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FINAL STATEMENT OF REASONS

CALIFORNIA CODE OF REGULATIONS

TITLE 8: New Section 3396 of the General Industry Safety Orders

Heat Illness Prevention in Indoor Places of Employment

UPDATED INFORMATION

There are no modifications to the information contained in the Initial Statement of Reasons except for the following substantial, non-substantial or sufficiently related modifications that are the result of public comments and evaluation by the Occupational Safety and Health Standards Board (Board) and the Division of Occupational Safety and Health (Division or Cal/OSHA) staff.

The 45-Day public comment period began March 31, 2023, and ended May 18, 2023. The Board held a public hearing on May 18, 2023, in San Diego, California. The Board received 35 written comments during the 45-day comment period and 45 oral comments at the public hearing. The Board issued the first 15-Day Notice of Proposed Modifications on August 4, 2023, and received 21 written comments. A second 15-Day Notice of Proposed Modifications was issued on November 9, 2023, and the Board received six written comments. The Board issued the third 15-Day Notice of Proposed Modifications on December 22, 2023, and received six written comments. The purpose of the modifications was to improve the overall clarity, specificity, and consistency, and respond to comments of the proposed regulations in the specific subsections as listed below:

Subsection (a) Scope and Application.

The proposed regulation was modified to include a new exception (C) to subsection (a)(1). This exception was modified and various alternatives were considered throughout the rulemaking process to address the stakeholders' concerns regarding the incidental indoor heat exposures without compromising the intent of the proposed regulation. Exception (C) specifies that employee exposures to temperatures at or above 82 degrees Fahrenheit and below 95 degrees Fahrenheit for less than 15 minutes in any 60-minute period are exempted from the scope of the proposed regulation. This aligns with the high heat threshold of 95 degrees Fahrenheit in section 3395 and follows the same scientific logic as National Institute of Occupational Safety and Health (NIOSH)'s recommended work/rest schedules. This exception does not apply to vehicles without effective and functioning air conditioning, nor shipping or intermodal

containers during loading, unloading or related work. This is necessary to allow more practical implementation of the proposed exception while still protecting employees working in a more hazardous environment.

The proposed regulation was modified to include a new exception (D) to subsection (a)(1). This exception specifies that this section does not apply to emergency operations directly involved in the protection of life or property. This would apply to active firefighting and rescue operations, and public safety operations. This is necessary to prevent delay in response times, and hindrance of emergency operations.

The proposed regulation was modified to add a new Note No. 3 to subsection (a). It states that this section does not exempt state entities and departments from complying with State Administrative Manual section 1805.3, standard operating efficiency procedures. This is necessary to provide clarification that the state entities and departments are obligated to comply with State Administrative Manual section 1805.3.

Subsection (b) Definitions.

The numbering for the exception to proposed subsection (b)(3) was changed for editorial purposes. The definition of "clothing that restricts heat removal" was modified to remove flame or arc-flash resistant properties. This change expands the application of the exception to include all types of clothing rather than that specifically with flame or arc-flash resistant properties. This modification is necessary to clarify that the exceptions are not specifically limited to flame or arc-flash resistant properties.

Additionally, exception (A) was modified to include an air and water vapor permeable material and not simply knit or woven fibers. Furthermore, exception (C) was modified to include clothing worn without a full-body vapor barrier. These modifications are necessary to provide clarification and expand the application of the exception to include additional types of clothing that do not restrict heat removal.

The definition of "cool-down area" in proposed subsection (b)(4) was modified to be shielded from other high radiant heat sources "to the extent feasible." This modification is necessary to recognize feasibility limitations.

The definition of "heat wave" in proposed subsection (b)(10) was modified to clarify that the application of the definition was specific to the proposed regulation only. This modification is necessary so that the definition does not create confusion and conflict with other regulations.

Proposed subsection (b)(11), definition of "high radiant heat area," was modified to reflect the revision to the cross-referenced definition of "temperature." The modification is necessary to harmonize the reference with the new numbering.

The proposed regulation was modified to include a new definition of "high radiant heat source" in subsection (b)(12). "High radiant heat source" means any object, surface, or other source of radiant heat that, if not shielded, would raise the globe temperature of the cool-down area five degrees Fahrenheit or greater than the dry bulb temperature of the cool-down area. This modification is necessary to provide clarity where the term is cross-referenced in the definition of "cool-down area."

Proposed subsections (b)(13) through (b)(21) were renumbered after the new definition of "high radiant heat source" was added at subsection (b)(12).

Subsection (d) Access to Cool-Down Areas.

The proposed regulation was modified to add a clarifying statement in subsection (d)(3) that preventative cool-down rest period has the same meaning as "recovery period" in Labor Code section 226.7(a). This is necessary to be consistent with section 3395.

Subsection (e) Assessment and Control Measures.

Proposed subsections (e)(1)(B) and (e)(1)(B)1. and 2. were modified to clarify where and when temperature and heat index measurements must be taken. This is necessary to clearly inform employers where and when they need to take measurements to assess the temperature or heat index in the workplace.

Proposed subsection (e)(1)(B)3. was modified to allow designated representatives as defined in section 3204 access to records of either the temperature or heat index as required by subsection (e)(1)(A). This is necessary to ensure that appropriate access rights are granted as necessary.

Proposed subsection (e)(1)(C) was modified to allow the use of instruments that utilize the National Weather Service (NWS) heat index equation to measure heat index. This is necessary to allow employers to use instruments that utilize NWS heat index equation or tables to measure the heat index.

Non-substantial changes were made to proposed exceptions in subsection (e)(1) to provide clarity by modifying the title of the exceptions and adding numbering to exceptions.

New exception (B) was added to proposed subsection (e)(1) for vehicles with effective and functioning air conditioning. Effective and functioning air conditioning should provide cool air to the employee inside the vehicle and function as designed by the manufacturer for its intended

use. This is necessary to clarify that work in these vehicles is not subject to the assessment and recordkeeping requirements of subsection (e)(1).

Proposed subsection (e)(2)(C) was modified to be consistent with subsection (e)(2)(B) and clarify that the use of personal heat-protective equipment is required where feasible administrative controls do not minimize the risk of heat illness. This is necessary to clarify that administrative controls do not necessarily reduce the temperature or heat index but rather are used to minimize the risk of heat illness.

Subsection (f) Emergency Response Procedures.

Proposed subsection (f)(2)(C) was modified to add "including contacting emergency medical services." This clarifies the requirement to contact emergency medical services without delay in accordance with an employer's emergency response procedures, when an employee shows symptoms consistent with possible heat illness that may require emergency medical services. This is necessary to ensure that there are no delays in providing emergency medical services thereby minimizing the severity of heat-related illnesses or fatalities.

Subsection (g) Acclimatization.

A non-substantial change was made to the title of proposed subsection (g) to be consistent with existing subsection 3395(g).

Proposed subsections (g)(2)(B) and (C) were rephrased to clarify the requirement of subsection (g)(2). This is necessary to clearly identify areas that would require close observation of newly assigned employees by a supervisor or designee for the first 14 days of employment.

Subsection (h) Training.

Proposed subsection (h)(1)(D) was modified to remove "and of close observation during acclimatization." This is necessary to be consistent with subsection 3395(h)(1)(D).

A new note was added to proposed subsection (h) to clarify that an employer can integrate the training program for the proposed regulation with existing section 3395 training. This modification is necessary to inform employers that they have the flexibility to combine the training for employees covered by existing section 3395 and the proposed regulation.

Subsection (i) Heat Illness Prevention Plan.

Proposed subsection (i)(5) was modified to reflect the modification of the title in subsection (g). This is necessary to remain consistent with the proposed regulation and subsection 3395(i)(4).

Appendix A to Section 3396: National Weather Service Heat Index Chart (2019).

Proposed appendix A was modified to update the temperature range to 80 to 125 degrees Fahrenheit. This is necessary to cover a wider range of temperatures since these temperatures as well as corresponding heat index values are required to be recorded by subsection (e)(1)(A).

Appendix A was further modified to update eight heat index readings in the chart that differed from the NWS Heat Index Chart 2019 used as a document relied upon in this rulemaking. This is necessary to correct discrepancies noted by a commenter and provide accurate values.

SUMMARY AND RESPONSE TO WRITTEN AND ORAL COMMENTS RESULTING FROM THE 45-DAY COMMENT PERIOD

I. Written Comments

1. Matthew Kuzemchak, Area Director, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor, by written comments dated May 8, 2023.

Comment 1.1
Per the advisory opinion request made April 3, 2023, OSHA completed their review of the proposed occupational safety and health standards: Title 8, General Industry Safety Orders, new section 3396, Heat illness Prevention in Indoor Places of Employment. As OSHA does not have an existing standard for the prevention of heat illness, the proposed occupational safety and health standards appear to be more effective than the federal requirements.

Response to Comment 1.1
The Board acknowledges OSHA's assessment that the proposed regulation does appear to be more effective than the federal requirements and thanks OSHA for their comment and for participating in the rulemaking process.

2. Cynthia Zhang, Ph. D. Candidate, 2024, Department of Comparative Studies in Literature and Culture, University of Southern California, by written comments dated April 7, 2023.

Comment 2.1
The commenter is concerned about the impact of extreme heat on California residents, especially essential indoor workers. In Southern California, many industrial worksites place employees at risk of injury from exposure to extreme heat. In 2021 alone, 60 indoor heat-related complaints were filed with the Division of Occupational Safety and Health (Cal/OSHA), but inspectors remain without a standard to enforce. Without clear rules stating the temperature above which heat is hazardous, there can be no enforcement action.

The commenter asks the Board to protect the indoor workers from avoidable heat illness and death by adopting the indoor heat standard today.

Response to Comment 2.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

3. Sarah Bogner, Manager of Health and Safety, on behalf of Contra Costa Water District, by written comments dated April 24, 2023.

Comment 3.1
The commenter is concerned about the requirement for monitoring heat index and temperature for over 100 "out-buildings." These buildings are composed of walls and a roof, house equipment such as pumps and motors, and are ventilated but do not have air conditioning. Although these buildings are not regularly staffed, employees periodically visit them for preventative maintenance and repair work. The commenter states that having to install temperature-monitoring equipment at each facility or providing employees with monitoring equipment and training would place an unreasonable burden by requiring significant investment in addition to being an administrative hurdle with minimal improvements in worker safety. The commenter recommends either removing the subsection (e) requirement to conduct temperature/heat index monitoring or provide an exception for employers that have workers who conduct work both indoors and outdoors during the course of a day and allow them to instead follow the outdoor heat illness standard for those workers.

Response to Comment 3.1
The Board is not persuaded by the commenter's argument and declines to remove the requirement in subsection (e)(1). The Board proposes to add an exception to subsection (a)(1) such that the proposal does not apply where an employee is exposed to temperatures at or above 82 degrees Fahrenheit and below 95 degrees Fahrenheit for less than 15 minutes in any 60-minute period. Please also see response to comment 8.1.

The Board thanks the commenter for their input and participation in the rulemaking process.

4. David Ross, Safety Engineer, California Department of Transportation, by written comments dated May 4, 2023.

Comment 4.1
The commenter recommends language be added to the new standard that would exempt indoor "conditioned" office space from the proposed regulation. Specifically, at this time, the California State Administrative Standard section 1805.3 (Standard Operating Efficiency Procedures) already establishes indoor heating and cooling temperature ranges between 68-78 degrees Fahrenheit with a +/- 2-degree variance on each end. The commenter states that

questions have arisen regarding the new standard's base setting of 82 degrees Fahrenheit vs. the "conditioned" indoor office space ceiling of no more than 80 degrees Fahrenheit. The commenter asserts that generating an indoor heat illness standard that raises the maximum temperature allowable in "conditioned" indoor office space would not be conducive to the health and wellbeing of staff operating within these facilities.

Response to Comment 4.1
The Board acknowledges the commenter's concern and proposes to add a note to subsection (a) to clarify that it does not exempt state entities and departments from complying with State Administrative Manual section 1805.3.

The Board thanks the commenter for their input and participation in the rulemaking process.

5. Gideon L. Baum, Vice President, Policy, California Hospital Association (CHA), by written comments dated May 8, 2023.

Comment 5.1
The commenter is concerned about the requirements for engineering controls under subsection (e) Assessment and Control Measures for hospitals in general, and specifically their burn units. In burn units, hospitals must keep the ambient temperature of burn ICUs and operating rooms at 82-95 degrees Fahrenheit when patients are being treated. Temperatures in these areas are raised by the thermostat, heat lamps, or a combination of the two. In order to keep employees safe from indoor heat, in lieu of engineering controls, administrative controls are used.

The commenter states that it is feasible for hospitals to reduce the temperature in a burn unit as an engineering control, however it is medically contraindicated, as reducing the ambient temperature would compromise patient treatment. Therefore, the commenter recommends an exemption from engineering controls under subsection (e)(2)(A). The recommended language is:

> (A) Engineering controls. Engineering controls shall be used to reduce and maintain both the temperature and heat index to below 87 degrees Fahrenheit when employees are present, or to reduce the temperature to below 82 degrees Fahrenheit where employees wear clothing that restricts heat removal or work in high radiant heat areas, except to the extent that the employer demonstrates such controls are infeasible or medically contraindicated. When such controls are infeasible to meet the temperature and heat index thresholds, the employer shall:
>
> […]

Response to Comment 5.1
The Board is not persuaded by the commenter's arguments and declines to make the proposed modification, as it is unnecessary. If burn units must maintain temperatures between 82-95 degrees Fahrenheit to treat burn victims, it would be considered infeasible to reduce and maintain temperature and heat index to below the mandated levels for employees in these units. In such case, the employer may implement administrative controls to lower the risk of heat illness.

Comment 5.2
Furthermore, the commenter is concerned about the requirement for actively monitoring medical professionals in a climate-controlled breakroom during burn unit medical treatment and procedures under the requirements of subsection (d)(2)(A) and asserts that it simply does not make sense. The commenter states that hospital staff are medical professionals trained to recognize signs of physical distress and recommends self-monitoring for heat illness as more appropriate. The recommended language is:

> (A) Shall be monitored and asked if they are experiencing symptoms of heat illness, except as provided in paragraph (4); …
> (4) The requirement to monitor employees in the cool-down area shall not apply to health facilities, as defined in Section 1250 of the Health and Safety Code.

Response to Comment 5.2
The Board is not persuaded by the commenter's arguments and declines to make the commenter's proposed modification to be consistent with section 3395. In Cal/OSHA's enforcement experience, it is crucial that employees that exhibit heat illness symptoms not be left unattended and that, in the event symptoms are observed, the employer ensures that appropriate first aid or emergency response be invoked to ensure appropriate and prompt treatment. Furthermore, the Board notes that syncope (fainting), generalized disorientation or mental confusion can be some of the physiological responses of exposure to heat, and as such, an employer cannot expect even qualified medical professionals will make the appropriate decision to request first aid or invoke emergency response procedures for themselves if needed.

The Board thanks the commenter for their input and participation in the rulemaking process.

6. Matthew DeAngelis, President, California State Association of Occupational Health Nurses, by written comments dated May 15, 2023.

Comment 6.1

The commenter supports the proposed regulation. As frontline care providers for workers, the commenter views this as both a practical and protective measure that will benefit the workers and employers in the State of California.

Response to Comment 6.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

7. Kurt Shickman, Director, Extreme Heat Initiatives, Adrienne Arsht Rockefeller Foundation Resilience Center, by written comments dated May 12, 2023.

Comment 7.1
The commenter requests the Board to adopt the rule as submitted at the May 18th meeting. Robust funding and aggressive implementation must follow quickly as the threat of heat to workers is grave and accelerating.

Response to Comment 7.1
The Board acknowledges the commenter's support for the proposed regulation.

Comment 7.2
The commenter asserts that the temperature threshold in subsections (a)(1) and (a)(2) should be set at 80 degrees Fahrenheit. As currently written, the temperature at which control measures are required is 87 degrees Fahrenheit. While workers can experience heat illness at lower levels, 80 degrees Fahrenheit is the temperature at which heat deaths increase. The research shows that accidents increase as the heat rises. This threshold is also consistent with the temperature required in shade structures for the Cal/OSHA rule for outdoor workers. As currently written, the temperature at which control measures are required is 87 degrees Fahrenheit putting workers at risk of serious heat health and safety impacts.

Response to Comment 7.2
The Board recognizes that lowering the threshold temperatures as recommended by the commenter would be more protective of employee safety and health, reduce workplace accidents in general, and improve productivity. However, the Board declines to make the proposed modification at this time. The 82 degrees and 87 degrees Fahrenheit thresholds were determined after careful consideration of multiple advisory committee meetings and stakeholder comments.

Comment 7.3
The commenter recommends that cool-down areas should be maintained at a temperature of 80 degrees Fahrenheit consistent with the comment above and the Cal/OSHA standard for outdoor workers. Amend subsection (d) accordingly and require the measurement of temperature to effectively achieve the goals of the cool-down areas.

Response to Comment 7.3

The Board acknowledges the commenter's recommendation. However, the temperature of 82 degrees Fahrenheit in the cool-down area is proposed due to stakeholder concerns that having the regulation apply when the temperature reaches 80 degrees Fahrenheit would run counter to companies' efforts to conserve energy. Therefore, the Board declines to make the proposed modification at this time. Regarding the commenter's recommendation to require the measurement of the temperature in the cool-down areas, the Board declines to adopt the proposed modification, in order to remain consistent with section 3395. In addition, it is the employer's responsibility to maintain the temperature in the indoor cool-down area at less than 82 degrees Fahrenheit to comply with the proposed regulation.

Comment 7.4

The commenter recommends that measuring and recording temperature should be required in any workplace where the temperature is 80 degrees Fahrenheit or higher and the exemption in subsection (e)(1) should be deleted. The rule is predicated on an accurate understanding of the temperature for both employers, workers and regulators. Adopting a rule that allows employers to exempt themselves from measuring and recording temperature as allowed in subsection (e)(1) makes no sense. To determine whether heat is above the threshold the temperature must be measured. The commenter questions how an employer would be able to maintain the temperature of a cool-down area at 82 degrees Fahrenheit, if they are not measuring the temperature. The commenter also questions how an employer would be able to maintain the temperature at 87 degrees Fahrenheit for its control measures, as the current draft requires in subsection (e)(2), if it is not measuring the temperature. In addition, the temperature must be measured and recorded for compliance and enforcement. Thus, the exemption in subsection (e)(1) should be deleted. The rule should be clear that temperature should be measured and recorded and available for review by Cal/OSHA and workers. Measuring and recording temperature should not be acceptable criteria for a determination of infeasibility.

Response to Comment 7.4

The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modifications. While the proposed regulation does not specifically require employers to measure and record the temperature when it does not meet the conditions listed in subsection (a)(2), it is employers' responsibility to determine whether they are covered by the scope of the proposed regulation and maintain the temperature in indoor cool-down areas. It is important to note that employers who use the exception in subsection (e)(1) are still required to implement control measures to protect workers from heat-related illness. The exception is intended to provide flexibility for employers to determine the most effective way to protect their workers while still ensuring that appropriate measures are taken. Measuring and recording temperature is one way to monitor heat levels, but it is not the only way. Employers

may use other methods to ensure that the temperature in cool-down areas and other areas where control measures are required is maintained at appropriate levels.

Comment 7.5
The commenter recommends that the proposed regulation should specify clearly the criteria on qualifications for a demonstration of infeasibility for each control measures in subsection (e)(2).

Response to Comment 7.5
The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modification. The Board has determined that it is not possible to detail the criteria for demonstration of infeasibility in the regulation as it will be dependent on specific circumstances of each workplace and work area. Based on the established case law[1], Cal/OSHA has the burden of demonstrating technological feasibility, while the employer has the burden of demonstrating economic feasibility.

Comment 7.6
The commenter recommends establishing clear guidelines for training. The current text for training on the health and safety impacts of high heat in subsection (h)(1)(A) is general and vague. Training should be based on current information including documents from the NIOSH and the California Department of Public Health (CDPH). Training should be culturally appropriate and provided in languages spoken in the workplace. Training should be required when an employee is hired and annually in the spring before heat season begins. In addition, training should include specific considerations for pregnant workers as they are more susceptible to heat exhaustion or heat stroke.

Response to Comment 7.6
In order to remain consistent with section 3395, the Board declines to adopt the proposed modification. Regarding the comment that the current language in subsection (h)(1)(A) is general and vague, it is important to note that this approach allows for flexibility and adaptability across different workplace settings and scenarios. As the proposed regulation requires the employer to provide effective training, it is the employer's responsibility to update the training content regularly to reflect current information and industry best practices.

The Board acknowledges that employee training must be conducted in a language that employees understand for it to be effective. The Injury and Illness Prevention Program (IIPP) regulation mandates that employers establish a communication system with employees in a manner that is easily understood by all employees affected regarding occupational safety and health matters. This includes measures to encourage employees to report any hazards at the workplace without fear of retaliation. The Board believes that the employer's responsibility to

[1] United Steelworkers of Am., AFL-CIO-CLC v. Marshall, 647 F.2d 1189 (D.C. Cir. 1981).

provide training to all employees in an understandable and effective manner is sufficiently clear.

In order to remain consistent with section 3395, the Board declines to adopt the proposed modification. In addition, the Board is not persuaded by the commenter's arguments regarding the frequency of refresher training and declines to make the modification as the "effectiveness" of a training relates to workers' understanding and retention of necessary information. It is the employer's responsibility to determine the frequency of training based on their workplace and risk assessment to ensure that employees understand and retain the necessary information to comply with the proposed regulation.

Subsection (h)(1)(A) requires the employer to provide training on environmental and personal risk factors. These risk factors encompass a range of health and safety concerns, including heat-related risks that can affect pregnant workers. Therefore, the existing training requirement already incorporates considerations for pregnant workers, ensuring their well-being and reducing the risk of heat exhaustion or heat stroke.

Comment 7.7
The commenter recommends deleting the definition of a heat wave in subsection (b)(10). The commenter states that this definition is confusing, out of date and inconsistent with current science. It is also irrelevant because the term "Heat Wave" does not appear anywhere else in the rule. The commenter argues that codifying this definition in regulation could create confusion and conflict with other laws, regulations, grant requirements and advisories developed by other state agencies and departments implementing the many actions addressing heat in the state's Extreme Heat Action Plan. If the Board retains this term, the commenter requests the Board to include language that clarifies that this definition applies only for the purposes of this section.

Response to Comment 7.7
The definition of heat wave is necessary to help employers identify a heat wave, during which time a supervisor or designee must closely observe all employees when no effective engineering controls are in use as required in subsection (g)(1). In response to the comment, the Board proposes to modify subsection (b)(10) to include language that clarifies that this definition applies only for the purpose of the proposed regulation.

The Board thanks the commenter for their input and participation in the rulemaking process.

8. Michael Walton, Secretary, Construction Employers' Association, by written comment dated May 15, 2023.

Comment 8.1

The commenter recommends building contractors engaging in activities that can take place inside and outside concurrently be allowed to comply with the existing outdoor Heat Illness Prevention Plan (HIPP). If this is not possible, the commenter recommends that the requirements of sections 3395 and 3396 be aligned so that building contractors can maintain a uniform heat policy across the jobsite. The commenter asserts that given that building construction activities can take place inside and outside concurrently, contractors have already devoted considerable resources in complying with the outdoor HIPP, and the requirement to comply with a separate indoor HIPP would be burdensome with the proposed regulation being overly complex.

Response to Comment 8.1

The Board is not persuaded that compliance with section 3395 in lieu of the proposed regulation for workers engaging in activities that take place both inside and outside will provide equal health and safety protection as compliance with the proposed regulation. The Board notes that section 3395 and the proposed regulation are already aligned. Also, please see the response to comment 10.2.

Comment 8.2

The commenter recommends an exception for workplaces that are normally air-conditioned. As proposed, the regulation would require employers who work exclusively in an air-conditioned office to develop and maintain a HIPP, including training employees, and ensuring a cool-down area, just in case the heating, ventilating and air conditioning (HVAC) system were to break down. The commenter proposes the following addition to the list of exceptions for subsection (a)(1).

> (C) This section does not apply to places of employment that are normally air conditioned below 82 degrees Fahrenheit.

Response to Comment 8.2

The Board is not persuaded by the commenter's argument and declines to adopt the commenter's proposed modification to exclude workplaces that are normally air-conditioned as it would be unnecessary provided that the temperature is maintained below 82 degrees Fahrenheit. Workplaces that are air-conditioned below 82 degrees are not covered by the proposed regulation. The term "normally" is vague and unenforceable in the context of the exception suggested by the commenter. Furthermore, section 5142 includes requirements should an HVAC system break down. Also, please see the response to comment 10.2.

Comment 8.3

The commenter recommends that a building contractor be able to use the same shaded area to meet the requirements for "access to shade" under section 3395 and "cool-down area" under section 3396. The commenter asserts that although the proposed language seemingly permits a "cool-down area" to be outdoors, the language is contradictory in that it prohibits locations where "environmental risk factors defeat the purpose of allowing the body to cool." Even when seated in the shade, the commenter states, construction workers would be exposed to air temperature and possibly radiant heat from tables, chairs and the ground. In addition, the commenter explains that construction workers often wear necessary clothing and personal protective equipment that covers the arms, legs, and torso to protect the worker from physical hazards that also meets the definition of "clothing that restricts heat removal" and the definition for "environmental risk factors for heat illness." The commenter recommends the deletion of subsection (b)(4)(A) under "cool-down area" so that building contractors already providing shade to their outdoor workforce pursuant to section 3395 can also use the same space for any workers performing work indoor.

Response to Comment 8.3

The Board has modified the definition of "cool-down area" in subsection (b)(4) which addresses the commenter's concern. Please see the response to comment 12.5. The Board declines to make the commenter's specific proposed modifications to avoid any confusion and conflict between regulations. The definition of "cool-down area" remains consistent with the definition of "shade" in section 3395. Furthermore, the proposed regulatory language for cool-down areas is not contradictory, but rather includes additional protective requirements for cool-down areas to ensure they are effective for indoor workers exposed to heat.

Comment 8.4

The commenter asserts that the regulation is unclear when to take globe temperature readings. The commenter recommends a clarification between when "globe temperature" as opposed to "temperature" as defined in section 3396 must be taken.

Response to Comment 8.4

The Board is not persuaded that it is unclear when to take the globe temperature and temperature (dry bulb) as the requirements are specified in the definition of high radiant heat, subsection (b)(11). To accurately determine high radiant heat, these two measurements would need to be taken at the same time. Furthermore, high radiant heat must be evaluated to determine application of subsection (e)(1) and compliance with the requirements for cool-down areas.

Comment 8.5

Lastly, the commenter states that the requirement to measure and record temperature or heat index is unclear. Specifically, it is unclear if the requirement is to take the temperature or

measure the heat index during the shift when employee exposure is greatest or take the temperature or measure the heat index at 10-degree intervals. Furthermore, the commenter inquires as to how an employer can determine the relative humidity in order to use the heat index chart.

Response to Comment 8.5
The Board proposes to modify subsection (e)(1)(B) to clarify when temperature and heat index must be measured and recorded. Additionally, relative humidity can be determined by utilizing a hygrometer or an indoor humidity monitor that are readily available. Furthermore, heat index instruments that use the National Weather Service (NWS) heat index equation or chart are readily available on the market and employers may follow the manufacturer's instructions to determine the heat index without having to measure the relative humidity.

The Board thanks the commenter for their input and participation in the rulemaking process.

9. Anastasia Christman, Senior Policy Analyst, National Employment Law Project, by written comment dated May 18, 2023.

Comment 9.1
The commenter supports Note 2 of subsection (a) and recommends an additional reference to SB 1044, adding a Chapter 11 on workers' rights in emergencies. It states that in a situation where persons at the worksite are in a condition of extreme peril caused by natural forces, such as a heat wave, workers can refuse to report to or perform duties that they reasonably believe are unsafe and employers cannot take or threaten adverse action.

Response to Comment 9.1
The Board acknowledges the commenter's recommendation. The Board believes the proposed language should be included in a broad application regulation that applies to all workplaces rather than just the proposed regulation. Therefore, the Board declines to make the proposed modification.

Comment 9.2
The commenter supports subsection (e)(1)(B) specifying that heat measurements must be taken when employees work and at times during the shift when employee exposures are expected to be the greatest.

Response to Comment 9.2
The Board acknowledges and thanks the commenter for their support for subsection (e)(1)(B).

Comment 9.3

The commenter asserts that the current proposed threshold temperature of 87 degrees Fahrenheit is significantly higher than levels recommended by the American Conference of Governmental Industrial Hygienists (ACGIH) and OSHA. Minnesota's Administrative Rule concerning indoor ventilation and temperatures in the workplace lists a heat exposure limit of 80 degrees Fahrenheit for indoor workers performing moderate work. Additionally, the commenter references Oregon's Heat Illness Prevention rules that apply to indoor workplaces unless they have a mechanical ventilation system that keeps the heat index temperature below 80 degrees Fahrenheit.

