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MINUTES OF THE ADVISORY COMMITTEE FOR CONSTRUCTION SAFETY ORDERS, SECTION 1532.3, RESPIRABLE CRYSTALINE SILICA IN CONSTRUCTION
December 14, 2016
Sacramento, CA

1. Call to Order.

The meeting was called to order by the chairman, David Kernazitskas, Senior Safety Engineer, Occupational Safety and Health Standards Board (OSHSB), at 9:30 am on Wednesday, December 14, 2016, in Sacramento, CA. The Chair was assisted by Leslie Matsuoka, Staff Services Analyst, OSHSB.

2. Opening remarks.

Mr. Kernazitskas welcomed the attendees and started the introductions of the committee. He then reviewed the Standards Board policy regarding the use of advisory committees, explaining that the Board has found advisory committees to be an effective way to develop a proposal because of the expertise of the attendees. He also provided general information about the rulemaking process.

3. Discussion of the proposed rulemaking:

Background

The Chair explained that the advisory committee was convened at the direction of the Board, as a result of public testimony on the recently adopted respirable crystalline silica federal final rule. Stakeholders from the California construction industry expressed concerns that some of the tools used to cut concrete and masonry materials in Table 1 of the new regulation only allowed for wet methods of dust control. Stakeholders pointed out that Table 1 did not recognize local exhaust ventilation (LEV) tools that have been in use in California since the adoption of Section 1530.1 “Control of Employee Exposures from Dust-Generating Operations Conducted on Concrete or Masonry Materials” in 2008.

Furthermore, they reminded the Board that the state is in a drought and that water on a construction site is expensive to use, while creating additional hazards onsite. Consequently, the Board directed its staff to expeditiously convene an advisory committee to address the industry’s concerns, to the extent possible, while remaining in compliance with the protections of the federal final rule and its June 23, 2017 effective date.

Bruce Wick (California Professional Association of Specialty Contractors - CalPASC), representing a coalition of industry stakeholders, said that the federal preamble contained information in support of several of the same exceptions that were adopted in California’s 2008 “Concrete and Masonry” standard (Section 1530.1).

Kevin Bland (Ogletree, Deakins, Nash, Smoak, and Stewart, P.C.) stated that the 2008 advisory committee was well represented by labor and management parties and that the effort to protect employees from hazardous dusts and silica "was not taken lightheartedly."

Steve Smith (Division of Occupational Safety and Health - DOSH) said that DOSH actually proposed an even lower PEL for respirable crystalline silica in 2004 than what was effective in 2008.

The Chair asked if the exceptions adopted in 2008 were intended to protect to the level proposed by the failed 2004 effort. Steve Smith responded that Section 1530.1 did not address a PEL.

Mr. Wick said that air sampling on a construction site is difficult due to ever-changing site conditions. He agreed with Steve Smith that the focus of the 2008 effort was to focus on proactively controlling dust exposures, instead of addressing the PEL.

Rulemaking Language Discussion

The Chair reviewed some of the excerpts of the federal register cited by the Coalition to support the inclusion of the proposed exceptions.

Mr. Wick said that the purpose of regulation is to protect employees. He said that the Coalition wanted clarity so that employers would know whether or not a standard applies.

Exception (1) for stucco, plastering material, or similar products

The Chair reviewed proposed Exception 1 for stucco and plaster work. He asked if exposures from stucco and plaster work were expected to exceed the action level (AL).

Eric Berg (DOSH) asked if there was any data to support the exception.

Mr. Bland pointed out that federal OSHA excluded the work because the exposures were less than 25 micrograms per cubic meter of air (µg/m3). He said that there was no data because OSHA does not expect exposure. Mr. Berg countered that it would depend on the work—some jobs may be below, but one should not make a blanket exception for all work.

Mr. Wick said that he wanted to be clearer than OSHA. Referring to the March 25, 2016, federal register, he said that one must read 608 pages to find that some of these processes may be excluded. He pointed out that Table 1 has several specific tools. He said that California has had an exception for stucco and plaster work for 8 years without the need for objective data.

The Chair asked the committee for more information on silica exposure from stucco and plastering work.

Robert Garcia (Kenyon Plastering, Inc.) said that silica exposure during stucco, plastering, or cement work comes from mixing and not from applying it in a spray because the spray is wet. He also said that the stucco cement is hand mixed.

Doug Parker (Worksafe) said that the federal register appears to indicate that some processes in isolation do not produce respirable crystalline silica dust in excess of the action level (AL), but that an exception is too aggressive because the sum of several smaller tasks could lead to employee over-exposure.

