

30 June 2017

Amalia Neidhardt, MPH, CSP, CIH
Research and Standards
Division of Occupational Safety and Health
California Department of Industrial Relations
1515 Clay Street
Oakland, CA 94612

RE: Heat Illness Prevention in Indoor Places of Employment Revised Discussion Draft

Dear Ms. Neidhardt:

The Phylmar Regulatory Roundtable (PRR) appreciates the opportunity to provide comments on the revised discussion draft regulation for Heat Illness Prevention in Indoor Places of Employment, made available prior to the 25 May 2017 Advisory Committee meeting.

PRR is a group of 34 companies and utilities with 15 members ranking among the Fortune 500. Combined, PRR members employ more than 673,000 individuals in the U.S. and have annual revenues of more than \$829 billion. PRR member companies are committed to improving workplace safety and health. Toward that end, PRR provides informal benchmarking and networking opportunities to share best practices for protecting employees. In addition, participating entities work together in the rulemaking process to develop recommendations to federal and state occupational safety and health agencies for effective workplace regulatory requirements.

PRR thanks the Division of Occupational Safety and Health (DOSH) for considering the recommendations from our comments on the initial discussion draft and for incorporating some of them into the revised discussion draft. PRR acknowledges all of the hard work of DOSH in this informal rulemaking, including the collaborative process with stakeholders through an advisory committee.

PRR appreciates that DOSH made revisions from the initial discussion draft which seem to reflect some concerns about the complexity of the draft and that the goal that the rule be more consistent with the Outdoor Heat Illness Prevention Standard, 8 CCR Section 3395. In particular, we support the removal of the Short Term Exposure Limits (STELs), the removal of the clothing adjustment factor, and the inclusion of terms and concepts that are consistent with section 3395. PRR writes here to express concerns and provide suggestions for revising the draft proposal that we encourage DOSH consider.

PRR companies respectfully request that the Division take a step back to gain perspective on the relative importance of this hazard and evaluate the implications of its approach. Employers face a variety of hazards in their workplaces, all of which need to be addressed to assure employee

protection. Based on the draft requirements, it appears that the risk of heat illness in indoor work environments is greater than in outdoor work environments. This has not been the experience of PRR members, and we are not aware of widespread serious health effects for workers from indoor heat. Requiring all employers to develop an extensive program to address a hazard not present in most workplaces will distract them from needed workplace safety and health efforts in other areas. Indoor heat is not the only workplace safety or health issue, and scarce resources will be diverted from programs that are addressing more pressing workplace hazards.

California law requires DOSH to develop a regulation to address heat illness prevention in indoor environments. It is not, however, wise public policy or a requirement of the legislation for DOSH to establish a complicated set of requirements applying to all employers. Disagreement exists about which industries should be covered, how to implement the legislation, and there is no understanding of why the proposed requirements are more onerous than those for outdoor heat, which is recognized as being far more dangerous.

Recommendation: We recommend that DOSH review the data and identify industries or types of indoor workplaces at risk for heat illness. During the development of the rule, we recommend outreach to those industries advising specific actions to mitigate the risk. Then, we recommend that DOSH craft a rule that applies to those workplaces at risk for indoor heat illness and begin a Special Emphasis Program to inspect those industries to understand whether the requirements are improving workplace conditions. Only then should DOSH, if determined necessary, expand the scope of the regulation to include other industries.

We believe that employers taking heat measurements in all assorted work areas, particularly in climate-controlled buildings, will lead to zero improvement in workplace safety and health. There will be those employers who do not believe that heat illness in indoor work environments is a real risk, and they will do nothing, rather than try to understand what is required.

It is critically important that employers take worker safety and health seriously, and PRR members certainly do. With respect, we believe that the result of this approach will trivialize the actual risk of heat illness in indoor work environments. We are concerned that Cal/OSHA will lose credibility with the average employer by issuing a rule with these requirements for heat illness prevention in indoor work environments. Regulations must be, at the very least, logical. Requiring employers to establish and implement an Injury and Illness Prevention Program to identify and correct hazards, and train employees to protect themselves is logical. Requirements in the proposed draft are not logical, particularly since they are more stringent than requirements for outdoor heat illness prevention.

If DOSH decides to continue its current path, PRR recommends that simplification of the requirements is needed. We believe that further aligning the draft with the outdoor heat illness regulation would make compliance with both standards less complex and would place the risk of indoor heat illness more commensurate with the risk of outdoor heat illness.