Furthermore, the commenter states that the proposed indoor heat standard seems inconsistent with the state's outdoor heat standard. The proposed rules state that cooling areas for indoor workers should be 82 degrees; however, the California outdoor heat standard requires employers to start providing shade and other protections when workers are exposed to temperatures of 80 degrees Fahrenheit. The commenter recommends consistency for California's indoor workers and employers and recommends a threshold temperature of 80 degrees Fahrenheit and provisions for cooling areas below that threshold.

Response to Comment 9.3

Please see responses to comments 7.2 and 7.3.

Comment 9.4

The commenter recommends acclimatization be more clearly defined, and employers should be given more detailed guidance to ease workers into jobs that expose them to heat. The commenter recognizes that the definition of acclimatization is identical to that in the Heat Illness Prevention in Outdoor Places of Employment, however, the commenter is concerned that both the definition and the rules for implementing this process laid out in subsections (g)(1) and (2) are insufficient to ensure that workers benefit from the best protective practices. Furthermore, the commenter states that per the definition under subsection (b)(1), "Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat" and is concerned that employers unfamiliar with this process could misinterpret this as recommending more hours per day to improve the adaptation process.

Furthermore, the commenter is concerned that there is no reference to the bodily adaptation to heat over time and the proposed subsections (g)(1) and (2) address only "close observation" of workers during a heat wave or when workers are newly assigned to work areas where they will be exposed to high heat. The commenter references NIOSH's guidance on acclimatization which uses the words "gradual increased exposure to a hot environment" and lists schedules to guide the design of workdays that add safe amounts of exposure each day until a worker has made the beneficial physical adaptations. Additionally, the commenter states that Oregon's

heat protection standard calls upon employers to design their own acclimatization plan or allows them to use the one designed by NIOSH detailing a 4–5-day plan to safely increase heat exposure.

The commenter is concerned about workers who may lose their adaptation to heat if they are absent for a week or more. The commenter states that subsection (g)(1) applies to all workers during a heat wave while subsection (g)(2) applies only to "an employee who has been newly assigned" to work in conditions that would expose them to heat stress. The commenter references the NIOSH sample schedule for acclimatization that includes models for both newly assigned workers and those returning to work after an absence. The commenter recommends that the proposed rules clearly state that acclimatization strategies are appropriate for both new workers and those returning to work after an absence.

Response to Comment 9.4
Please see response to comment 24.5.

Comment 9.5
The commenter is concerned about all indoor heat protections being explicitly extended to any contracted workers, temporary workers, or workers brought to the site by other labor contractors or staffing agencies. The commenter urges the Board to consider the impacts on temporary workers who may be assigned to new work that exposes them to heat or reassigned to that work after a period long enough to offset previous acclimatization. The commenter asserts that companies that use temporary, staffing, or other subcontracted labor arrangements do not take responsibility for these workers. The commenter references several studies that have found temporary workers to be at a greater risk of being injured and twice as likely as permanent workers to get heat exhaustion. Furthermore, the commenter states that lack of safety training, and current assignment of legal responsibilities in a fissured work arrangement can create disincentives for temporary staffing firms to provide a safe workplace. The commenter recommends that some clarification as to the responsibility for ensuring that all heat stress prevention procedures, including acclimatization, are used for all workers, including dual employer and multiemployer worksites. The commenter recommends citing the Cal/OSHA Policy and Procedures Manual regarding dual employer and multi-employer inspections to help all involved employers understand their respective and shared responsibilities for implementing the heat standard. At the very least, the commenter recommends that worksite/client employers do their own training and acclimatization of staffing or subcontracted workers to ensure safety and protections.

Response to Comment 9.5

The Board is not persuaded by the commenter's arguments and declines to revise the proposed regulation to clarify the requirements for dual employers[2] and multi-employers.[3] It is the policy of Cal/OSHA to (1) enforce the multi-employer laws (Labor Code section 6400(b)), regulations (title 8 section 336.10), and dual-employer responsibilities in a manner that promotes workplace safety and health on multi-employer worksites and/or dual employer worksites; and to (2) gather sufficient evidence to determine whether employers at a multi-employer and/or dual employer worksites are citable for violative conditions observed at that worksite. The multi-employer laws, regulations, and dual-employer responsibilities apply to all employers who fall within the jurisdiction of Cal/OSHA and as such, it is not necessary to include specific language about the multi-employer and dual-employer policies in the proposed regulation.

Comment 9.6

The commenter recommends the host employer be required to share the 12-month heat measurement records required by subsections (e)(1) and (e)(1)(B) with the employer of any contracted or temporary workers as well as a copy of the employee training materials required in subsections (h)(1) and (2) and the HIPP called for in subsection (i).

Response to Comment 9.6

The Board is not persuaded by the commenter's arguments and declines to revise the proposed regulation as a primary employer may request such information from the secondary (host) employer or contract to have such information provided. Furthermore, as part of their basic responsibilities established in the Labor Code and title 8, a primary employer must conduct initial and periodic inspections to identify and evaluate workplace hazards at the secondary employer's worksite. As part of the inspection, the primary employer may review the secondary employer's HIPP and employee training materials required by subsections (h)(1) and (i), respectively. Additionally, please see response to comment 9.5.

Comment 9.7

The commenter recommends the HIPP include a schedule for acclimatization to ensure that temporary workers have the chance to adapt to excessive heat conditions.

Response to Comment 9.7

Please see response to comment 24.5.

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[2] Cal/OSHA Policy and Procedures Manual. C-1D, Dual Employer Inspections. Revised 12/12/17. https://www.dir.ca.gov/DOSHPol/P&PC-1D.pdf

[3] Cal/OSHA Policy and Procedures Manual, C-1C, Multi-Employer Worksite Inspections. Revised 12/8/2000. https://www.dir.ca.gov/DOSHPol/P&PC-1C.pdf

Comment 9.8
The commenter supports the recommendations outlined in Worksafe's letter.

Response to Comment 9.8
Please see responses to comments 15.1 through 15.8 for the Board's responses to the comments of Worksafe.

Comment 9.9
The commenter recommends Cal/OSHA to use stringent and targeted enforcement as a compliance tool, and widely publicize findings of violations of heat standards. The commenter references economic studies that found that when federal OSHA regional offices issue press releases announcing penalties assessed against violators to local news outlets and industry publications, there can be significant ripple effects on other nearby facilities, lowering violations at other companies by as much as 73%. The commenter states this was especially true when local worker advocates were made aware of the violations and could share information about worker rights with employees at other firms.

Response to Comment 9.9
With respect to publicizing findings of violations of heat standards, Cal/OSHA regularly issues press releases of findings for significant inspections and related citations. Furthermore, citations for all inspection cases can be found on the Cal/OSHA website. Currently, Cal/OSHA has implemented a special emphasis program for planned outdoor heat inspections, and based on objective criteria and findings may implement the same for indoor heat inspections.

Comment 9.10
The commenter recommends employee training be provided upon starting work and annually thereafter in a language that workers understand, by a trainer with language fluency and cultural competency to ensure complete comprehension. Furthermore, the commenter recommends that within subsection (h)(1), the term "effective" be elaborated upon to make clear that training must be provided by a fluent speaker of the language understood by employees using language and cultural awareness to maximize worker understanding, retention, and the ability to answer questions.

Response to Comment 9.10
Please see response to comment 7.6.

Comment 9.11
The commenter states that all workers must have the right to participate in developing heat protection plans for their workplaces. Furthermore, the commenter asserts that under the proposed subsection (e)(1)(D), the rights to a "union representative" are limited and should be

changed to align with current California law and federal OSHA regulations which use terms such as "designated representative," "employee representative," and "authorized representative."

Response to comment 9.11.
Please see response to comment 15.5.

The Board thanks the commenter for their input and participation in the rulemaking process.

10. Helen Cleary, Director, Phylmar Regulatory Roundtable (PRR) Occupational Safety and Health (OSH) Forum, by written comments dated May 16, 2023.

Comment 10.1
The commenter understands the hazard of heat to workers and supports the overall objective of Cal/OSHA to prevent California's workers from experiencing heat illness. The commenter also supports the Board's objective as stated in the Initial Statement of Reasons:

"The specific purpose of the proposed subsection [3396(a). Scope and Application] is to limit the requirements of the proposed regulation to employers with employees having considerable exposure to heat and hot environments."

Unfortunately, the scope of the standard does not support this stated purpose. However, the commenter believes that their recommendations will help accomplish the Board's and Cal/OSHA's goals to protect workers from the risk of heat illness.

Response to Comment 10.1
The Board acknowledges the commenter's support for the overall objective to prevent workers from experiencing heat illness. Please see the Board's responses to each of the commenter's recommendations provided below.

Comment 10.2
The commenter argues that the proposed regulation does not consider actual risk of heat exposure, as it is not based on duration of exposure or other environmental risk factors. The commenter believes this expands the scope of impacted workers and requires significant employer responsibilities without a worker safety and health benefit. The proposed regulation does not consider workload severity or activity, which directly contributes to a worker's risk of heat illness. A blanket temperature or heat index is the single determinant that triggers all the requirements. Combined with the broad and encompassing definition of "indoor" makes the application unreasonable and at times, unsound.

The proposed regulation requires workers to determine the temperature and humidity of a space without a cooling system, document the result, and implement required protections when the temperature is 82 or 87 degrees Fahrenheit. This can be burdensome for workers

who enter such spaces for short durations, as the risk of heat exposure may not result in heat illness. The commenter provides an example of PRR members who enter the customers' attic space to conduct an inspection. The work may not be strenuous and the environment may not be directly controlled by the employer. Implementing assessment and control measures can extend the worker's time in the space, increasing their risk. The use of outdoor storage containers or sheds is another example where short-duration exposure to heat does not create a considerable risk and should not trigger assessment and control measures. Additionally, some employers and employees will need to switch between different requirements for outdoor and indoor heat, which can be confusing and impractical.

Similar challenges and short duration exposures are reasonably addressed and effectively managed in section 5141.1, Protection from Wildfire Smoke. In addition, section 3205, COVID-19 Prevention considers duration of exposure to the hazard of COVID-19 and the low risk of exposure when employees walk through indoor spaces.

The commenter recommends a similar approach to manage worker exposure to heat and suggests two exceptions:

> EXCEPTION: For short duration exposures, $\leq$ 15 minutes in a one-hour period, the employer is not required to comply with this section.
>
> EXCEPTION: Employers in compliance with section 3395 are not required to comply with this section.

These exceptions will ensure the Board meets its stated purpose of limiting the standard to employers with employees who have "considerable exposure to heat and hot environments." They will also prevent employers and workers from switching between multiple Cal/OSHA standards throughout their day and eliminate worker confusion that can create unintended consequences.

Employers subject to confined space requirements should already have policies in place to address heat hazards in indoor spaces, regardless of the duration of exposure to excessive heat conditions. Federal OSHA finds that short-duration, light-duty tasks in hot attics do not typically constitute a physical hazard triggering permit-required confined space requirements. This suggests that duration and type of activity can be considered when determining the health risk of heat in indoor workspaces. Confined space requirements in Cal/OSHA's Construction Safety Orders and Federal OSHA's guidance on crawl spaces and attics already require employers to address heat hazards. Workers exposed to excessive heat conditions for less than 15 minutes in a confined space are protected under current title 8 regulations. The commenter asserts that their recommended exceptions will not reduce worker protections in these hazardous environments.

Response to Comment 10.2

The Board is not persuaded by the commenter's arguments that triggering all the requirements in the regulation by a blanket temperature or heat index combined with the broad and encompassing definition of "indoor" makes the application unreasonable and at times, unsound. Other alternatives such as adopting the ACGIH Threshold Limit Values (TLVs®) approach, which considers work activity levels, was considered during the advisory committee process and it was rejected based on the stakeholders' input that such approaches were much too complicated, difficult to determine and enforce, and other factors. Activity levels are highly subjective and can vary significantly across different work environments. Therefore, the decision was made to establish clear temperature triggers as a more objective and practical approach to protecting workers in various environments from heat illness.

The Board received comments regarding indoor spaces that are only accessed briefly and proposes a modification to exempt such locations from the proposed regulation. With this exception, the proposal will not apply where an employee is exposed to temperatures at or above 82 degrees Fahrenheit and below 95 degrees Fahrenheit for less than 15 minutes in any 60-minute period. This exception does not apply to vehicles without effective and functioning air conditioning; or shipping or intermodal containers during loading, unloading, or related work.

The Board is not persuaded by the commenter's argument and declines to adopt the commenter's proposed modification to add an exception for employers that are in compliance with section 3395.The proposal is aligned and consistent with section 3395.

Comment 10.3

The commenter expresses concern that the proposed text of subsection (d) does not adequately account for mobile or solo workforces and brief exposures to temperatures above 82 degrees Fahrenheit. The commenter argues that the language is designed for fixed workspaces and fails to consider situations where workers operate in environments beyond the employer's control. This is highly concerning and is not reasonable in a standard that needs to be workable for a broad range of employers.

For example, many workers in utilities and communications are assigned duties in remote areas and customers' homes. In such cases, they may seek respite from the heat by accessing air-conditioned spaces such as the customer's home or their own truck, which may be preferable to finding shaded areas outdoors. Similar challenges arise for workers checking remote facilities or accessing storage sheds. These environments meet the definition of indoor but are not staffed and are rarely or quickly accessed.

In many cases, these workers work alone, limiting the employer's ability to comply with the requirement to maintain cool-down areas and monitor employees for heat illness symptoms. The requirement to "maintain one or more cool-down areas at all times while employees are

present" and for that area to "be at least large enough to accommodate the number of employees on recovery or rest periods, so that they can sit in a normal posture fully in the cool-down areas without having to be in physical contact with each other" is reasonable for fixed work locations but impractical for mobile workforces.

These challenges can be addressed in training programs, emergency response procedures and in HIPP. The proposal should not require additional workers with supervisory authority to always be assigned or cool-down areas to be built and maintained for every space that meets the narrow definition of indoor. This is not reasonable for the thousands of operations in the state it will impact, and it would not be safe protocols during emergency response for critical infrastructure workers.

The commenter recommends adding the following exception to subsection 3396(d). This language aligns with the outdoor heat standard exception in subsection 3395(d) Access to shade.

> EXCEPTION to subsections (d)(1): Where the employer can demonstrate that it is infeasible or unsafe to have a cool-down area, or otherwise to have a cool-down area available on a continuous basis, the employer may utilize alternative procedures for providing assess to cool down areas if the alternative procedures provide equivalent protection. For example, an air-conditioned vehicle or outdoor area blocked from direct sunlight can be used as a cool-down area.

Response to Comment 10.3
The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modification, as it would be inconsistent with section 3395 and the proposed regulation already allows cool-down areas to be located outdoors by definition when it complies with conditions listed in subsections (b)(4) and (d).

Comment 10.4
The commenter recommends adding the following exception to support mobile, solo workforces and low risk exposures:

> EXCEPTION to subsections (d)(2) and (d)(3): Where the employer is unable to directly monitor employees working alone or in remote locations, they shall have effective Emergency Response Procedures as required in subsection (f) to address employee monitoring and employees experiencing signs and symptoms of heat illness.

Response to Comment 10.4
The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modification as the language in subsection (d)(1) is consistent with section 3395. Many employers with outdoor places of employment have employees that are mobile, work in

remote locations, or work alone and they have successfully monitored their employees as required by existing section 3395.

Comment 10.5
The commenter does not believe that subsection (d)(2)(C) is appropriately placed in the regulation. Subsection (d)(2) is specific to "preventative cool-down rest" and subsection (d)(2)(C) is specific to employees already exhibiting signs and symptoms of heat illness; it instructs the employer on how to "abate" the signs and symptoms which should be a new subsection ((d)(4)) or fall under subsection (d)(3).

Response to Comment 10.5
The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modification as the language and subsection number is identical to section 3395. The Board understands the commenter's concern about the placement of subsection (d)(2)(C) in the regulation. However, after careful consideration, the Board has determined that it is appropriately placed within subsection (d)(2), which addresses preventative cool-down rest. Subsection (d)(2)(C) provides guidance to employers on how to abate signs and symptoms of heat illness in employees who are already exhibiting them. This is an important part of the preventative measures outlined in subsection (d)(2) and the Board believes it is appropriately placed within this section.

Comment 10.6
The commenter expresses concern regarding the operational complexity and burden associated with measuring and documenting temperature or heat index for remote workstations and solo workers. The commenter argues that these requirements may not significantly enhance the health and safety of workers engaged in transitory work or experiencing short exposures at temperatures as low as 82 degrees Fahrenheit. The commenter suggests that the burden of carrying multiple measuring devices, calculating heat index, and maintaining records for extended periods would only delay work and prolong exposure. They also highlight the cost and burden of training and issuing Wet Bulb Globe Thermometers (WBGT) to comply with the regulation. The commenter recommends aligning the indoor heat standard with the outdoor heat requirements and allowing employers to determine if control measures are necessary based on an effective HIPP. The commenter proposes limiting the temperature and heat index determinations and recordkeeping requirements to fixed workspaces or situations where workers are at risk of heat illness. The commenter argues that these elements are not integral to worker protection and should be revised accordingly.

Response to Comment 10.6
The Board acknowledges the commenter's concerns about the requirement to measure and document the temperature or heat index and maintain records for remote workstations and solo workers. While this may require additional effort on the part of employers and employees, the Board believes that these measures are necessary to ensure the health and safety of

workers in these environments. The requirements to measure and document the temperature or heat index are intended to provide a clear and objective means of determining when control measures are necessary to protect workers from heat illness. It is important to note that the proposed regulation does not mandate the use of WBGT, as the application is primarily based on temperature and heat index criteria.

Regarding the commenter's suggestion to align the indoor heat regulation with the outdoor heat requirements, it is important to note the differences in requirements of the proposed regulation and section 3395. The proposed regulation requires employers to implement control measures specified in subsection (e)(2)(A) through (C) to reduce and maintain the temperature below the threshold levels and minimize the risk of heat illness. On the other hand, section 3395 requires employers to implement high heat procedures because the Board recognizes it is not feasible to control outdoor temperature. As the proposed regulation includes control measures, it is necessary to include requirements for measuring and documenting temperature and heat index to ensure that appropriate control measures are implemented in a timely manner. Therefore, the Board declines to make the proposed modification.

After careful consideration, the Board proposes to add an exception for subsection (e)(1) for vehicles with an effective and functioning air conditioning system.

Please see the response to comment 3.1.

Comment 10.7
Subsection (e)(1) does not accurately reflect that the heat index in the NWS chart in Appendix A is not a measurement. It is a determination based on measuring relative humidity and temperature. The commenter suggests the references to "…measure the temperature and heat index…" in subsection (e)(1) and the requirement to "…maintain accurate records of either the temperature or heat index measurements…" in subsection (e)(1)(A) be revised for clarity.

> (e)(1)…the employer shall measure the temperature and determine the heat index…
>
> (e)(1)(A)…the employer shall establish and maintain accurate records of either the temperature or heat index ~~measurements~~…

Response to Comment 10.7
The Board is not persuaded that the heat index is not a measurement. It is defined as a measure of heat stress developed by NWS and direct reading instruments to measure the heat index are available. Therefore, the Board declines to make this change.

Comment 10.8
The commenter appreciates that feasibility may be considered when implementing controls. However, PRR members remain concerned about how feasibility will be considered by

Cal/OSHA and individual inspectors. Some argue that anything is feasible if it can be engineered, and high costs to implement should not be a consideration for large employers.

The commenter was highly disappointed that the exception that was proposed in the April 22, 2019 draft was removed; this exception would help alleviate some of this concern and the commenter supported its inclusion in the previous draft. It is also important to point out that the proposed draft in the rulemaking notice and the Standardized Regulatory Impact Assessment (SRIA) was also based on the April 2019 draft. The commenter believes that the removal of this exception is significant and strongly encourages Cal/OSHA to reconsider.

The commenter recommends that the exclusion in the April 2019 draft be added back to the indoor heat proposed regulation:

> EXCEPTION: The employer may use administrative controls in lieu of engineering controls if the employer demonstrates that the administrative controls can minimize the risk of heat illness more effectively than engineering controls.

This is a rational risk mitigation approach that is appropriate for heat hazards. For example, implementing work-rest schedules or utilization of vehicle air conditioning as a cool-down area will be more effective than a worker having to turn on and wait for a fan or air conditioning system that is installed in remote locations to lower the temperature.

Response to Comment 10.8
The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modification. The hierarchy of controls, a widely accepted approach to risk management, prioritizes the use of engineering controls over administrative controls. While administrative controls can be effective in certain situations, engineering controls are more effective in reducing or eliminating hazards. It is not possible to demonstrate that administrative controls are more effective than engineering controls in minimizing the risk of heat illness. If administrative controls reduce temperatures to a level that removes the workplace from the scope of the regulation or subsection (e), then no additional engineering controls are required. Therefore, the Board has determined that it is not necessary to include this exception in the proposed regulation.

Comment 10.9
Subsection (e)(2)(C) requires personal heat-protective equipment when "…administrative controls are not sufficient to reduce and maintain the temperature and heat index to below 87 degrees…." However, administrative controls, as defined in subsection (b)(2), are "…method[s] to limit exposure…" and typically do not result in a measurable outcome to reduce the actual temperature or heat index. In addition, subsection (e)(2)(B) acknowledges, "administrative controls shall be used to minimize the risk of heat illness…" not the temperature.

The commenter is hopeful that this language is an oversight, and Cal/OSHA can clarify the text that will eliminate the concern and resulting inappropriate requirement to provide personal heat-protective equipment when administrative controls do not reduce the temperature or heat index.

The commenter recommends revising the language in subsection (e)(2)(C) as follows:

> …Where feasible engineering controls ~~and administrative controls~~ are not sufficient to reduce and maintain the temperature and heat index to below 87 degrees Fahrenheit…and feasible administrative controls cannot minimize the risk of heat illness…

Response to Comment 10.9
In response to the comment, the Board proposes to modify the language in subsection (e)(2)(C) to clarify the requirement.

Comment 10.10
The commenter understands the intent of the definition of "heat wave" and its alliance with section 3395; however, it cannot be applied and does not have the same implications to indoor conditions in the same way it is applied to outdoor. It becomes particularly complex when considering mobile and solo workforces who operate in different regions with varying temperatures every day. An employer's entire operation could be in a "heat wave" as defined by this regulation when the average five-day temperature is as low as 70 degrees Fahrenheit.

The commenter recommends deleting this definition from the indoor heat standard. If heat wave needs to be defined, it should be based on actual heat waves determined by the state.

Response to Comment 10.10
The Board is not persuaded by the comment that the definition of "heat wave" cannot be applied in the same way to indoor conditions as it is to outdoor settings. The proposed regulation requires close observation of all employees during a heat wave only when effective engineering controls are not utilized to control the impact of outdoor heat on indoor temperatures. Employees in such indoor locations will be affected by the rise in the outdoor temperature the same way as employees working outdoors. Therefore, the Board declines to make the proposed modification to maintain consistency with section 3395. It is important to note that employers have successfully complied with section 3395, further reinforcing the Board's decision to retain the proposed subsection.

Comment 10.11
The commenter asserts that it is not reasonable to require observation of solo workforces when the average temperature can be as low as 70 degrees Fahrenheit. During actual heat waves, utilities workers may need to work alone in order to respond to power outages that impact the

health and safety of the communities they serve. Requiring a partner to observe these workers during actual heat waves will essentially cut the workforce in half and slow down response times to perform critical infrastructure support. The commenter suggests that critical infrastructure employees should not require close observations during emergency operations.

Response to Comment 10.11
In order to remain consistent with section 3395, the Board declines to adopt the proposed modification. The requirement in subsection (g) is identical to section 3395 and critical infrastructure employers working outdoors have successfully complied with this requirement.

Comment 10.12
The commenter argues that making the HIPP "…available at the worksite…" is unnecessary and burdensome for employers with transient workers. Also, this requirement does not align with the allowance in Note No. 1 in subsection (a) of the proposed rule that specifically states the employer may integrate their HIPP into their IIPP. The IIPP already has requirements for employee access to the program and access to the HIPP should not be different.

The commenter recommends deleting the requirement to "…be made available at the worksite…"

Response to Comment 10.12
In order to remain consistent with section 3395, the Board declines to adopt the proposed modification. The requirement in subsection (i) is identical to section 3395 and employers have successfully complied with the requirement.

The Board thanks the commenter for their input and participation in the rulemaking process.

11. Stephanie Phelps, CECRAOHN President, California El Camino Real Association of Occupational Health Nurses, by written comments dated May 16, 2023.

Comment 11.1
The commenter states that many workers are affected by heat, and OSHA has reported that almost half of heat-related deaths occur on a worker's first day on the job and over 70% of heat-related deaths occur during the first week on the job. The commenter supports heat illness best practices, such as training, acclimatization, administrative and engineering controls, and the basics - water, rest, and shade. A HIPP along with emergency response procedures should be implemented. As occupational and environmental health nurses, the commenter supports the efforts to prevent heat illness.

Response to Comment 11.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

12. Robert Moutrie, Policy Advocate, California Chamber of Commerce, on behalf of: American Composites Manufacturers Association; American Pistachio Growers; Associated General Contractors of California; Associated General Contractors, San Diego Chapter; Associated Roofing Contractors; California Apple Commission; California Association of Joint Powers Authorities; California Association of Sheet Metal and Air Conditioning Contractors, National Association; California Association of Winegrape Growers; California Attractions and Parks Association; California Beer & Beverage Distributors; California Blueberry Association; California Blueberry Commission; California Chamber of Commerce; California Citrus Mutual; California Construction and Industrial Materials Association (CalCIMA); California Cotton Ginners and Growers Association; California Framing Contractors Association; California Fresh Fruit Association; California League of Food Producers; California Manufacturers & Technology Association; California Restaurant Association; California Retailers Association; California Rice Commission; California State Association of Counties; California Strawberry Commission; Chemical Industry Council of California; Family Business Association of California; Far West Equipment Dealers Association; Grower-Shipper Association of Central California; Housing Contractors of California; Industrial Environmental Association; Nisei Farmers League; Olive Growers Council of California; PCI West – A Chapter of the Precast/Prestressed Concrete Institute; Residential Contractors Association; Western Agricultural Processors Association; Western Growers Association; and Western Steel Council, by written comments dated May 18, 2023.

Comment 12.1
The commenter is concerned about Note No. 1 under subsection (a) as it has no regulatory effect for enforcement and recommends deleting the note here and including it in subsection (i). The commenter states that this change will make it clear that an employer has the right to incorporate the requirements of this standard into any of several options, including integration into the employer's outdoor HIPP in compliance with section 3395. Furthermore, the commenter states that placing these provisions in the appropriate place would allow them to have the force of law and employers meeting the requirements will be deemed in compliance.

Response to Comment 12.1
The Board is not persuaded by the commenter's arguments and declines to move or delete Note No. 1 of subsection (a) as it is already included in the language of subsection (i). The Note No. 1 under subsection (a) of the proposed regulation is very similar to Note No. 1 in subsection (a) of section 3395.

Comment 12.2
The commenter is concerned that the regulation's requirements are triggered regardless of how briefly the temperature rises above 82 degrees. The commenter asserts that a lack of a temporal element in the regulation creates unintended obligations that are nonsensical. For

example, if an employee enters a remote building (such as a storage shed) or a vehicle that has warmed up to 85 degrees due to sunlight, that employee may be briefly exposed to a temperature above 82 degrees. For a vehicle, the temperature will likely drop as soon as air conditioning is functioning. For a shed, the employee may grab a tool and step out immediately. The commenter states that in these cases, the regulation would be triggered, and the employer must now begin compliance with the regulation even though the exposure was de minimis. The commenter recommends allowing a brief time of exposure presents two benefits, without reducing the effectiveness of the regulation. First, it ensures that entering a vehicle and waiting for air conditioning to cool the vehicle does not create a regulatory obligation (or create an awkward switch in regulatory regimes from the outdoor heat illness regulation). Second, it ensures that employees briefly entering buildings (or waiting for indoor air conditioning to cool the vehicle) will not create unnecessary and burdensome compliance obligations. The commenter proposes a briefly delayed trigger for the application of regulation, as follows:

> (a)(1)(C) EXCEPTIONS:
> This section does not apply to places of employment where employees are exposed to heat below 95 degrees Fahrenheit for less than 10 cumulative minutes in any 30-minute period.

Response to Comment 12.2
An exception was added to address the commenters concern. Please see the response to comment 10.2. The exemption suggested by the commenter would leave certain workers unprotected by this proposed regulation as heat exhaustion and heatstroke can develop quickly over a few minutes.

Comment 12.3
The commenter is concerned about the definition of "indoor" in the regulation. The commenter is concerned about a situation where an employee who momentarily steps into a closed vehicle (with four windows or similar obstructions and a roof) switches from being covered by section 3395 to section 3396, because that vehicle is considered an indoor space and employers will need to instruct an employee that they must, upon stepping into a vehicle that feels warm, pull out a thermometer and test the temperature, then record it, before they start the air conditioning and drive to their next objective. The commenter recommends adoption of a temporal trigger or clarifying that industries under section 3395 may continue to comply with section 3395 in their vehicles. The commenter proposes the following exception under subsection (b)(12).

