CALIFORNIA INDUSTRIAL HYGIENE COUNCIL

Advancing public policy to improve the health and safety of workers and the community.

August 11, 2020

Via email: oshsb@dir.ca.gov

Occupational Safety and Health Standards
Board 1017 L Street, PMB #254
Sacramento, CA 95814-3805

RE: Draft Permanent Regulation §5141.1, Protection from Wildfire Smoke

Dear Board Staff:

The California Industrial Hygiene Council (CIHC) appreciates the opportunity to comment on the draft permanent regulation §5141.1, Protection from Wildfire Smoke. We have a few comments on this draft as provided with the 15-day Notice of Proposed Modification to California Code of Regulations dated July 23, 2020.

The proposed modifications to the language in 8 CCR 5141.1 are acceptable to CIHC. We recognize that the OSHSB has indicated that comments should be confined to the proposed modifications. However, there are several comments provided previously that CIHC would like to reiterate that we consider still applicable to the regulatory language, and which need to be discussed in the advisory committee.

Use of the AQI for Exposure Limits

The AQI is established by the Environmental Protection Agency for 24-hour exposures to the public and not for the basis of evaluating shorter term worker exposures. Therefore, what is the calculated risk for the duration of a work shift (such as 8 hours or 10 hours) versus a 24-hour exposure (an exposure that may not occur if the workers live outside the high AQI area)? What is the duration of exposure that triggers AQI applicability? It appears from the language in 8 CCR 5141.1 that this may be an exposure in excess of one hour above an AQI of 150. However, this is not clear from the current language. Is there scientific information that establishes a dose/response relationship for an exposure greater than 1 hour? In other words, what is the basis for determination of the potential for health affects and the duration of exposure?

What information do we have regarding the location of the AQI measurements within the State relevant to specific workplace locations and potential exposures in those locations? In another way of stating, do the AQI data adequately protect in accordance with the language? How should employers evaluate their workplace and adequately prepare for control implementation with respect to the location of the actual AQI measurements and the possible changes of the AQI over relatively short periods of time? Without additional context, it would be difficult for most employers to apply this information effectively.

The language establishes a type of "action" level at an AQI of 150 (described as "unhealthy") and a type of "permissible exposure limit" at an AQI above 500 ("hazardous"). Normally, at a

Cal/OSHA action level, there are increased monitoring and other requirements. In this language, at an AQI of 150, voluntary use of respirators is encouraged and engineering controls and/or administrative procedures are required. Respirators are *required* by the proposed language at an AQI above 500. Quick, responsive implementation of engineering controls, and some administrative controls, to provide adequate protection under the language is not possible for most employers. How should they proactively and effectively ensure protection based on the language?

PM2.5 vs. Occupational Definition of Respirable Particulate

An additional issue to add for discussion is that the current Cal/OSHA PEL for respirable particulate (<10 microns effective diameter) is 5 mg/m^3 vs. the >0.5 mg/m^3 (500.4 ug/m^3) as the basis for AQI calculation. How can we say that an airborne work place exposure to PM2.5 respirable particulate of >0.5 mg/m^3 is unhealthy during a wildfire, but for the rest of the time and in other work environments, the exposure must exceed 5 mg/m^3 to be unhealthy?

Employer Option to Measure the AQI

An employer option to show compliance is to measure the AQI in the workplace to show that exposures do not exceed an AQI of 150. Currently, this is not a quick evaluation method and requires this to be performed by a knowledgeable, experienced person (generally an industrial hygienist). The use of a direct-reading instrument may offer an alternative method that does not require laboratory analysis or the same level of expertise. However, the user must be proficient in the use of the instrument and the instrument requires calibration to afford adequate reliance on the measurements obtained. Also, interpretation of the results can be difficult for a variety of technical reasons not elaborated here. A further complication is that this instrumentation is not plentiful at this time, and may be difficult to obtain on short notice such as during a wildfire emergency.

Use of Respiratory Protection

<u>Exposure to PM 2.5 above an AQI of 150 – voluntary use of respirators.</u>

Firstly, the voluntary use of respiratory protection for potentially **toxic** dusts may not comply with Section 5144. The voluntary use of respirators for particulates is interpreted as pertaining to *non-toxic* dusts. This needs to be reconciled. There are reasons for this distinction, pertaining to technical issues, as well as potential health affects, that are outlined in the preamble for the respiratory protection regulation. These should be carefully considered prior to implementing any use of respirators based on this language.

<u>Exposure to PM 2.5 above an AQI of 500 – required use of respirators.</u>

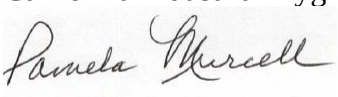
The feasibility of implementing an adequately effective respiratory protection program in a quick, responsive manner to afford protection under this language must be considered. Given the requirements of the language, it may be necessary for employers to be pre-prepared for the potential for exposure above the AQI of 500.

The misuse of respirators is potentially a high-risk outcome of this language. There has been a long-standing determination that the misuse of respirators can be more hazardous than no use. In addition, the requirement for use of respirators based on this language may trigger an employer to have a respiratory protection program in compliance with Section 5144 when they have no need for a respiratory protection program otherwise. This could be just one of many unintended consequences of this language.

The CIHC, founded in 1990, represents the industrial hygiene and the occupational and environmental health professions in California. CIHC is affiliated with the national American Industrial Hygiene Association (AIHA), an 8,000-member organization. The CIHC is formally comprised of industrial hygienists and occupational and environmental health and safety professionals who are members of the five California AIHA local sections represented by the CIHC Board of Directors. The CIHC's mission is to provide sound scientific and technological input to the regulatory and legislative processes, and establish a legislative presence in the state Capitol through professional representation.

CIHC appreciates the ability to be involved in the development of this regulation. We look forward to participating in the advisory committee and acting as a technical resource for the process. Please contact me on behalf of CIHC at (916) 712-4547 or kwa-sacramento@att.net.

Very truly yours,
California Industrial Hygiene Council



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