

June 7, 2018

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Sent via E-mail: [rs@dir.ca.gov](mailto:rs@dir.ca.gov)

**Re: Heat Illness Prevention in Indoor Places of Employment May 16, 2018 Discussion Draft**

Dear Chief Sum,

The undersigned organizations respectfully submit these comments on the Division's May 16, 2018 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. We would also refer the Division to comments submitted by the undersigned and other workers' rights organizations in response to the February 16, 2018 draft revision, as many of our concerns from that and prior drafts remain.

We are particularly concerned that this latest discussion draft continues to set heat thresholds for the standard's application and its control measures too high to adequately protect many workers, especially those engaged in heavier work. These concerns have only increased with this draft, in light of it raising the default application temperature from 80 to 85 degrees Fahrenheit. We are also concerned that exceptions to the definition of "indoor" create significant loopholes that may leave many workers in indoor settings protected only under the section 3395 outdoor heat standard, which is not sufficient to protect workers in the particular conditions of indoor workplaces. While we recognize several improvements throughout this draft, stronger control measures are needed if this standard is to be effective in preventing heat illness in the workplace.

Our full comments by subsection follow.

## **SCOPE AND APPLICATION**

### **Application temperatures**

We strongly oppose the revisions in the latest discussion draft to raise the default application temperature to 85 degrees Fahrenheit, while keeping the 80-degree application temperature only for an exclusive list of industries. This is a significant step backward from the previous draft which used 80 degrees Fahrenheit as the default application threshold, with a narrower category of professional and administrative office settings for the higher 85-degree application threshold.

As many workers' rights organizations discussed in comments responding to the prior discussion drafts, 85 degrees Fahrenheit is an unsafe application temperature for many, if not most, workplaces. This is especially true when that application threshold is based on dry bulb temperature rather than heat index and there are no adjustments for work activity level.

Evidence-based guidelines indicate that an 85-degree Fahrenheit application threshold is too high. ACGIH heat stress guidelines define the action limit for heavy work, above which general workplace controls are recommended, at 75.2 degrees Fahrenheit WBGT. Under an 85-degree dry bulb temperature application threshold, workplaces with 84-degree temperatures and, for example, 50 percent relative humidity would be at a heat index of 85 degrees Fahrenheit but entirely outside the scope of the standard. This means workers would be forced to endure heavy or very heavy work in a heat index of 85 degrees Fahrenheit, potentially for prolonged periods, without the protection of even the most basic general workplace controls from the proposed standard.

The above scenario is not an extreme example, and these conditions present an unacceptable risk for heat illness under multiple scientific guidelines, including those of ACGIH, NIOSH, and the National Weather Service. An 85-degree default application threshold is also less protective than the outdoor heat illness prevention standard in section 3395, which does not include an overall application threshold and requires employers in all industries to provide access to shade when the temperature exceeds 80 degrees Fahrenheit, and even below that temperature upon an employee's request.

We recognize that the Division may be attempting to ameliorate the risks for workers engaged in heavier work by including industries where such work is common in subsection (a)(1) with the 80-degree application temperature. However, this approach leaves too many workers unprotected. The list is likely to inadvertently leave out workplaces where conditions are just as hazardous, without justification for why workers in excluded industries should have weaker protections. The ability to add specific workplaces through an Order to Take Special Action is not enough to address these concerns, since the mere availability of the process does not provide notice or proactive coverage to any workplace. Also, the limitations of the process and the

difficulty of implementation have meant that the Division has historically rarely taken such orders.

The standard would be more consistent, straightforward, and effective in preventing heat illness if it set the default at 80 degrees Fahrenheit and allowed only carefully tailored exceptions for circumstances where heat illness risk is demonstrably low, such as office work in areas with functioning HVAC systems.

Although a default 80-degree application temperature would better protect workers, if that temperature is reserved for a limited list of industries, the following should be added: janitorial and maintenance work in any industry; waste management and recycling; automobile maintenance, modification and cleaning; utility work; and transportation.

Furthermore, if 85 degrees is used as the default application threshold, it should be based on heat index, not dry bulb temperature. The discrepancy between dry bulb and heat index only increases with a threshold of 85 degrees instead of 80, increasing the heat illness risk for workers.

### **Clothing adjustment**

The addition of lower temperature thresholds for workers wearing clothing that restricts heat removal is an important improvement throughout this discussion draft, as clothing factors are significant contributors to heat illness risk. However, in this subsection, the adjustment would be unnecessary if the previous default 80-degree application threshold remained, and that lower default threshold is a better, less complicated approach. As discussed below under definitions, the clothing definition is also too restrictive and should be broadened.

### **Add subsection on employer responsibility**

The application section should include a subsection with language specifying the responsibility of employers to provide all required safeguards, such as: “The employer shall provide all safeguards required by this section, including water, preventive rest breaks, personal protective equipment, training, and medical services, at no cost to the employee, at a reasonable time and place for the employee, and during the employee's working hours.” This provides notice to employers and employees of the existing requirements of the California Labor Code and provides the Division an enforceable section with which to ensure that employees are provided all necessary safeguards. This would be similar to subsections included in other standards, such as in the Aerosol Transmissible Diseases standard in section 5199(a)(4).