> EXCEPTION: Space inside vehicles or equipment cabs, either with or without air conditioning, that are covered under subparagraph (a) (2) (E) of section 3395 are outdoor workspaces and remain covered under section 3395 and not under this section.

> EXCEPTION: Space inside vehicles and equipment cabs otherwise covered under section 3395 remain covered under section 3395 and not under this section.

Response to Comment 12.3
The Board is not persuaded by the commenter's arguments and declines to make the proposed modification as vehicles meeting the definition of "indoor" will be covered by the proposed regulation. Furthermore, vehicles expressly covered by subsection 3395(a)(2)(E) will continue to be covered by section 3395.

Comment 12.4
The commenter is concerned that the exception under subsection (b)(12) requires the shaded area to be used "exclusively" for shade. The commenter states this exception will preclude any structure not used solely for shade from the exception; that means a structure used as a machine shed, storage or even to shelter a hay pile could be considered "indoor." Furthermore, the commenter asserts that the only structure that could be used for shade under section 3395 would be a structure dedicated to the purpose of providing shade; otherwise, it would be covered by section 3396. For example, many of the bays and shops used as cool-down areas for outdoor workers in certain circumstances are in compliance with section 3395. The requirement that an area be exclusively for shade under the exception of subsection (b)(12) limits the availability of structures that can effectively serve as shade structures. The commenter states that there is a presumption with the exception of subsection (b)(12) to limit regulatory switches and allow agricultural or other outdoor workers to stay under section 3395 while taking their cool-down breaks and expresses their appreciation. However, the commenter believes the "exclusively" language appears unnecessary to this intent and if the space qualifies as a cool-down space under section 3395, does not see the functional harm and recommends the following exception.

> EXCEPTION: "Indoor" does not refer to a shaded area that meets the requirements of section 3395 and is used ~~exclusively~~ as a source of shade for employees covered by section 3395.

Response to Comment 12.4
The Board is not persuaded by the commenter's arguments and declines to make the proposed modification as this would exempt nearly all indoor spaces from the proposed regulation and would not protect employees as intended.

Comment 12.5
Although the commenter appreciates the inclusion of the potential for a cool-down area to be outside and shaded, they are concerned that, for smaller and more urban businesses, the definition of cool-down area still fails to leave sufficient feasibility. The commenter is concerned for employers who rent space in a structure and do not have the ability to control the outdoor environment fully. For example, the commenter describes a small restaurant who rents

commercial space and may need to set up a cool-down area outside because they have no additional internal space. However, if the outdoor space is paved in blacktop, the commenter is concerned that this might be considered a "high radiant heat source," making such an area impermissible as a cool-down area. In that situation, the commenter asserts that a small employer cannot remove the blacktop and cannot utilize indoor space (as none may exist), leaving them with no feasible option for compliance. The commenter recommends the following amendment to the definition of cool-down area.

> (4) "Cool-down area" means an indoor or outdoor area that is blocked from direct sunlight and shielded from other high radiant heat sources <u>to the extent feasible</u> and is either open to the air or provided with ventilation or cooling. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight.

<u>Response to Comment 12.5</u>
The Board accepts the proposed modification to the definition of "cool-down area" in subsection (b)(4) to state that cool-down area must be blocked from direct sunlight and shielded from other high radiant heat sources to the extent feasible.

<u>Comment 12.6</u>
The commenter objects to the use of external temperature in subsection (b)(10) as a trigger in a regulation that only has relevance for indoor temperatures. The commenter asserts that the term "heat wave" relies on the outdoor temperature (and, in fact, repeated measurements of outdoor temperature and averaging of those measurements) and requires employers to measure, record, and average outdoor temperatures on a regular basis. The commenter recommends that employers be permitted to utilize a weather report's "high" for the day as their measure of temperature, instead of individually monitoring outdoor temperatures.

Furthermore, the commenter states that the definition of a "heat wave" is inconsistent with the trigger of section 3396, which begins application at 82 degrees Fahrenheit. The commenter offers an example if the average high daily outdoor temperature for the preceding five days was 71 degrees and it rose to 81 degrees, then a heat wave would be occurring under the regulation, however the regulation itself would not yet be triggered. To bring the definition of heat wave and section 3396 into conformity, the commenter recommends the following change to the definition of "heat wave:"

> Heat Wave means any day in which the predicted high outdoor temperature for the day will be at least <u>82</u> ~~80~~ degrees Fahrenheit and at least ten degrees Fahrenheit greater than the average high daily outdoor temperature for the preceding five days.

<u>Response to Comment 12.6</u>

The definition of "heat wave" is based on predicted high and average high outdoor temperatures over a period of five days. Therefore, separate measurements are not required to determine a heat wave. The Board declines to make the commenter's proposed modification to the definition of heat wave.

Comment 12.7

The commenter is concerned about the obligation for employers to "monitor" employees under subsection (d) whenever they take a rest (whether they are experiencing any signs of heat illness or not) is infeasible across every workplace in the state from a staffing perspective. As an example, a small restaurant does not have spare staff to sit with an employee outside during the dinner rush as every worker, from the waiter to the manager, is active throughout the dinner rush. The commenter states the same is true for many other workplaces where there is no spare worker who is easily available to take breaks whenever any employee takes a break.

Furthermore, the commenter is concerned that whenever an employee "feels the need" to take a break, the employer has no discretion to prevent such breaks when an employee has taken 10 breaks that day or has already taken a break within the last five minutes, resulting in critical staffing shortages.

The commenter is concerned with subsection (d)(2)(B) where an employer must "encourage" an employee to remain in the cool-down area and at some point, an employer may need to say that an employee is needed at their workstation.

Additionally, the commenter is concerned with subsections (d)(2)(B) and (d)(2)(C) which requires an employer to encourage an employee to remain in the "cool-down area." The commenter states that at some point, an employer may have to inform the employee that they are needed at their workstation that creates a conflict that will confuse workers and employers.

The commenter understands the intention of such breaks for employees feeling the effects of heat, but states that the extent of the unfettered discretion to a break for an employee is relatively unprecedented in law. The commenter compares the breaks in the proposed regulation to rest breaks and lunch breaks prescribed in Labor Law, which are precisely defined and come at regular intervals, to ensure that employees have rest but also that employers may manage necessary staffing. Additionally, the commenter asserts that unlimited breaks are not generally applicable indoors to the same extent they were necessary in section 3395 and recommends the following addition to subsection (d).

> <u>(d)(4) If the temperature in an employee's work area is less than 95 degrees, an employer may limit the number of preventative cool-down breaks taken during a shift to no more than two breaks per hour, unless the employee demonstrates symptoms of heat illness. If an employee demonstrates signs of heat illness, they shall be allowed a cool-down break until such signs have abated.</u>

Response to Comment 12.7
The Board is not persuaded by the commenter's arguments and declines to make the commenter's proposed modification as it would be inconsistent with section 3395. The current language in the proposed regulation is consistent with section 3395. Subsection (d) requires employers to monitor employees who are taking preventive cool-down rest, which is defined as a rest taken in a cool-down area to prevent overheating. It is the employer's responsibility to ensure that employees taking a preventive cool-down rest are monitored for symptoms of heat illness and provide appropriate measures such as first aid and/or emergency services if symptoms are observed. Preventive cool-down rest can help employees process heat better and reduce the likelihood of heat illness. Furthermore, if an employee is continuously seeking preventive cool-down rests, they may be experiencing symptoms of heat illness, and therefore it is imperative for the employer to initiate their emergency response procedures and seek medical assistance. Based on Cal/OSHA's enforcement experience with section 3395, it is unlikely that employees would abuse the preventive cool-down rest. Also, see response to comment 10.3.

Comment 12.8
The commenter is concerned with subsection (e)(1)(D) which specifies that an employer shall obtain the active involvement of "employees and their union representative." The commenter recommends the language be revised to reflect the involvement of a union representative is limited to one that has been certified or recognized by the employer as the representative of the employees in the affected bargaining unit.

> (D) The employer shall have effective procedures to obtain the active involvement of employees and their certified or employer-recognized union representative, if any, in ~~designing and conducting the assessments.~~ performing the following:

Response to Comment 12.8
The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modification as the intent of subsection (e)(1)(D) is to obtain active involvement of employees either individually and/or through a union representative and the proposed modification is not necessary.

Comment 12.9
The commenter states that subsections (e)(1)(B)1. and 2. conflict with subsection (e)(1)(B). The commenter explains that subsections (e)(1)(B)1. and 2. provide exact times when measurements shall be taken. The commenter asserts that subsection (e)(1)(B) instructs employers to measure based on when a temperature changes, and at certain times of the day, which may, on some days, be in conflict. The commenter recommends clarification with the following proposed language.

(B) Temperature and heat index measurements, as required by subsection (e)(1), shall be taken ~~where employees work and at times during the work shift when employee exposures are expected to be the greatest~~ at the following times:

Response to Comment 12.9
In response to the comment, the Board modified the proposed regulatory language. Please see response to comment 8.5.

Comment 12.10
The commenter recommends that employers with employees working in both indoor and outdoor areas should be able to provide one training program to comply and should not be required to provide separate training for both indoor and outdoor heat illness prevention. Furthermore, the commenter states that the language in the regulation should clarify that training is required before an employee starts a job that should be reasonably anticipated to result in exposure to the risk of heat illness, not each day that the employee may be exposed. The commenter proposes the following addition to subsection (h):

Combined training. Where employees are covered by section 3395 and this section, the training program for this section can be integrated into section 3395 training.

Response to Comment 12.10
In response to the comment, the Board has modified the proposed regulatory text to include a note under subsection (h) Training, to permit employers with employees working in both indoor and outdoor areas to provide one comprehensive training which includes the requirements of section 3395 and the proposed regulation.

The Board thanks the commenter for their input and participation in the rulemaking process.

13. Mauricio Juarez, Jack in the Box worker, by written comments dated May 17, 2023.

Comment 13.1
The commenter, who has worked at Jack in the Box in San Diego for eight years, has experienced ongoing heat issues at the workplace. The kitchen temperature reached 102 degrees Fahrenheit two years ago, causing coworkers to faint and require paramedics' assistance. Despite requests, the management failed to address the broken air conditioning (AC) or provide any training on handling such situations. The employees lodged complaints with Cal/OSHA and staged a strike to demand improvements. Although the AC was eventually fixed, it still malfunctions at times.

With summer approaching, the commenter is afraid they will have to work in the same dangerous situations as in the past. The commenter emphasizes the need for companies like Jack in the Box to prioritize employee health and safety. The commenter urges the Board to

adopt and support the proposed heat rule to set stricter standards on employers. It will require them to take the protective measures necessary to ensure the workplace is safe and provide appropriate training for handling these situations.

Additionally, the commenter requests that the Board seriously consider comments from their organization, Fight for $15 and a Union, and to strengthen the heat standard accordingly.

Response to Comment 13.1
The Board acknowledges the commenter's support for the proposed regulation. Please see responses to comments 22.1 through 22.7 for the Board's responses to the comments of the Fight for $15 and a Union.

The Board thanks the commenter for their input and participation in the rulemaking process.

14. Maribel Acevas, McDonald's worker, by written comments dated May 17, 2023.

Comment 14.1
The commenter has been working as a cook at McDonald's in San Diego for five years. Throughout this period, the AC has not consistently been working. Two years ago, the employees had to go on strike to have the AC fixed as the temperature inside the restaurant approached 100 degrees Fahrenheit. Although the AC was functional for a while, it has now become excessively hot again, leading to excessive sweating and fatigue for the commenter.

The commenter emphasizes that they have never received any training on recognizing and managing heat. The commenter states that they should not have to go on strike to simply work in a comfortable and humane environment.

Fight for $15 and a Union is submitting written comments in support of the proposed heat rule and is asking the Board to strengthen it. As one of the workers most affected by the heat rule, the commenter asks the Board to carefully review and consider these comments.

Response to Comment 14.1
The Board acknowledges the commenter's support for the proposed regulation. Please see responses to comments 22.1 through 22.7 for the Board's responses to the comments of the Fight for $15 and a Union.

The Board thanks the commenter for their input and participation in the rulemaking process.

15. Stephen Knight, Executive Director and AnaStacia Nicol Wright, Staff Attorney, on behalf of Worksafe and: California Conference of Machinists; California Conference Board of the Amalgamated Transit Union; California Labor Federation; California Teamster Public Affairs Council; Climate Resolve; CRLA Foundation; CLEAN Carwash Worker Center; CA

Healthy Nail Salon Collaborative; California Nurses Association; California Teachers Association; Engineers and Scientists of California, IFPTE Local 20; East Bay Alliance for a Sustainable Economy (EBASE); Fight for 15 and a Union; Glenn Shor, former Manager, Census of Fatal Occupational Injuries, Cal/OSHA; Koreatown Immigrant Worker Alliance (KIWA); Legal Aid at Work; Líderes Campesinas; Luisa Gratz - President, Local 26 ILWU; National Union of Healthcare Workers; Natural Resources Defense Council (NRDC); Northern California District Council of the International Longshore and Warehouse Union; Pilipino Association of Workers and Immigrants (PAWIS); Restaurant Opportunities Center United; Santa Clara County Wage Theft Coalition; San Mateo Labor Council; SoCalCOSH; SEIU California; Teamsters Local 572; The California School Employees Association (CSEA); UFCW Western States Council; USW Local 675; UNITE HERE; Warehouse Worker Resource Center, by written comments dated May 18, 2023.

Comment 15.1

The commenters expressed strong support of the proposed regulation, which is overdue and urgently needed to protect California workers from current and increasing conditions of high heat in their indoor workplaces.

The commenters have concerns about key elements of the proposal that, if not strengthened, will continue to leave workers exposed to serious and well-known dangers. The commenters also stress the need to avoid further delays that would require missing the one-year Administrative Procedure Act (APA) deadline and withdrawing the current proposal.

The commenters assert that high heat is a hazard that leads to a wide array of workplace injuries far beyond just heat illness itself. The commenters reference a 2021 study of 18 years of California workers compensation injury reports. The researchers concluded that extreme heat is likely to have caused about 20,000 extra workplace injuries of all kinds every year or 360,000 extra injuries to California workers between 2001 and 2018 - 19 times the annual number of workplace injuries shown in the worker compensation records as caused by extreme temperatures. The researchers also reported that lower income workers are at least five times more likely to be hurt on the job due to heat than high-income workers. The commenter argues that this study suggests that the SRIA estimate by the RAND Corporation -- that over the first 10 years the proposed indoor heat regulation would result in approximately 2,029 fewer non-fatal injuries and 10 fewer fatalities -- is a significant underestimate of the impact of this important indoor heat standard.

Response to Comment 15.1

The Board acknowledges the commenters' support for the proposed regulation. Please see the Board's responses to the commenters' concerns provided below.

Comment 15.2

The commenters argue that the current application threshold of 82 degrees Fahrenheit in the proposed regulation increases the risk of heat exposure for workers and causes confusion. They propose lowering the threshold to 78 degrees Fahrenheit for several reasons.

The commenters highlight that previous drafts suggested an application threshold of 80 degrees Fahrenheit for higher-risk workers, but even that was deemed inadequate to protect certain workers. They reference ACGIH guidelines recommending lower thresholds for heavy and moderate work conditions. The commenters stress the need to protect workers engaged in hazardous conditions, such as heavy work, repetitive motions, poor cool air circulation, or wearing heat-restrictive clothing.

Furthermore, the commenters point out that the 82 degrees Fahrenheit threshold may create confusion as the outdoor heat standard's shade requirement threshold is set at 80 degrees Fahrenheit. To ensure clarity and consistency, they suggest setting the default application threshold at 80 degrees Fahrenheit for all industries, aligning it with the outdoor heat standard. This would simplify the standard and adhere to scientific guidelines for implementing general controls.

Additionally, the commenters argue that the threshold temperature for implementing control measures in subsection (e) is too high. They refer to empirical data and an OSHA study recommending a lower heat index threshold of 85 degrees Fahrenheit based on recorded occupational heat incidents occurring at indices below 87 degrees Fahrenheit. They propose adopting the heat index of 85 degrees Fahrenheit as a more appropriate threshold in line with scientific guidelines and occupational heat illness data.

Response to Comment 15.2
Please see response to comment 7.2.

Comment 15.3
The commenters express concern that the current definition of "clothing that restricts heat removal" is too restrictive and may exclude clothing that poses significant heat illness risks. They argue that workers often wear standard clothing like jeans and t-shirts and cannot afford specialized heat-restricting garments. The commenters emphasize that any heavyweight clothing can impede heat removal, even if it is not waterproof or designed for environmental hazards or contamination protection. They also highlight that masks and respirators, although effective for safety, can interfere with the body's heat regulation and increase the risk of overheating. The commenters propose expanding the definition to include masks, respirators, heavy coveralls, work uniforms, multiple layers of clothing, and heavy or fluid-resistant aprons and gowns.

Response to Comment 15.3

The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modification to the definition of "clothing that restricts heat removal." The current definition is intended to focus on clothing that significantly limits the body's ability to dissipate heat and increase the risk of heat illness. While items such as masks, respirators, heavy coveralls, work uniforms, multiple layers of clothing, and heavy or fluid-resistant aprons and gowns may have some impact on thermal regulation, they are generally designed to provide protection from other workplace hazards and serve important safety purposes. Expanding the definition to include these items may have unintended consequences, such as discouraging employers from allowing voluntary use of respirators. The Board believes that the proposed definition strikes a balance between worker safety and practical considerations in various work environments.

Comment 15.4

The commenters state that the current standard leaves the determination of when or whether to take a cool-down break to the workers. However, this can lead to workers not feeling empowered or comfortable in requesting a break, or not requesting a break due to work quota demands or pressure or retaliation from managers or other employees, etc. To avoid this, the standard should include mandatory rest break language during high heat periods. For example:

> Employers will require one (1) ten (10) minute cool-down rest break every 90 minutes when the threshold application applies.

These breaks shall not interfere with an employee's right to take any other mandated, scheduled or requested breaks.

In addition, cool-down areas should be required to be located indoors if feasible, since the temperature in indoor spaces is generally easier to control with a required indoor heat standard. Placing cool-down areas outdoors should not be permitted by the standard, unless it is absolutely not feasible to have indoor areas. Likewise, the maximum temperature in indoor cool-down areas should be 78 degrees Fahrenheit rather than 82 degrees Fahrenheit.

Response to Comment 15.4

In order to remain consistent with section 3395, the Board declines to make the commenters' proposed modification. Using work/rest schedules is an administrative control and the proposed regulation requires employers to use control measures as specified in subsections (e)(2)(A) through (e)(2)(C) to minimize the risk of heat illness when they meet the conditions listed in subsection (a)(2). The Board disagrees that all cool-down areas should be maintained indoors. The Board believes that various factors should be considered in the location of cool-down areas, including the nature of the work environment and the effectiveness of both indoor and outdoor cool-down measures. In respect to the comment regarding the maximum temperature in indoor cool-down areas, please see response to comment 7.3.

Comment 15.5

The commenters assert that the definition for "union representative" in subsection (b), and the limitation on the right of participation in developing a heat prevention plan to a “union representative” in subsection (e)(1)(D), is detrimentally restrictive to non-unionized employees who make up the great majority of California workers and of workers at risk from high heat.

The commenters state that they have long advocated for the right of non-unionized employees to have the ability to designate a representative of their choice to assist with their involvement in workplace safety. Neither the California nor federal OSHA Acts limit this type of representation to unions.

"Designated representative," "authorized representative," or "employee representative" are all well-understood terms used in other state and federal OSHA standards and in the Labor Code, and this standard should not conflict with these existing code sections. The commenters urge deletion of the reference to “union representative” in favor of established terminology.

Response to Comment 15.5

The Board is not persuaded by the commenter’s arguments and declines to adopt the commenter’s proposed modifications. The Board disagrees with the comment that the language in subsection (e)(1)(D) is detrimentally restrictive to non-unionized employees. The provision explicitly states that employers must have effective procedures to obtain active involvement of employees and their union representatives. It is important to note that the involvement of employees is required regardless of their union status. Thus, the regulation ensures that all employees, regardless of their union affiliation, have the opportunity to participate in the process.

The term “union representative” is specifically used in subsection (e)(1)(D) because they have legal access to the worksite. On the other hand, terms such as “designated representative,” “authorized representative,” and “employee representative” are used in other sections of title 8 regulations to provide access solely to records, without legal access to the worksite. The Board has made this distinction to maintain consistency across different sections of the regulation and to ensure that appropriate access rights are granted as necessary.

Comment 15.6

The commenters assert that it is critical that any training under this standard be in a language workers can read and understand and also be presented in-person and interactive. These training principles are not new and have been incorporated into other recent standards such as subsection 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. Lastly, there should be a trigger for refresher trainings anytime there is a high heat advisory.

Response to Comment 15.6

In order to remain consistent with section 3395, the Board declines to adopt the proposed modification. Implementing refresher trainings triggered by high heat advisories may pose logistical challenges, especially in industries with widespread operations or varying local weather conditions. It could require significant resources and coordination to ensure timely and consistent delivery of refresher trainings across all affected locations. The proposed regulation requires employers to provide an effective training that equips employees with the necessary knowledge and skills to identify and mitigate heat-related risks during high heat advisories. In addition, subsection (g)(1) requires close observation of all employees during a heat wave where no effective engineering controls are in use to control the effect of outdoor heat on indoor temperature. In respect to comments regarding the language and annual training, please see response to comment 7.6.

Comment 15.7

The commenters argue that the proposed 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 HIPP. 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 Cal/OSHA will miss important information to help establish whether an employer adequately assessed environmental risk factors and implemented appropriate control measures.

Response to Comment 15.7

The Board acknowledges the commenters' concerns that the proposed recordkeeping requirements in subsection (e) may weaken the standard and undermine compliance, workplace transparency, and enforcement related to control measures. However, the Board declines to adopt the proposed modification at this time as requiring employers to establish and maintain records of evaluations of environmental risk factors for heat illness, in addition to temperature and heat index measurements, will significantly increase the cost estimate for the proposed regulation and impose an additional recordkeeping burden on employers.

Comment 15.8

The commenters state that other Cal/OSHA standards make a reference to the employee access provisions of section 3204(e), which require access to records in a reasonable, time, place, and manner no later than 15 days after the request is made (e.g., in the workplace violence prevention standard for health care settings, safe patient handling, and aerosol transmissible diseases standard). Good regulatory drafting practices demand consistency where there is no need to use new or different terminology that could create confusion or conflict. As such, it

would make sense to also incorporate this reference into the heat illness prevention standard's recordkeeping section as well.

The standard should require longer verifiable 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 some employers use to discourage worker action on health and safety.

Response to Comment 15.8
The Board is not persuaded by the commenter's argument that the proposed regulation needs to reference subsection 3204(e). The specific record retention requirements outlined in subsection (e)(1)(B)3. adequately address the need for accessibility without the necessity of cross-referencing. This approach ensures clarity and facilitates easy access to the relevant requirement.

The Board thanks the commenters for their input and participation in the rulemaking process.

16. Tomás J. Aragón, MD, DrPH, Director and State Public Health Officer, California Department of Public Health, by written comments dated May 17, 2023.

Comment 16.1
The commenter strongly supports adoption of this regulation to protect workers from illness and death caused by exposure to heat.

Heat-related illness (HRI) is a significant, preventable cause of occupational illness and death. In addition to outcomes like heat syncope, heat exhaustion, and heat stroke, exposure to elevated heat has been shown to increase the risk of work-related injuries and worsen chronic health conditions. Many California workers in facilities lacking air conditioning like warehouses, factories, and commercial kitchens are exposed to excessive heat on the job; this risk is not distributed evenly among the workforce, with Latino and Black workers and immigrant workers at particularly high risk of HRI.

California's 2006 adoption of the Maria Isabel Vasquez Jimenez heat illness standard for outdoor places of employment and 2015 revisions require that employers maintain a written HIPP and act to prevent HRI by measures including ready access to drinking water, preventative rest breaks that take into account high heat, and training for workers and supervisors; however, indoor workers do not yet have mandated access to these essential prevention strategies. Also, existing general industry standards do not address specific measures critically needed to prevent HRI such as temperature monitoring, access to cool-down areas, and acclimatization - in an analysis of United States (US) HRI fatalities more than 70% occurred in unacclimatized workers.

US- and California-based studies of reported HRI cases and fatalities and Workers' Compensation claims have demonstrated the need for a standard specific to indoor workplaces. HRI may result in permanent disability and causes significant financial costs to workers and their families, employers, and the healthcare system. The effects of climate change will continue to increase the burden of occupational HRI.

The proposed regulation provides employers with tools to act proactively to prevent HRI – tools that are supported by scientific evidence and proven to be effective and feasible by the success of previously implemented heat illness prevention standards in California and other states. This standard will close the gap in protections between outdoor and indoor workplaces and protect millions of California workers from heat-related illness and death.

Response to Comment 16.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

17. Sarah Quiter, Principal Counsel, UC Legal, Office of the General Counsel, University of California, Office of the President, by written comments dated May 17, 2023.

Comment 17.1
The commenter suggests the Board incorporate two separate time components to subsection (a): (1) the length of time the temperature needs to equal or exceed the triggers of 82 and 87 degrees Fahrenheit; and (2) the duration an employee is exposed to the temperatures indoors.

The commenter argues that it does not make logical sense for the proposed regulation to apply when the indoor temperature is exceeded for only a few minutes. An employer should not have to wonder whether an instantaneous spike above 82 degrees would trigger the assessment and control measures of subsection 3396(e); the fluctuation of temperatures based upon an "equals or exceeds" threshold will create unnecessary confusion. The commenter suggests the Board to incorporate a temperature trigger based upon either a sustained period of time (such as one or two hours) or a time-weighted average (TWA) over one or two hours. Using a TWA would be similar to how Fed OSHA and the ACGIH calculate average WBGT.

The commenter states subsections (a)(1), (a)(2)(A), and (a)(2)(B) each refer to "when employees are present" for an undefined period. The commenter asserts that the proposed regulation should differentiate between incidental/short periods and sustained periods of exposure to areas with high indoor heat. Accordingly, the proposed regulation should only apply when an employee is exposed to the triggering temperatures for a specified minimum time.

The commenter recommends revising subsection (a)(1) as follows:

> This section applies to all indoor work areas where the temperature equals or exceeds 82 degrees Fahrenheit consistently for a minimum of one hour [or if using the TWA method, "…equals or exceeds a time-weighted average of 82 degrees Fahrenheit over a one-hour period"] when employees are present for a minimum of one hour.

The commenter states that these same edits could also be made in subsection (a)(2).

Response to Comment 17.1
The Board is not persuaded by the commenter's arguments and declines to amend the proposed regulation as suggested. The current regulation, which applies when the indoor temperature equals or exceeds the threshold, provides a clear and objective standard for employers to follow. Subsection (e)(1)(B) clearly states that temperature and heat index measurements, as required in subsection (e)(1), shall be taken where employees work and at times during the work shift when employee exposures are expected to be the greatest. Introducing a time-based trigger could create ambiguity and uncertainty for employers, making it more difficult for them to comply with the regulation. Additionally, even brief exposure to high temperatures can pose a risk to worker health and safety. It is therefore important for the regulation to apply as soon as the temperature threshold is exceeded, rather than waiting for a sustained period of time or calculating an average. Also, please see responses to comments 10.2 and 12.2.

Comment 17.2
The commenter states many employees perform indoor and outdoor tasks and would thus be subject to both indoor and outdoor heat illness standards. To eliminate confusion and ensure consistent training of employees subject to these dual standards, the Board should consider harmonizing the indoor and outdoor temperature triggers, at least for those employees who wear heat-restrictive clothing or work in high radiant heat areas.

Response to Comment 17.2
The Board is not persuaded by the comment. Increasing the temperature threshold for subsection (e) to harmonize with the high-heat procedures in the outdoor heat illness standard (subsection 3395(e)) could result in inadequate protection for employees working indoors who wear clothing that restricts heat removal or work in high radiant heat areas. Instead of harmonizing the temperature triggers, it may be more effective to provide clear and consistent training to employees on the differences between the indoor and outdoor heat illness standards and how to protect themselves in both environments.

Comment 17.3

The commenter states the definition of "cool-down area" in subsection (b)(4) includes the phrase "open to the air," which is too vague and requires additional context. For example, it would be helpful to know whether "open to the air" could include a barn or shop with large roll-up doors or whether there must be no walls or a certain percentage of the space that is "open to the air."

Response to Comment 17.3
The Board is not persuaded by the commenter's argument that the definition of "open to the air" is too vague. The definition of "cool-down area" is written to be consistent with the shade requirement in section 3395 and employers have successfully complied with that requirement over the years. A barn or shop with large roll-up doors is an "indoor" space as defined in subsection (b)(12). If it is used as a cool-down area, the temperature must be maintained at less than 82 degrees Fahrenheit unless the employer demonstrates it is infeasible.

