HEPA-filtered vacuum, and other methods that minimize the likelihood of exposure would negatively impact the quality of the work being done. However, even in cases where one of the acceptable cleaning methods may not be feasible, employers may be able to use another acceptable cleaning method.

In another FAQ, OSHA clarifies that the prohibition does not apply when there are just *de minimis* exposures, those below the action level:

> If employee exposure will remain below the AL of 25 μg/m^3 as an 8-hour TWA under any foreseeable conditions, does the prohibition on dry sweeping, dry brushing, and the use of compressed air for cleaning clothing and surfaces apply?
>
> No, none of the standard's requirements apply if, without implementing any controls, exposures will remain below the AL under any foreseeable conditions. Employers should note, however, that dry sweeping, dry brushing, and the use of compressed air, either alone or in combination with other tasks, can result in exposures at or above the AL, and thus coverage under the standard. Employers should consider the duration of the dry sweeping, dry brushing, or use of compressed air; the location and frequency of the tasks; and other factors in determining whether employee exposures will remain below the AL under any foreseeable conditions. (Note that the standard's housekeeping provisions apply in areas where dry sweeping, dry brushing, or the use of compressed air could contribute to the exposures of any employees who are covered by the standard.)

This FAQ, while interpreting the scope of the standard, also recognizes that the prohibition does not apply where exposures to crystalline silica are *de minimis* and isolated. The CISC believes that this should be explicitly recognized in a revised standard. Specifically, the CISC recommends that the prohibition should not apply in those instances where the dry sweeping and dry brushing is limited to 30 minutes, is performed in isolation, and the employee performing the sweeping has had no other respirable crystalline silica exposure throughout the day.

Such a rule would ease compliance burdens without sacrificing employee protection. It would allow for a common practice, particularly in residential construction, of sweeping and brushing at the end of the day, provided the contractor can do so consistent with the work practices outlined. It also reflects what is implicit in FAQ No. 23, that where exposures are very low, the prohibition on dry sweeping and dry brushing is not necessary.

The CISC is NOT recommending that OSHA re-examine the entire prohibition at this time. However, this easing of the requirement where exposures are *de minimis* is appropriate and will not sacrifice workplace safety.

7. Adopt "Expanded" Table 1 for Tasks Supported by Adequate Data through Interim Final Rulemaking.

The CISC has consistently noted the significance of the respirable crystalline silica standard to the construction industry. Unlike all other health hazards regulated by OSHA, crystalline silica is everywhere on construction worksites and is present in virtually all foundational construction materials.

Table 1 also constituted a first-of-its-kind approach to regulating a health hazard, by prescribing for contractors specific controls and respiratory protection to use when performing

common construction tasks. As noted above, however, Table 1 is too limiting at this time and contractors, thus, cannot always follow it. It needs to be expanded – and quickly – to improve overall compliance with the standard.

Furthermore, technology continues to improve and manufacturers of equipment develop new control measures, vacuum systems, shrouds, and water delivery methods that protect employees. Without a quick and easy method to continue to update Table 1, OSHA may end up stifling the type of innovation that it seeks to create. The development of Table 1 demonstrated the creativity of the Agency. The CISC encourages the Agency to continue that creativity by developing a process to quickly and efficiently "update" Table 1.

To that end, the CISC strongly recommends that OSHA commit to updating Table 1 on an ongoing basis through the interim final rulemaking process. This would involve two steps.

- *First*, the Agency would develop set criteria for data submission for new control technology on a going-forward basis. The characteristics of the data that OSHA set forth in this RFI could be used as a starting point; however, for this ongoing update project, we recommend that the Agency specifically seek comment or hold stakeholder meetings on the parameters of the data needed. Parameters such as number of samples for a task, variety of conditions to be examined, worst-case conditions evaluated, etc. should be part of the overall criteria.

- *Second*, once the criteria is established, OSHA should publish it and allow the submission of information to the Agency on an ongoing basis for the Agency's consideration. If the Agency determines that the submission satisfies the criteria established, the Agency will issue an interim final rule permitting use of the control measure, along with an identical proposed rule providing the public an opportunity to comment on it. Should OSHA receive significant negative comment on allowing the control measure – something that should be rare given the criteria established by the Agency – the Agency could rescind the interim final rule and proceed with rulemaking on the proposed rule. However, if no negative comment is received, OSHA could simply withdraw the proposed rule and the final rule would already be in place.

Provided the Agency adopts criteria that is widely accepted by stakeholders, the likelihood of significant negative comment on a particular control measure is low. The interim final rule procedure, however, is designed to allow for that possibility while streamlining the rulemaking process and contributing to the "market place of ideas" with respect to engineering controls for respirable crystalline silica.

8. Economic Considerations.

The RFI also requests information on any economic impacts that should be considered in determining whether to update Table 1, along with information about how small entities could be affected if OSHA decides to revise Table 1.

As described above, member company feedback has been almost universal in noting the difficulties in compliance with Table 1. For all of the reasons described above, Table 1 is too limiting for it to be an effective compliance option. As a result, contractors are being forced to spend additional resources on trying to follow the Alternative Exposure Control Method for compliance. This involves exposure assessment and application of uncertain engineering or work practice controls in a wide variety of environments and workplace conditions.

Furthermore, while industry and equipment manufacturers are working to provide objective data for contractor use when following the Alternative Exposure Control Method, some of that data is not universally applicable to the wide variety of construction worksites and conditions. The limitations of Table 1 result in significant costs to contractors and, as a result, also diminish overall compliance with the rule.

The CISC firmly believes that implementing the recommended adjustments to the rule that are set forth here will result in improved compliance and significant cost savings. Even just allowing a "dry" option for the first several items on Table 1 should result in significant cost savings. Incorporating the use of floor or pedestal fans or air scrubbers will also result in cost savings, when used by themselves or in conjunction with other control measures. The latter two options would be particularly useful for small and very small entities.

During the initial rulemaking, the CISC predicted that the costs of the rule would be significantly greater than what OSHA estimated. Part of this related to some of the underlying assumptions used by OSHA, but part related to the CISC's view that Table 1 would not be able to be used universally by the construction industry. The feedback that CISC member companies have provided supports the CISC's initial position.

Notwithstanding this, OSHA has the opportunity to adjust the rule to reduce its costs while not sacrificing employee health. OSHA should proceed to do so promptly.

9. Conclusion.

The CISC appreciates OSHA publishing the RFI and seeking ways to improve compliance with the respirable crystalline silica standard. This is a vitally important initiative for the construction industry. The CISC asks the Agency to seriously consider the recommendations included in this response, along with the data and information provided.

The CISC looks forward to continuing to work with the Agency in this important area.

American Road and Transportation Builders Association
American Society of Concrete Contractors
American Subcontractors Association
Associated Builders and Contractors
Associated General Contractors
Association of the Wall and Ceiling Industry
Concrete Sawing & Drilling Association
Construction & Demolition Recycling Association
Distribution Contractors Association
FCA International
Interlocking Concrete Pavement Institute
International Council of Employers of Bricklayers and Allied Craftworkers
Leading Builders of America
Mason Contractors Association of America
Mechanical Contractors Association of America
National Asphalt Pavement Association
National Association of Home Builders of the United States
National Association of the Remodeling Industry
National Demolition Association
National Electrical Contractors Association
National Roofing Contractors Association
National Utility Contractors Association
Natural Stone Council
Natural Stone Institute
Sheet Metal and Air Conditioning Contractors National Association
The Association of Union Constructors
Tile Roofing Industry Alliance