Amber Novey (Laborer's International Union – LIUNA) expressed concern with the wording of the proposed exception that said "stucco or similar products." She asked what "similar products" may mean.

The Chair responded that some materials may have differing amounts of ingredients to make them up, but they can still be referred to as a substance, even though they are not 100% that substance. Chocolate syrup, for example, can range from very little actual chocolate to almost pure chocolate. When the regulatory language refers to "stucco or similar products," it intends to regulate stucco and stucco-like products used in the same way stucco is used.

Mike Horowitz (DOSH) said that exempting all stucco work could be problematic. He explained that spraying stucco is not a concern, but demolishing a building or sanding on stucco is.

Mr. Wick, speaking about construction tasks performed in isolation, said that if an operation is performed adjacent to other tasks, then by definition, one is not in isolation. In response to Mr. Horowitz, Mr. Wick stated that the stucco exception has been in Title 8 for eight years and he (Mr. Wick) is not aware of any Division concerns resembling the ones mentioned by Mr. Horowitz. He said that the Coalition wants the regulation to be clean and clear by defining the requirements in Table 1 and the exceptions to the regulation.

Mr. Bland said that the proposed exceptions have near-zero exposure and that most are short duration. He said that if the employer is using an exception excessively, the Division can sample and show the employer that it is exceeding the permissible exposure limit (PEL). He said that the burden of proof would be on the Division and not on the employer. If an employer is drilling a few holes per day, it should not have the burden to perform sampling. Listing the drilling as an exception would remove the burden from the employer.

The Chair asked the Coalition what they wanted the exception to mean. Mr. Bland said that he wanted exceptions similar to those that already exist in Section 1530.1 "Control of Employee Exposures from Dust-Generating Operations Conducted on Concrete or Masonry Materials." He said that the exceptions were for tasks presumed to be below the AL. Therefore, no controls or respirator requirements would apply. Employers performing these tasks would be exempt from the entire standard.

Mr. Wick said that the committee could clarify that demolition work would not be included in the exception. He suggested limiting it to "installation and mixing".

Robert Williams (International Union of Painters and Allied Trades - IUPAT) said that if a stucco application fails, it needs to be grinded off. Although the application of stucco would have a minor exposure, the grinding could lead to a larger exposure.

Laura Boatman (State Building Construction Trades Council - SBCTC) asked for objective data showing that employees are not exposed from the application of stucco.

The Chair wondered if the data existed for the 100 µg/m3 PEL in 2008. He asked if the exception could be limited to the application of stucco cement only.

Mr. Berg said that limiting it to application is much better because all stucco work is too broad.

The Chair asked the rest of the committee if limiting the exception to the application of stucco would work for everyone. He said that existing regulations for hazard communication, respiratory protection, and airborne contaminants would still apply, but the requirements of new Section 1532.3 would not.

Mr. Berg clarified his previous statement and said that he only meant it to apply to an exception to Table 1 in subsection (c). Steve Smith said that one cannot get out of the rest of the standard unless he is complying with Table 1. Mr. Berg said that DOSH opposes expanding the exception beyond Table 1.

Mr. Yarbrough (Caltrans) pointed out that Section 5155 requires an exposure determination whenever it is "reasonable to suspect" that employees are exposed in excess of a PEL. He asked how an employer would know to sample unless there was objective data to hint at an over-exposure. He asked how the Division would interpret the requirement to sample when an employee is "reasonably expected" to be in excess of the silica PEL.

The Chair asked the committee if anyone had a "reasonable expectation" that the application of stucco products would expose employees in excess of the AL.

Mr. Horowitz stated that other activities can affect exposures. He said that the committee should not allow an exception for wet application of concrete stucco if someone in the vicinity is dry-cutting concrete. He said that the proposed exceptions should apply where Section 5155 requirements do not.

Mr. Yarbrough said that Caltrans uses pallets of concrete to coat a bridge. He said that employees open bags and mix concrete as their only job duty for 8 hours. He said that such employees are in need of protection.

Mr. Wick reminded the committee that California has lived with Section 1530.1 since 2008. He said that Mr. Yarbrough's example would be clearly over the PEL so the exception would not apply.

The Chair repeated his earlier question to the committee: "Is there a reasonable expectation that the application of 'stucco, plastering material, or similar products' would lead to employee exposure beyond the AL for respirable crystalline silica?"

Mr. Berg opined that as long as the stucco was wet, there would not be a reasonable expectation for over-exposure.

