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September 28, 2018

Frank Nunes, Chief Executive Officer
Wall and Ceiling Alliance
5726 Sonoma Drive
Pleasanton, CA 94566

RE: Wall and Ceiling Conference Respirable Crystalline Silica Program – Objective Data

Dear Mr. Nunes:

I write in response to the request from Christopher Lee on August 29, 2017 to review “objective data” (information used to characterize employee exposures to respirable crystalline silica) from your trade association and provide feedback. On January 29, 2018, you provided the September 2017 edition of the Wall and Ceiling Conference Respirable Crystalline Silica Program (“WCC Silica Program”) for review.

My comments in this letter are limited to the respirable crystalline silica air sampling data you provided (Appendix A of the WCC Silica Program) for certain activities related to drywall and plastering work described on page 17 of the WCC Silica Program and in Appendix A of the WCC Silica Program.¹ You stated that this air sampling data will constitute objective data for Wall and Ceiling Alliance member employers who perform these drywall/plastering activities.

Requirements for objective data in title 8 section 1532.3 Occupational Exposures to Respirable Crystalline Silica.

Employers may use objective data to determine employee silica exposures provided the data conforms to the definition in California Code of Regulations title 8, section 1532.3(b), and the requirements in 1532.3(d)(2)(B).

Section 1532.3. Occupational Exposures to Respirable Crystalline Silica.

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(b) Definitions. For the purposes of this section the following definitions apply:

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

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¹ I did not review all aspects of the WCC Silica Program. Please contact Cal/OSHA Consultation Services if you would like their feedback on the program. See <https://www.dir.ca.gov/dosh/consultation.html>

(d) Alternative exposure control methods.

For tasks not listed in Table 1, or where the employer does not fully and properly implement the engineering controls, work practices, and respiratory protection described in Table 1:

- (1) Permissible exposure limit (PEL). The employer shall ensure that no employee is exposed to an airborne concentration of respirable crystalline silica in excess of 50 µg/m³, calculated as an 8-hour TWA.
 - (2) Exposure assessment.
 - (A) General. The employer shall assess the exposure of each employee who is or may reasonably be expected to be exposed to respirable crystalline silica at or above the action level in accordance with either the performance option in subsection (d)(2)(B) or the scheduled monitoring option in subsection (d)(2)(C).
 - (B) Performance option. The employer shall assess the 8-hour TWA exposure for each employee on the basis of any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures to respirable crystalline silica.
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Title 8 subsection 1532.3(j)(2) requires employers to keep records of objective data that they rely upon. It also requires that those records contain other information relevant to employee exposure:

Section 1532.3. Occupational Exposures to Respirable Crystalline Silica.

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(j) Recordkeeping.

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(2) Objective data.

- (A) The employer shall make and maintain an accurate record of all objective data relied upon to comply with the requirements of this section.
- (B) This record shall include at least the following information:
 1. The crystalline silica-containing material in question;
 2. The source of the objective data;
 3. The testing protocol and results of testing;
 4. A description of the process, task, or activity on which the objective data were based; and
 5. Other data relevant to the process, task, activity, material, or exposures on which the objective data were based.

* * * * *

Additional clarification of objective data from federal OSHA rulemaking²

While a trade association or other organization may assist employers in compiling data on silica exposures, the employer is responsible for demonstrating that the data meets the requirements for objective data for activities conducted by its employees. In the preamble to the federal Respirable Crystalline Silica standard, federal OSHA stated:

Where employers rely on objective data generated by others as an alternative to developing their own air monitoring data, they will be responsible for ensuring that the data relied upon from other sources are accurate measures of their employees' exposures. Thus, the burden is on the employer to show that the exposure assessment is sufficient to accurately characterize employee exposures to respirable crystalline silica.³

² The title 8 respirable crystalline silica standards are identical to the federal OSHA respirable crystalline silica standards except for formatting.

³ Federal Register, Vol. 81, No. 58, Friday, March 25, 2016, Rules and Regulations, page 16763
https://www.osha.gov/FedReg_oseha_pdf/FED20160325B.pdf

In addition, federal OSHA stated that objective data, and its documentation, must demonstrate a “reasonable basis” for characterizing employee exposure. This means that the objective data must accurately represent employees’ actual exposures. The accuracy must be equivalent to the employer conducting air sampling of its own employees.

Since the rule allows objective data to be used to exempt the employer from monitoring requirements and to provide a basis for selection of respirators, OSHA considers it critical that the use of objective data be documented. As authorized in the rule, reliance on objective data is intended to provide the same degree of assurance that employer monitoring of employee exposures by taking air samples does. The specified content elements [of the documentation] are required to ensure that the records are capable of demonstrating to OSHA a reasonable basis for the conclusions drawn by the employer from the objective data.⁴

Review of objective data used for the WCC Silica Program

I cannot determine if the air sampling data in Appendix A of the WCC Silica Program meets the requirements of objective data in section 1532.3 for the following reasons:

1. There are several locations within the WCC Silica Program and its Appendix A that describe drywall and plastering activities for which air sampling has been conducted. I identified 11 separate activities. The description of each individual activity should be identical throughout the program and its appendix to eliminate confusion about what specific work is covered by the air sampling for the activity. However, the descriptions for each individual activity differ significantly throughout the WCC Silica Program and its Appendix A. As a result, I cannot discern what work is included in each described activity. Please refer to the following table.