We foresee that the impacts of this standard as drafted, including the compliance costs, will be significant and encourage DOSH to begin developing information on the cost of implementing the requirements as soon as language has been completed for the rulemaking package.

PRR urges DOSH to continue revising the draft regulation to reduce the complexity of the requirements and provide more clarity as to what is necessary for compliance. A simpler approach is likely to result in a higher level of employee protection than a complex one that employers do not understand. Included in these comments are specific recommendations with these goals in mind. PRR believes that doing so will improve employers' ability to understand, implement, and comply with indoor heat illness prevention requirements, while at the same time decrease some of the

significant impacts and burdens that would likely result from the revised discussion draft with no discernible improvement in worker health or safety.

Comments

(a) Scope

1. **Exception for low risk workplace assessments.** PRR supports the simplification of the revised scope section and in particular the elimination of the work level activity differentiation. This will make it easier for employers to determine whether an indoor workplace is within the scope of the section. PRR supports the use of an 85 degrees Fahrenheit threshold, but requests that DOSH consider adding an exception, for work places or work areas where a risk assessment undertaken by the employer shows a low risk of heat illness, the employer may document and address the low risk of heat illness within their Injury and Illness Prevention Program (IIPP) in lieu of complying with this section. There will be workplaces (particularly temperature controlled offices) where the 85 degree Fahrenheit threshold will only be reached infrequently and/or of short duration, or where employee exposures at that level or above are infrequent and/or of short duration. In these situations, employers should not have to implement all of the requirements of this section, but they can incorporate procedures and protections as needed into their IIPP to sufficiently address the hazard.
2. **Exception for confined spaces.** As discussed in our previous comments, PRR believes DOSH should consider an exception for work areas that are covered by other comprehensive Cal/OSHA standards such as Confined Space, Sections 5156-5158, which requires employers to plan for atmospheric hazards including heat exposures.
3. **Exception for temperature and environment-controlled office spaces.** We recommend that employers with these spaces develop a contingency plan in the event of a loss of air conditioning that would result in a temperature exceeding 90 degrees Fahrenheit, but otherwise would not be subject to the requirements. Employer resources should be expended to address realistic hazards.
4. **Exception for Certain Structures.** As stated in PRR's previous comments, many companies have constructed structures to provide shade for work operations to protect employees from outdoor heat. They are subject to Section 3395 and should not be covered by this rule.

(b) Definitions

1. **PRR supports revisions made that make the draft proposal more consistent with the outdoor standard, section 3395.** Consistency between these definitions that cover the same health risk of heat illness will make it easier for employers to follow and comply with both the indoor and outdoor standard. Specifically, PRR supports the inclusion of the terms heat illness, heat wave, environmental risk factors for heat illness, personal risk factors for heat illness, as well as the revised and much clearer definition of acclimatization.
2. **High radiant heat work areas.** PRR supports the revised definition for this term, as it provides needed clarity as to what is and what may be considered such an area. PRR also appreciates removal of electrical utility rooms as an example of a high radiant heat work area, as PRR member experience has been that employees only work in these locations for short durations.