Comment 17.4
The commenter states the definition of "indoor" in subsection (b)(12) needs clarification. As written, a barn would not be considered an indoor space because one side is open to the outdoors. But barns provide significant shelter and are frequently viewed as indoor spaces. Likewise, if a barn has large roll-up doors, it would be helpful to know if this meets the definition of "Indoors."

Response to Comment 17.4
The Board is not persuaded by the comment. The proposed definition intends to categorize any space with an open side as outdoor. Doors and windows, regardless if open or closed, are considered the same as a solid wall in determining if a space is indoors as expressly stated in the definition. Consequently, if a barn has roll-up doors, it would be considered indoor according to the definition.

Comment 17.5
The commenter states subsection (e)(1)(B) requires employers to measure temperature and heat index "where employees work," but it is unclear how granular these measurements must be. For example, would a measurement for each building be sufficient? Or is a measurement for each floor required? The Board should clarify what is meant by "where employees work."

Response to Comment 17.5
The proposed regulation applies to a wide variety of workplaces and the level of granularity required for temperature and heat index measurements will depend on the specific situation. If employees are in a building that has consistent temperatures throughout, one measurement may be sufficient. However, if the facility has areas with varied temperatures, the employer must take enough measurements to ensure that an accurate representation of temperature conditions is obtained throughout the facility where employees work to assess their exposure to indoor heat. The requirement to measure temperature and heat index "where employees

work" is intended to provide flexibility for employers to determine the most appropriate level of granularity for their specific workplace.

Comment 17.6
The commenter states the proposed regulation can potentially impose significant costs on the University and other employers depending on where and how many temperature and heat measurements will be required. In buildings where temperature-controlled mechanical ventilation does not exist, employers must purchase instruments to read these temperatures and train employees to check them throughout the day when it is warm outside. University locations, particularly those in the Bay Area and in mild coastal climates that do not have HVAC, would also face enormous costs to implement the controls in section 3396(e). Given the substantial infrastructure upgrades that will likely be necessary to achieve compliance with the proposed regulation, the University (and likely many other California employers) would not be able to immediately comply with the temperature and heat measurement requirements once the proposed regulation goes into effect. The processes of budgeting, procurement, and installation of these systems will take time. The commenter recommends that the Board should add an implementation schedule to the proposed regulation – a defined period for employers to come into compliance with subsection 3396(e) and other requirements of the proposed regulation.

Response to Comment 17.6
The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modification due to the urgent need for protection against heat illness in indoor places of employment. If an employer determines immediate implementation of engineering controls is not feasible, alternative control measures, such as administrative controls and personal heat protective equipment, can be utilized while engineering controls are being implemented. This approach will ensure that necessary safeguards are in place without delay.

Comment 17.7
The commenter states that the proposed regulations mention the infeasibility of implementing specific controls. The commenter recognizes the difficulty of defining "infeasible," but it would be helpful for the Board to add examples of what is considered "infeasible" – either in the proposed regulation itself or in a separate guidance document, such as a frequently asked questions (FAQ) page.

Response to Comment 17.7
The Board acknowledges the commenter's suggestion and will consider adding examples of what is considered "infeasible" in a separate guidance document. Please see response to comment 7.5. Feasibility has been defined in case law established by the Occupational Safety and Health Appeals Board. A definition in the proposed regulation could disrupt long established case law.

The Board thanks the commenter for their input and participation in the rulemaking process.

18. Larry Sweetser, Sweetser & Associates, Inc., by written comments dated May 18, 2023.

Comment 18.1
The commenter states the triggering temperature of 82 or 87 degrees Fahrenheit does not allow for short durations of exceedances, e.g. 10 minutes at or over that temperature will result in full implementation of the requirements. This would imply that an operation would need to conduct continuous temperature measurements at all times. This is not justified for short exceedance durations.

Response to Comment 18.1
The Board is not persuaded by the commenter's argument that the proposed regulation implies that an operation will need to conduct continuous temperature measurements at all times. The employer is only required to conduct a reassessment when there is a reasonable expectation that the environmental conditions will be 10 degrees or more above the previous measurements at the location where employees work. Furthermore, these assessments should be conducted during the work shift when employee exposures are anticipated to be at their highest. With respect to the commenter's argument regarding short duration of exceedances, please see responses to comments 10.2 and 12.2.

Comment 18.2
The commenter states the definition of "clothing that restricts heat removal" will also apply to cotton coveralls or pants and long-sleeves of any material that are standard for solid waste operations for protection from physical hazards or waste materials. The commenter states using less clothing creates a safety hazard. This does not seem to be the intent but applies. Impact is that the new standard applies when temperature is 82 degrees Fahrenheit and not 87 degrees Fahrenheit. It would be good to try again for clarification.

Response to Comment 18.2
In response to the comment, the Board proposes to modify the language of the exception to subsection (b)(3) to include any clothing that meets all of the listed criteria.

Comment 18.3
The commenter states that it is not clear that definition of "indoor" excludes vehicles since cabs have an overhead covering. If the vehicle does not have temperature control, heat can be an issue. The commenter remembers the San Francisco transfer truck did not have air conditioning and many garbage trucks drive with the window open to hear sounds, which limit the effectiveness of air conditioning. The commenter asserts that it needs clarification.

Response to Comment 18.3
Please see response to comment 12.3.

Comment 18.4
The commenter states that in larger facilities (e.g. solid waste transfer stations and Material Recovery Facilities with many operating areas), the definition of "temperature" could require multiple thermometers in different areas. Employees that roam throughout the building will need to monitor the temperature as they move. Please clarify how these measurements and recordkeeping are required for larger facilities.

Response to Comment 18.4
The Board acknowledges that large facilities with varied environments may need to use multiple thermometers to comply with the proposed regulation when it meets the conditions specified in subsection (a)(2). In these cases, the employer must take measurements to ensure that an accurate representation of temperature conditions is obtained throughout the facility where employees are present to assess employees' exposure to indoor heat. Please also see the response to comment 17.5. Records, as required by subsection (e)(1)(A), must be retained for 12 months or until the next measurements are taken, whichever is later.

Comment 18.5
The commenter states that one quart per employee per hour is two gallons per eight-hour shift per employee. Ten employees equates to 20 gallons per shift. One hundred employees equates to 200 gallons. That is a lot of water but likely the needed amount. Training would likely be to drink before shift starts.

Response to Comment 18.5
The requirement in subsection (c) to provide one quart of drinking water per employee per hour for the entire shift is consistent with section 3395 and employers have successfully complied with the requirement. The Board disagrees that the training for this requirement would be limited to drink before the shift starts. As stated in subsection (c) employers are required to encourage frequent consumption of water as described in subsection (h)(1)(C). Even if employees drink water before the start of the shift, it remains the employer's responsibility to ensure sufficient quantity of drinking water is available throughout the entirety of the shift.

Comment 18.6
The commenter states subsection (e)(1) has a temperature and heat index recordkeeping requirement when the initial temperature is exceeded and when the temperature increases by 10 degrees or more. The recordkeeping is not difficult, but time will be needed to keep monitoring the temperature change. A humidity gauge is required to calculate heat index with the temperature. Sites will need to buy a thermometer with alarms to record when temperature is exceeded.

Response to Comment 18.6

The proposed regulation does not mandate continuous temperature monitoring or the use of a thermometer with an alarm. Instead, employers are required to measure the temperature and determine heat index initially when it is reasonable to suspect that subsection (e) applies and when they are reasonably expected to be 10 degrees or more above the previous measurements. These measurements must be taken where employees work and at times during the work shift when employee exposures are expected to be the greatest. Also, please see response to comment 8.5.

Comment 18.7
The commenter states that it will be a difficult process in remote rural areas with only one employee with no means of communication. Supervisors will not know the temperature in that area and no means to reach them or know when an emergency is triggered. Instructions will need to be to close and leave for the day.

Response to Comment 18.7
The Board is not persuaded by the comment. The requirements outlined in subsection (f) are identical to those specified in section 3395, which effectively applies to remote outdoor workplaces. Employers have demonstrated successful compliance with these requirements, ensuring the safety and well-being of employees.

Comment 18.8
The commenter states that remote sites with only one employee will not be able to comply with this standard other than not to allow the employee to work at the remote site until they pass the 14 days. Some of these sites are only one day per week operation so 14 days would be 14 weeks before they could start remotely. This is not clear if the 14 days applies if they start in the winter for 14 days before the temperature starts getting hot. There is no explanation or justification for this 14-day period. The commenter states cutting this in half to seven days or even less should be sufficient.

Response to Comment 18.8
The Board is not persuaded by the comment. The requirements in subsection (g) are identical to those specified in section 3395, which effectively applies to remote outdoor workplaces. Employers have demonstrated successful compliance with these requirements, ensuring the safety and well-being of employees.

Comment 18.9
The commenter states that including this NWS Heat Index Chart in the regulations limits it to the version printed in 2019. If the chart changes, the regulations would be limited to this version. It could reference the 2019 or latest adopted version by the NWS.

The commenter also notes that the maximum temperature in Appendix A is 103 degrees Fahrenheit and the proposed regulations do not address what to do when the temperature is

over 103. This needs to be changed to cover higher temperatures since the heat index number is a required recordkeeping requirement.

Response to Comment 18.9
In response to the comment, the Board proposes a revision to Appendix A to encompass higher temperature ranges. The Board declines to adopt the commenter's recommendation to reference the 2019 or latest adopted version by the NWS. According to California Code of Regulations, title 1, section 20, a proposed regulation that incorporates another document by reference must specifically and accurately identify the name or title of the incorporated document and the revision date of the incorporated document in the text of the regulation.

The Board thanks the commenter for their input and participation in the rulemaking process.

19. Jonathan Parfrey, Executive Director, Climate Resolve, by written comments dated May 18, 2023.

Comment 19.1
The commenter states that the proposed safe temperature threshold for indoor heat is too high and too rigid. According to the NIOSH, adequate indoor temperatures in the summer should range between 75 to 80 degrees Fahrenheit assuming slow air movement of 40 feet per second and 68 to 75 degrees Fahrenheit during winter. The commenter recommends a 78 degrees Fahrenheit temperature standard for summer and a 72 degrees Fahrenheit standard for winter.

Response to Comment 19.1
The Board is not persuaded by the commenter's arguments and declines to adopt the comment's proposed modification to have different thresholds for summer and winter. Please see response to comment 7.2.

Comment 19.2
The commenter asks the Board to clarify the meaning of "…when employees are present." It is not uncommon for factory workers to visit detached auxiliary warehouses for a half hour or more and then return to their regular indoor work spaces. In addition, many warehouse workers spend time away from their regular work spaces intermittently unloading/loading intermodal cargo containers. The commenter asks whether this will apply to factories with detached auxiliary workspaces like warehouses, loading bays or intermodal containers.

Response to Comment 19.2
The proposed regulation applies to all indoor work areas where the temperature equals or exceeds 82 degrees Fahrenheit when employees are present with an exception for teleworking locations. The Board received comments regarding indoor spaces that are normally unoccupied and only accessed briefly and proposes a modification to add a new exception (C) to subsection (a)(1) to address incidental heat exposures. Please see response to comment 10.2.

Comment 19.3
The commenter states there is a direct correlation between heat temperature and relative humidity. As temperature increases, so does relative humidity. The commenter requests to lower the heat index threshold as 87 degrees Fahrenheit is identified as a "dangerous" relative humidity level by the NWS.

Response to Comment 19.3
Please see response to comment 7.2.

Comment 19.4
The commenter suggests elaborating on the definition of "clothing that restricts heat removal" to include face masks, respirators, plastic gloves, coveralls, impermeable aprons and gowns. All of this clothing, combined or otherwise, can cause people's internal temperature to rise to dangerous levels.

Response to Comment 19.4
Please see response to comment 15.3.

Comment 19.5
The commenter states the current standard puts the onus on workers to decide when and where to take cool-down breaks. The commenter recommends adding language to subsection (b)(4) that mandates a minimum number of rest breaks and adding a definition for measuring minimum/maximum distances between affected indoor heat areas and cool-down areas. Is the distance taken from the edge of heat areas or center radius? All cool-down areas should be maintained indoors.

Response to Comment 19.5
The Board decided that placing a distance limit is inappropriate for various types of worksites as it may become a default distance even when conditions allowed having cool-down areas much closer to workers. In respect to comments regarding a minimum number of rest breaks and indoor location, please see response to comment 15.4.

Comment 19.6
The commenter suggests removing the following language from the definition of "heat index": "Radiant heat is not included in the heat index." For many factories, radiant heat is a constant source of extreme heat and should be mitigated for the health and safety of all indoor workers.

Response to Comment 19.6
The Board is not persuaded by the commenter's arguments and declines to make the proposed modification. The heat index, developed by the NWS, serves as a measure of heat stress specifically designed for outdoor environments. It takes into account the dry bulb temperature

and relative humidity, while omitting the consideration of radiant heat load. The inclusion of the language mentioned by the commenter in the definition aims to clarify that the heat index does not encompass radiant heat.

However, the Board acknowledges that radiant heat constitutes a consistent source of extreme heat and recognizes the need to address it at worksites. The proposed regulation addresses this concern by requiring employers to implement assessment and control measures outlined in subsection (e) when the temperature reaches or exceeds 82 degrees Fahrenheit when employees work in a high radiant heat area. This ensures that appropriate measures are taken to mitigate the effects of radiant heat on worker safety and health.

Comment 19.7
The commenter asserts that all employees, whether unionized or non-union, should be allowed to participate in the formulation of a "heat prevention plan." The current definition that limits participation to "union representatives" is limiting and counter to the general interests of all indoor workers. The commenter recommends to delete the term "union representative" from the definitions section and adopt established terminology.

Response to Comment 19.7
Please see response to comment 15.5.

Comment 19.8
The commenter recommends indicating a maximum distance where water should be located in reference to indoor work areas as "close as practicable" is too arbitrary.

Response to Comment 19.8
In order to remain consistent with section 3395, the Board declines to adopt the commenter's proposed modification. The Board decided that placing a distance limit is inappropriate for various types of worksites as it may become a default distance even when conditions allowed having water much closer to workers.

Comment 19.9
The commenter recommends indicating a maximum distance where cool-down areas should be located in reference to indoor work areas in subsection (d)(1) as "close as practicable" is too arbitrary.

Response to Comment 19.9
Please see response to comment 19.5.

Comment 19.10
The commenter recommends requiring employers to establish and maintain records of evaluations of environmental risk factors for heat illness. As it stands, the standard only

requires temperature and heat index measurements to be maintained. These requirements need to be broadened so that employers are mandated to keep records open and accessible to employees in order for them to effectively alter their behavior on extreme heat days. Furthermore, not mandating this requirement weakens enforcement by Cal/OSHA as there is no record of appropriate control measures to prevent injury.

Response to Comment 19.10
Please see response to comment 15.7.

Comment 19.11
The commenter recommends adding language indicating the employers' responsibility to conduct culturally relevant training sessions in languages best understood by workers. There is also a need for annual refresher courses and a proactive mechanism that reminds workers to implement these life-saving measures when heat advisories are issued by the NWS.

Response to Comment 19.11
Please see responses to comments 7.6 and 15.6.

Comment 19.12
The commenter states that subsection (i)(3) should require employers to include a thorough evaluation of risk factors that makes indoor workers prone to preventable accidents. Things to consider in the risk factor assessment include work activity levels, which can cause a worker to overexert themselves or exacerbate pre-existing medical conditions. Other fundamental aspects of heat illness risk factors include clothing adjustment factors and radiant heat sources and should be included in the assessment.

Response to Comment 19.12
The Board is not persuaded by the commenter's arguments and declines to make the proposed modification because it is not necessary. Subsection (i)(3) requires the HIPP to include procedures, in accordance with subsection (e), to measure the temperature and determine heat index, and record whichever is greater; identify and evaluate all other environmental risk factors for heat illness; and implement control measures.

The definition of environmental risk factors for heat illness, as outlined in subsection (b)(6), covers a broad range of working conditions that could potentially lead to heat illness. These factors include air temperature, air movement, relative humidity, radiant heat from various sources (including the sun), conductive heat from the ground, workload severity and duration, protective clothing, and personal protective equipment worn by employees. By incorporating these environmental risk factors, the regulation already necessitates the assessment of work activity levels, clothing adjustment factors, and radiant heat sources as part of the overall evaluation of heat illness risks.

Comment 19.13
The commenter suggests that the exception to subsection (e)(1) should specify the kinds of indoor spaces where this subsection would not be applicable.

Response to Comment 19.13
The Board is not persuaded by the commenter's arguments and declines to make the proposed modification. The exception in subsection (e)(1) provides flexibility for employers to determine the most effective way to protect their workers while still ensuring that appropriate measures are taken. Any employer with a work area that meets conditions listed in subsection (a)(2) may choose to use this exception. Employers who use the exception in subsection (e)(1) are still required to implement control measures to protect workers from heat-related illness.

The Board thanks the commenter for their input and participation in the rulemaking process.

20. Jo Forchione, Industrial Hygienist, Pacific Gas and Electric Company, by written comments dated May 18, 2023.

Comment 20.1
The commenter states this standard is overdue, and the current version is a beautiful piece of work that reflects a collaborative approach between Cal/OSHA and the various stakeholders.

Response to Comment 20.1
The Board acknowledges the commenter's support for the proposed regulation.

Comment 20.2
The commenter has a couple of concerns around how to ensure compliance when a significant number of employees work remotely and are often transitioning continuously between outdoor environments and indoor facilities not under the control of the employer. For example, Gas Service Representatives and Energy Efficiency Specialists spend much of their time driving between customer facilities and working inside them, where they cannot control the environment. It is particularly concerning when they work in super-heated attic and crawl space areas. It is not reasonable to expect individual workers to track the temperature or heat index, while trying to complete their work quickly and get out into an air-conditioned vehicle or other space. The commenter also has warehouse workers who transition multiple times each day between outdoor yards and indoor warehouses, so they would have to be mindful of which standard applies and adjust accordingly. The commenter is also concerned about fire responses as it does not appear that there is any exemption for emergency responders, although they certainly do their best to follow the standard in an effort to provide cool drinking water and shade.

Most of their employees use applications on their various devices to track heat and air quality, but these apps focus on outdoor heat, not indoor. There is also a time lag for various apps to

adjust to location. It might be more feasible to set a time limit on working in hot areas, when these are transitional.

Response to Comment 20.2
The Board has added an exemption to the application of this proposal for emergency response operations in subsection (a)(1) exception (D). In respect to the comment regarding setting a time limit on working in hot areas, such as attics, and the time spent on driving to these workplaces, or who transition between outdoor and indoor locations, please see responses to comments 8.1 and 10.2.

The Board thanks the commenter for their input and participation in the rulemaking process.

21. Alexis Teodoro, Orange County Communities Organized for Responsible Development, by written comments dated May 18, 2023.

Comment 21.1
The commenter states ensuring the safety and well-being of workers, especially in environments exposed to high temperatures, is of paramount importance. Heat-related injuries and illnesses can have severe consequences on the health and productivity of employees, and it is essential that comprehensive measures are in place to mitigate these risks. The commenter notes that the proposed regulation moves in the right direction for the protection of workers. However, several key provisions do not kick in until high temperatures ranging between 82-87 degrees Fahrenheit are reached. This can place the lives and health of workers at risk. The commenter recommends revising and lowering the temperature thresholds in order for the strongest protections to kick in sooner, rather than later.

Response to Comment 21.1
Please see response to comment 7.2.

The Board thanks the commenter for their input and participation in the rulemaking process.

22. Olivia Garcia, Alondra Hernandez, Angelica Hernandez, Pablo Narvaez, Laura Pozos, Delia Vargas, and Ingrid Vilorio, on behalf of California Fight for $15 and a Union, by written comments dated May 18, 2023.

Comment 22.1
The commenters support the proposed regulation as an important step toward protecting workers from the danger of heat illness. Fast food workers provided statements that they often experience heat illness symptoms and that managers routinely deny or minimize the dangers of heat. The commenters argue strongly in support of establishing a strong indoor heat illness standard and of requiring mandatory training for supervisors as well as employees.

Response to Comment 22.1
The Board acknowledges the commenters' support for the proposed regulation.

Comment 22.2
The commenters state that fast food workers who filed complaints about excessive heat cited broken air conditioning as the reason or among the reasons for the overheated conditions in their workplaces. Furthermore, workers state that fans do not actually reduce their exposure to high heat. The commenters suggest adding the following sentence to subsection (e)(2)(A) in the proposed regulation:

> In establishments with radiant heat sources, when other engineering controls fail to reliably and consistently maintain temperatures below the action threshold, the employer shall provide air conditioning and ensure its proper functioning unless the employer demonstrates that doing so is infeasible.

Response to Comment 22.2
The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modification, as it is not necessary. The proposed regulation covers a wide variety of industries and requiring air conditioning in all establishments with radiant heat sources would be too prescriptive. Employers are responsible for implementing appropriate control measures to reduce the risk of heat illness, and air conditioning is one of the engineering controls that can be used to comply with the regulation. Furthermore, existing title 8 regulations, sections 3328 and 5142, already mandate that employers inspect and maintain equipment, including air conditioning, in proper working condition.

Comment 22.3
The commenters agree with the comments submitted by Worksafe. The commenters urge mandating cool-down breaks rather than requiring vulnerable workers in understaffed, high-pressure workplaces to request them. The commenters provide the following language:

> Employers will require one 10-minute cool-down rest break every 90 minutes when the threshold application applies.

Response to Comment 22.3
Please see response to comment 15.4.

Comment 22.4
The commenters support Worksafe's recommendation to lower the standard's application threshold to 78 degrees Fahrenheit.

Response to Comment 22.4
Please see response to comment 7.2.

Comment 22.5

The commenters assert that the language in subsection (e)(1)(B) is insufficiently specific to ensure adequate temperature measurements in workplaces such as restaurants, where some employees work near radiant heat sources (such as cooks and drive-through staff in fast food kitchens) while others work further away from such heat sources (such as fast food cashiers). The commenters suggest the following change in subsection (e)(1)(B):

> Temperature and heat index measurements, as required by subsection (e)(1), shall be taken where employees work including measurements in proximity to any radiant heat source(s) in the workplace and at times during the work shift when employee exposures are expected to be the greatest.

Response to Comment 22.5

The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modification. Subsection (e)(1)(B) clearly requires employers to take measurements where employees work and at times during the work shift when employee exposures are expected to be the greatest. This already includes taking measurements in proximity to any radiant heat sources if necessary to accurately assess employee exposure to indoor heat.

Comment 22.6

The commenters urge requiring employers to provide drinking containers free of charge as well as drinking water.

Response to Comment 22.6

The Board is not persuaded by the comment and declines to adopt the proposed modification to be consistent with section 3395. Labor Code section 6401 requires every employer to furnish and use safety devices and safeguards, and shall adopt and use practices, means, methods, operations, and processes that are reasonably adequate to render such employment and place of employment safe and healthful. It also requires every employer to do every other thing reasonably necessary to protect the life, safety, and health of employees. It is important to note that section 3363 requires employers to provide free potable water to their employees and prohibits the common use of a cup, glass or other vessel for drinking purposes. Employers may supply employees with individual water bottles/containers (preferably insulated) provided hygiene is ensured (i.e., clean bottles for each employee) and a source for water replenishment is readily available. It is not permissible for an employer to require employees to supply their own water or water containers, even if the employer reimburses the employees for the cost.[4]

[4] Cal/OSHA Heat Illness Prevention Enforcement Questions and Answers. Updated July 2018. Accessed 6/6/2023. https://www.dir.ca.gov/dosh/heatIllnessQA.html

Comment 22.7
The commenters urge the Board to revise the statement of reasons for the draft indoor heat standard to memorialize that the indoor heat standard will apply to multiple employers under the multi-employer policy.

Response to Comment 22.7
The Board is not persuaded by the commenter's arguments and declines to revise the statement of reasons for the proposed regulation as it is not necessary. Please see response to comment 9.5.

The Board thanks the commenters for their input and participation in the rulemaking process.

23. Pamela Murcell, MS, CIH, President, California Industrial Hygiene Council, by written comments dated May 18, 2023.

Comment 23.1
The commenter recommends adopting the ACGIH TLVs® approach. The bill (SB1167, signed during 2016 legislative session) stated that the standard should consider the ACGIH TLVs® for heat. This was also discussed during advisory committee meetings. The proposed language clearly does not incorporate the TLVs® approach.

Response to Comment 23.1
The Board is not persuaded by the commenter's arguments and declines to make the proposed change. The ACGIH TLVs® approach was considered during the advisory committee process and it was rejected based on the stakeholders' input.

Comment 23.2
The commenter states that the standard sets an initial indoor trigger temperature without consideration of regional outdoor temperature differences in our state that may have impact on the indoor temperature, e.g., Fresno is typically subject to much higher outdoor temperatures from May through September as opposed to the much lower outdoor temperatures for San Francisco. The commenter asserts that one-size fits all is not an appropriate approach. The outdoor temperature for the region as well as the associated indoor temperature for a specific work environment will contribute to the acclimatization of the workers.

Response to Comment 23.2
The Board is not persuaded by the comment. While it is true that outdoor temperatures can vary significantly between regions and can impact indoor temperatures, it is important to note that the application threshold set by the proposed regulation is intended to provide a baseline level of protection for workers across the state. The proposed regulation considers the fact that workers may be exposed to high indoor temperatures regardless of the outdoor temperature in

their region. Additionally, employers are required to implement additional measures to protect workers when the indoor temperature exceeds higher thresholds. This approach provides a consistent and objective standard for employers to follow while also allowing for flexibility in addressing regional differences in outdoor temperatures. In addition, it is not feasible and overly complex to have variable temperature triggers for each microclimate in the state.

Comment 23.3
The commenter recommends incorporating a "heat wave" approach that would trigger implementation of certain control strategies when there is "excessive" heat given the work environment geographical location.

Response to Comment 23.3
The Board is not persuaded by the commenter's arguments and declines to incorporate the commenter's recommendation. Defining what constitutes "excessive" heat and determining when certain control strategies should be implemented could be complex and subjective. Additionally, relying solely on a "heat wave" approach could result in inadequate protection for workers in environments where high indoor temperatures are a regular occurrence, rather than just during heat waves. The proposed regulation provides a clear and objective trigger for implementing control measures to protect workers from heat illness, regardless of the geographical location of the work environment.

Comment 23.4
The commenter states the proposed regulation does not consider work activity levels like NIOSH and ACGIH do in their recommended strategies. The commenter asserts that work activity level is extremely important, particularly indoors, and needs to be accounted for in the proposed language.

Response to Comment 23.4
The Board is not persuaded by the commenter's arguments and declines to make the proposed modification. The ACGIH TLVs® approach, which considers work activity levels, was considered during the advisory committee process and it was rejected based on the stakeholders' input. Activity levels are highly subjective and can vary significantly across different work environments and over time in the same work environment. Therefore, the decision was made to establish clear temperature triggers as a more objective and practical approach to protecting workers from heat illness.

Comment 23.5
The commenter states that the proposed language could require the employer to take action even when within the Heat Index acceptable range (when considering temperature and relative humidity) under many instances. An employer should be able to calculate a WBGT based on reported temperature and relative humidity or take a dry bulb temperature, as best suits their operations, to determine if action is required.

Response to Comment 23.5
The Board is not persuaded by the commenter's arguments and declines to make the suggested modification. The use of WBGT was considered during the advisory committee process and it was rejected based on the stakeholders' input. The proposed regulation sets clear thresholds for implementing preventive measures to protect workers from heat illness. This approach provides a clear and objective standard for employers to follow while ensuring the protection of workers. It is important to note that the proposed regulation does not prohibit employers from utilizing WBGT as an additional tool to evaluate the risk of heat illness and identify suitable control measures for their operations.

Comment 23.6
The commenter states that time of exposure to temperature(s) of concern is not incorporated and needs to be addressed. Duration of exposure is a key factor when considering potential for impact.

Response to Comment 23.6
In order to remain consistent with section 3395, the Board declines to adopt the commenter's proposed modification. Please see responses to comments 10.2 and 12.2.

Comment 23.7
The commenter recommends striking out "environmental" and simply state "other" risk factors in subsections (e)(1) and (e)(1)(D)2. The commenter states that not all risk factors are environmental.

Response to Comment 23.7
The Board is not persuaded by the commenter's arguments and declines to adopt the commenter's proposed modification. While the Board acknowledges that not all risk factors for heat illness are solely environmental, it is important to note that the environmental risk factors outlined in subsection (b)(6) can be evaluated by the employer. On the other hand, personal risk factors may not always be reasonably assessable by the employer. Therefore, it is appropriate to focus on the evaluation and mitigation of environmental risk factors within the regulation.

Comment 23.8
The commenter recommends including the NIOSH Heat Illness application or similar applications as alternatives to the NWS heat index tables in subsection (e)(1)(C). Further, the commenter recommends clarifying whether NWS heat index tables are the same as information presented in proposed Appendix A "National Weather Service Heat Index Chart (2019)."