## **DEFINITIONS**

### **“Cool-down area”**

The definition for a cool-down area should require that the area be maintained at a heat index of no higher than 80 degrees Fahrenheit, as the Division proposed in its discussion draft from May 25, 2017. The safeguard in the current language excluding locations where “environmental risk factors defeat the purpose of allowing the body to cool” is too vague and subjective a standard. This language provides insufficient guidance to employers and will be difficult for the Division to enforce. Setting a specific heat index ceiling, ideally 80°F, is much more straightforward and will be more effective in protecting workers from heat illness.

The standard should also clarify that “**covered by section 3395 during the work shift**” means during a significant portion of the work shift. For an objective measure, this should be based on a minimum number of ACGIH time-weighted exposure hours, such as four hours spent working outdoors during the shift. The term is otherwise vague and inviting of enforcement challenges where employees might be simply passing through outdoor environments for short periods.

### **“Clothing that restricts heat removal”**

We support the addition in this draft of adjustments for clothing that restricts heat removal, as such clothing can be a significant risk factor for heat illness. However, the current definition 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 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 chemical-resistant aprons, 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 increase breathing resistance can significantly increase the wearer’s risk of overheating.

### **“High radiant heat work area”**

As worker advocates have stated in previous comments, we oppose making the industries in this definition an exclusive list, since listing these industries instead as examples would eliminate the risk of inadvertently leaving out workplaces where workers face the same hazardous exposure to radiant heat. Additionally, we note that the revised industry list in this draft appears to be drafted to encompass all the previously listed industries, but mining appears to be missing from the new list. This is a dangerous industry with significant high radiant heat exposure that should be listed.

### **“Indoor”**

The exceptions in subsection (1) and (2) for spaces with openings to the outdoors create unnecessary loopholes in the standard that will weaken protections for workers. These

exceptions are improved from the prior discussion draft in that they require employees to already be covered by section 3395 during the shift and the indoor temperature to be the same as or less than the outdoor temperature. We recognize this is likely meant to simplify administration for places where workers are going between outdoor and indoor workplaces during a shift, such as from an agriculture field to a packing shed, by having the same requirements apply in both spaces. However, this approach ignores significant differences between indoor and outdoor environments, with potentially hazardous consequences for workers.

Even with openings to the outdoors, a covered structure can restrict breeze and trap humidity from work processes, the ground, and human exertion, in some cases creating an environment with a higher heat index and different hazards than outdoors. Furthermore, different control measures are feasible indoors, most obviously fans and air conditioning. Section 3395 does not require these control measures because they are generally infeasible outdoors, but they are necessary requirements to consider in any indoor work environment, where controls should be required to reduce the heat index to 80°F or as close as is feasible. This is crucial in the Central Valley and desert regions where the daily maximum outdoor temperature exceeds 95 degrees Fahrenheit for weeks or even months.

For spaces where the extra requirements of the proposed indoor standard are truly not possible, such as a barebones greenhouse with no power access, the employer would already have the right to demonstrate that certain subsection (e) control measures such as engineering controls are not feasible. This limit on requirements in indoor workplaces makes the broad exceptions in subsections (1) and (2) largely unnecessary, and achieves a similar goal without weakening protections for so many workers.

However, should the Division keep the exceptions in subsections (1) and (2), we strongly urge two critical revisions. First, as discussed above under the definition for “cool-down area,” the standard should clarify that “covered by section 3395 during the work shift” means during a significant portion of the work shift, such as at least four hours spent outdoors during the shift. Second, the indoor and outdoor conditions comparison should be based on heat index, not temperature, as this is a much better assessment of the environmental risk factors for heat illness.

### **Definition needed for employee representative**

The standard should define employee representative and specifically include an employee-designated representative where workers are not represented by a union. While most workers want to be represented by a union, ongoing employer opposition and other forces have left the majority of workers unrepresented. Those workers should have the right to designate an attorney, nonprofit organization, or fellow employee to advocate with them on identifying heat illness hazards and protecting worker safety. This would be consistent with definitions in other health and safety standards, such as the definition for “designated representative” in Hazard

Communication, Title 8 Section 5194(c), and “employee representative” in Process Safety Management for Petroleum Refineries, Title 8 Section 5189.1(c).

## **ASSESSMENT**

### **Temperature threshold**

In subsection (e)(1), the 90-degree Fahrenheit temperature at which employers are required to assess the environmental risk factors of heat illness is far too high. The assessment process is one of the most important steps in preventing heat illness, as it is needed to inform the employer’s entire prevention plan, from training to specific control measures. As such, assessment should be required at the application threshold for the standard, *before* conditions get so hot that specific subsection (e) control measures become necessary. This could be achieved by setting the assessment threshold at 80°F heat index, or by simply returning to the Division’s format from prior drafts with a separate assessment subsection, triggered by the application threshold along with other general subsections.