3. **Clothing-adjustment factors.** PRR supports the removal of the clothing-adjustment factors definition. Several PRR members reported that the ACGIH clothing-adjustment factors are unworkable in practice and not reflective of real-world workplace situations. PRR suggests that the clothing worn by employees should be part of an employer’s performance-based risk assessment for indoor heat illness.
4. **Cool-down area.** PRR recommends that DOSH delete the requirement, included in this definition, that drinking cups be provided in cool-down areas. Most places of indoor employment maintain drinking fountains. Plumbed water for direct consumption should not require cups. Seating and drinking water must be provided, but not necessarily cups.
5. **Indoor.** Although this definition includes “space inside a vehicle,” there is no definition of “vehicle.” Off-road vehicles such as cranes, forklifts and earthmoving equipment equipped with air conditioning will quickly cool once it is on. By including vehicles, in some cases employers will be subject to indoor regulations for the vehicles and everyone else at the construction site will be subject to the outdoor regulation. We recommend deleting “space inside a vehicle” from the definition of indoor, or clarify the specific intention.
6. **Wet bulb globe temperature.** PRR supports the removal of the Wet Bulb Globe Temperature (WBGT) definition and calculation. PRR believes that WBGT is a challenging standard and difficult to follow, particularly for employers without health and safety staff, and that its use will result in relatively little additional health benefit.
7. **Dry bulb temperature and Globe temperature accuracy and performance criteria.** PRR believes that equipment used to take temperature and heat index measurements must meet certain performance criteria, similar to the sound level meters required under the OSHA Noise Standard. This is in addition to proper calibration, storage, and care requirements. A cheap measuring instrument may have a variance of + or - 5 degrees which could have significant negative implications for a heat illness program that at its core depends on accurate measurements to assess risks. PRR recommends that DOSH provide more information to employers on performance criteria and consider providing a validated sampling and analytical method so employers know what constitutes acceptable levels of accuracy, precision, and repeatability for dry bulb and globe thermometer measurements.
8. **Light, moderate, heavy, and very heavy work activity levels:** PRR supports the removal of the work activity level concepts as the inclusion of these terms and subsequent requirements would have created significant complexity. PRR members believe that work activity levels are useful and should be taken into account as part of the employer’s risk assessment for indoor heat illness.
9. **Heat index and Levels I, II, and III.** PRR has some concerns about the Level I, II, and III categories included with the definition for heat index. PRR urges DOSH to simplify the regulatory scheme of differentiating between levels of high heat versus more moderate heat and corresponding procedures and requirements. The outdoor heat illness regulation, section 3395(e), high-heat procedures, contains an additional heightened set of procedures to follow when the temperature equals or exceeds 95 degrees Fahrenheit. Basic requirements such as shade are triggered at 80 degrees Fahrenheit (or upon employee request). Similarly, **PRR recommends that DOSH create a two level approach for the indoor heat illness prevention standard.** The first level provides procedures and protections for moderate heat levels at or above a heat index of 85 degrees Fahrenheit, and the second level contains additional heightened procedures and protections for high heat levels triggered at or above a

heat index of 95 degrees Fahrenheit. Simplifying the determination of whether a work area is a moderate or high heat area also allows for simplifying the regime of controls required.

10. **“Close Monitoring” and “Observation” of Employees not Acclimatized.** PRR recognizes that these terms have been used in Section 3395 for years and are understood by employers who have been subject to the Outdoor Heat Illness Prevention Standard. However, employers who have never been subject to this standard because they have no outdoor environments do not understand the difference between “monitoring” an employee exhibiting signs or symptoms of heat illness and “closely observ[ing]” an employee newly assigned. These appear under the draft subsection (f)(6) under First Aid and Emergency Response and (g) under the Acclimatization section. PRR recommends that DOSH define the difference between these terms, or, if they are the same thing, use the same word. Again, many more employers will be covered by the indoor heat illness prevention rule, and it is essential that they understand the requirements.

(c) Heat Illness Prevention Plan

PRR again recommends that following the opening paragraph, the subsections beneath it should be revised using performance language, as some of the subsections may not apply to all industries and workplaces.

(d) Assessment of Heat Illness Risk

1. **Performance based approach.** PRR supports DOSH for revising this section to use the language of risk assessment to require employers to identify and evaluate heat illness risks. The purpose of an assessment inside a facility is to identify areas where heat illness risk is high, such as near some radiant heat sources, and known low risk industries should be exempt. We recommend that DOSH consider adding more of a performance based approach to this risk assessment in addition to the consideration of heat index measurements. An approach that allows employers to also consider other factors such as work activity levels, controls, exposure frequency and duration, Personal Protective Equipment (PPE), clothing, or scheduling.
2. **IIPP option for low risk workplace assessment.** Once assessed, if there is a risk of heat illness, the employer should then be required to address it by following the requirements of the section. However, if a risk assessment shows a low risk of heat illness, we believe employers should not have to follow all of the requirements of this section. PRR is concerned that there will be a significant number of indoor places of employment that are within the scope of the section, but that infrequently experience a temperature of 85 degrees Fahrenheit or above, or where employee exposures to those conditions are rare. If the risk of heat illness is found to be low after conducting a risk assessment, PRR believes an employer should not have to comply with the requirements of the standard, and should be able to document and address the low risk of heat illness within their IIPP in lieu of complying with this section.
3. **Subsection (d)(1).** PRR is concerned that heat index measurements must be taken in each work area of a facility regardless of similarities. Subsection (d)(1) does not state whether this is the case but requires that the heat index must be determined “in all locations where heat exposure is at or near the highest levels.” Subsection (d)(2) requires that heat index measurements be posted “in each work area covered by this section,” which seems to imply that measurements must be taken in each work area. PRR is concerned that requiring heat index measurements be taken in every work area covered by this section would be an onerous requirement for some indoor places of employment, particularly if multiple work