Mr. Bland suggested expanding the language to "Installation, Application, and mixing of stucco…"

The Chair asked if "installation" was the same as "application".

Mr. Bland said that the regulation should aim to state "These activities are presumed to be under the PEL" and then require the Division to prove otherwise. The Chair pointed out that the Division already has the burden of proof, to which Mr. Bland replied, "Then why worry about exceptions?" Mr. Berg said that data or proof is needed if we are going to create exceptions.

Mr. Parker pointed out that subsection (a) says the regulation only applies to "foreseeable circumstances of over exposure." He asked why we needed exceptions when the scope is written this way. He said that exceptions are broad and remove the requirement for "foreseeability" from the employer's responsibility. He asked why "foreseeability" language was not enough.

The Chair asked the committee to consider what the objective data would look like in the situations described by the proposed exceptions, which would exclude an employer from the standard. He opined that it could be difficult to have objective data that would apply to various jobs using different amounts of stucco. He asked, "Assuming that we do not allow an exception for stucco, plastering material, or similar products, what kind of objective data would we expect someone to gather in order to avoid the need to sample the work?"

Mr. Wick said that it would be difficult to sample at such low levels due to limitations on the sampling analytical method.

David Rempel (UC Berkeley) stated that most manufacturers are providing their own objective data so that contractors can know which tools will control dust exposures to the desired levels. He said that the objective data should reflect worst-case scenarios. He said the bit diameter (for drilling tasks), material content, and rate of work all affect the silica exposure.

The Chair said that he did not anticipate stucco manufacturers would proactively provide such data. Mr. Wick said that the CPWR was also developing objective data for various tools, but that it was not yet available.

Rick Olson (Tile Roofing Institute) said that many industries were trying to find the objective data, but that it was not easy to find. He said that OSHA delayed implementation of the final rule to allow more time for objective data to be gathered. He also said that finding people to perform workplace sampling was expensive and required planning due to a backlog of employers requesting sampling.

The Chair explained that he was going to go through each of the proposed exceptions so that the discussion did not bog down on a single topic. He explained that the exceptions would apply to the entire silica standard and would mean that the excepted task was assumed to be lower than the AL.

Mr. Berg said that DOSH was opposed to allowing exceptions that would exempt an employer from the entire standard. He said that the exception as initially proposed for the meeting stated that they only applied to subsection (c) and he was opposed to any expansion of the exceptions.

Steve Smith said that DOSH recommends adding a note to the regulation to state that subsections (d) and on still apply.

Exception (3) for downward drilling

The Chair read from the Industry's Justification letter (included with the meeting announcement) to discuss those exceptions which were specifically mentioned in the federal register. He said that Exception 3 for downward drilling is addressed in the federal register on page 422 of 606 where it states that federal OSHA does not believe employees will be exposed above 25 µg/m3 as an 8-hour time weighted average on "tasks involving occasional, brief exposures…that are incidental to their primary work." The register continues: "These employees include carpenters, plumbers, and electricians who occasionally drill holes in concrete or masonry or perform other tasks that involve exposure to respirable crystalline silica." He asked for comments on Exception 3.

John Tweeds (IUPAT) said that he has seen downward drilling cause extensive dust when drilling on multi-story buildings, even when drilling in a downward direction. He said that the material has to exit the hole somehow. He said it is not incidental exposure for everyone.

The Chair asked the committee for the rationale of the 2008 committee when they agreed to allow an exception for downward drilling.

Mr. Horowitz said that in 2008 the committee intended to allow only limited drilling of holes and not in an upward direction. He said that the dust exposure depends on the tool and the capture device.

Mr. Rempel said that he researches all types of drilling and most downward drilling is done by laborers doing downward drilling. He said that he measures exposures that are 5 to 13 times the current PEL of 50 µg/m3. He said that incidental drilling wouldn't have the same exposure. He recommended removing downward drilling as an exception.

The Chair asked if we should discuss limiting the size of the drill bit or how the drill is used (rock drill versus pneumatic drill).

Mr. Bland said that when the exception was discussed in 2008 it was discussed in the context of drilling through a 2x4 to install a "redhead". He said that we could have narrowed the scope back then and maybe we should focus on that now.

Bill Benham (Bill Benham Consulting, LLC) said that we should define the drill size in the exception.

Mr. Rempel said that it was more important to discuss the energy source of the drill. He said that pneumatic drills should not have any exception. Mr. Bland asked if "downward drilling, except for with a pneumatic drill" would be acceptable. Mr. Rempel agreed with Mr. Bland's language.

