February 22, 2019

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Sent via E-mail: rs@dir.ca.gov

Re: Heat Illness Prevention in Indoor Places of Employment, January 29, 2019 Discussion Draft

Dear Chief Sum,

The undersigned organizations respectfully submit these comments on the Division's January 29, 2019 discussion draft for the standard on Heat Illness Prevention in Indoor Places of Employment. We appreciate the opportunity to comment on this draft, and all of the work contributed by Division staff and stakeholders to develop a strong and effective standard. After a rigorous advisory committee process, the latest discussion draft represents the basis for an effective standard moving forward.

This discussion draft includes several revisions that significantly improve the standard and its effectiveness in protecting indoor workers from heat illness. Specifically:

1. Lowering subsection (e) application threshold from 90°F to 87°F

The control measures in subsection (e) are the most important requirements in the proposed standard for preventing heat illness, and to be effective they should be implemented at the point when workers become at risk of overheating. Scientific guidelines and real-world enforcement data indicate that heat illness risk arises at temperatures and heat indices much lower than the 90°F proposed for the subsection (e) threshold in prior discussion drafts. Lowering the threshold to 87°F is a significant step in the right direction and will make the standard more effective in preventing heat illness.

The lower threshold of 87°F for control measures is closer to evidence-based guidelines for reducing the risk of heat illness. The ACGIH TLVs for heat stress suggest implementing hazard assessment and potentially job-specific controls for employees performing moderate work at 83.4°F WBGT.[1] NIOSH's recommended heat stress exposure limits (RELs) for acclimatized workers are also in the low to mid 80s in °F WBGT for moderate work.[2] U.S. Military guidelines implement a 40/20 minute work/rest schedule for moderate work when the WBGT falls between 82 and 84.9°F.[3] Empirical data on heat illness incidents further demonstrate the need for control measure interventions below 90°F. For instance, a recent OSHA study of recorded occupational heat incidents recommended a heat index of 85°F as a screening threshold for hazardous workplace heat conditions, based in part on the fact that a substantial portion of incidents occurred in heat indices below 90°F.[4]

Scientific guidelines, occupational heat illness data, and worker experiences shared throughout this advisory committee process suggest that a heat index of 85°F would be a more appropriate threshold (and a more logical number) than 87°F. Nonetheless, the 87°F threshold for subsection (e) control measures is an important revision that improves the standard and aligns it more closely with evidence-based guidelines such as the ACGIH TLVs, which the standard's authorizing legislation requires the Division to take into consideration.

2. Maximum temperature in cool-down areas

The revision in this draft to limit the maximum allowable temperature in cool-down areas, as the Division had previously proposed in its discussion draft from May 25, 2017, is a significant improvement. Cool-down areas are critical to enabling workers to slow and prevent overheating, but to be effective these areas must be maintained in conditions that actually provide a cooling effect compared to the work area. The specific temperature ceiling provides an additional and more straightforward measure of compliance alongside the requirement that environmental risk factors, unsafe conditions, or discouragement from using the space do not defeat its purpose.

The additional requirement of maintaining the cool-down area temperature at less than 82°F, alongside the previously included requirement for providing drinking water in the cool-down area, should improve compliance and increase worker safety. The cool-down area requirements would be more effective in preventing heat illness, however, if the definition also required the

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[1] American Conference of Governmental Industrial Hygienists, *Heat Stress and Strain TLVs*, 2009, p. 3.
[2] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, *NIOSH criteria for a recommended standard: occupational exposure to heat and hot environments*, 2016, p. 95.
[3] *E.g.*, Army Public Health Center, "Heat-Related Illness Prevention," available at: https://phc.amedd.army.mil/topics/discond/hipss/Pages/Heat-Related-Illness-Prevention.aspx (accessed 2/21/19).
[4] Tustin, Aaron W., et. al., "Evaluation of Occupational Exposure Limits for Heat Stress in Outdoor Workers - United States, 2011-2016, *Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report*, Vol. 67, No. 26, July 6, 2018, p. 735.

area to be located indoors if feasible, since the temperature in indoor spaces is generally easier to control.

3. Clearer and more effective guidelines for control measures in subsection (e)

Several revisions to subsection (e) in this draft help to provide clearer and more effective directions for implementing the critical control measures in this subsection. In (e)(2)(A), the requirement to reduce the temperature and heat index to below the 87°F threshold if feasible, rather than just to the lowest level possible, provides a clearer measurable initial target for compliance. Making this the first goal in the control measure framework also establishes a proper hierarchy of controls by prioritizing the elimination or minimization of the hazard itself, per well-established OSH rulemaking practices and standards. Specifying that engineering controls shall be used not just to reduce but also to maintain the temperature and heat index below 87°F also clarifies the employer's ongoing responsibility for conditions beyond an initial intervention.