The lower assessment temperature thresholds added in this draft for clothing and radiant heat factors are important considerations in theory, but only necessary if the overall application threshold is set at such a high and impractical temperature.

### **Directions for assessment**

We support the additions and the revisions to the directions for the assessment process in subsections (e)(1)(A) through (E), as they provide helpful guidance and clarification. We urge, however, the Division to include a requirement that employers complete an initial assessment, and then one at least annually thereafter, to ensure heat illness risk factors are adequately monitored. Subsection (E) should also be revised to include a broader definition of representative, such as “designated representative” or “employee representative,” as discussed in more detail above under definitions.

## **CONTROL MEASURES**

### **Temperature threshold**

The 90-degree Fahrenheit default threshold temperature and heat index for requiring control measures in subsection (e) is too high to adequately protect many workers from heat illness. As numerous worker advocacy organizations detailed in comments on the previous discussion draft, many workers have reported suffering heat illness symptoms at temperatures and heat indices far lower than 90 degrees Fahrenheit.

Evidence-based guidelines also suggest that specific control measures such as those required in subsection (e) should be implemented at lower temperatures in many circumstances. The ACGIH

TLV for people doing heavy work, even on only a 50-75 percent workload in a work-recovery cycle, is 81.5 degrees Fahrenheit WBGT. Yet, under the current language, in most industries workers could be engaged in heavy or very heavy work for a full-day shift in 89-degree temperatures without their employer being required to implement any of the critical control measures in subsection (e). Add 60 percent relative humidity, and the workers would be enduring a heat index above 95 degrees Fahrenheit without these protections.

A 90-degree Fahrenheit temperature or heat index threshold for the most important protections of engineering controls, administrative controls, and personal protective equipment leaves workers in almost any setting highly vulnerable to heat illness. For workers doing heavy or very heavy work, however, this threshold is downright dangerous. **As such, this high threshold also contradicts SB 1167's mandate for the Division to base this standard on work activity levels, and to take into consideration the ACGIH heat stress and heat strain guidelines.**

To adequately protect workers across industries and work types, the control measures in subsection (e) should be required when the heat index equals or exceeds 80 degrees Fahrenheit, or at the very highest 85 degrees Fahrenheit.

We do, however, strongly support the addition in this draft of lower target temperatures for workplaces where employees are wearing clothing that restricts heat removal or working in high radiant heat work areas. This threshold would be more protective if based on a heat index measurement that accounted for the environmental risk factors of humidity. These 80-degree lower thresholds should remain in place even if the general threshold is lowered to 85 degrees Fahrenheit but would not be needed if the general threshold is reduced to 80 degrees Fahrenheit.

Regardless of the application threshold for control measures, it should be based on a heat index measurement for all industries. Control measure thresholds are not very effective if they do not take relative humidity into account, as humidity is a key factor contributing to heat illness risk. This is especially true at 90 degrees Fahrenheit, where humidity increases the heat index by a greater factor than at lower thresholds such as 80 or 85 degrees Fahrenheit.

### **Preventative cool-down breaks**

Preventative cool-down rest breaks are an essential measure in high temperatures to reduce the risk of heat illness. Proactively mandating employers to require hourly breaks of a specified length during high heat indices ensures that self-consciousness, productivity pressure, or fear of retaliation do not impede anyone from taking this important preventative measure. Only allowing for workers to take cool-down breaks when they feel the need to means that many workers will wait until it's too late, after heat illness symptoms have already developed.

The Division included mandatory hourly rest breaks in its first two discussion drafts and we strongly urge the Division to re-incorporate this critical control measure in its final proposal.

### **Clarifying administrative controls**

Subsection (e)(2)(B) on administrative controls could be improved by following language already used in section 5140: “Administrative control. Any procedure which limits exposure to [the risk of heat illness] by adjustment of the work schedule.” This language would simplify the subsection while still encompassing the controls currently listed.

### **CLOSE OBSERVATION DURING ACCLIMATIZATION**

In subsection (g)(2)(A), the 90-degree Fahrenheit threshold for when close observation is required for newly assigned employees is too high. As discussed above, 90 degrees Fahrenheit is well above where many employees become at risk for heat illness, especially those engaged in heavy or very heavy work. A more appropriate threshold would be 80°F heat index, or at most 85°F heat index.

We strongly support the lower observation threshold temperatures in parts (B) and (C) for workers wearing clothing that restricts heat removal and exposed to high radiant heat. However, those thresholds should also be in heat index, not dry bulb temperature, to adequately account for the environmental risk factors workers must acclimatize to in order to work safely.

### **TRAINING**

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.

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Thank you for considering our comments. We appreciate the Division’s work on this standard and the opportunity to be a part of the process.

Sincerely,

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