Comparison of individual activity descriptions between the WCC Silica Program and various sections of Appendix A of the WCC Silica Program				
Description of activity on page 17 of the WCC Silica Program	Description of activity in Appendix A, “Introduction” (page 1 of Appendix A)	Description of activity in Appendix A, “Description of Work Activities Monitored” (starting on page 2 of Appendix A)	Description of activity in Appendix A, “Findings” (starting on page 7 of Appendix A)	Description of activity in Appendix A “Current Sampling” (last 3 pages of Appendix A)
No description found	Overhead drilling into metal pan and concrete decking during interior framing work	Overhead drilling into concrete decking	Overhead Drilling in Concrete/Interior Wall Framing	Overhead drilling into concrete decking (interior wall framing)

⁴ Federal Register, Vol. 81, No. 58, Friday, March 25, 2016, Rules and Regulations, page 16853
https://www.osha.gov/FedReg_oshaf/FED20160325B.pdf

Handheld routers for cutting gypsum board	Cutting, rasping and hanging interior drywall	Interior drywall installation	Interior Drywall Hanging/ Installation	Cutting, rasping, and hanging drywall; (separately) Hanging drywall using a router in an enclosed room
Hand, pole or vacuum sanding of gypsum board surfaces	Hand and power sanding of joint compound and drywall	Drywall finishing/sanding joint compound and chopsaw activities	Sanding joint compound and interior wall framing	Drywall Finishing/Sanding Joint Compound
Power chop-saws used to cut light gauge metal framing members	Use of a powered chop saw to cut metal framing	No description found	No description found	Cutting and installing metal wall framing
Mixing and spraying of fireproofing	No description found	No description found	No description found	Mixing and spraying monokote fireproofing
No description found	Mixing and hand application of exterior plaster	Exterior plastering	Mixing and hand application of exterior plaster	Plasterer - hand application (by trowel) of scratch plaster coat; (separately) Hod carrier mixing exterior plaster
Installation of gypsum board, including the use of screw guns	Securing drywall to framing members with screw fasteners	Interior drywall installation	No description found	Cutting and hanging drywall
Mudding and/or taping activities	No description found	No description found	No description found	No description found
Housekeeping or sweeping of floors with sweeping compounds	Laborer activities handling trade materials and cleaning up construction debris	No description found	No description found	Laborers during interior drywall installation
No description found	No description found	No description found	No description found	Cutting USG drywall (RJ Lee Group)
No description found	No description found	No description found	No description found	Cutting of concrete floor tile with bandsaw

2. Some of the sampling dates in Appendix A of the WCC Silica Program are in conflict.⁵
 - The sampling conducted for “overhead drilling into concrete decking” is described in the first half of Appendix A as occurring on 10/10/16 and 12/23/16, however, tables 1A and 1B of Appendix A, which likely contain the data from the two sampling dates respectively, are both labeled as 10/10/16.
 - The sampling conducted for “drywall finishing/sanding joint compound and chopsaw activities” is described in the first half of Appendix A as occurring on 2/16/17, however, elsewhere in the appendix it is labeled 2/26/17.
 - The sampling conducted for “cutting, rasping and hanging drywall” is described in the first half of Appendix A as occurring on 11/30/16, however, elsewhere in the appendix it is labeled 11/20/16.
3. Certain activities in Appendix A of the WCC Silica Program are missing information that is required for objective data by subsection 1532.3(j)(2)(B). For example:
 - Some of the data does not contain information on the presence or absence of engineering (e.g. ventilation) or work practice controls.
 - The silica content of the material involved in the fireproofing activity is not specified.
 - The testing protocol (e.g. sampling and analysis method) is not listed for the activities “handheld routers for cutting gypsum board” and “mixing and spraying of fireproofing.”
 - One activity, “mudding and/or taping activities,” is not addressed by any of the data.
4. Certain activities in Appendix A of the WCC Silica Program are conflated with other activities resulting in an inaccurate exposure determinations. For example:
 - The activity “housekeeping or sweeping of floors with sweeping compounds” is represented by data that was collected while laborers conducted housekeeping and a wide range of other work, such as flagging for heavy equipment operators, and moving metal materials. As a result, the data for this activity does not represent an employee’s exposure while performing housekeeping duties.
 - The activity “handheld routers for cutting gypsum board,” includes work not related to the use of routers. There are six work tasks listed in this activity, but only one of the tasks involves routers.
5. Appendix A of the WCC Silica Program does not explain how the sampling data is sufficient to represent the exposures at other worksites.
 - For almost all of the drywall/plastering activities in Appendix A of the WCC Silica Program, the number of air samples relied upon is very small (two to six samples). While title 8 and federal OSHA do not specify a target number of air samples, uncertainty results when data sets are this small. Without an explanation, an employer’s burden of proof to show that Appendix A is an accurate measurement of their own employees’ exposures will not be met due to these uncertainties.

⁵ If such inconsistencies are truly errors, I suggest that the authors compare the report and Appendix A to all of the raw data to ensure that other errors, such as transcription and calculation errors, were not made and carried through to the report and appendix

I hope these comments are helpful to you. Please feel free to contact me if you have any further questions.

Sincerely,

A handwritten signature in blue ink that reads "Eric Berg". The signature is fluid and cursive, with the first name "Eric" and last name "Berg" clearly distinguishable.

Eric Berg
Deputy Chief
Cal/OSHA Research and Standards

Cc: R&S file §1532.3