The requirements in (e)(2)(A) subparts 1 and 2 also provide helpful directions, making clear the responsibility to both reduce the temperature or heat index to the lowest feasible level and to still use engineering controls to otherwise minimize the risk of heat illness when engineering controls are not sufficient to reduce the temperature and heat index to below 87°F. This requirement helps to ensure that effective engineering controls are still implemented, even when they alone are not sufficient to maintain conditions below the subsection (e) threshold. Along with the lower 87°F threshold, the above revisions effectively strengthen the standard's most important control measures, while also providing greater clarity to ease compliance.

4. Including environmental risk factor assessment in the Heat Illness Prevention Plan

This draft improves subsection (i) on the Heat Illness Prevention Plan by reinstating from previous drafts the requirement that the Plan include procedures to identify and evaluate environmental risk factors for heat illness, rather than just procedures to measure and record the temperature or heat index, as proposed in the prior discussion draft. Environmental factors such as work activity level, clothing adjustment factors, and radiant heat exposure are fundamental aspects of heat illness risk, and employers cannot adequately assess risk or develop an effective prevention plan without taking these factors into account. As discussed more below, the standard should also ensure that employers maintain adequate records of these environmental risk factors.

AREAS OF CONCERN

Several sections of this discussion draft include revisions or maintain provisions from prior drafts that do not provide sufficient protection or clarity and threaten to undermine the standard's effectiveness in preventing heat illness. Specifically:

1. Inadequate recordkeeping requirements

This draft's revisions to recordkeeping requirements in subsection (e) overall weaken this aspect of the standard, and shortcomings from prior drafts remain that undermine compliance, workplace transparency, and enforcement related to control measures in the standard. Most importantly, there is no requirement for employers to establish or maintain records of evaluations of environmental risk factors for heat illness. Subsection (e) requires employers to perform these evaluations, and doing so is necessary to implement an effective heat illness prevention plan, but the standard only requires records of temperature and heat index measurements to be maintained. Without a recordkeeping requirement for the environmental risk factor evaluation, some employers will be less likely to perform the evaluation, workers will lack this critical information about their exposure to risk factors, and the Division will miss important information to help establish whether an employer adequately assessed environmental risk factors and implemented appropriate control measures.

Additionally, the recordkeeping requirements for temperature and heat index records specified in this draft are less effective than the requirements incorporated in previous drafts by reference to Section 3204. The addition in this draft to maintain records of measurements for 12 months or until the next measurements are taken is better than no such requirement at all, but Section 3204 provides more rigorous requirements for recordkeeping and records access, including keeping measurement records for longer, making copies of records available free of charge, and providing requested records within 15 days. Incorporating Section 3204's requirements by reference was thus more effective in ensuring access and transparency in the workplace. Recordkeeping language for HVAC systems in Section 5142 provides an additional possible model in parts, including the requirement to maintain records for five years and providing for employee rights to obtain copies of the records within a specified timeframe.

The standard would be stronger if it incorporated these sections or had similar requirements for longer record maintenance and a more specific set of rights for employee access to records, to ensure that employers could not impede access by delaying or charging for copies, a tactic we have unfortunately seen some employers use to discourage worker action on health and safety.

2. 82°F is too high for the application threshold

The continuation in this draft of the prior discussion draft's increased application threshold of 82°F increases exposure risk for many workers and will cause unnecessary confusion.

The Division's discussion draft from May 16, 2018 used an application threshold of 80°F for workers at higher risk – those wearing clothing that restricts heat removal, working in high radiant heat work areas, or employed in a designated list of industries where heavy work is common. The 80°F application threshold was already too high to adequately protect some of

these workers, and the risk will only increase with the 82°F threshold. The ACGIH recommends implementing general controls at 75.2°F WBGT for employees performing heavy work (and that's assuming only a 50-75% allocation of work in a work/rest cycle), and at 71.6°F WBGT for employees performing moderate work while wearing double layer woven clothing.[5] An 82°F application threshold is thus inadequate to protect workers in these more hazardous conditions. 82°F may be a more convenient threshold for office workspaces where employees perform light administrative work, but the standard needs to adequately protect all workers, including especially workers in dangerous yet relatively common conditions such as performing heavy work or wearing clothing that restrict heat removal.