Mr. Tweed asked if the exception would include a roto-hammer. Mr. Rempel said that a roto-hammer is an electric hammer that generates larger particles. He said that overexposure was unlikely, but could be

possible if the dust was allowed to fall down to workers at lower levels. Mr. Tweed said that the roto-hammer still blows dust back into the worker's face when the hole is drilled and he observes workers with dust on their face at the end of a shift.

The Chair asked if anyone else had a similar experience with roto-hammers. No additional experiences were shared.

Mr. Rempel said that in his laboratory, drilling one hole per minute will fill the room with dust, which would overexpose a worker. He said that drilling one hole every 15 minutes would not exceed the PEL, however.

The Chair asked if the holes were typically drilled indoors. Mr. Tweed explained that the holes were drilled around the edge of a deck as a building is constructed. He said a worker will typically drill 50 to 100 holes per day. He explained that employees are often protected by fall protection and working in tight spaces; therefore they are unable to back away from the dust when created. He said that the dust can fall down on other employees as well.

The Chair mentioned that the current standard has a scope that excludes exposures below the AL. He continued, however, saying that safety may be increased by making compliance easier for employers. Removing some burden from the employer for sampling allows the employer to focus on specific problem areas instead of minor areas of concern for dust exposure.

The Chair asked if there was a drill bit size or a power source for a drill that the committee could agree on.

Mr. Bland suggested excluding downward drilling except for pneumatic or rock drilling. Mr. Tweed suggested adding roto-hammering. The Chair cautioned against creating a list of tools to exclude. He asked if there was a more general way to describe processes that would not be expected to create dust in excess of the AL.

Mr. Bland asked if bit diameter could be used. He asked if the process mattered as much as the drill. Mr. Williams said that if a hole is drilled all the way through the concrete, the exposure is different than if it is only drilled to a certain depth and then retracted. He said that pulling the drill out of the hole created a lot of dust.

The Chair asked if there were any conditions that the committee could agree upon to exclude downward drilling. Mr. Benham said that dust would come up through the hole no matter what size drill bit was used. He said he was unsure if the amount of dust would be over the AL or not. Mr. Rempel said that there was not enough data to entirely eliminate downward drilling from the standard.

Mr. Berg said that the language should say "infrequent" drilling because he expected drilling several holes throughout the day to be an over-exposure. He said that he would support an exception for a limited, infrequent drilling task.

Mr. Tweed said that he had a concern with allowing a set number of holes per day because it would be difficult to keep count. Mr. Bland said that the Division would need to prove that too many holes were drilled.

Exception 4 for jack-hammering or chipping incidental to the scope of the planned work

The Chair suggested moving on from downward drilling because the committee could not agree to a limited number of holes, or limits on drill bit sizes, etc. He read proposed exception 4, regarding jackhammering and chipping when the work is incidental to a plumbing or landscaping activity.

Mr. Berg said that the Division did not support the exception. Mr. Wick said that the exception would only apply to work incidental to the main project. He asked for more information on why committee members objected to the exception.

The Chair explained that the employer can always develop his/her own objective data. He said that whether or not the exceptions were placed into the regulation as proposed, employers could still use existing regulatory language to exempt themselves by showing that certain tasks did not produce exposures in excess of the AL.

Mr. Bland said that he hoped to place the exceptions into the standard so that employers could use their limited resources to evaluate processes where exposures above the PEL were likely. He wanted to avoid having an employer prove exposure levels each time DOSH came out to a worksite.

The Chair explained that it could be difficult for employers to come up with objective data for the many unique and transient tasks on a construction site. Mr. Bland said that money spent to prove compliance in tasks similar to the proposed exceptions could decrease the amount of money available to be spent on other safety protections like fall protection or blood borne pathogens. He said that the exceptions would help employers allocate resources towards more significant hazards. He explained that an unexpected task involving a jackhammer could earn an employer an extra $200 on a job, but performing air sampling for the task could cost the employer up to $5,000.

Ms. Boatman asked why a wet method could not be used for the hypothetical jackhammer job. She said that there was enough vagueness in all of the exceptions to cause concerns for overexposures. She said that some employees would not know if they were being overexposed while doing a task similar to one described in the proposed exceptions; providing an exception could mistakenly convey to a worker that the task he/she was performing would not overexpose him/her to silica.