areas share similar heat index measurements. For example, one PRR company has a work facility that is approximately 250,000 square feet and contains a multitude of work areas, and requiring measurements for each work area would be time consuming and often redundant without additional benefit. PRR suggests DOSH clarify that employers may use representative heat index measurements for multiple work areas that share similar conditions including heat exposure levels and risks, and that they should be allowed for conducting reassessments as well.

4. **Subsection (d)(2).** PRR is concerned that requiring heat index measurements be posted “in each work area covered by this section” would be an onerous requirement for some indoor places of employment, particularly if multiple work areas share similar heat index measurements. For example, one PRR company has a work facility that is approximately 250,000 square feet and contains a multitude of work areas, and requiring a separate posting for each work area would be time consuming and often redundant without much additional benefit. PRR believes that posting heat index measurements where other Occupational Safety and Health (OSH) postings are located, such as in break rooms near work areas, is sufficient. PRR suggests changing the language to require postings of temperatures of high risk areas (e.g., high radian heat sources) “in areas where OSH information is typically posted.” Keeping up with postings in various work areas requires commitment of staff time and resources not commensurate with the risk.

Also, the rule should clarify that postings are not required when there are periods with no risk of heat illness such as during the winter. This seems to be unnecessary and will not improve worker safety but will require resources to implement.

5. **Subsection (d)(3).** PRR believes that subsections (d)(3)(A)-(C) provide sufficient mechanisms for triggering a reassessment, and that an annual assessment under subsection (d)(3)(D) is not needed. If the circumstances that are covered under subsections (d)(3)(A)-(C) have not changed in a way necessitating a reassessment, then we believe that there is no need to conduct an annual reassessment. To do so would create unnecessary additional compliance burden for employers, again, without a benefit. PRR recommends DOSH delete the annual reassessment requirement under subsection (d)(3)(D). Alternatively, PRR suggests DOSH revise subsection (d)(3)(D) to require that employers, at least annually, make a determination as to whether a reassessment is warranted under subsections (d)(3)(A)-(C). Another option would be to require a reassessment to any area where a change in conditions significantly increases the heat illness risk in that area.
6. **Accurate heat index assessment.** PRR members are concerned that an accurate assessment of an area’s heat index would require taking several measurements over a period of more than one day. Given the importance of accurate measurements and assessments to implementing effective safety measures, we recommend that DOSH provide more guidance on how to properly assess the heat index of a work area.

(f) First Aid and Emergency Response

1. PRR appreciates that DOSH relocated language concerning effective employee observation and communication procedures from the Control Measures section to the First Aid and Emergency Response section, as we believe they are more appropriately placed here.
2. **Subsection (f)(2).** PRR recommends deleting the words “and monitoring,” so that the text reads “Ensure effective observation of employees for alertness...” This would simplify and make the subsection more internally consistent with subsection (f)(2)(d) which requires “Other effective means of observation,” but does not include the term monitoring.

3. **Subsection (f)(3).** Many PRR members have emergency procedures in place where an on-site security department is used to contact emergency responders in order to best facilitate the coordinated response, including accurately directing emergency responders to the site of the incident. Under this type of emergency response plan, employees, whether designated or not, are instructed to first contact security when there is a need for emergency services. PRR members are concerned that this type of procedure would not be in compliance with (f)(3) as drafted. We recommend that this provision apply only to high risk industries. PRR suggests revising (f)(3) to state:

“Designate one or more employees ... to call for emergency medical services or follow employer’s procedures for contacting emergency medical services such as first contacting on-site security personnel, and allow other employees to call ... or follow employer’s procedures for contacting emergency medical services such as first contacting on-site security personnel when no designated employee is available.”

4. **Subsections (f)(4) & (5).** PRR requests that DOSH provide some examples of effective first aid measures to treat heat illness. This would assist employers and provide clarity on the types of first aid treatments that should be provided to employees experiencing signs or symptoms of heat illness. Simply stating “first aid measures” is not helpful to employers unaware of what these would be.