Response to Comment 23.8

The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modification as NIOSH Heat Illness application measurements are based on the outdoor conditions and will not accurately reflect temperature and heat index for indoor environments. Although NIOSH Heat Illness application allows the user to enter the temperature and humidity to calculate the heat index, it does not provide the heat index value over 137 degrees Fahrenheit. In addition, the heat index value calculated by the NIOSH Heat Illness application does not always match the heat index value from the NWS heat index tables or equation. Thus, incorporating the NIOSH Heat Illness application measurements would not align with the intended scope of the proposed regulation. As stated in the note of subsection (b)(9), Appendix A is the same as the 2019 NWS heat index table.

Comment 23.9
The commenter recommends not including Appendix A with information that references a specific date. Alternatively, if an appendix is included, indicate whether the use of the appendix is mandatory or non-mandatory and whether other information sources/references with equivalent information are acceptable.

Response to Comment 23.9
The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modification. Appendix A is included to provide employers a reference for determining the heat index from the dry bulb temperature and the relative humidity for employers that elect not to purchase heat index meters. The utilization of the appendix is clarified in the definition of heat index, which provides guidance on its appropriate use. A specific date is required for the table in Appendix A pursuant to Title 1 section 20.

The Board thanks the commenter for their input and participation in the rulemaking process.

24. Juanita Constible, Senior Climate & Health Advocate, Natural Resources Defense Council, by written comments dated May 18, 2013.

Comment 24.1
The commenter is in favor of strong, enforceable indoor workplace heat standards and appreciates the efforts of the Board to protect indoor workers from heat. The proposed regulation has the potential to reduce preventable illnesses, injuries, and deaths among workers laboring in warehouses, factories, fast food restaurants, K-12 schools, and other hot indoor settings across the state.

Response to Comment 24.1
The Board acknowledges the commenter's support for the proposed regulation.

Comment 24.2

The commenter asserts that an air temperature of 82 degrees Fahrenheit can correspond with heat index values ranging from 79 to 95 degrees Fahrenheit and this range is too high to use as a trigger for the rule. The commenter notes that 82 degrees Fahrenheit trigger is also inconsistent with the outdoor standard in section 3395, which requires employers to provide shade when the air temperature exceeds 80 degrees Fahrenheit. This discrepancy is particularly notable since the proposed indoor standard allows employers to offer outdoor cool-down areas.

The commenter states that it seems unnecessarily confusing to make every covered employer measure the air temperature and the heat index. The heat index will always be higher than the air temperature unless the humidity is extremely low. Therefore, the commenter recommends relying solely on the heat index to minimize confusion and the implementation burden on employers.

The commenter recommends using a heat index of no more than 80 degrees Fahrenheit to trigger provisions in the heat standard for workers wearing regular clothing, and an even lower trigger for workers in vapor-barrier or other heat-trapping clothing or personal protective equipment.

Response to Comment 24.2
The Board is not persuaded by the commenter's arguments and declines to adopt the commenter's proposed modification to rely solely on the heat index. The reliance on the heat index alone may not fully account for variations in environmental conditions across different workplaces. Measuring both the air temperature and the heat index allows employers to better understand and address the risks associated with working in hot environments. With respect to the commenter's recommendation regarding lowering the application threshold of the regulation, please see response to comment 7.2.

Comment 24.3
The commenter argues that employers who do not meet the criteria specified in subsection (a)(2) are exempt from measuring temperature as outlined in subsection (e)(1). The commenter contends that without proper monitoring and recordkeeping, it is difficult for employers, workers and Cal/OSHA inspectors to determine if a workplace is truly exempt. This becomes particularly important in cases where employers have implemented engineering controls like air conditioning but fail to maintain appropriate thermostat settings or ensure the units are in good working condition. Furthermore, the exemption ignores the fact that California's climate is rapidly getting hotter.

Additionally, the exempted groups are also not required to assess environmental risk factors. Without that information, employers and workers cannot be sure that the cool-down areas are free of environmental risk factors that defeat the purpose of allowing the body to cool, as defined in subsection (b)(4).

The commenter recommends requiring every employer to monitor the temperature and to assess environmental risk factors. Employers should also be required to provide the monitoring and assessment records upon request to employees or their designated representatives in a timely matter, and at no cost.

Response to Comment 24.3
The Board is not persuaded by the commenter's arguments and declines to make the proposed modification. The requirements in subsection (e) are intended for workplaces with a higher risk of heat-related injuries and illnesses. While the proposed regulation does not specifically require employers to measure and record the temperature when their work areas do not meet the conditions listed in subsection (a)(2), it is still the employer's responsibility to determine whether they are covered by the scope of the proposed regulation and to maintain the temperature in indoor cool-down areas. If an employer fails to maintain implemented engineering controls, i.e., air conditioning in proper working condition, they will be in violation of sections 3328 and/or 5142.

The Board disagrees with the assertion that employers who do not meet the conditions listed in subsection (a)(2) are not required to assess environmental risk factors. All indoor work areas where the temperature equals or exceeds 82 degrees Fahrenheit when employees are present must comply with all subsections of the proposed regulation, except for subsection (e). As such, all employers must ensure that their cool-down areas meet the conditions listed in subsections (b)(4) and (d), as well as provide employee training on environmental risk factors.

The Board has modified subsection (e)(1)(B)3. to make temperature or heat index measurement records required by subsection (e)(1)(A) available to employees and designated representatives. In addition, section 3204 already requires the employer to provide access to employee exposure and medical records in a reasonable time, place, and manner and at no cost to the employees or designated representatives.

Comment 24.4
The commenter states that subsection (d) directs employers to "allow and encourage employees to take a preventative cool-down rest in a cool-down area when employees feel the need to do so" but this puts the onus on the workers. The commenter asserts that the indoor standard should include, at minimum, a high-heat procedure in which employers are required to maintain a written rest/work plan for workers engaged in moderate to heavy work or who are wearing heavy clothing or personal protective equipment (PPE). Cool-down rests should also be part of paid work time, as in Oregon's occupational heat standard.

Response to Comment 24.4
The Board is not persuaded by the commenter's arguments and declines to make the commenter's proposed modification. Using work/rest schedules is an administrative control

and the proposed regulation already requires employers to use control measures as specified in subsections (e)(2)(A) through (e)(2)(C) to minimize the risk of heat illness when they meet the conditions listed in subsection (a)(2). The Board proposes to add a clarifying statement that preventative cool-down rest period has the same meaning as "recovery period" in Labor Code section 226.7(a) to be consistent with section 3395.

Comment 24.5
In a recent analysis of nearly 500 fatal or catastrophic heat-related incidents from 2005 to 2019 and more than 16,000 heat citations from January 2005 to May 2021, acclimatization was the least cited provision in California's outdoor heat standard. This is partly because the standard did not include acclimatization until 2015. The commenter argues that the relative lack of acclimatization citations also may be related to vague language in the outdoor standard.

Like the outdoor standard, subsection (g) of the proposed indoor standard does not give employers a framework for how to effectively prepare their workers for heat. It also does not require them to keep records on how and when they acclimatize employees. The commenter recommends the Board to consider the following key changes:

- In subsection (b)(1), include a more explicit statement about how acclimatization is lost over time without regular exposure to heat. Significant losses of acclimatization occur within a week and most benefits are lost in about three weeks.
- Mandate employers to go beyond "close observation" in subsection (g). Acclimatization schedules recommended by the NIOSH, the U.S. Military, and others require a phased approach to heat exposure, not just a watchful eye.
- Require modified acclimatization protocols to apply to employees returning after an extended absence (e.g., two weeks), not just those who are newly assigned to specific work areas.

Response to Comment 24.5
The Board is not persuaded by the commenter's arguments and declines to make the proposed modifications. To avoid any confusion or conflicts between regulations, the definition of "acclimatization" remains the same as the existing definition in section 3395. In order to remain consistent with section 3395, the Board declines to adopt the proposed modification. The Board notes that acclimatization may be one of the most important elements of a HIPP. The detailed account of acclimatization is required in the training and written procedures. This approach allows employers the necessary flexibility to address the unique circumstances of their respective industries and worksites.

Comment 24.6
The commenter states that it is not sufficient to provide heat trainings just once to employees during onboarding. Supervisory and non-supervisory employees should be given refreshers

annually, when returning to work in the heat season after an extended absence, and ahead of excessive heat warnings from the NWS.

Response to Comment 24.6
Please see responses to comments 7.6 and 15.6.

Comment 24.7
The commenter asserts the standard should also require employers to provide trainings in the language, vocabulary, and format understood by employees. Training should also be delivered by someone with sufficient language competency to answer follow-up questions from employees. The commenter argues that lack of such requirements in California's outdoor heat standard resulted in many immigrant workers not receiving the kind of information they may need to save lives. The commenter suggests that employers should involve workers or their designated representatives in designing, implementing, and evaluating training programs.

Response to Comment 24.7
The Board acknowledges the commenter's suggestion to require worker involvement in designing, implementing and evaluating training programs. However, in order to remain consistent with section 3395, the Board declines to adopt the proposed modification. In respect to comments regarding language, please see response to comment 7.6.

Comment 24.8
The commenter suggests that employers should be required to prepare and maintain written or electronic annual training records that contain the name or identification of each employee trained, the dates of the training, and the name of the person who conducted the training.

Response to Comment 24.8
In order to remain consistent with section 3395, the Board declines to adopt the proposed modification. The Board recommends that employers maintain records of the training required in the proposed regulation as specified in subsection 3203(b).

Comment 24.9
The commenter recommends the Board to replace the term "union representatives" in the draft standard with "designated representative," "authorized representative," or "employee representative." This small, but significant, change in language will help give non-unionized workers a stronger voice in workplace health and safety matters.

Response to Comment 24.9
Please see response to comment 15.5.

Comment 24.10

The commenter asserts the indoor standard should reinforce that secondary employers are "fully responsible for the health and safety of the employees who are also employed by the primary employer" by referencing Cal/OSHA's existing Policy and Procedures Manual on Dual-Employer Inspections. This is important to ensure that temporary and staffing agency workers get the appropriate acclimatization protections and heat training.

Response to Comment 24.10
Please see response to comment 9.5.

The Board thanks the commenter for their input and participation in the rulemaking process.

25. Katia Brit, Marathon Petroleum Refinery laboratory worker, by written comments dated May 18, 2023.

Comment 25.1
The commenter agrees with the majority of the workers testimonies that the threshold of 80-87 degrees Fahrenheit is too high. The commenter proposes a new threshold of 74-76 degrees Fahrenheit for indoor temperature (doctors' recommendations). This takes into consideration that workers perform physical work in warehouses, with cooking stoves in the food industry, with engines and equipment emitting hazardous fumes in laboratories, wearing respirators in refinery laboratories, etc. in other lines of work.

The commenter states that the indoor room temperature of management rooms is maintained at 68-70 degrees Fahrenheit. The commenter questions why there should be a difference in treatment between the management and blue-collar workers. Additionally, the commenter raises concerns about the potential long-term health effects on workers, including kidney and heart diseases, as well as cognitive impairment, resulting from excessive heat exposure.

The commenter shares a personal experience, noting that wearing a respirator in temperatures above 76 degrees Fahrenheit for a few hours led to feelings of oxygen deprivation, heart palpitations, and the sensation of almost fainting. Additionally, the commenter shared that workers wearing fire-resistant protective clothing and respirators, as well as the increased indoor heat temperatures had caused them to experience heat illnesses.

Response to Comment 25.1
Please see response to comment 7.2.

Comment 25.2
The commenter recommends that the new standard should include provision for free bottles of water and electrolytes provided by the companies.

Response to Comment 25.2

Please see responses to comments 22.6 and 31.1.

The Board thanks the commenter for their input and participation in the rulemaking process.

26. Alex Oseguera, Director of Government Affairs, Waste Management California, Hawaii, by written comments dated May 18, 2023.

Comment 26.1
The commenter supports the provision of the outdoor standard that is similarly applicable to prevent indoor heat illness and states that should be the principal component of the proposed regulation.

Response to Comment 26.1
The Board acknowledges the commenter's support and will strive to maintain the similarities between the proposed regulation and section 3395.

Comment 26.2
The commenter asserts that the application for the proposed regulation imposes arbitrary and unprecedented criteria. The commenter states that it is unclear whether the requirements under subsection (a)(1) are determined by temperature or heat index readings. Furthermore, the commenter states that heat index readings are not required until the employer is subject to subsection (e), which is logical because heat index methodology is a relatively complicated multi-parameter measurement and comparison to a selected heat stress index is a difficult burden for many employers. The commenter asserts that there is no flexibility as to variability when arbitrary temperatures are used.

Response to Comment 26.2
The Board is not persuaded by the commenter's arguments and finds it clear in subsection (a)(1) that temperature is to be utilized to determine application of the proposed regulation. Additionally, the Board disagrees that the temperature thresholds in the proposed regulation are arbitrary, as ACGIH TLVs® approach and stakeholder input was considered when developing the appropriate temperature thresholds. Also, please see response to comment 8.5.

Comment 26.3
The commenter states that a given temperature at any time when any employee is present is not an objectively reasonable means of assessing whether the employee is exposed to heat stress and whether the standard should apply. Furthermore, the commenter asserts that there is substantially greater variability in indoor workplace conditions than outdoor ambient temperature.

Response to Comment 26.3

The Board is not persuaded by the comment and finds temperature to be an objective and clear indicator to assess employee exposure to heat stress and the application of the proposed regulation for employers to follow to protect their employees. Furthermore, assessment of heat stress for employees through other means such as determining core body temperature would not be practical. Also, please see response to comment 26.2.

Comment 26.4
The commenter states that the use of a temperature threshold for overall applicability of the administrative provisions of the standard may be appropriate, but not to mandate engineering controls, like a cool-down room, which should be determined based on the employer's heat stress assessment procedures.

Response to Comment 26.4
The Board is not persuaded by the comment and finds that the accepted hierarchy of controls in occupational illness prevention must be followed. Engineering controls are more protective and, if feasible, are to be implemented to protect employees prior to considering and implementing administrative controls and the use of personal heat protective equipment.

Comment 26.5
The commenter recommends the Board to consider affording employers the option of using any of the recognized heat stress work/rest heat indices: NIOSH WBGT, NOAA, or ACGIH TLVs® as an alternative to the 82 and 87 degrees Fahrenheit thresholds in the currently proposed rule. This action, the commenter asserts would make the standard more of a performance standard allowing employers to consider administrative controls, precise workplace conditions, and human factors to devise a more workplace-specific and cost-effective indoor HIPP, with the proposed engineering controls as defaults for employers who assume conditions in subsection (a)(2) apply.

Response to Comment 26.5
The Board is not persuaded by the commenter's argument of utilizing multiple heat stress indices as it would introduce unnecessary complexity to the proposed regulation, thereby creating confusion that would affect an employer's ability to understand and comply with the standard. Additionally, the proposed regulation utilizes the heat index used by the NWS for over forty years. Also, please see response to comment 23.5.

Comment 26.6
The commenter states that the term "indoor" as defined in subsection (b)(12) requires clarification. The commenter asserts that the definition is nonsensical in that if the windows and doors are open, the airflow is not restricted.

Furthermore, the commenter states the exception after subsection (b)(12) appears to preclude any roofed structure as being outdoors and recommends an amendment from a specification to

a performance standard. The commenter asserts if a roofed work area can maintain sufficient airflow to effectively equal outdoor conditions, the employer should be able to achieve heat illness protection using outdoor methods.

The commenter asserts that the definition of "indoor" be based on the temperature differential between indoors and outdoors or the percentage of openness or air movement, or percentage of outdoor perimeter and/or airflow measurements.

Response to Comment 26.6
The Board is not persuaded by the commenter's arguments and declines to modify the definition of indoor to prevent any potential confusion and inconsistency in the application of the proposed regulation. Adopting the recommended parameters to define indoor would add complexity to the regulation and potentially cause more confusion for the regulated community.

In respect to the commenter's suggestion to amend the exception to subsection (b)(12) from a specification to a performance standard, which would enable a roofed work area to be considered outdoors if it maintains sufficient airflow comparable to outdoor conditions, the Board has determined that maintaining a clear distinction between indoor and outdoor spaces is crucial for effective implementation of heat illness protection measures. Also, please see response to comment 27.3.

Comment 26.7
The commenter states that a clarification is needed regarding whether vehicles are included as indoor workplaces under subsection (b)(12). Furthermore, the commenter references AC Transit Decision After Reconsideration (DAR) in which the commenter erroneously asserts that interiors of transit buses are not outdoor workplaces. The commenter asserts that the assessment of heat stress in vehicles is significantly different than in more static indoor workplaces and recommends that vehicles be exempt from the current standard or additional rulemaking.

Response to Comment 26.7
Please see response to comment 12.3.

Comment 26.8
The commenter is concerned that subsection (b)(3) would apply to permeable Tyvek®-style coveralls which may offer some employers a cost-effective means of reducing heat stress. Furthermore, the commenter asserts that permeable, Tyvek®-type coveralls as recognized by NIOSH and other heat stress indices as less of a heat stress factor than significantly impervious or "waterproof" coveralls, and close to ordinary work attire. The commenter recommends an exception or revision to subsection (b)(3) to exclude permeable Tyvek®-type coveralls.

Response to Comment 26.8
In response to the comment, the Board proposes to modify the exception to subsection (b)(3) to include clothing constructed of an air and water vapor permeable material.

The Board thanks the commenter for their input and participation in the rulemaking process.

27. Veronica Pardo, Regulatory Affairs Director, Resource Recovery Coalition of California, by written comments dated May 18, 2023.

Comment 27.1
The commenter recommends a FAQ to assist employers and employees to understand and follow the standard.

Response to Comment 27.1
The Board will make a recommendation to Cal/OSHA to develop an FAQ to correspond to the proposed regulation, similar to the FAQ currently in place for section 3395.

Comment 27.2
The commenter recommends clarification that the definition of clothing that restricts heat removal under subsection (b)(3) does not apply to permeable personal protective clothing and equipment that may cover employees' arms, legs, or torso. Furthermore, the commenter states that cotton shirts and jeans, typically worn by recycling employees, are permeable material and recommends the proposed regulation be made clear or an FAQ document be developed.

Response to Comment 27.2
Please see responses to comments 18.2 and 26.8.

Comment 27.3
The commenter recommends that the definition of "indoors" under subsection (b)(12) exclude most material recovery facilities that are covered but not enclosed on all sides.

Response to Comment 27.3
The Board is not persuaded by the comment. The proposed definition intends to categorize any space with an open side as outdoor. Therefore, if a material recovery facility has a roll-up door, it would be considered indoor even if the door is open, however, if one side was completely open (no enclosing walls, windows, doors, etc.), it would be considered outdoor.

Comment 27.4

The commenter recommends that vehicles used by the waste and recycling industry such as waste collection trucks, street sweepers, water trucks, compactors, loaders, excavators, dozers, material handlers, graders, scrapers, fall under the outdoor heat illness prevention standard.

Response to Comment 27.4
Please see response to comment 12.3.

The Board thanks the commenter for their input and participation in the rulemaking process.

28. Greg Kramer, P.E., EHS Technical Director, on behalf of the American Foundry Society, by written comments dated May 18, 2023.

Comment 28.1
The commenter is concerned that the heat index does not satisfy the minimum criteria that heat stress indices must meet to have workplace application set by NIOSH Criteria for a Recommended Standard: Occupational Exposure to Hot Environments. The commenter states that all important criteria such as environmental, metabolic, clothing, physical condition must be considered along with proving feasibility and accuracy with the use of the heat index. The criteria that need to be considered are:

1. Heat energy present in the area surrounding the worker (environmental heat) that can be transferred to the worker through convection, conduction, and heat radiation,
2. Heat energy gain by the worker due to the heat which is released inside the worker as a byproduct of the metabolic process in the muscles which produces the needed physical energy to conduct work activities (metabolic heat),
3. Heat energy discharged from the worker's body, triggered by rising body core temperature and accomplished most effectively by evaporation of the sweat layer which the body discharges onto the skin surface. Clothing and PPE isolate the water vapor to the skin area where humidity level can reach the dew point and terminate the heat transfer from the body through evaporation of sweat.

Validation of the feasibility and accuracy of the index can be achieved using research findings combined with evaluation of the actual use of the index to protect workers from heat related illness and injury in industry.

The commenter states that the proposed regulation's use of heat index only considers the heat transfer sources from:

1. Work area temperature rising above skin temperature, which can heat the body through convection, and
2. Work area humidity rising, which can hinder the body's discharge of internal heat through evaporation of sweat.

The commenter asserts that in setting temperature limits for heat exposure, the index does not specifically address metabolic heat gain by the body, restriction of heat loss through evaporation of sweat caused by containment of the body by clothing and PPE and heat transferred to the body by radiant heat energy. Furthermore, the commenter states that subsection (e)(1) places the responsibility for the evaluation of these factors and other potential risk factors on the employer.

The commenter asserts that the proposed regulation provides no information concerning feasibility and accuracy of the index method. Finally, the commenter states that the proposed regulation only monitors and sets limits on environmental temperature and humidity, and attention is deflected away from addressing these other heat stress sources.

Response to Comment 28.1
The Board disagrees with the commenter's description and applicability of the NIOSH Criteria for a Recommended Standard: Occupational Exposure to Hot Environments. It was considered during the advisory committee process and was rejected based on the stakeholder's input. Also, please see response to comment 10.2.

Comment 28.2
The commenter states the requirements for preventative cool-down area under subsection (b)(15) are contradictory and unworkable. The commenter asserts that a lunchroom or a foundry melt deck control room where employees are free to spend time between activities can be considered a cool-down area since every worker spends some part of the shift in such preventative activities.

The commenter states that the word "Feel" in subsection (d)(2) is undefined and could be interpreted to include anyone who is hot and wants to cool-down and employees who do not have heat strain would be discouraged to access a cool-down room. The commenter recommends that all employees should be encouraged to use cool-down areas as defined in subsection (d)(2) for heat illness prevention regardless of whether they are experiencing signs of heat stress or not. Furthermore, the commenter recommends that monitoring and clearance are appropriate for those experiencing such signs, but not for everyone who stops into a cool room to take a break from the heat.

Response to Comment 28.2

The Board is not persuaded by the commenter's argument that the requirements for preventive cool-down area are contradictory and unworkable. A lunchroom or a foundry melt deck control which employees can freely access could be designated as a cool-down area if all the elements of "cool-down area" as defined in subsection (b)(4) are met.

The term "feel" is a personal sensation and the proposed regulation is intended to allow employees to be able to exercise their rights to prevent and/or respond to symptoms of heat stress and is consistent with section 3395. The Board agrees that access to a "cool-down area" and taking "preventive cool-down rest" is an essential preventive measure that can reduce heat stress fatalities and/or severity of the illness and an employee does not necessarily need to wait until they "feel" the need to do so to protect themselves from overheating.

The Board notes that syncope (fainting), generalized disorientation or mental confusion can be some of the physiological responses of exposure to heat, and as such, an employer cannot expect, even when properly trained, that an employee will be able to recognize and report the symptoms in themselves. Therefore, it is essential for employers to remain vigilant towards heat illness symptoms and observe employees for the presence of symptoms of heat illness and if symptoms observed, ensure that first aid/emergency services are provided without delay.

Comment 28.3

The commenter asserts that the term feasibility is vague and recommends defining the term using the following test criteria:

1. Not being capable of providing meaningful reduction of risk
2. Impairing quality (reducing ability to market the product)
3. Impairing performance ability (interfering with ability to produce the product)
4. Requiring unacceptable cost that adversely impacts a business' ability to survive (1% of gross revenue, or 10% of profit)

Response to Comment 28.3

Please see response to comment 7.5.

Comment 28.4

The commenter states mandatory engineering controls would essentially require air conditioning and, as such, would not be sustainable for foundries due to the radiant load routinely raising the temperature above 82 degrees Fahrenheit. Additionally, the commenter states that foundries operate with open walls to increase airflow to minimize temperature and the increased ventilation would reduce dust and fume exposure. Requiring air conditioning, the

commenter asserts, would require closing the walls that could reduce air movement and increase dust exposure levels, and result in increased energy consumption.

Response to Comment 28.4
The Board is not persuaded by the comment that mandatory engineering controls would essentially require air conditioning. HVAC systems are not the only form of engineering controls that can be used, and employers may consider other engineering controls to comply. If the employer demonstrates that the engineering controls are infeasible to meet the temperature and heat index thresholds, administrative controls and/or personal heat-protective equipment could be utilized to minimize the risk of heat illness.

The proposed definition of indoor intends to categorize any space with an open side as outdoor. Therefore, if a foundry has an open exterior wall that is not capable of being closed, it would be considered outdoor, and the employer would comply with section 3395.

Comment 28.5
The commenter recommends that employers be allowed to move directly to heat relief PPE without having to determine feasibility of engineering controls.

Response to Comment 28.5
Please see response to comment 26.4.

Comment 28.6
The commenter recommends that employers using cooling suits be exempt from temperature monitoring and recordkeeping requirements of subsection (e).

Response to Comment 28.6
Personal heat protective equipment is the least effective method of protecting employees. Please see response to comment 26.4.

The Board thanks the commenter for their input and participation in the rulemaking process.

29. Kevin Riley, PhD, MPH, Director, UCLA Labor Occupational Safety and Health Program, by written comments dated May 18, 2023.

Comment 29.1
The commenter recommends that lower action thresholds be adopted to align with current scientific understanding such as recommended by ACGIH, NIOSH, and Fed OSHA and to maintain consistency with section 3395.

Response to Comment 29.1
Please see response to comment 7.2.

Comment 29.2
The commenter recommends that the standard incorporate intensity of work as a factor as recommended by ACGIH, NIOSH, and other expert bodies to determine when protective measures are needed.

Response to Comment 29.2
Please see response to comment 23.4.

Comment 29.3
The commenter recommends the definition of heat restricting clothing be broadened to encompass a wider variety of clothing items that may contribute to heat burden. The commenter states that the definition in subsection (b)(3) is likely to be overly narrow and may exclude some clothing that may restrict heat removal even if it is not intended to offer hazard protections and may not cover the full body but may still restrict breathing, airflow, and/or heat removal.

Response to Comment 29.3
Please see response to comment 15.3.

Comment 29.4
The commenter recommends a more prescriptive schedule for cool-down breaks that includes explicit guidance as to the frequency and length, as a form of administrative control. The commenter states that the current standard leaves the determination of when or whether to take a cool-down break to workers, however some workers may be uncomfortable asking for rest breaks, particularly based on fear of retaliation by the employer.

Response to Comment 29.4
The Board believes that the language for “access to cool-down areas” of the proposed regulation allows for flexibility for a large variety of work environments, temperatures, worker risk factors, etc. The proposed regulation would not preclude more prescriptive requirements should an employer elect to do so provided that adequate employee protections are ensured.

Comment 29.5
The commenter recommends the addition of language to provide best practices for acclimatizing workers by following an acclimatization program (such as those provided by

NIOSH), reducing physical workload or work intensity during the acclimatization period, and maintaining close observation of employees by supervisors or designees.

Response to Comment 29.5
The Board is not persuaded by the commenter's arguments and declines to modify the proposed regulation as best practices can be described in guidance documents rather than within regulations. Please see response to comment 27.1.

Comment 29.6
The commenter recommends clarifying "close observation" as required by subsection (g) to include not leaving an employee alone or sending them home without being offered first aid or emergency medical services if demonstrating signs of heat illness. Furthermore, the commenter recommends that such observation should occur even when employees are in designated cool-down areas.

Response to Comment 29.6
The Board is not persuaded by the commenter's arguments and declines to adopt the proposed modification as it is unnecessary. The requirement of not leaving an employee alone or sending them home without being offered first aid or emergency medical services if demonstrating signs of heat stress is addressed in subsection (f), Emergency Response Procedures.

Comment 29.7
The commenter recommends that the standard be explicit and state that employee training should be in a language that workers understand, that it be offered at an appropriate literacy or educational level, and that it provides opportunities for interactive questions and answers.

Response to Comment 29.7
Please see response to comment 7.6.

Comment 29.8
The commenter recommends the addition of required annual refresher training of all employees to ensure that workers have opportunities to review the employer's HIPP on a regular basis and are encouraged to provide input on any updates that could be effective.

Response to Comment 29.8
Please see responses to comments 7.6 and 24.7.

The Board thanks the commenter for their input and participation in the rulemaking process.

30. Anne Katten, MPH, Pesticide and Work Safety Project Director, California Rural Legal Assistance Foundation, by written comments dated May 18, 2023.

Comment 30.1
The commenter has signed on to Worksafe's comments and is submitting additional comments.

Response to Comment 30.1
Please see responses to comments 15.1 through 15.8 for the Board's responses to the comments from Worksafe.

Comment 30.2
The commenter recommends that the trigger temperatures be reduced to 78 degrees Fahrenheit or 80 degrees Fahrenheit and 85 degrees Fahrenheit without causing further delay because an indoor heat illness standard is urgently needed.

Response to Comment 30.2
Please see response to comment 7.2.

Comment 30.3
The commenter recommends that outdoor cool-down areas only be allowed when the employer can demonstrate that providing a temperature controlled indoor cool-down area is not feasible.