Exception (5) for powder actuated tools

Mr. Benham said that he was in favor of exempting powder actuated tool use from the standard as proposed in exception five. Mr. Berg said that there was no data to support exempting powder actuated tools, even though the preamble mentions that OSHA did not receive data showing over-exposure from these tools. Mr. Berg said that he opposes a blanket exemption in this case. He said that employers should review their obligations to the standard on a case by case basis.

The Chair pointed out that the scope of the regulation could be used to exclude minor tasks that led to exposures below the AL. Mr. Benham asked if the Division would cite an employer using powder actuated tools if the employer did not sample the process. The Chair reminded Mr. Benham that Mr. Berg had previously expressed the opinion that the Division would need to perform the sampling in order to prove a violation.

Exception (10) for the first 24 hours of an emergency

Kim Smith (Caltrans) said that Caltrans was in support of the exception to the regulation for the first 24 hours of an emergency. The Chair asked if anyone had any concerns with the exception for emergencies.

Mr. Berg said that the exception included the word "property" and he felt that lives were more important than property. The Chair asked if property emergencies could lead to emergencies that threatened lives. He said that if a building was going to fall, the building could be considered property, but it can fall on people and threaten lives. He also said that property could obstruct emergency crews from accessing areas where lives are threatened.

Mr. Yarbrough said that it was important to take initial steps right away and then crews can step back and address safety concerns. He said that all rules would be off for the first 24 hours in reality. He said he would not ask contractors to delay emergency work due to a lack of safety equipment. He said that he was in favor of leaving "property" in the exception.

Amber Novey (LiUNA) said that she was in support of the exception.

Local Exhaust Ventilation (LEV) in Table 1

The Chair suggested moving to the next item on the agenda because the exceptions did not appear to be acceptable to the full committee. He said that they could be revisited later in the day if there was interest. He explained that LEV controls were not present in some areas of Table 1 that California has historically allowed their use. Specifically, he said that the industry would like to add LEV controls as an option for controlling dust while using stationary masonry saws, handheld power saws of any blade diameter, and walk-behind saws (tools *i*, *ii*, and *iv* in Table 1, respectively).

Mr. Wick said that vacuum control technology has improved in the past few years and should be allowed to be used as an option for protecting employees. He said that more options to protect employees would lead to better workplace safety.

Mr. Berg said that in 2008, studies showed the LEV controls were "better than nothing". He said that since then, studies have shown that when comparing LEV to wet methods, the LEV exposures are double the exposures from wet methods. He said that data is needed to justify the allowance of LEV controls in Table 1.

The Chair stated that there was likely not objective data for every LEV tool available. Mr. Berg responded that he had data showing that exposures were double those of wet methods when compared to

LEV controls. The Chair asked if the data he was referring to indicated exposures above the PEL. Mr. Berg said that the exposures were over the PEL. The Chair asked why this data was not sent to the committee prior to the meeting as requested in the meeting invitation. Mr. Berg said that he was given the study while at lunch just now.[1]

Ms. Boatman said that OSHA studied LEV controls extensively and decided not to allow LEV for these tools in Table 1. She said that her understanding was that there was not enough data to show that LEV controls would be as effective as wet methods and that was the reason for not placing them into Table 1.

Mr. Berg confirmed Ms. Boatman's concerns. He pointed out that LEV controls were allowed for certain tools in Table 1.

Mr. Horowitz discussed some of the reasoning OSHA used while discussing the efficacy of a LEV tool made by IQ Power Tools during the preparation of the final rule. He said that the conditions of use and characteristics of the tool allowed it to control exposures to allowable levels, but that OSHA concluded that more research was necessary to confidently conclude that it would control dust levels in all situations as would be implied by adding the tool to Table 1.

The Chair asked for some of the benefits of allowing LEV tools to be used in Table 1. Ms. Smith said that contractors are regulated by the Air Resources Board, Water Resources Board, Cal/OSHA, and other agencies, and that LEV controls are preferred because they don't have the environmental and safety concerns that water controls do. She said that some Caltrans work requires contractors to use only LEV controls and not wet methods.

Mr. Yarbrough said that LEV works well as long as it is properly maintained. He said that using wet methods near any river, stream, or other water body is an environmental concern. Ms. Smith said that cement dust can alter the pH and turbidity of the nearby water body.

Mr. Bland said that there were safety concerns with wet controls as well. He said that slips, falls, and electrical shocks were major concerns when using wet methods. He also said that water can stain the product a contractor is working on, making its use infeasible. Other processes cannot be done wet because the water hinders visibility or reacts with the product.