(g) Acclimatization

PRR supports the revised draft’s use of language that is similar to Section 3395(g), Acclimatization. Under subsection (g)(2), PRR believes it is clearer to have coverage of employees that have been newly assigned to high heat work areas that meet level II heat index levels or above. PRR is concerned that the language “new location covered by this section” is overly broad and vague: broad because it captures all work areas that simply trigger the scope of a dry bulb temperature of 85 degrees Fahrenheit without considering the results of the risk assessment; and vague because it does not include any temperature threshold for the new area.

Although the revised definition of high radiant heat work areas enumerates the specific work areas that qualify, PRR believes it is more effective and simpler to tie close observation after an employee begins new assignment to heat index measurements that reach level II.

(h) Control Measures

1. PRR appreciates the relocation of the heightened observation and communication provisions from Control Measures to First Aid and Emergency Response Procedures. This is a more appropriate placement.
2. **Pre-shift meetings before the commencement of work.** PRR members are concerned that the plain language of the opening paragraph requires a meeting before every shift regardless of the actual heat conditions of that shift. A more reasonable requirement would be to only require pre-shift meetings for **indoor heat illness prevention** if there is an actual risk of heat illness, which could also include a threshold temperature. PRR members also believe it may be unnecessary and repetitive to require a meeting before every shift even if the risk is present. This is especially so given that in hot temperatures, control measures under this section already require employers to encourage employees to drink water and ensure they take cool down rests where they must be observed. This is in addition to the training employees are required to undertake annually. PRR believes that a requirement for a weekly pre-shift meeting when there is an actual risk of heat illness would be more appropriate.

3. **(h)(1)(E) & (h)(2)(C), Personal protective equipment.** PRR recommends that DOSH revise these provisions to qualify that an employer is not obligated to provide PPE if control measures are able to reduce the heat index to below a certain threshold such as below 90 degrees Fahrenheit. The language could be revised to state:

“Personal protective equipment, such as water cooled garments, . . . , shall be made available to employees if other control measures are not sufficient to reduce the heat index to below 90 degrees Fahrenheit.”

(i) Training

There is some question among PRR members whether training should be required of employees that only work in level I conditions and where a risk assessment finds a low risk for heat illness. PRR requests that DOSH consider limiting requiring training to employees that work under level II and III conditions. Again, other workplace risks which employers are actually facing should receive the attention and resources, e.g., for training.

We also recommend that (i)(4) be revised to state: “The concept, importance, and the employer’s methods of acclimatization.” This provides employees with concrete information on the methods used by their employer.

Further, we recommend that training be aligned with Outdoor Heat Illness Prevention training requirements. Operating on different training frequencies is an unnecessary logistical and administrative burden likely to lead to confusion.

(j) Recordkeeping

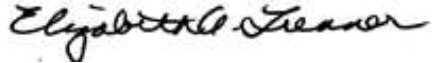
PRR recommends that subsection (j)(4) be removed from the revised draft. As discussed above, there are concerns about the accuracy and performance criteria of instruments that are used to take temperature and humidity levels. Adding subsection (j)(4) without also adding guidance and procedures for employees who wish to take such measurements would likely be problematic. Draft section (c), already provides for the active involvement of employees and their representatives in developing and implementing a heat illness prevention plan, which includes developing effective procedures to assess heat illness risk including measuring the heat index. This employee involvement removes any need for subsection (j)(4).

Conclusion

PRR recommends that DOSH keep in mind the wide variability in employer operations that will be included under the scope of the proposal as currently drafted and continue modifying the draft proposal to reduce complexities and more closely reflect the degree of risk to employees from exposure to heat in indoor work environments. We also suggest that DOSH continue to focus on using performance-oriented language. PRR believes that simplifying the regulation will result in greater employer understanding of the requirements and greater likelihood of compliance, with the benefit of increased worker protection.

Thank you for the opportunity to provide these comments on this important proposal. PRR would be pleased to discuss any of these comments further with DOSH staff and look forward to continued involvement in the process.

Sincerely,

A handwritten signature in black ink that reads "Elizabeth Treanor". The signature is written in a cursive style.

Elizabeth Treanor
Director
Phylmar Regulatory Roundtable-OSH Forum

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