Response to Comment 30.3
Please see response to comment 15.4.

Comment 30.4
The commenter supports the proposed definition of "indoor" workplaces that includes structures with open doors.

Response to Comment 30.4
The Board acknowledges the commenter's support for the proposed definition of "indoor."

Comment 30.5
The commenter asserts that workers who work both indoors and outdoors need the protections afforded by both regulations because exposure conditions are different indoors and outdoors. Since the proposed regulation follows the same format as the outdoor regulation employers should be able to combine training and other requirements in a straightforward manner.

Response to Comment 30.5
The Board agrees with the comment. Note No. 1 in subsection (a) permits the integration of the measures required by the proposed regulation to be contained in sections 3203, 3395, or in separate documents. Also, please see response to comment 12.10.

Comment 30.6
The commenter opposes the recommendation to exempt work 15 minutes per hour indoors from the proposed regulation. The commenter asserts that this type of exception would create challenges to enforcement and make employers' recordkeeping more burdensome. The commenter states that a forklift driver who goes back and forth from a hot outdoor area to an even hotter indoor packing house or warehouse is at elevated risk of heat illness and the indoor portion of their work needs to be considered.

Response to Comment 30.6
The Board acknowledges the commenter's concern. However, the Board also received comments regarding indoor spaces that are normally unoccupied and only accessed briefly by employees. The Board modified subsection (a)(1) exception (C) such that it only applies to incidental heat exposures where an employee is exposed to temperatures at or above 82 degrees Fahrenheit and below 95 degrees Fahrenheit for less than 15 minutes in any 60-minute period. This exception does not apply to vehicles without effective and functioning air conditioning; or shipping or intermodal containers during loading, unloading, or related work.

Comment 30.7
The commenter opposes the recommendation to classify vehicle cabs as outdoor workplaces. The commenter states that agricultural workers who load boxes into trucks are at high risk of heat illness because this is heavy and fast paced work and the time spent driving to a packing house can be a heat recovery time if the truck cab has an effective and well-maintained AC system or can put the workers over the edge into serious or even fatal heat illness if it does not.

Response to Comment 30.7
Please see response to comment 12.3.

The Board thanks the commenter for their input and participation in the rulemaking process.

31. Daniel Glucksman, Senior Director for Policy, International Safety Equipment Association, by written comments dated May 18, 2023.

Comment 31.1

The commenter references the NIOSH Criteria for a Recommended Standard for Occupational Exposure to Heat and Hot Environments and states that workers involved in moderate work activities in heat for several hours should drink sports drinks containing balanced electrolytes. Furthermore, the commenter references OSHA as having the same recommendation and states that this recommendation provides clarification that employees need for engineering and administrative controls, and for PPE, as stated by Mr. Mitch Steiger of the California Labor Federation at the May 18, 2023, OSHSB Hearing.

The commenter recommends the following definition of electrolyte-replenishing beverages, and further recommends references to electrolyte-replenishing beverages be added in all sections that mention personal hydration.

> Electrolyte-Replenishing Beverages shall not contain a concentration of electrolytes/carbohydrates of more than 8% by volume. Electrolyte-Replenishing beverages shall not contain high amounts of sugar, caffeine, or both, such as energy drinks.

Response to Comment 31.1

The Board is not persuaded by the commenter's arguments and declines to make the proposed modification to avoid any confusion or conflict between regulations. The requirements for the provision of water remains the same as the existing section 3395 with the exception of a requirement to provide water in indoor cool-down areas. The Board acknowledges that NIOSH and federal OSHA have recommended beverages containing balanced electrolytes for prolonged sweating events lasting several hours. Although health effects of severe acute negative electrolyte and water imbalance have been well documented, the long-term effects of such imbalances are not well known when occurring over months or years. Also unknown are the health effects of long-term electrolyte loading with and without hyper hydration or hypo hydration.[5] Furthermore, in most cases, eating regular meals with adequate water intake is sufficient to maintain water and electrolyte balance.[6]

Comment 31.2

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[5] Jacklitsch B, Williams WJ, Musolin K, et al. Criteria for a Recommended Standard: Occupational Exposure to Heat and Hot Environments: Revised Criteria 2016. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (NIOSH). February 2016; DHHS (NIOSH) Publication 2016-106. https://www.cdc.gov/niosh/docs/2016-106/pdfs/2016-106.pdf?id=10.26616/NIOSHPUB2016106l7

[6] Heat Stress Hydration. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (NIOSH). DHHS (NIOSH) Publication 2017-16. https://www.cdc.gov/niosh/mining/userfiles/works/pdfs/2017-126.pdf

The commenter recommends the following amendment to subsection (c).

> (c) Provision of Water. Employees shall have access to electrolyte-replenishing beverages or potable drinking water meeting the requirements of sections 1524, 3363, and 3457, as applicable, including but not limited to the requirements that it be fresh, pure, and suitably cool. Both drinking water and electrolyte-replenishing beverages shall be provided to employees free of charge...

Response to Comment 31.2
Please see response to comment 31.1.

Comment 31.3
The commenter recommends the following amendment to subsection (h)(1)(C).

> (C) The importance of frequent consumption of small quantities of water or electrolyte-replenishing beverage, up to four 8-ounce cups per hour, when the work environment is hot, and employees are likely to be sweating more than usual in the performance of their duties.

Response to Comment 31.3
The Board is not persuaded by the commenter's arguments and declines to make the commenter's proposed modification as the language in subsection (h)(1)(C) is consistent with section 3395. Furthermore, by definition, a cup is eight fluid ounces.[7] Also, please see response to comment 31.1.

Comment 31.4
The commenter recommends that electrolyte-replenishing beverages be added to subsection (i)(1) as indicated below.

> (1) Procedures for the provision of water or electrolyte-replenishing beverages in accordance with subsection (c).

Response to Comment 31.4
Please see response to comment 31.1.

Comment 31.5

[7] "Cup." *Merriam-Webster.com*. 2023. Accessed June 22, 2023. https://www.merriam-webster.com/dictionary/cup

The commenter states that "personal heat-protective equipment" generally refers to aluminized protective garments for those who work in extremely high-heat and radiant heat environments, such as kilns, furnaces, and smelting operations. Furthermore, the commenter states that heat-reflective clothing often includes aluminized glass fabric, aluminized fiberglass, aluminized aramid fabrics and more; in addition, face-shields for this type of work can be made of gold or other specialized materials. The commenter states that PPE, such as coveralls for vapor and splash protection, is recognized as a potential source of heat. The commenter asserts that equipment worn to protect the worker against heat exposure and illness be called Heat Stress Solutions (HSS) because the current name in subsection (b)(13) will cause confusion in the marketplace.

The commenter recommends the following change and clarification to subsection (b)(13):

> "~~Personal heat-protective equipment~~ Heat Stress Solutions (HSS)" means equipment worn to protect the user against heat illness. Examples of personal heat-protective equipment that may be effective at minimizing the risk of heat illness in a particular work area include, but are not limited to: water-cooled garments (i.e., cooling towels and neck wraps), air-cooled garments, cooling vests, wetted over-garments, heat-reflective clothing (i.e., aluminized garments and accessories), and supplied-air personal cooling systems.

Response to Comment 31.5
The Board is not persuaded by the commenter's arguments and declines to make the proposed change as PPE is a term used in many title 8 regulations. Introducing a new term for PPE used to protect against heat would cause unnecessary confusion and conflict.

The Board thanks the commenter for their input and participation in the rulemaking process.

32. Barbara Ferrer, Ph.D., M.P.H., M.Ed., Director, and Rita Kampalath, Ph.D., P.E., Acting Chief Sustainability Officer, Los Angeles County Department of Public Health (DPH) and Chief Sustainability Office (CSO), by written comments dated May 18, 2023.

Comment 32.1
The commenter references the OSHA Technical Manual and states a threshold of 82 degrees Fahrenheit is insufficient to protect all workers, for example, workers who are subject to multiple environmental risk factors such as thick clothing requirements and heavy workload may experience heat-related illness at temperatures as low as 72 degrees Fahrenheit. The commenter recommends the threshold temperature for the current standard be lowered to the low 80s degrees Fahrenheit. Furthermore, for ease of communication, implementation, and

enforcement, the commenter recommends the indoor threshold align with the state's existing outdoor heat standard, which requires accommodations for shade at 80 degrees Fahrenheit and above. The commenter asserts an application threshold of 80 degrees Fahrenheit in combination with environmental risk assessments to identify factors may necessitate heat protections at lower temperatures and offers an example of reducing the threshold by five degrees Fahrenheit from the standard threshold when workers' clothing limits or restricts heat removal.

Response to Comment 32.1
Please see response to comment 7.2.

Comment 32.2
The commenter references Cal/OSHA's high heat procedures and recommends for high-risk worksites without centralized air conditioning (ex. manufacturing industry) that temperatures be monitored using WBGT meters which are the most accurate instruments for factoring radiant heat, humidity, air movement into temperature readings.

Response to Comment 32.2
Please see response to comment 23.5.

Comment 32.3
The commenter recommends broadening the definition of "clothing that restricts heat removal" to include heavyweight clothing (i.e. heavy coveralls, multiple layers of clothing even if not full-body, heavy or fluid resistant and impermeable aprons and gown) that is designed to protect individuals and masks/respirators that affect breathing.

Response to Comment 32.3
Please see response to comment 15.3.

Comment 32.4
The commenter recommends that access to cool-down areas and rest breaks be mandated when temperatures reach the highest risk thresholds such as in those sites with insufficient air conditioning (ex. lack of centralized HVAC) and those that are in high-risk industries (e.g. manufacturing) during extreme heat conditions (e.g. over 95 degrees Fahrenheit). The commenter states the proposed regulations places the burden of when and whether to take cool-down breaks on employees, who may choose not to exercise that right due to the demand of the work or potential backlash from the employer. The commenter asserts that the standard should include mandatory cool-down break language during high heat periods and the cool-

down break should not interfere with the right of an employee to take any other mandated scheduled or requested break.

Response to Comment 32.4
The Board is not persuaded by the commenter's arguments and declines to make the proposed changes. Note No. 2 to subsection (a) emphasizes that an employee may not be discharged or discriminated in any manner for exercising their rights under this or any other provision offering occupational safety and health protections. With respect to the comment regarding mandating rest breaks when the temperatures reach the highest risk thresholds and employee's right to take other breaks, please see response to comment 24.4.

Comment 32.5
The commenter recommends the cool-down break be required to take place indoors due to greater temperature control, unless infeasible. Furthermore, the commenter recommends the temperature in the indoor cool-down areas be maintained at 78 degrees Fahrenheit and a specific distance be established because the "close as practicable" criteria is too arbitrary.

Response to Comment 32.5
Please see responses to comments 7.3, 15.4 and 19.5.

Comment 32.6
The commenter recommends that the requirement for "union representative" in subsections (b) and (e)(1)(D) be replaced with a more inclusive term to include non-unionized employees, so that unionized and non-unionized employees be afforded equal protections.

Response to Comment 32.6
Please see response to comment 15.5.

Comment 32.7
To ensure proper education and best practices are followed regarding heat illness training for employees, the commenter recommends the training provided uses language and terminology that workers can understand, takes place in person, has requirements for annual refresher courses, takes place whenever a change occurs in workplace conditions or procedures that can impact the risk of heat illness, and when a high heat advisory is issued.

Furthermore, the commenter recommends that protection from retaliation be included in the training, should an employee request compliance with the provisions of the standard such as access to water, cool-down areas, cool-down rest periods, engineering controls, and access to first aid.

Response to Comment 32.7
The Board declines to make the proposed modification to remain consistent with section 3395. Additionally, please see responses to comments 7.6, 15.6 and 32.4.

Comment 32.8
The commenter recommends that recordkeeping requirements be strengthened to include records of the evaluations or environmental risk factors of heat illness required by subsection (e). This information, the commenter states, is critical for workers to understand their exposure to high heat and for Cal/OSHA to have this information to determine sufficient assessment is done and suitable control measures are implemented. Furthermore, the commenter recommends that workers have access to these records.

Response to Comment 32.8
Please see response to comment 15.7.

Comment 32.9
The commenter states that the science on how to best measure and mitigate heat illness is evolving and recommends that Cal/OSHA periodically update the standard based on best available evidence.

Response to Comment 32.9
The Board agrees that the science regarding the measurement and mitigation of heat illness is an evolving field. The rulemaking procedures and standards are established by the APA and the Board will consider a revision to the regulation based on best available evidence. Additionally, any person may file a petition to propose new or revised standards by presenting at the Board's public meeting or submitting in writing.

The Board thanks the commenter for their input and participation in the rulemaking process.

33. Katie Davey, Senior Legislative Director, California Restaurant Association, by written comments dated May 18, 2023.

Comment 33.1
The commenter has signed the California Chamber of Commerce coalition letter and offers additional comments.

Response to Comment 33.1

Please see responses to comments 12.1 through 12.10 for the Board's responses to the comments of the California Chamber of Commerce.

Comment 33.2

The commenter states that restaurants use commercial cooking equipment like gas ranges, broilers, ovens, and fryers to prepare menu items for customers and the California Retail Food Code requires restaurants to heat eggs, meat, poultry, and fish to specific temperatures to ensure food safety. The commenter is concerned that the proposed regulations may conflict with their ability to heat and hold food to the necessary temperatures to protect the public's health and safety from food borne illnesses and comply with the California Retail Food Code. The SRIA did not adequately address their concerns with the temperature requirements in the California Retail Food Code and the environmental temperature requirements in the proposed regulations. The commenter recommends that Cal/OSHA consider how engineering controls in the proposed regulation conflict with the temperature requirements in the California Retail Food Code.

Response to Comment 33.2

The objective of the SRIA is to assess the economic impact of a regulation and not the potential conflict with other laws and regulations. The proposed regulation will not conflict with the ability of restaurants to heat and hold food to necessary temperatures as required by the California Retail Food Code. The temperature requirements within the proposed regulation apply to control general ambient temperatures and provide measures to protect employees and would not conflict with temperature requirements for food storage and preparation as those are controlled by commercial cooking and storage equipment. Temperatures for food safety and employee health and safety can be controlled independent of each other. Engineering controls required by proposed subsection (e)(2)(A) can be effective in controlling radiant heat generated by food preparation and storage equipment and, if feasible, are to be implemented first to minimize the risk of heat illness prior to considering administrative controls and the use of personal heat-protective equipment. Moreover, a wide range of electric food preparation equipment is available for the restaurant industry, which could reduce heat exposures in kitchens and improve thermal comfort for employees.

Comment 33.3

The commenter states that restaurants have a limited amount of physical space and appreciates Cal/OSHA taking their space limitations into account and including an outdoor area to be used as a cool-down area that is shielded from direct sunlight and high radiant heat sources. The commenter recommends "to the extent feasible" be added to the definition of cool-down area to provide flexibility for restaurants that lease commercial space and do not have control over the physical footprint of their location to completely shield outdoor cool-down areas from high radiant heat sources such as black top and sunlight reflecting from neighboring buildings.

Response to Comment 33.3
Please see response to comment 12.5.

Comment 33.4
The commenter asserts that many employees in their community work at more than one restaurant and/or change employers throughout the calendar year and some of the outlined topics for the training in the proposed regulation will be universal among all restaurant employers. The commenter recommends that a universal evaluation sheet and test be created to correspond with those topics so new employees who have received prior training in the calendar year can comply with the regulation in an efficient manner and avoid retraining simply due to the fact that they work at more than one restaurant or have a new restaurant employer.

Furthermore, the commenter recommends that restaurant employees, such as servers, who work in both indoor and outdoor areas, should be able to receive one training course that covers both indoor and outdoor heat illness prevention requirements.

Response to Comment 33.4
The Board is not persuaded by the commenter's arguments that a universal training course would be adequate for employees who work at multiple restaurants. The training must be site-specific to ensure adequate protections for employees. This is because not all restaurants present the same indoor heat hazards, nor do they have the same control measures or emergency response procedures in place. As such, it is necessary for employees to receive site-specific training in order to be fully prepared for the unique conditions of each restaurant. Also, please see response to comment 12.10.

Comment 33.5
The commenter clarifies that franchise establishments across the state are locally owned small businesses operating under a national brand or identity. The commenter states that these local business owners are solely responsible for complying with federal, state and local laws and it is the local franchisee who owns and operates the establishment, not the franchisor. Furthermore, the commenter asserts that, despite testimony at the May 18, 2023, Board meeting alleging that limited-service restaurant franchisees flout existing law and have a disproportionate number of Cal/OSHA violations or citations compared to other industries, it is not supported by data. The commenter recommends Cal/OSHA regulations and citations apply to limited-service franchise restaurants in the same way that they apply to other businesses and opposes the creation of a new enforcement model or citation program for limited-service franchise restaurants.

Response to Comment 33.5
It is the policy of Cal/OSHA to enforce title 8 regulations at all places of employment in an equal manner to ensure that employees are provided with places of employment that are free from occupational safety and health hazards. The establishment of a new enforcement model or

citation program specific to limited-service franchise restaurants does not fall within the scope of this rulemaking.

The Board thanks the commenter for their input and participation in the rulemaking process.

34. Chuck Helget, Director of Government Affairs, Republic Services, by written comments dated May 18, 2023.

Comment 34.1
The commenter states that in the refuse industry, Material Recovery Facilities (MRFs) are generally open air with large bay doors open during work hours to allow operations and would be subject to the definition of indoors per subsection (b)(12) and recommends the definition be amended to permit a roofed work area that can maintain sufficient airflow to effectively equal outdoor conditions to be considered "outdoors."

Response to Comment 34.1
Please see response to comment 27.3.

Comment 34.2
The commenter asserts that heat stress in vehicles is significantly different than in more static indoor workplaces and recommends that vehicles be excluded from indoor regulations.

Response to Comment 34.2
Please see response to comment 12.3.

Comment 34.3
The commenter states that at a given temperature when an employee is possibly only momentarily present is not an objective means of assessing whether the employee is exposed to heat stress and whether the standard applies. Furthermore, the commenter asserts that there is substantially greater variability in indoor workplace conditions and locations, and the use of a temperature threshold for overall applicability of administrative provisions of the regulation may be appropriate but not to mandate engineering controls such as a cool-down room or mechanical controls.

The commenter recommends that the proposed regulation allow employers the option to utilize other recognized heat indices such as NIOSH, WBGT, National Oceanic and Atmospheric Administration (NOAA), or ACGIH TLVs® as an alternative to the 82 and 87 degrees Fahrenheit thresholds. The commenter asserts this would allow employers the flexibility to consider administrative controls, precise workplace conditions, and human factors to devise a more

workplace-specific and cost effect indoor HIPP with the proposed engineering controls as defaults for employers covered by subsection (a)(2).

Response to Comment 34.3
Please see response to comment 10.2.

Comment 34.4
The commenter references NIOSH and other heat indices and states that permeable Tyvek-type coveralls are less of a heat stress factor than significantly impervious or "waterproof" coveralls, and close to ordinary work attire. The commenter recommends that permeable Tyvek-style coveralls be excluded from clothing that restricts heat removal in subsections (a)(2)(C) and (b)(3).

Response to Comment 34.4
Please see response to comment 26.8.

The Board thanks the commenter for their input and participation in the rulemaking process.

35. Mitch Steiger, Senior Legislative Advocate, on behalf of California Labor Federation and California Teamsters Public Affairs Council, by written comments dated May 18, 2023.

Comment 35.1
The commenter states that an enclosed cab is much more like an indoor worksite, and allowing employers to treat this environment as outdoors could very possibly cost workers their lives. Furthermore, the commenter states that drivers without air conditioning who spend all day loading and unloading in cargo areas or in delivery trucks where temperatures can exceed 130 degrees Fahrenheit with little or no wind exposure would not be protected by engineering, administrative, or PPE controls to manage excessive heat exposure. The commenter opposes classifying vehicles as an outdoor place of employment.

Response to Comment 35.1
Please see response to comment 12.3.

Comment 35.2
The commenter opposes exempting workers who are subject to heat above the threshold temperature for 10 minutes per half hour, or 15 minutes per hour. The commenter states that a worker who spends 20-40 minutes in 110-degree Fahrenheit outdoor temperatures could very well need 10-15 minutes benefiting from the proposed regulation's control measures to avoid heat illness, especially if that 30- to 60-minute clock restarts repeatedly all day. Exempting

workers from the proposed regulation while indoors for one-quarter to one-third of their shift would present an unacceptable risk as temperatures continue to rise across our state.

Response to Comment 35.2
Please see response to comment 30.6.

The Board thanks the commenter for their input and participation in the rulemaking process.

II. Oral Comments

Oral comments received at the May 18, 2023, Public Hearing in San Diego, California.

36. Mauricio Juarez, Jack in the Box worker/Fight for $15.

Comment 36.1
The commenter has worked for Jack in the Box restaurant for eight years and states that the temperatures are very high, and at times were 102 degrees Fahrenheit. No one said anything, people have fainted, and employees did not know that they were to call 911 to call paramedics to seek help.

The commenter's manager and the owner were both informed that there was a problem. With assistance from Fight for $15, employees went on a strike, and were able to get the air conditioning repaired. The air conditioning was repaired; however, it was a cheaper remedy and sometimes it works and sometimes it does not. The commenter is very happy that this issue is being taken seriously and would like restaurants to know that it will become law, and they will have to make sure workers are okay. The commenter encourages the Board to do it.

Response to Comment 36.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

37. Maribel Aceves, McDonald's worker/Fight for $15.

Comment 37.1
The commenter is part of Fight for $15 and has been working at a McDonald's for four years where it is always hot. Employees had to go on strike to have the air conditioning repaired. The air conditioning is not working again, employees are sweating, and wishes there was something to fix the air conditioning.

Response to Comment 37.1

The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

38. Robert Moreno, UPS worker/Teamsters Local 542.

Comment 38.1
The commenter has been an employee of UPS for three decades and, for a majority of the time, has worked inside of a warehouse. The commenter states that most warehouses are constructed of sheet metal that radiates heat all day long and there is no airflow. The commenter asserts that as a victim of heatstroke, the temperature thresholds are too high to protect workers in a warehouse.

Furthermore, the commenter states that employees work inside of trailers that have been sitting in the sun, unloading tens of thousands of boxes for days up to 12 hours long. The commenter recommends the Board be a beacon of hope for blue-collar workers and to set standards that are progressive, proactive, not reactive and, above and beyond.

Response to Comment 38.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

39. Anastasia Christman, on behalf of the National Employment Law Project.

Comment 39.1
The commenter has submitted written comments and wanted to detail some suggestions. The commenter states that the trigger temperatures and temperatures for cool-down areas are set too high. The commenter references Minnesota's, Oregon's, and proposed Washington's indoor heat standards and asserts that the threshold temperature is 80 degrees Fahrenheit and urges California have the same threshold.

Response to Comment 39.1
Please see response to comment 7.2.

Comment 39.2
Additionally, the commenter recommends a clarification of acclimatization, including instructions for employers on how to implement this important safety measure and states that an acclimatization schedule should be required.

Response to Comment 39.2
Please see response to comment 24.5.

Comment 39.3
The commenter recommends that supervisors be trained on using acclimatization schedules to build bodily adaptions in workers exposed to heat.

Response to Comment 39.3
Please see response to comment 24.5.

Comment 39.4
The commenter recommends that explicit directions be provided for employers who use temporary workers or other staffing agency services regarding the shared responsibility for acclimatization and other interventions. Furthermore, the commenter states that there are strong policies in place with clear requirements of responsibilities for client host and direct employers and that these policies be included by reference in the proposed regulation.

Response to Comment 39.4
Please see the response to comment 9.5.

Comment 39.5
The commenter recommends specific guidance for employers regarding the provision of heat protection training, especially using language and cultural awareness to maximize worker understanding and retention. In addition to recommending that the training be done annually with refreshers, the commenter recommends that training be conducted in a manner to allow employees to ask questions and receive answers in a language that they understand.

Response to Comment 39.5
Please see the response to comment 7.6.

Comment 39.6
The commenter recommends an expansive definition of worker representation for worker participation in developing the heat prevention plans. Specifically, the commenter recommends using the term “designated representative” or “employee representative” to recognize non-unionized workers and industries subjected to extreme indoor heat.

Response to Comment 39.6
Please see response to comment 15.5.

The Board thanks the commenter for their input and participation in the rulemaking process.

40. Athena Tan, on behalf of Plug In IE.

Comment 40.1

The commenter asserts that the current temperature thresholds of 82 and 87 degrees Fahrenheit do not make sense for active fast-paced work and for a realistic range of body masses. The commenter recommends realistic heat index and temperature thresholds be used that are based on workers' actual experiences.

The commenter states that indoor heat illness prevention regulation is not marginal in their counties, it is about the everyday work of hundreds or thousands of warehouse workers who have limited other career options and limited ability to shape their individual working conditions. The commenter strongly supports low wage workers in other industries who are testifying today, like the members of Fight for $15.

Response to Comment 40.1
The Board acknowledges the commenter's support for the proposed regulation. In respect to the comment regarding thresholds, please see responses to comments 7.2 and 23.4.

The Board thanks the commenter for their input and participation in the rulemaking process.

41. Eric Frumin, on behalf of the Strategic Organizing Center.

Comment 41.1
The commenter would like to add to the comments from fast-food workers and Anastasia Christman and recommends the Board consider the fissured workplace and responsibilities of multiple employers when dealing with underlying conditions that create hazards. The commenter provides an example of franchisees who do not know what equipment to use, who do not control the equipment nor have the authority to change it. The commenter explains the authority for the equipment lies with the franchisors (franchise owner) which is typically a multi-billion-dollar corporation that uses franchisee as a way to make a lot of money without being the employer on record for employees. The commenter states that there is a Cal/OSHA policy and procedures for multi-employer worksites that identifies categories of employers such as franchisors who create or control these hazards. However, the commenter asserts that there is very little enforcement of standards on creating and controlling employers outside of the construction industry. The commenter recommends that at the minimum in the Statement of Reasons when the standard is issued, it is made clear that the responsibility is not simply with the employer who signs the paycheck or in the case of restaurants, the franchisee, but to every employer who controls or creates a hazard. If it is not made clear, the commenter asserts, the sections on training, assessment of controls, or other key sections of the standard will ring hollow and will never reach the workers whom it is intended to benefit.

Response to Comment 41.1
Please see response to comment 9.5.

The Board thanks the commenter for their input and participation in the rulemaking process.

42. Mirella Deniz-Zaragoza, on behalf of Warehouse Worker Resource Center.

Comment 42.1
The commenter asserts that warehouses in the Inland Empire region lack air conditioning and good insulation, and temperatures equal or exceed the high outdoor temperatures which regularly reach 80s and 90s degrees Fahrenheit throughout the year. There have been serious heat illnesses including heat stroke in the workplace, even for warehouses that are air-conditioned. Although the proposed regulation is four years behind the timeline required by SB 1167, the temperature thresholds are set too high and are arbitrary. The commenter further asserts that arbitrary numbers are not set by evidence-based standards and are set too high to protect employees in physically intensive jobs. The commenter references ACGIH guidelines that recommend control measures starting at a wet bulb temperature of 77 degrees Fahrenheit for workers engaging in only moderately intensive work. The commenter states that leaving the current temperature triggers would disregard scientific evidence, condemn warehouse workers and others to work in objectively hazardous heat conditions without protections. The commenter recommends the Board to lower the threshold temperature and to enact a strong indoor heat standard as soon as possible.

Response to Comment 42.1.
The Board acknowledges the commenter's support for the proposed regulation. In respect to the comment regarding lowering the threshold, please see response to comment 7.2.

The Board thanks the commenter for their input and participation in the rulemaking process.

43. Melissa Ojeda, Warehouse Worker Resource Center worker.

Comment 43.1
The commenter worked for Amazon for one- and one-half years and now works at the Warehouse Worker Resource Center. The commenter states that over 260 workers were surveyed from the Inland Empire Amazon Workers United and found that the heat safety was a big concern for them. The commenter asserts that there is no balance between production and rest, even during high heat. The commenter asserts that a standard is needed to balance between the mindset of production over worker safety that is currently not in place. This standard will hold companies accountable, and workers deserve safety.

Response to Comment 43.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

44. Daniel Rivera, Amazon Air Hub worker/Inland Empire Amazon Workers United member.

Comment 44.1
The commenter states that they have suffered multiple symptoms of heat illness, including nosebleeds, and had to take care of themselves as the employer did not do anything. As there are little to no standards for heat exhaustion, the commenter is worried for the safety of new co-workers, some of which have already suffered heat illness and fatigue although summer has just begun. The commenter states that summer is brutal, dry, high temperatures mixed with high production, and stress, which is a dangerous combination that can lead to serious and fatal injuries. This cycle will not stop, another summer without protections will put too many workers in danger and the commenter recommends a real standard be in place.

Response to Comment 44.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

45. Mitch Steiger, on behalf of the California Labor Federation.

Comment 45.1
The commenter states that a standard is necessary because the IIPP is not working and specifically referenced the TSI NCD [sic] case. The commenter recommends that a threshold temperature, a list of available engineering, administrative and PPE controls, and specific training requirements be included in the regulation to guide everyone to a safer workplace.