The Chair asked what employers would do if they were required to use wet methods to control dust in situations where it would be an issue. Mr. Bland said that it has not been an issue in the past because LEV was allowed as an option.

[1] Mr. Berg provided the Board staff a 2006 study entitled "Silica Exposures on Construction Sites", by Mary Ellen Flanagan, two days after the meeting, which was then sent to the industry coalition. Although Mr. Berg referred to the Flanagan study several times in the meeting, claiming that it shows that LEV controls are only half as effective at controlling dust as wet methods, in a follow up email sent in response to concerns voiced by the industry coalition after reviewing the study, Mr. Berg states that "[He] was mistaken in referring to the Flanagan study …during the silica advisory committee meeting as showing local exhaust controls being less effective than water control."

The Chair asked the committee for input on how to ensure that a LEV tool was adequately controlling dust exposures. Mr. Rempel said that there was objective data for some tools and processes online. Tuck-pointing has been well researched he said. He said that a shroud should match the tool and the system should be maintained properly to control dust. He said that the proposed language would help ensure that the LEV tool was effective in controlling dust exposures.

Steve Smith pointed out that tuck-pointing using LEV is already allowed in Table 1.

Bill Benham said that grinding is also allowed to use LEV in Table 1, but that it produces as much dust as cutting with a handheld saw. He said that there were products available that would collect and remove dusts in accordance with OSHA requirements.

Mr. Horowitz said that contractors needed to use the right tools for the job. He explained that some tools could control the dust, where others could not.

The Chair said that job tasks that could not be done using wet methods would need to be done using LEV. He asked the committee to come up with criteria for allowing an employer to use LEV tools effectively.

Mr. Wick said that some tools would be ineffective in controlling dust, while others are still being studied to determine their abilities. He was concerned that employers who have invested in LEV tools would no longer be able to use them after June 23, 2017 (the effective date of Section 1532.3). He suggested that they be allowed time to collect objective data on their existing LEV tools.

Mr. Berg pointed out that subsection (d) already contains provisions for employers to demonstrate that a LEV tool could effectively control dust exposures. The Chair said that there may be a safety benefit to having a control listed in Table 1 rather than requiring employers to collect the appropriate objective data.

Mr. Wick said that the controls need to be listed in Table 1 because some employers will insist that if the control is not listed in the table, it will not be as effective.

Mr. Parker suggested that we look at why fed OSHA does not include a control in Table 1. He said that because OSHA did not include the control, the state cannot add the control and remain at least as effective as the federal regulation. He said that any control is allowed as long as the employer has objective data to show that it effectively controls exposure.

Cindy Sato (Construction Employers Association – CEA) said that expanding Table 1 to include more controls would be helpful in informing employers how to comply with the regulation.

Ms. Boatman said that listing tools in Table 1 had a clear benefit to workers and employers both. She said that following Table 1 would exempt a contractor from the PEL, but that more data is needed to prove that employees would be protected using the control methods proposed to be added to Table 1. She said that the focus should be on what is most protective to the worker.

The Chair asked Ms. Boatman if she would support adding LEV tools to Table 1 if objective data existed to show that the exposures using the controls were below the PEL. Ms. Boatman said that she was not sure if her organization would support the amendments until she saw the data.

Mr. Rempel said that we will likely get more objective data in the coming months as this rulemaking goes into effect. He said that the process for adding tools to Table 1 should be flexible. He suggested referencing the "Safe Silica" website (http://www.silica-safe.org/) as a quality source of objective data to evaluate LEV tools.

The Chair agreed with Mr. Rempel and suggested discussing language that could be used to identify reliable sources of objective data as it becomes available, even if such data does not exist today.

Mr. Wick suggested putting the information from subsection (d) into Table 1 as requirements for LEV tools. He said that a year from now, there would be so much more data available for employers to use in evaluating their LEV tools. He said that he would like to see provisions in the standard that allow employers an opportunity to validate their equipment before being required to move to compliance with Table 1 and potentially discard their past investments into LEV tools.

Jeremy Smith (SBCTC) said that he views Table 1 as a living document. He said that tools could be added or taken away depending on verification of their effectiveness in controlling silica dust. He opined that OSHA did not seem concerned about California having issues with wet cutting. He said that we may be wasting our time trying to allow LEV controls into Table 1 if OSHA will reject them. Furthermore, he said that delaying the implementation of the standard risks running afoul of the federal rule.

The Chair said that he would only propose changes if he felt that he could show that they were equivalently protective to federal regulations.