The 82°F threshold may also confuse employers and employees, because the threshold for the outdoor heat standard in Section 3395 for shade requirements is 80°F. It would provide greater clarity to keep the application threshold for general controls the same for the indoor and outdoor heat standards, even if they differ in some of their more specific requirements. 80°F as the default application threshold for all industries would better follow scientific guidelines for when to apply general controls and would simplify the standard.

3. The definition of "clothing that restricts heat removal" is too narrow

The definition of "clothing that restricts heat removal" is overly restrictive and as written will likely exclude clothing that poses significant heat illness risks. Any heavyweight clothing can greatly restrict heat removal, even if it is not waterproof, designed to protect from environmental hazards, or designed to protect the wearer or work processes from contamination. The definition should be broad enough to include regular heavy coveralls, multiple layers of clothing even if not full-body, and heavy or fluid resistant and impermeable aprons and gowns, for example.

Critically, the definition should also include **respirators**, even if worn without other clothing that restricts heat removal, since respirators and other face coverings that create breathing resistance can significantly increase the wearer's risk of overheating.

4. The definition of "union representative" restricts the rights of non-unionized employees and is inconsistent with other standards

We also have concerns about the addition of a definition for "union representative" in subsection (b) and limiting the right of participation in developing a prevention plan to a "union representative" in subsection (e)(1)(D). In previous comments we have objected to the use of this term because we advocated for the right of non-unionized employees to have the ability to designate a representative to assist with their involvement in heat illness prevention. Even setting aside that objection, this language is still too restrictive, is unnecessary, and risks conflict with

[5] ACGIH, *supra* note 1, p. 2-3.

other rights of employees to representation in health and safety matters. While we understand that the Division may interpret "representative authorized by employees" for purposes of walkaround and other collective representation of employees to generally be limited to collective bargaining agents, the fact is that neither the California nor federal OSH Acts' texts limit this type of representation to unions, and so this interpretation is subject to change. For example, in 2013, federal OSHA issued guidance interpreting Section 8 of the OSH Act[6] to allow for employees without a collective bargaining agreement to designate a union (regardless of bargaining agent status), community organization or third party expert to represent them and exercise "walkaround rights" during OSHA inspections.[7] While this interpretation has since been altered, it illustrates how changes in the law or its interpretation – in particular changes in the interpretation of federal law that California may be required to adopt – dictate the need for consistency in how authorized representatives of employees are identified.[8]

As we have noted in prior comments, "designated representative," "authorized representative," or "employee representative" are understood terms used in other state and federal OSH standards and in the Labor Code, and this standard should not conflict with these existing code sections.[9] Good regulatory drafting practices demand consistency where there is no need to use new or different terminology that could create conflict, and we urge deletion of the reference to "union representative" in favor of established terminology.

5. Training requirements should ensure that common-sense best practices are followed

As workers and advocates have stated in multiple previous comments, it is critical that any trainings under this standard be in a language workers understand and also in-person and interactive. These training principles are not new and have been incorporated into other recent standards such as in section 3342(f), Violence Prevention in Health Care. For training to be effective, there should also be requirements for refresher courses at least annually, and whenever there is a change in workplace conditions or procedures that affect the risk of heat illness.

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[6] The OSH Act provides that "a representative authorized by [the employer's] employees" may participate in OSHA inspections. 29 U.S.C. § 657(e). California's Occupational Safety and Health Act contains substantially identical language. Cal. Lab. Code § 6314(d).

[7] OSHA Interpretation Letter from R. Fairfax to S. Sallman, 2/13/2013. Archived at https://www.osha.gov/laws-regs/standardinterpretations/2013-02-21 (accessed 2/21/2019).

[8] In addition, a regulation with language that on its face is explicitly favorable to unions over other forms of employee representation could have unforeseen preemption implications. *Cf. Livadas v. Bradshaw*, 512 U.S. 107 (1994) (holding that a California Labor Commissioner policy of not enforcing statutory wage claim penalties if an employee is covered by a collective bargaining agreement is preempted).

[9] E.g., Title 8 §§ 3204 and 5194 use "designated representative," § 5189.1 uses "employee representative," Labor Code § 6314 uses "representative authorized by [the employer's] employees," and federal OSHA regulations 29 U.S.C. § 1910.1020 uses "designated representative."

Thank you for considering our comments. We appreciate the Division's work on this standard and the opportunity to comment on the latest discussion draft.

Sincerely,

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