The commenter recommends that temperature thresholds be lowered, and other changes be made to strengthen the standard. Furthermore, the commenter states the standard should not be delayed significantly.

Response to Comment 45.1
The Board acknowledges the commenter's support for the proposed regulation. Please see responses to comments 7.2 and 27.1.

The Board thanks the commenter for their input and participation in the rulemaking process.

46. Dan Glucksman, on behalf of the International Safety Equipment Association in Washington DC.

Comment 46.1
The commenter recommends that, in the various hydration areas in the regulation such as subsection (c) "Provision of Water," electrolyte replacement beverages be referenced and

included. This would allow employers to provide these beverages that are popular among employees and, in some cases, would encourage employees to consume the required amounts of hydration. Furthermore, the commenter states in subsection (c), these beverages should be made free of charge to employees. The commenter also references Washington State's upcoming heat standard, and states that a note in their definition of drinking water allows for electrolyte replacement beverages. The commenter states that as proposed in their written comments, electrolyte-replacing beverages or replenishing beverages shall not contain the concentration of electrolytes or carbohydrates of more than 8% by volume, as this tracks with NIOSH's heat stress criteria document.

Response to Comment 46.1
Please see response to comment 31.1.

Comment 46.2
The commenter recommends that training in subsection (h)(1)(C) should include electrolyte-replenishing beverages. The commenter also recommends that subsection (h)(1)(C) which talks about "small quantities of water" should say "quart per hour" as a little cup can be considered a small quantity, however four of these per hour will lead to a quart.

Response to Comment 46.2
Please see response to comment 31.3.

Comment 46.3
The commenter recommends that personal heat protective equipment should be personal heat solutions because personal heat protective equipment is a current reference to aluminized clothing that workers wear near furnaces, smelting, and in kilns.

Response to Comment 46.3
Please see response to comment 31.5.

The Board thanks the commenter for their input and participation in the rulemaking process.

47. AnaStacia Nicol Wright, on behalf of Worksafe.

Comment 47.1
The commenter states that California keeps getting hotter and references a 2021 study of 18 years of California Workers' Compensation data indicating that workplace injuries are 5% to 7% higher when temperatures are between 85 and 90 degrees, and 10% to 15% higher when temperatures are over 100 degrees Fahrenheit. Furthermore, the commenter states that lower-income workers are five times more likely to be hurt on the job than high-income workers. Considering that science predicts increasing temperature and with documentation of the

additional workplace hazards caused by heat, the commenter recommends lowering the temperature thresholds in subsection (e) to 80 and 85 degrees Fahrenheit respectively.

Response to Comment 47.1
Please see response to comment 7.2.

Comment 47.2
The commenter supports the California Nursing Association's comments relating to burn units in the medical industry and how they will be impacted by this standard.

Response to Comment 47.2
Please see response to comment 5.1.

The Board thanks the commenter for their input and participation in the rulemaking process.

48. Anna D. Ortega, Inland Empire Amazon Workers United (IEAWU).

Comment 48.1
The commenter states that stronger heat protections for indoor workers are long overdue and dangers are only getting worse. Furthermore, the commenter states that workers are experiencing sweating, headaches, nausea, lightheadedness, and nosebleeds because of the heat and physically demanding duties in a 10-hour shift. The commenter asserts that there is a lot of heavy machinery and conveyances that not only emit heat but stop airflow because of how big they are and that employers are not doing enough to protect workers.

Response to Comment 48.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

49. James Diaz, IEAWU.

Comment 49.1
The commenter has worked at Amazon for six months and recommends that the standard be strengthened to protect indoor workers by lowering the 82-to-87-degree Fahrenheit threshold. The commenter states that companies provide high-end coolers like Igloo and Yeti that boast that their products will keep ice frozen for seven days. However, by the seventh day in the work environment, the ice has melted and is susceptive to waterborne bacteria since it is not changed. Furthermore, the commenter states it is only May and the ice is already melting at this rate where the temperatures are below the threshold that shows that the proposed threshold is set too high.

Response to Comment 49.1
Please see response to comment 7.2.

The Board thanks the commenter for their input and participation in the rulemaking process.

50. Sarah Fee, Amazon Air Hub worker/IEAWU committee.

Comment 50.1
The commenter states there are struggles associated with heat while working inside the building where workers are in constant motion and asserts that the heat standard of 82 to 87 degrees is too high.

Response to Comment 50.1
Please see response to comment 7.2.

Comment 50.2
The commenter describes how they have felt heat illness and were required to find and notify a manager of their suffering and had to walk half the length of the warehouse (one half mile) to the cool-down area. The commenter recommends that the cool-down areas need to be closer.

Response to Comment 50.2
Please see response to comment 19.5.

Comment 50.3
The commenter recommends that cool water needs to be closer.

Response to comment 50.3
Please see response to comment 19.8.

The Board thanks the commenter for their input and participation in the rulemaking process.

51. Robert Moutrie, on behalf of the California Chamber of Commerce.

Comment 51.1
The commenter disagrees with the definition of “indoor” to include vehicles because it makes the reach of the standard awkward and unintended in places.

Response to Comment 51.1
Please see response to comment 12.3.

Comment 51.2
The commenter expresses concern about the feasibility of cool-down areas particularly for small employers such as restaurants who rent space and may not have full control of the work area.

Response to Comment 51.2
Please see response to comment 15.4.

Comment 51.3
The commenter recommends a temporal trigger of 10 minutes instead of a temperature trigger to be included in the regulation.

Response to Comment 51.3
Please see response to comment 10.2.

The Board thanks the commenter for their input and participation in the rulemaking process.

52. Renee Guerrero DeLeon, on behalf of the Southern California Coalition for Occupational Safety and Health (SoCalCOSH).

Comment 52.1
The commenter supports lowering the heat threshold that is based on fact-based evidence at a time where workplaces are getting hotter due to climate change.

The commenter acknowledges unions and organizations pushing for the indoor standard, including Worksafe, Warehouse Workers Resource Center, Fight for $15, and California Labor Federation.

Response to Comment 52.1
Please see response to comment 7.2.

The Board thanks the commenter for their input and participation in the rulemaking process.

53. Anthony Wooden, Amazon worker/IEAWU.

Comment 53.1
The commenter wishes to clarify statements made previously by a co-worker regarding water coolers being full of water meaning that the coolers were full of melted water and not bottled water. The commenter asserts that the only reason coolers and fans have been provided is because the employer was confronted and basic dignities in the workplace were demanded.

The commenter describes a time when a co-worker experienced heat illness and passed out. Ultimately, the co-worker went to the Amazon in-house clinic and was transported by paramedics to the hospital. The commenter asserts that employees deal with 100,000 to 200,000 packages that weigh tens of thousands of pounds that are divided between a dozen or two employees. Considering these issues, the commenter believes the standard of 82 and 87 degrees Fahrenheit is too high.

The commenter states that the warehouse where he works is a half million square foot facility and workers had to go outside the building to find water until they demanded water coolers. This is unreasonable and the only reason the employer will do anything is if a standard is set that protects the working people.

Response to Comment 53.1
The Board acknowledges the commenter's support for the proposed regulation. In respect to the comment regarding the application thresholds, please see response to comment 7.2.

The Board thanks the commenter for their input and participation in the rulemaking process.

54. Bruce Wick, on behalf of the Housing Contractors of California.

Comment 54.1
The commenter agrees with the written comments submitted by California Chamber of Commerce and Phylmar Regulatory Roundtable.

The commenter is concerned that the proposed regulation is not a consensus standard and references a meeting held in 2017, where warehouse and restaurant workers along with a few others stated, "protect us, please." The commenter recommends that a lot of changes will have to be made, since the proposed regulation is not a consensus standard and covers everyone rather than only warehouse, restaurant, and some other workers.

Response to Comment 54.1
The Board is not persuaded by the comment that the proposed regulation is not a consensus standard. The option to limit the scope of the proposed regulation to specific industries was discussed during the advisory committee process and was rejected by the stakeholders. A regulation limited to certain industries would leave unprotected many workers at high-risk of heat illness, which would directly conflict with labor code section 144.6.

Comment 54.2
The commenter asserts that the SRIA is vastly wrong, and the law requires that the Board and public know what a regulation will cost prior to being voted in. The commenter states the first problem is that it excludes from its estimates workers who are exposed to high heat fewer than

once per week. Therefore, the commenter asserts that if a worker were exposed one day out of the year, the employer would have to go through the whole regulation. The commenter states the second problem is that the SRIA does not adequately justify assumptions made. For example, the commenter asserts that 20% of enterprises and affected industries and 80% of manufacturing and restaurants will not need additional action to comply, however all have heard that there is going to be additional action needed to comply. Furthermore, the SRIA states that 8% of workers will be impacted with a cost of a billion dollars over 10 years, when the correct number is 80% and cost is estimated ten times too low. The commenter recommends the SRIA be redone to obtain the costs.

Response to Comment 54.2
The Board is not persuaded by the comment. Department of Finance reviewed the SRIA and the Board responded to all comments from the Department of Finance, which are included in the rulemaking document.

The Board thanks the commenter for their input and participation in the rulemaking process.

55. Andrew J. Sommer, on behalf of Fisher Phillips.

Comment 55.1
The commenter is concerned about the application of the proposed indoor rule to various workforces and employees. The commenter asserts that the proposed indoor rule does not consider the interaction of outdoor and indoor workplaces and their respective roles. The commenter believes that rules cannot be reconciled for employees transitioning from indoor to outdoor work. Furthermore, if an employee primarily works outdoors, the commenter questions why the indoor rules apply for such isolated instances where employees work indoors for a limited duration at a time or cumulatively throughout the day. The commenter recommends an exception for employees working cumulatively for a short duration above the temperature thresholds of this rule.

Response to Comment 55.1
Please see responses to comments 10.2 and 12.2.

Comment 55.2
The commenter is concerned about the hierarchy of controls and the manner the rule is presently written which requires employers to implement engineering controls to reduce indoor temperatures except when such controls are infeasible. The commenter asserts that issue lies in the application by the [Occupational Safety and Health] Appeals Board that equates feasibility with the possibility of instituting effective engineering controls without consideration of costs and practicability for employers.

Furthermore, the commenter states that administrative controls are more effective than engineering controls and are simply more feasible. The commenter recommends flexibility with the hierarchy of controls within the rule to recognize realities of indoor operations where air conditioning may not be feasible or have limited effectiveness.

Response to Comment 55.2
Please see response to comment 10.8.

Comment 55.3
The commenter is concerned regarding the requirement of close observation as it is tied to a heat wave. The commenter explains that a heat wave does not correlate to an indoor workspace when it is based on outdoor temperatures.

Response to Comment 55.3
Please see response to comment 10.10.

The Board thanks the commenter for their input and participation in the rulemaking process.

56. Katie Davey, on behalf of the California Restaurant Association.

Comment 56.1
The commenter expresses concern about the misconception in the restaurant industry regarding the ownership of the franchise brands when it comes to franchisors and franchisees. The commenter explains that franchisee establishments own and operate the stores and make employment decisions such as hiring, firing, wages, and benefits. The national brands (the franchisors) have no role whatsoever in the day-to-day operation. Furthermore, the commenter asserts that the counter service industry does not flout existing labor laws and do not have disproportionate Cal/OSHA violations compared to other industries. The commenter recommends the regulation be simplified to ease compliance and protect employees.

Response to Comment 56.1
Please see response to comment 33.5.

Comment 56.2
The commenter is concerned that the proposed indoor heat illness regulation may conflict with regulations that affect the ability to heat and hold foods to the necessary temperatures to protect the public from foodborne illness and comply with the California Retail Food Code. The commenter asserts the engineering controls in the proposed regulation conflict with the California Retail Food Code and recommends they be reconsidered.

Response to Comment 56.2

Please see response to comment 33.2.

Comment 56.3
The commenter appreciates that the definition of cool-down area includes outdoor areas that are shielded from direct sunlight and high radiant heat sources. The commenter recommends that the language "to the extent feasible" be included in the definition of cool-down area to provide flexibility for compliance.

Response to Comment 56.3
Please see response to comment 12.5.

Comment 56.4
The commenter recommends that the controls and measures section of the proposed regulation be clarified for taking the temperatures.

Response to Comment 56.4
Please see response to 8.5.

Comment 56.5
The commenter recommends that employees who work both indoor and outdoor be permitted to receive one training that covers both indoor and outdoor heat illness prevention requirements.

Response to Comment 56.5
Please see response to comment 12.10.

The Board thanks the commenter for their input and participation in the rulemaking process.

57. Bryan Little, on behalf of the California Farm Bureau.

Comment 57.1
The commenter supports comments from Michael Miiller, Rob Moutrie, and Helen Cleary.

The commenter is concerned about agricultural workers who will be impacted by the proposed indoor regulation and the potential conflict with section 3395 such as training, recordkeeping, temperature triggers, and other requirements. Furthermore, the commenter asserts the definition of indoor is too broad and raises issues about employees who pass back and forth from indoor and outdoor spaces. The commenter recommends the regulation specify that any employer to whom section 3395 applies, should be deemed in compliance in situations where employees alternate between indoor and outdoor employment.

Response to Comment 57.1
Please see response to comment 8.1.

Comment 57.2
The commenter states that vehicles like tractors and trucks operated by agricultural employees are covered by section 3395 and applying the proposed regulation would be impractical. As an example, temperature measurements and recordkeeping would be triggered for the short duration needed for the vehicle to cool after turning on the air-conditioning if operable. The commenter recommends that temperature measurements and recordkeeping not be required for vehicles whose operation continues to be covered by section 3395 or if they are equipped with air-conditioning that can cool the interior to 80 degrees Fahrenheit.

Response to Comment 57.2
Please see response to comment 12.3.

Comment 57.3
The commenter recommends that air-conditioned vehicles be allowed as a cool-down area to align with section 3395.

Response to Comment 57.3
The proposed regulation does not prohibit the use of air-conditioned vehicles as cool-down areas if they meet the defined criteria and comply with subsection (d). For such vehicles, the air conditioner must remain operational throughout the workday in order to keep the temperature below 82 degrees Fahrenheit.

Comment 57.4
The commenter recommends that the regulation should clarify that a shaded area used to comply with section 3395 is not an indoor space covered by the proposed regulation.

Response to Comment 57.4
Please see response to comment 63.3.

Comment 57.5
The commenter recommends that the requirements for cool-down areas such as ventilation, being blocked from direct sunlight, and shielded from radiant heat be required only if feasible.

Response to Comment 57.5
Please see response to comment 12.5.

Comment 57.6
The commenter asserts that the trigger temperature for the new indoor regulation differs from the trigger temperature for the various requirements of section 3395 and will cause confusion for employers and employees. The commenter recommends a minimum time exposure trigger of 15 minutes in a 60-minute period for the regulation to apply at the trigger temperatures of 82 to 87 degrees Fahrenheit.

Response to Comment 57.6
Please see response to 10.2.

The Board thanks the commenter for their input and participation in the rulemaking process.

58. Gideon Baum, on behalf of the California Hospital Association.

Comment 58.1
The commenter is concerned about the requirements for engineering controls within burn units of hospitals. The commenter asserts it is feasible to lower the temperatures in these units, however, would cause significant and adverse impacts to the medical conditions of patients. Burn patients with significant thermal damage, the commenter explains, are at a high risk for hypothermia as the skin has lost its ability to regulate body temperature, requiring burn units to operate at temperatures ranging from 85 to 95 degrees Fahrenheit. Furthermore, the commenter states that burn units have been operating this way since the 1970s and have a history of using administrative controls such as cool-down rooms, pre-hydration and post hydration, and electrolyte rich drinks to keep workers safe. The commenter explains that other methods for patient care such as forced air blankets and other technologies cannot be used due to the nature of the injury. Lastly, the commenter recommends that engineering controls include language that says feasibility or unless medically contraindicated or simply include a narrow exemption for burn units.

Response to comment 58.1
Please see response to comment 5.1.

Comment 58.2
The commenter recommends that medical professionals be allowed to self-monitor when in cool-down rooms as they have knowledge of heat illness and requiring a monitor may divert staff from patient care.

Response to comment 58.2
Please see response to comment 5.2.

The Board thanks the commenter for their input and participation in the rulemaking process.

59. Helen Cleary, on behalf of Phylmar Regulatory Roundtable.

Comment 59.1
The commenter agrees with the need for indoor heat regulation and supports the objective of the proposed rulemaking. However, they believe that the proposed scope of the standard does not effectively address the concerns related to mobile workforces and solo workers. The commenter argues that the regulation groups together short and incidental exposures with high heat conditions that expose employees for extended periods. The regulation implies that workers are at risk of a heat illness whenever they enter an enclosed space that is 82 degrees Fahrenheit. The trigger of 82 degrees Fahrenheit does consider clothing that restricts heat, high radiant heat areas. However, the high radiant heat areas defined as only five degrees higher, and technologies on protective clothing is improving. The commenter does not believe these individual factors alone at such a low temperature automatically create an actual heat risk. As drafted, the regulation is missing key occupational safety and health principles, specifically the duration of exposure. This missing element combined with the definition of indoor greatly expands the scope beyond, "Employees having considerable exposure to heat and hot environments."

Employers will be required to define every enclosed space a worker performs a single task and as an indoor space and consider these requirements if the space does not have a cooling system. This casts the net beyond traditional indoor spaces and includes thousands of units across the state. This does not consider other environmental risk factors such as the time spent working in this space, or how strenuous the activity is like the workers who have demonstrated the hard work that they do in these hot environments. All outdoor storage containers are now subject to these requirements. The commenter states that their concern is incidental entrances and exits and they do not believe these low exposures actually create an occupational health risk as the rule establishes.

The commenter expresses concerns about the impact on outdoor workers and suggests two exceptions to mitigate the expanded scope: a short duration exception of 15 minutes in a one-hour period and an exception allowing employers to comply with the outdoor heat standard. The duration inspection aligns with the wildfire smoke and COVID-19 regulations that both consider actual exposure. A 15-minute every hour parameter will inherently require a cool-down period. The commenter aligns with the previous comments on access to cool-down areas.

Response to Comment 59.1
Please see response to comment 10.2.

Comment 59.2
The commenter also requests an exemption to subsection (e) and the reinstatement of administrative controls as an alternative to engineering controls. They are hopeful that a few changes will improve the applicability to all of the industries that will impact not just the ones at the highest risk.

Response to Comment 59.2
Please see response to comment 10.8.

The Board thanks the commenter for their input and participation in the rulemaking process.

60. Heath Lopez, Amazon driver/Teamster Local 396.

Comment 60.1
The commenter has been a delivery driver for DAX8 for three years. The drivers go through intense conditions in the summer, including walking or running in dry heat, meeting demanding deadlines set by Amazon while enduring excessive heat without proper ventilation or air conditioning in the vans they drive. The vans feel like ovens even when parked in the shade with doors open. Some vans have air conditioners that fail to blow cold air, and the heat inside can be intense enough to cause burns.

The commenter has witnessed and heard from fellow drivers who suffer from heat-related fatigue, exhaustion, and near-fainting episodes while on the road. Some drivers even fear coming to work each day due to the heat. While Amazon provides water to stay hydrated, there are limits on how much they can take. The expectation to finish routes in under eight hours and deliver 300 to 400 packages a day per person seems unreasonable, requiring some drivers to seek assistance to complete their routes. Although they may be considered outside workers to some, the majority of their work is indoors. They take breaks, have lunch, and handle packages in the van. The commenter states that it is like a fight for survival and expresses a desire for change, a better working environment, and a brighter future not only for themselves but also for future drivers in the delivery service industry.

Response to Comment 60.1
The Board acknowledges the commenter's support of the proposed regulation and thanks the commenter for input and participation in the rulemaking process.

61. Veronica Pardo, on behalf of Resource Recovery Coalition of California.

Comment 61.1

The commenter states that she was part of a listserv and a communication listserv during the informal process but received very late notice regarding this rulemaking. She believes that some stakeholders did not receive timely notice about this standard and suggests that such issues should be taken into account for future iterations, if they occur.

Response to Comment 61.1
The Board will ensure that notifications are sent out in a timely manner. Members of the public are invited to join the Board's mailing list at this link: www.dir.ca.gov/oshsb/email-list-request-form.html.

Comment 61.2
The commenter states that their industry largely follows the outdoor heat illness standard, section 3395, and acknowledges the clarity provided on several concerning issues. She expresses satisfaction with the clarification provided regarding clothing that restricts heat removal. They will distribute the slide deck to their membership for better understanding, as the drafted definition is a little unclear.

Response to Comment 61.2
Please see responses to comments 18.2 and 26.8.

Comment 61.3
The commenter seeks clarification regarding vehicles. She states that workers frequently enter and exit the refuse truck throughout the day. Currently, the industry follows section 3395.

Response to Comment 61.3
Please see response to comment 12.3.

Comment 61.4
The commenter recommends that once the standard is finalized, a comprehensive FAQ be provided to employers and employees to outline the expectations set by the standard.

Response to Comment 61.4
Please see response to comment 27.1.

The Board thanks the commenter for their input and participation in the rulemaking process.

62. Beth Malinowski, on behalf of SEIU California.

Comment 62.1

The commenter strongly supports the proposed regulation and aligns themselves with the concerns and recommendations put forward by Worksafe and labor colleagues. They emphasize the importance of implementing the standard promptly for the benefit of low-wage workers, including those in fast food settings and less recognized at-risk work settings like cabin cleaners on airplanes and on the tarmac.

Response to Comment 62.1
The Board acknowledges the commenter's support for the proposed regulation.

Comment 62.2
The commenter states that they represent health care workers in public and private hospitals with burn units. They acknowledge the concerns raised by their colleague at CHA regarding the interplay between the standard and care burn units. Their members providing care to burn patients are committed to providing the best care to their patients while also guaranteeing the health and safety of the whole care team. While they do not agree with CHA's proposed solution, they express willingness to engage in dialogue to ensure that the needs of both workers and patients are met.

Response to Comment 62.2
Please see response to comment 5.1.

The Board thanks the commenter for their input and participation in the rulemaking process.

63. Michael Miiller, on behalf of the California Association of Winegrape Growers.

Comment 63.1
The commenter aligns themselves with the comments and the letter submitted by California Chamber of Commerce and Phylmar Regulatory Roundtable. They also concur with several other comments raised concerning issues, especially those comments from Bryan Little at the Farm Bureau. They have submitted a letter raising a few concerns that they believe can be easily resolved and addressed.

The commenter requests an incidental exposure exemption for exposure to moderate heat for less than 15 minutes at a 60-minute period.

Response to Comment 63.1
Please see responses to comments 10.2 and 12.2.

Comment 63.2

Second, draft regulations should be amended to address issues where employees are covered by both the proposed regulation and the outdoor heat illness preventions regulation that exists already. As Eric Berg stated this morning, both the indoor and outdoor standards are intended to prevent heat illness. They believe it is duplicative to have two standards for the same purpose apply to the same employee in the same workplace in the same work shift. They have already provided a draft to address this.

Response to Comment 63.2
Please see response to comment 8.1.

Comment 63.3
The commenter states that the proposed exemption for shaded areas is a bit confusing and needs a clarification.

Response to Comment 63.3
The Board is not persuaded by the comment that the exception for shaded areas in subsection (b)(12) needs a clarification. It is clearly stated that a shaded area that meets the requirements of subsection 3395(d) and used exclusively as a source of shade for employees covered by section 3395 is not indoor for the purpose of the proposed regulation. Also, please see response to comment 12.4.

Comment 63.4
The commenter believes that proposed regulations should include an exemption for vehicles, as previously discussed. They propose differentiating between vehicles used for delivery purposes and other types of vehicles. However, they defer to the Board's staff and they are happy to help in drafting that.

Response to Comment 63.4
Please see response to comment 12.3.

Comment 63.5
The commenter states that their biggest concern is for indoor heat issues where engineering controls and personal heat-protective equipment are infeasible. They have provided a language that they think may resolve that as well.

Response to Comment 63.5
Subsection (e)(2) requires employers to use control measures, such as engineering controls, administrative controls and personal heat-protective equipment, to minimize the risk of heat

illness to the extent feasible while following the hierarchy of controls. Please see response to comment 10.8.

Comment 63.6
The commenter states that the concerns raised by Gideon Baum really hit hard the issue raised by Dan Leacox regarding the potential unintended consequences of a broad-based approach in the regulation. It is almost impossible to address all the issues, every occupation, and every industry covered by this regulation. They mention the example raised by Mr. Baum, where the regulation could potentially cause harm to patients in a burn unit. While they understand the need for standards to prevent fatalities, they believe that collaborative efforts involving all parties are the most effective way to achieve this goal. The commenter expresses their willingness to work with the Board staff and Cal/OSHA staff and offers their assistance as a resource to address these issues.

Response to Comment 63.6
The Board strives to avoid unintended consequences of a regulation by engaging stakeholders in the rulemaking process. In respect to the comment regarding burn units, please see response to comment 5.1.

The Board thanks the commenter for their input and participation in the rulemaking process.

64. Jesus Lopez, Amazon driver/Teamsters Local 396.

Comment 64.1
The commenter is a driver for Amazon and a member of the Teamsters Local 396 union. They deliver up to 300 or more packages a day in the Anza Valley, which is a desert. He expresses concern about the increasing heat and the need for better heat standards and a reasonable policy for drivers. They emphasize the importance of policies that help them stay hydrated and ensure their well-being on the road. The commenter urges the Board to add more measures to the proposed regulation rather than removing existing measures.

Response to Comment 64.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

65. Viviana Gonzalez, UPS worker.

Comment 65.1

The commenter has been working at the Palmdale building for nine years and has been a shop steward for about seven years. The commenter describes that their indoor employees have suffered heart palpitations and heatstroke, and all they can do is drink more water and electrolytes. They express the need for more robust laws to ensure heat relief, as the company will only provide employees the minimum required by the law.

The commenter states that their building does not have fans and temperatures inside trucks reach 140 to 150 degrees Fahrenheit when the ambient temperature gets to 115 degrees Fahrenheit.

They emphasize the physical strain and health risks involved in unloading trailers for extended periods without adequate breaks because the company only allows employees to take a break after two and a half hours. They request stronger legal protections to safeguard their well-being and enable them to return home to their families.

The commenter mentions a driver who died in the back of the truck last year in Pasadena due to heat and criticizes the company's lack of action. The commenter represents their local union, building, coworkers and fellow delivery drivers who are seeking relief from heat conditions that can reach 119 degrees Fahrenheit in the desert. They urge the Board to put everything in writing because the big corporations are looking to see what the bare minimum requirements are.

Response to Comment 65.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

66. Carlos Avalos Porras, Amazon driver/Teamsters.

Comment 66.1
The commenter has been a DAX8 driver for Amazon for about a year and represents fellow coworkers and drivers working in the heat. As a driver, the commenter has experienced heat exhaustion, fatigue, and even incidents of almost fainting and falling due to the extreme heat. He consumes multiple jugs of water each day. It is important for this law to be elevated in scale because workers risk their lives daily for corporations that do not care about workers. The commenter notes the lack of air conditioning in the trucks and temperatures reaching 130 to 140 degrees Fahrenheit in the truck is unacceptable.

Response to Comment 66.1

The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

67. Alice Berliner, on behalf of UC Merced Community and Labor Center.

Comment 67.1
The commenter works closely with workers and organizations in various industries, including farmworkers, warehouse workers, and poultry workers. They highlight the extreme heat conditions experienced in the Central Valley and across California, with record temperatures and anticipated similar weather in the coming months. They reference a study from July 2021 linking higher workplace injury rates to elevated temperatures, demonstrating the direct correlation between extreme heat days and increased injuries. The commenter also mentions their farmworker health study report published in January 2023, which found adverse pregnancy outcomes associated with exposure to high temperatures during pregnancy. More than one third of respondents also reported difficulties in keeping their houses cool during extreme heat. The commenter emphasizes the need for temperature controls at work. As research shows that when temperatures exceed 80 degrees Fahrenheit, workers need opportunities to cool-down, rest, and have access to clean drinking water. They believe that a standard like the indoor heat standard under discussion is an important step in ensuring the safety of indoor workers and state workers.

Response to Comment 67.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

68. Judith Neidorff, IFPTE Local 21.

Comment 68.1
The commenter, a safety worker for a public utility and a member of IFPTE Local 21, expresses their support for the proposed regulation.