Cassie Hilaski (Nibbi Brothers) said that she was concerned with waiting for OSHA to propose the necessary amendments. She suggested that we move forward with the regulation so that we are ready for the newer technologies as they come about. She said that her employees would more easily be able to understand Table 1 than use subsection (d) to objectively demonstrate that they were in compliance. She said that a list of qualifications for a LEV control would be helpful to her employees.

Mr. Bland proposed language to allow LEV to be used in Table 1 for the proposed tools. He suggested requiring documentation from manufacturers or nationally recognized organizations with expertise in controlling silica exposure to demonstrate that a LEV tool could be used to effectively control silica dust exposures under the prevailing conditions.

The Chair asked if Mr. Bland's proposed language would be acceptable to the committee to allow the use of LEV controls for stationary masonry saws, handheld power saws, and walk-behind saws, as shown in Table 1.

Mr. Parker said that the regulation contains a detailed process for allowing the use of tools not included in Table 1.

Mr. Williams said that he had concerns with introducing new tools into Table 1 unless they were shown to be compliant with the PEL. Mr. Yarbrough said that objective data would be limited in its applicability.

Mr. Bland said that manufacturers would be encouraged to produce better data and better control technologies if we produced a regulation requiring such information. He suggested allowing employers to have until 2018 to provide documentation to validate their existing LEV control methods.

The Chair said that the 2018 date for objective data would likely encounter resistance from OSHA because it would arguably leave employees less protected than the federal regulation for a one year period.

The Chair explained that simplicity of compliance aided employers in providing safe work places. He said that he could see employers having difficulty in navigating subsection (d) to determine whether or not a LEV control could effectively protect workers. He asked if the proposal to add requirements for LEV controls in Table 1 had merit or if we should move on.

Jeremy Smith said that he was not prepared to agree with the proposal on behalf of the building trades. He said that workers should be able to see the tool documentation when they wanted to see it and not have to request it.

Mr. Berg said that the documentation regarding LEV tools should be on the jobsite for employees and their representatives to review upon request. The Chair asked Mr. Berg if he was supportive of the proposal in general. Mr. Berg said that it was worth further discussion.

Mr. Parker said that he would have to look into the matter further before agreeing with it.

Ms. Boatman said that the committee would need to confirm with CPWR before using them as a potential reference for objective data for employers to use[2].

Rooftop cutting of tiles

The Chair suggested moving forward to discuss rooftop cutting of tiles.

Rick Olson (Tile Roofing Institute) said that water does not belong on a steep roof. He said that water hurts roofing products and structure siding and can interfere with fall protection equipment. He also pointed out that climbing a ladder with roofing tiles in-hand was an unsafe practice.

Bill Callahan (Associated Roofing Contractors) said that the proposed exception is too broad. He said that it should only apply to steep-sloped roofs, which he defined as 3:12 or greater. He said that water should never be used on steep roofs and was unsure why OSHA did not fully address the issue in their

[2] A comment letter from Chris Trahan Cain, Executive Director, CPWR, dated January 19, 2017, stated "while we appreciate the recognition of our work in [proposed] footnote 1 on Table 1, it does not accurately reflect our role and should be removed."

recent rule. He pointed out some of the discussion of in the preamble on page 16460 where OSHA states that water cannot be used on roofs when it increases the hazards of a fall.

The Chair asked Mr. Callahan for his input on which controls should be required in place of the wet methods on the roof. Mr. Callahan said that LEV controls should be allowed in place of water for situations where the water poses a hazard. He said that there are certain instances where water could be used safely on a roof, like when using a scaffold to access the roof. He said that one should never require a contractor to use wet methods on a roof because it can place employees in hazardous situations.

The Chair asked for comments on Mr. Callahan's proposal. Mr. Berg pointed out that wet methods are not required to be used on roofs. Mr. Callahan said that it was important to include the information in Table 1 so that workers would have easier access to the necessary information. He said that most people would look to Table 1 for guidance on the requirements. He said that since wet methods are the only option listed, employers are likely to assume that wet methods are required for rooftop cutting. Mr. Berg said that it was easier to understand using Table 1, but that employers could still use subsection (d) to allow LEV controls.

The Chair pointed out that if the committee allowed LEV to be used for the tools as proposed earlier, we would not need to add additional language to the Table 1 for rooftop work. Mr. Berg said that respiratory protection would be required when using LEV controls for rooftop cutting because the data he has indicates double the exposure using LEV versus wet methods.

Mr. Callahan reconfirmed with Mr. Berg that he would share the study he was referring to with the committee. Mr. Callahan said that the study did not sound valid if it said that LEV controls would lead to twice the exposures of wet controls (see Footnote 1 on page 10).

Mr. Olson said that we should place the exception for water use inside of Table 1 so that it is easily seen by workers. He said that greater visibility of the exception would help employers focus on preventing falls while trying to comply with the standard.

Steve Smith suggested placing the exception below the description of wet controls in the table so that it could be easily seen and followed.

New exceptions using language from the preamble

Ms. Hilaski suggested using the language in the federal preamble as proposed exceptions to Section 1532.3, since there was little agreement on the originally proposed exceptions. She pointed out that the preamble discusses various situations where federal OSHA chose not to require protection because they did not believe that the exposures presented silica hazards. She said that this was important because it demonstrated OSHA's intent in creating the regulation. She said that using the language from the preamble would help employers focus on tasks that need addressing and avoid wasted efforts on tasks OSHA does not see as a concern.

Mr. Parker said that Ms. Hilaski's proposal warranted further discussion. He said that the originally proposed language did not accurately reflect the discussion in the preamble. He said that we should be careful not to expand loopholes in the proposal.

Mr. Bland said that using the preamble language would help in appeals cases because it would provide information on the intent of the regulation.

The Chair asked the committee if they were suggesting discarding the originally proposed exceptions and instead using the language from the preamble to create exceptions. He asked them how they felt about using the exact language from the preamble to describe exceptions to the regulation.

Amber Novey said that she was in support of the federal language. Jeremy Smith said that he needed to review the preamble and discuss with other labor groups to determine his position.

The committee agreed to create a subcommittee to review a new list of exceptions, compiled by the Chair, using language taken from the federal preamble. The proposal would be sent to Jeremy Smith (SBCTC), Bruce Wick (CalPASC), Robert Williams (IUPAT), Bill Callahan (Associated Roofing Contractors), Eric Berg (DOSH), Kevin Bland (Ogletree, Deakins, Nash, Smoak, and Stewart), and Doug Parker (Worksafe) for their comments. The Chair encouraged the subcommittee members to openly participate in the review of the language when it is sent.

The meeting was adjourned at 4 pm.

Addendum

During the advisory committee meeting, Eric Berg, Deputy Chief of Health, Division of Occupational Safety and Health (Division), referred to a study (Silica Exposures on Construction Sites, JOEH, April 2006, Mary Ellen Flanagan) that he claimed showed that local exhaust ventilation controls on tools were only half as effective as wet methods of dust controls. When the committee chair, David Kernazitskas (Chair), asked him why he had not sent the study to the committee earlier (as requested in the meeting announcement), Mr. Berg said that he had first received the study the morning of the meeting.

Several committee members requested a copy of the study and Mr. Berg sent the study to the Chair on Friday, December 16, 2016. The Chair forwarded the study to Bruce Wick, Director of Risk Management, CALPASC, on Monday, December 19, 2016.

On Friday, January 6, 2017, Bruce Wick, on behalf of the Construction Silica Coalition (Coalition), sent an email to the Board, expressing concerns "about what transpired during the Advisory Committee meeting on December 14th, and its impact on the progress of the regulation." Among his concerns was the introduction of the Flanagan study.

The Coalition pointed out that the Flanagan study was a 2006 compilation of respirable crystalline silica dust samples taken between 1992 and 2002, where "the types of vacuum tools under discussion currently were not in use." The Coalition asserts that if the committee stakeholders knew about the age of the study, they "would have clearly understood the 2006 report had no relevance to a discussion of vacuum tools in 2016."

The Coalition mentioned a 2012 U.K. study, found on the Silica-Safe.org website, which concludes "Where the two on-tool methods [LEV and water] were directly compared there was often no significant difference in control effectiveness." The study also points out that "Water suppression methods were often considered to be unfavourable in some applications for both safety and quality control reasons." (See http://www.hse.gov.uk/research/rrpdf/rr926.pdf for the full study).

The Coalition requested the Board staff to "clarify with the Division that the information presented during the Advisory Committee was not relevant, and should not have been introduced." On Monday, January 9, 2017, Board staff forwarded the Coalition's comment email to the Division for a response.

On Wednesday, January 11, 2017, Mr. Berg responded to the Coalition letter stating that "[He] was mistaken in referring to the Flanagan study …during the silica advisory committee meeting as showing local exhaust controls being less effective than water control." He said that the Flanagan study "is not relevant to our principal discussion" and suggested the committee focus on whether any objective data exists to support the proposed amendments to the federal rule.