The commenter highlights various recommended and required maximum indoor temperature guidelines from different agencies and organizations. The Bureau of Prisons recommends keeping prisons a maximum temperature of 76 degrees Fahrenheit during the summer. The World Health Organization (WHO) guidelines on health and housing has 24 degrees Celsius, a little under 76 degrees Fahrenheit, as the upper temperature at which there's no demonstrable risk to the health of healthy sedentary people. The CDC references American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 55 and recommends an operative temperature range of 75 to 80.5 degrees Fahrenheit for the summer, with slow air movement

and 50% indoor air humidity. Federal OSHA Technical Manual recommends 76 degrees Fahrenheit as the maximum indoor temperature under their indoor air quality investigation chapter. Federal OSHA Technical Manual also ties their data to the ACGIH 2017 TLVs and Biological Exposure Indices, which ties their heat stress action and threshold limits to the level of physical activity. They indicate the action limit as the temperature at which an unacclimated person is at risk for heat stress, and the threshold limit as the temperature at which an acclimated person is at risk for heat stress. For somebody who only performs occasional light work less than 25% of their job like walking to a printer maybe, their action level is 86 degrees Fahrenheit, and the threshold is 90.5 degrees Fahrenheit. However, these people generally work in air-conditioned areas. For those who perform moderate work 75% to 100% of their day, their action level is 77 degrees Fahrenheit and their threshold is 82.5 degrees Fahrenheit.

The commenter's concern with the current limits is that they seem to line up with the ACGIH action and threshold limits for a person who performs light work full time, which is not realistic as those people tend to be the ones with access to temperature-controlled areas. The commenter recommends changing the application threshold from 82 to 77 degrees Fahrenheit, which is one degree over the ASHRAE maximum recommendation, which also aligns with the Bureau of Prisons, WHO and Federal OSHA maximum recommendation. They also recommend changing the 87 degrees Fahrenheit trigger level to 81.5 degrees Fahrenheit, which is the threshold limit value for employees who perform heavy work between half and 75% of their time on the job.

Response to Comment 68.1
The Board acknowledges the commenter's support for the proposed regulation. In respect to the comment regarding the application threshold, please see response to comment 7.2.

The Board thanks the commenter for their input and participation in the rulemaking process.

69. Johann Amberger, Amazon worker/IEAWU.

Comment 69.1
The commenter has worked at the Amazon Air Hub in San Bernardino since the facility launched in April 2021 and a proud member of IEAWU. The commenter states that their coworkers have already given ample testimony on the impact of indoor heat on our physically demanding work and on their struggles to get their employer to respond adequately. The commenter offers a brief anecdote as to support their belief that an 82/87 degrees Fahrenheit standard is insufficient.

During the August and September heatwave last year, after scores of coworkers implored site leadership to take their health seriously, their general manager actually did lower the thermostat. Several days later, the commenter walked into sweltering indoor temperatures of 85 degrees Fahrenheit on the robotics floor and 87 degrees Fahrenheit in the flow control office around 6:45 a.m. No air circulation was present and it took about two hours until 9:00 a.m. or so when the rooftop units kicked on. The commenter asked the maintenance supervisor if there had been a problem with the HVAC and learned that the corporate office in Seattle had discovered a deviation from their internal standards and had ordered the air to be cut off overnight to allow the temperature to rise before bringing it back down.

If temperatures can spike into this range, with only a few hours of HVAC cut off during a California late summer night, then the commenter does not think it is a sensible solution for the state's seasonality.

Response to Comment 69.1
Please see response to comment 7.2.

The Board thanks the commenter for their input and participation in the rulemaking process.

70. Jassy Grewal, on behalf of United Food and Commercial Workers (UFCW) Western States Council.

Comment 70.1
The commenter is in strong support of the proposed indoor heat illness standard. This standard is beyond long overdue and urgently needed to protect California workers from current and increasing conditions of high heat and extreme heat in their indoor workplaces. It is unfortunate that workers will continue to have no protections from indoor heat this summer, as temperatures are already starting to rise all throughout California.

UFCW represents workers and packing houses, meatpacking facilities, processing plants, warehousing and retail stores, where there is often little to no ventilation and temperatures can rise significantly during the hotter weeks of the summer. They represent workers at the Spreckels Sugar Factory in the Imperial Valley where there is no ventilation inside the processing plant and temperatures can rise to upwards of 120 degrees Fahrenheit. These are dangerous conditions for workers who are doing physically intensive labor. Additionally, they represent workers at cannabis retail locations in the City of San Diego, where there is no indoor air conditioning. With global warming and extreme heat events, these locations can experience high internal temperatures with very few measures taken by employers to reduce the heat exposure indoors.

The commenter emphasizes that high heat is a hazard that leads to a wide variety of workplace injuries far beyond heat illness itself. On days where temperatures are between 85 to 90 degrees Fahrenheit, the overall risk of workplace injuries was 5% to 7% higher. Moreover, on days with temperatures exceeding 100 degrees Fahrenheit, the overall risk of injuries is 10% to 15% higher, which is very alarming.

The commenter believes that the standard should do more to protect workers. They respectfully urge the Board to pursue these changes without further significant delays. Workers have waited years for an indoor heat illness standard and cannot wait any longer. But workers are also deserving of strong protections after all the unnecessary suffering they have endured year after year without a standard.

Workers, especially low-income workers who are five times more likely to be hurt on the job due to heat than high-income workers cannot wait any longer for protections. For these workers and others, delay on this standard is life or death for them.

Response to Comment 70.1
The Board acknowledges the commenter's support for the proposed regulation.

Comment 70.2
The commenter urges the Board to reduce the 82 and 87 degrees Fahrenheit thresholds to 78 and 85 degrees Fahrenheit respectively to offer more protection to workers.

Response to Comment 70.2
Please see response to comment 7.2.

Comment 70.3
The commenter urges the Board to broaden the definition of clothing that restricts heat removal.

Response to Comment 70.3
Please see response to comment 15.3.

Comment 70.4
The commenter recommends the Board to mandate minimum rest break schedules and cool-down areas.

Response to Comment 70.4

Please see response to comment 15.4.

Comment 70.5
The commenter recommends that training requirements should ensure that common sense best practices are followed.

Response to Comment 70.5
Please see response to comment 7.6.

Comment 70.6
The commenter recommends strengthening the recordkeeping requirements.

Response to Comment 70.6
Please see responses to comments 15.7 and 15.8.

The Board thanks the commenter for their input and participation in the rulemaking process.

71. Steve Johnson, on behalf of Associated Roofing Contractors of the Bay Area Counties, Inc.

Comment 71.1
The commenter expresses strong support for the comments of Helen Cleary with the Phylmar Regulatory Roundtable and Rob Moutrie with the California Chamber of Commerce.

The commenter highlights that fixed worksites are much different from construction sites where there are storage units, containers where employees will just occasionally have to run and grab material and go back to work outside on the job site. The commenter is concerned about the lack of an exception for someone who is not continuously working in a space but only getting materials. The commenter does not think such spaces were meant to be indoor workplaces, but they fall under the current definition of indoor. They look forward to working with Cal/OSHA on some clarifications of these natters.

Response to Comment 71.1
Please see responses to comments 10.2 and 12.2.

Comment 71.2
The commenter is also concerned about frequent use of the terms “reasonable” and “feasible” throughout the regulation. They point out that the burden is on the employer to prove reasonable and feasible. If Cal/OSHA decides it is not reasonable, or if Cal/OSHA decides that it

is not infeasible, then Cal/OSHA writes a citation. The employer is caught with some language that is prone to interpretation problems.

Response to Comment 71.2
The terms “reasonable” and “feasible” have been defined in case law established by the Occupational Safety and Health Appeals Board. A definition in the proposed regulation could disrupt long established case law. Therefore, the Board declines to make modification in the proposed regulation. Also, please see response to comment 7.5.

72. Travis West, on behalf of California Nurses Association.

Comment 72.1
The commenter supports the comments made earlier by Worksafe’s AnaStacia Nicol Wright, UFCW’s Jassy Grewal, California Labor Federation's Mitch Steiger, and SoCalCOSH’s Rene Guerrero. They support the Board in issuing a strong standard to protect the workers from heat illness in indoor workplaces. Their members can see firsthand the drastic effects on workers when they need medical care due to heat related illnesses and other injuries that happen at the workplace when their employers fail to protect them.

When workers are not protected from indoor heat, they can obviously experience heat related illness and require medical help. As AnaStacia has brought up earlier, studies have shown that the risk of other workplace injuries increase significantly when workers are exposed to high temperatures. Nurses know that safe workplaces are essential for a patient's health and the Board has the ability to protect them by issuing a strong and protective standard on indoor heat.

Additionally, nurses themselves can be impacted by high heat temperatures in certain situations, such as when employers fail to maintain ventilation systems that can handle high outdoor temperatures, which obviously can lead to the temperature indoors increasing as well. Furthermore, nurses often have to wear personal protective equipment to care for patients, which can make even moderately high indoor temperatures dangerous for nurses, which of course puts their patients at risk.

The commenter urges the Board to adopt a proposed standard with the changes outlined in the union coalition letter to strengthen the proposed standard. The Board should not delay the issuance of a strong and effective standard. A delay will only put more workers at risk of heat related illness, work related injuries and potentially death.

Response to Comment 72.1

The Board acknowledges the commenter's support for the proposed regulation.

Comment 72.2
The commenter disagrees with CHA's proposed amendments. While it's true that some nurses work in units where higher temperatures are required as part of patient care, such as on burn units, they urge the Board to ensure that medical facilities are still covered under the proposed standard and to not exempt them from any of their requirements. The commenter clarifies that not all burn patients require treatment in high heat rooms, and a broad or blanket exemption for burn units or for workers treating burned patients would be inappropriate.

The commenter suggests adding a clarifying note that in certain narrow situations, engineering controls may be infeasible for certain work areas within healthcare facilities where temperatures are higher than 82 degrees Fahrenheit, if that's necessary for patient care and treatment, as determined by the patient's treating provider. But this should also make clear that administrative and other personal controls remain in place. They believe that this issue with burn patients should not delay the standards implementation in any way.

Response to Comment 72.2
The Board agrees with the comment that broad exemption for burn units is not appropriate. Please see response to comment 5.1.

Comment 72.3
Furthermore, staff who work in burn units may experience signs and symptoms of heat illness, especially if they have been floating to a new unit or are new to the area and not acclimated to the high temperatures or wearing personal protective equipment. Therefore, they should not be excluded from cool-down requirements, including the requirement that they should be monitored for signs of heat illness while in cool-down areas.

Response to Comment 72.3.
The Board agrees with the comment. Please see response to comment 5.2.

Comment 72.4
Regarding comments from the California Chamber of Commerce about implementing temporal control, the commenter believes such controls would be arbitrary. The commenter emphasizes the importance of conducting assessments, temperature readings, and taking other precautions as described in the proposed standard, even for workers in high heat areas for relatively short periods. Heat stroke can develop quickly, even within 10 minutes, making it important for this standard to be applicable to those workers as well.

Response to Comment 72.4
Please see response to comment 30.6.

The Board thanks the commenter for their input and participation in the rulemaking process.

73. Alexis Teodoro, on behalf of Orange County Communities Organized for Responsible Development (OCCORD).

Comment 73.1
The commenter asserts that ensuring the safety and well-being of workers, especially in an environment exposed to high temperatures is of paramount importance. Heat related injuries and illnesses can have severe consequences on the health and productivity of workers and it is essential that comprehensive measures are in place to mitigate these risks. The commenter states that the proposed regulation moves in the right direction of protecting the lives of workers. However, several key provisions do not kick in until high temperatures ranging between 82 and 87 degrees Fahrenheit are reached. This can place the lives of workers at risk. The commenter urges the Board to consider revising and lowering the temperature thresholds in order for the strongest protections to kick in sooner rather than later. They emphasize protecting and uplifting the lives of workers, especially those working in high temperatures such as Amazon and restaurant workers.

Response to Comment 73.1
The Board acknowledges the commenter's support for the proposed regulation. In respect to the application thresholds, please see response to comment 7.2.

The Board thanks the commenter for their input and participation in the rulemaking process.

74. Dwayne Garrett, on behalf of Teamsters Local 542.

Comment 74.1
The commenter states that their membership ranges from warehouse workers such as Costco workers to UPS drivers and they routinely hear about drivers having heat exhaustion. In the past year alone, they had several drivers that had heat stroke and suffered from heat exhaustion. The commenter asserts that there needs to be stronger protections for the workers that work for a living, the middle class, and the working class people. They urge the Board to make the needed adjustments in order to protect the working class.

Response to Comment 74.1

The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

75. Chris Martinez, Teamsters Local 542.

Comment 75.1
The commenter had worked as an Amazon delivery driver and UPS warehouse worker. The commenter highlights the extreme conditions experienced in these workplaces. The temperature inside big rigs is around 85-90 degrees Fahrenheit when it is 60 degrees Fahrenheit outside. The commenter emphasizes that the geographic location should be considered when setting thresholds as certain areas, like San Bernardino and El Centro, have significantly higher temperatures. They urge the Board to lower the temperature threshold for worker safety.

The commenter states that UPS workers, Costco workers, and Amazon workers do not wake up saying, "I'm going to go to work today and I'm going to take these deliveries. I am going to stock the shelves. And I might die of heat, because it is too hot, because my employer, my manager does not want to implement the correct trainings on how to handle myself when I am experiencing heat exhaustion or the early onset signs of a heat stroke." The commenter does not remember Amazon or UPS providing the training on how to recognize and handle heat exhaustion or heat stroke. The commenter hopes these are taken into consideration.

Response to Comment 75.1
Please see response to comment 7.2.

The Board thanks the commenter for their input and participation in the rulemaking process.

76. Kevin Bland, on behalf of California Framing Contractors Association, Residential Contractors Association, and Western Steel Council.

Comment 76.1
The commenter incorporates by reference and joins in the comments, both written and oral by Rob Moutrie, Bruce Wick, Helen Cleary, Bryan Little, Andrew Sommer and Michael Miiller.

The commenter raises concerns regarding those who are substantially covered by the outdoor heat regulation. He provides an example of a framing contractor and highlights the challenges in defining what constitutes an indoor space, especially when considering elements like shear walls and open studs. He expresses confusion over the phrase "whether open or closed" and the potential implications it has on compliance and enforcement. The commenter suggests that

the issue could be resolved by refining the scope and definition of the regulation. He proposes exempting employees who are substantially working outdoors, to avoid confusion, enforcement difficulties, and the burden of complying with two separate standards. He also notes that certain industries, such as construction, oil and gas, and agriculture, already have elevated compliance requirements under section 3395.

Response to Comment 76.1
Please see response to comment 8.1.

The Board thanks the commenter for their input and participation in the rulemaking process.

Oral Comments by Members of the Occupational Safety and Health Standards Board:

77. Barbara Burgel, Board Member, Occupational Safety and Health Standards Board.

Comment 77.1
Board Member Barbara Burgel thanks all the stakeholders and emphasizes the importance passing an indoor heat standard as soon as possible due to its impact. She supports the following recommendations made by stakeholders:

- Lowering the current trigger temperatures to 78 and 85 degrees Fahrenheit, or at least down to 80 degrees Fahrenheit;
- Adding a duration exception and exposure definition due to feasibility issues for outbuildings;
- Including the acclimatization schedule into the standard and the training curriculum; and
- An annual refresher training on indoor heat.

Board Member Burgel states that she does not have a position on combining the indoor and outdoor heat standard. She commends Cal/OSHA for integrating and looking at both standards to align those two standards. She thinks that these two standards should interface as efficiently as possible, whether it is one combined standard or two. She emphasized that this regulation should move forward in a timely fashion. In the meantime, she hopes that Cal/OSHA continues to do education and outreach to all California workers and employers about heat prevention this summer.

Response to Comment 77.1
The Board acknowledges Board Member Burgel's support for the proposed regulation. In respect to comments regarding lowering threshold, duration exception, acclimatization

schedule and annual training, please see responses to comments 7.2, 10.2, 24.5 and 7.6 respectively.

Board Member Burgel's comments are noted for the record.

78. Laura Stock, Board Member, Occupational Safety and Health Standards Board.

Comment 78.1
Board Member Laura Stock is in support of the comments of Board Member Burgel. She thanks Cal/OSHA for their hard work. She is glad that the regulation will be promulgated by next summer although she is concerned that it is not going to be in place for this summer.

Board Member Stock supports the idea of conducting outreach, education, and enforcement activities this summer to promote indoor heat safety. She acknowledges that enforcement within the IIPP might not be sufficient, but it could provide some recourse for those suffering from indoor heat exposure this summer. She expresses gratitude to the workers who shared their firsthand experiences, highlighting the importance of such testimonies in emphasizing the need for prompt regulation.

Board Member Stock supports the following:

- Lowering the threshold as the current proposed threshold is higher than the thresholds recommended by various national and international organizations;
- Inclusion of work intensity in triggering the standard and particularly in cases of intensive work, to trigger coverage of control measures in subsection (e); and
- Making annual refresher training mandatory.

Board Member Stock hopes to incorporate these changes in future drafts. She emphasizes that the primary focus is on establishing a standard as quickly as possible rather than delaying it. She is concerned about the timeframe as these changes would require adjustments to the SRIA. She requests to be kept informed about the progress of the process to ensure that the proposed regulation can be voted on and promulgated by the summer.

Response to Comment 78.1
The Board acknowledges Board Member Stock's support for the proposed regulation. In respect to comments regarding lowering threshold, inclusion of work intensity and annual training, please see responses to comments 7.2, 23.4 and 7.6 respectively.

Board Member Stock's comments are noted for the record.

79. Dave Harrison, Board Member, Occupational Safety and Health Standards Board.

Comment 79.1
Board Member Dave Harrison is in support of the comments of fellow Board members. He expresses appreciation for all the speakers. He acknowledges that teachers in the state of California have previously raised concerns regarding working in high-heat indoor environments. He states that the specific challenges faced by teachers working in high heat indoor workplaces should be recognized and addressed.

Response to Comment 79.1
Board Member Harrison's comments are noted for the record.

80. Kathleen Crawford, Board Member, Occupational Safety and Health Standards Board.

Comment 80.1
Board Member Kathleen Crawford thanks Board Member Harrison for acknowledging teachers. She notes that there is a significant amount of agreement regarding the issue of indoor heat regulation moving forward. However, she acknowledges that the complexity lies in the specific details of the regulation.

Board Member Crawford supports the addition of annual training. She asks Cal/OSHA Chief Jeff Killip or Eric Berg for clarification regarding concerns raised about the SRIA in this meeting and the last meeting.

Response to Comment 80.1
All comments from Department of Finance regarding the SRIA are contained in the Notice posted March 31, 2023, as required by Government Code 11346.3(f). Changes in the proposed regulation, such as lowering the thresholds and requiring annual training, would require reassessing economic and fiscal impacts as the costs and benefits would change.

The Board's Executive Officer Christina Shupe reminded everybody that the SRIA is a living document during the rulemaking process and any changes to the proposal as well as feedback from the Department of Finance that occurs during the formal rulemaking process will result in changes in the SRIA. She highlighted that it was mentioned earlier that complexity of documents could delay the rulemaking process. She noted that if this rulemaking should be moving forward promptly, some of those items could be addressed in a future rulemaking.

In respect to the comment regarding annual training, please see response to comment 7.6.

Board Member Crawford's comments are noted for the record.

SUMMARY AND RESPONSE TO WRITTEN COMMENTS RESULTING FROM THE FIRST 15-DAY COMMENT PERIOD

1. Mary Ann Pham, Safety Officer II, Los Angeles County Department of Children and Family Services, and 2023 Board Vice President, Public Agency Safety Management Association (PASMA) South Chapter, by written comments dated August 4, 2023.

Comment 1.1

The commenter requests further clarification on subsection (a) scope and application. For applicability, this is determined to be "all indoor work areas where the temperature equals or exceeds 82 degrees Fahrenheit when employees are present." Upon review of the proposed regulation, there is no definition for "indoor work areas." It is understandable for smaller offices where there is one thermometer, although a number of worksites operate with a large square footage and utilize more than one thermometer in the work area.

The commenter states that it is not uncommon for the heating, ventilation and air conditioning (HVAC) system to malfunction during the summer and have a section of the office kept at a reasonable 72 degrees Fahrenheit, while another section of the office is at 81 degrees Fahrenheit with air vents blowing at 96 degrees Fahrenheit due to a broken AC unit. The commenter asks how the proposed regulation would be applied in such cases.

The commenter suggests the Board to provide the following:

- A definition for "indoor work areas."
- Consideration for indoor work areas that have multiple temperature readings in various sections that do not have floor to ceiling separations.
- Consideration between ambient air temperature and influent air that may adversely affect a section of employees who are technically in workspaces where the ambient air temperature does not meet the threshold temperature.
- How to apply the regulation when the indoor work area ambient air temperature is not uniform throughout the work area.

The commenter asks how to enforce the proposed regulation if office management justifies keeping staff in environments where the overall temperature of the office is tolerable while a section is blowing hot air directly onto a handful of employees who cannot move to another workstation because they need hardware that is only available where the hot air is blowing (ex: sit and stand).

Response to Comment 1.1

The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

2. Luisa Gratz, President, Local 26, International Longshore & Warehouse Union (ILWU), by written comments dated August 4, 2023.

Comment 2.1
The commenter expresses concern about workers in California who must toil in non-air-conditioned work environments that are indoor and on platforms, upstairs on floors without cooling or air circulation, enduring convection currents and rising temperatures, combined with increasing humidity and storage.

The commenter states the heat index includes humidity and was not adequately addressed in the proposed regulation. Furthermore, the proposed regulation ignores clothing worn or required to be worn by workers as a condition of employment, cotton, not polyester, to protect workers' safety and health. When these conditions exist, the heat index must be reduced to a comfort level that can be maintained throughout the workday. Additionally, the proposed regulation ignores specific work categories, such as work at a desk or counter that is lightweight repetitive, or very heavy repetitive lifting that would generate body heat in addition to the heat index. The commenter asserts that work description is an essential component to the indoor heat standard and without a work description and relevant application, it is not a useful proposal for workers.

The commenter states that climate change is real and for worker's physical and mental health laws must change to reflect care, or they are useless. This should not be a numbers game, working decimal points on a temperature gauge.

Response to Comment 2.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 2.2
The commenter states that the definition of union representative must not be ambiguous. The standard must also be effective for workers in non-union workplaces for worker enforcement, and not arguments with an employer whose comfort level is in an air-conditioned office or work environment.

Response to Comment 2.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 2.3
The commenter states that the record keeping requirements must include worker records in Spanish and English and based on tools that are accurate and reliable for both workers and employers with union approval, and worker approval where there is no union.

Response to Comment 2.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

3. Stephanie Phelps, President, California El Camino Real Association of Occupational Health Nurses (CECRAOHN), by written comments dated August 11, 2023.

Comment 3.1
The commenter supports the proposed heat illness prevention in indoor places of employment regulation.

Response to Comment 3.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

4. Michael Chaskes, by written comments dated August 11, 2023.

Comment 4.1
The commenter states that access to fresh, cool water; adequate break time in a cool area; work cessation for laborers suffering heat illness; and monitoring of temperature/heat index are eminently reasonable and crucial requirements for California employers to abide by.

The commenter urges the amendment of title 8 to include proposed section 3396 to address the increased risk of heat exposure and illness by indoor workers as extreme heat becomes more prevalent across the state of California. The commenter requests that section 3396 be implemented in full, immediately and that there are additional measures in place to ensure continued compliance and enforcement.

Response to Comment 4.1
The Board acknowledges the commenter's support for the proposed regulation and thanks the commenter for their input and participation in the rulemaking process.

5. Norma Wallace, CSRM, Executive Director-JPA, Tuolumne County Superintendent of Schools, by written comments dated August 15, 2023.

Comment 5.1
The commenter requests guidance be included in this plan for school buses as they are in much need of indoor guidance for extreme heat for school buses.

Response to Comment 5.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

6. Robert Moutrie, Policy Advocate, California Chamber of Commerce, by written comments dated August 16, 2023.

Comment 6.1
The commenter states the 15-day change includes multiple improvements in the clarity and feasibility of the text over the present draft and are appreciated. These include:

- Exception for rarely-occupied spaces subject to certain terms – subsection (a)(1) exception (C).
- Improvement to the definition of clothing that restricts heat – subsection (b)(3).
- Improvement to the definition of cool-down area to recognize that certain workplaces cannot avoid all potential radiant heat sources – subsection (b)(4).
- Removal of minor contradiction when temperature measurements must be taken – subsection (e)(1).
- Exemption from temperature testing for vehicles with air conditioning – subsection (e)(1).
- Clarification that training for Indoor Heat and Outdoor Heat Regulations can be handled as one training – subsection (h) Note.

Response to Comment 6.1
The Board acknowledges the commenter's support for these aspects of the proposed regulation.

Comment 6.2
The commenter states that the exception for vehicles or shipping containers within subsection (a)(1) exception (C) is unnecessary. The requirements for this exception already address circumstances where a shipping container should not be covered by the exception, such as when it is used as a temporary office or workshop, or where workers unloading a shipping container are in and out of it for a long period. Any other structure (wooden shed, school bungalow, etc.) would be examined based on its usage. The commenter recommends the following change:

(C) Indoor locations that meet all of the following criteria are considered outdoors and are covered by section 3395 and not this section. ~~This exception does not apply to vehicles or shipping containers.~~ Criteria for this exception are: …

Response to Comment 6.2
The Board acknowledges the commenter's concerns and has proposed to modify subsection (a)(1) exception (C) with broader and more simple language. Also see responses to comments 6.3 and 16.2.

Comment 6.3
The commenter states that the term "shipping container" is problematic and unnecessary as the criteria to subsection (a)(1) exception (C) resolve any concerns. If a definition/term is going to be used, they recommend the use of the term "intermodal container" which would be a better fit for the indoor heat regulation and is already in use in the marine shipping industry, and by federal Occupational Safety and Health Administration (OSHA).

Response to Comment 6.3
The Board acknowledges the commenter's recommendation to use the term "intermodal container" and has modified the subsection (a)(1) exception (C).

The Board thanks the commenter for their input and participation in the rulemaking process.

7. Lee Sandahl, Northern CA District Council of the ILWU, by written comments dated August 20, 2023.

Comment 7.1
The commenter states that regarding control measures for workers having to wear protective clothing, cotton should be the material chosen.

Response to Comment 7.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 7.2
The commenter states that the heat index should be set at 80 degrees Fahrenheit.

Response to Comment 7.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 7.3
The commenter states that work discretion and identification is necessary to the indoor heat standard. Additionally, workers need descriptions and relevant applications for their physical and mental health at work.

Response to Comment 7.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 7.4
The commenter states the definition of a union representative is important so that there is no uncertainty. Furthermore, the commenter asserts the standard must also be effective for workers who are not represented by a union.

Response to Comment 7.4
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 7.5
The commenter recommends that recordkeeping should include worker records in English and Spanish. Additionally, the commenter states that accuracy is very important and will help facilitate issues for employers and workers represented by a union and approval from non-unionized workers.

Response to Comment 7.5
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

8. Michael Miiller, Director of Government Relations, California Association of Winegrape Growers; Matthew Allen, Vice President, State Government Affairs, Western Growers; Tricia Geringer, Vice President of Government Affairs, Agricultural Council of California; Timothy A. Johnson, President/CEO, California Rice Commission; Christopher Valadez, President, Grower-Shipper Association of Central California; Roger Isom, President/CEO, California Cotton Ginners and Growers Association and Western Agricultural Processors Association; Bryan Little, Director, Employment Policy, California Farm Bureau; Joani Woelfel, President & CEO, Far West Equipment Dealers Association; Casey Creamer, President, California Citrus Mutual, Rick Tomlinson, President, California Strawberry Commission; Manuel Cunha, Jr., President, Nisei Farmers League; Todd Sanders, Executive

Director, California Apple Commission, California Blueberry Association, California Blueberry Commission, Olive Growers Council of California; Richard Matoian, President, American Pistachio Growers; Ian LeMay, President, California Fresh Fruit Association; Pete Downs, President, Family Winemakers of California; Tim Schmelzer, Vice President, California State Relations, Wine Institute, by written comments dated August 18, 2023.

Comment 8.1
The commenters state the proposed regulation has one size fits all approach which has unintended consequences. Furthermore, the concerns raised in their May 17, 2023, letter remain.

Response to Comment 8.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 8.2
The commenters state that they had requested that the de minimis exposure to heat (less than 15 minutes in a 60-minute period) not be included in the scope of the proposed regulation. However, the scope is amended to allow an exemption of 15-minute exposures only under the following circumstances:

- The workers are working outdoors (though this is unclear);
- The exception does not apply to vehicles or shipping containers;
- The indoor location is not normally occupied when employees are present or working in the area or at the worksite; and
- The indoor location is not contiguous with a normally occupied location.

The commenters believe that the de minimis exposure should be exempt without exceptions because it is not supported by findings of occupational health experts of other states, including Washington state which recognized that there is no significant health risk, and the safety standard provides no quantifiable benefit to the worker. The commenters assert that if the Board and Cal/OSHA believe that the proposed regulation must cover de minimis exposure, then data and evidence is requested to be provided in the public record that quantifies the benefit. Furthermore, they recommend the following change:

> (a) Scope and Application.
> (1) This section applies to all indoor work areas where the temperature equals or exceeds 82 degrees Fahrenheit for 15 minutes or more in a 60-minute period, when employees are present and all indoor work areas with conditions covered by subparagraph (2).

Response to Comment 8.2
The Board acknowledges the commenters' concerns and has proposed to modify subsection (a)(1) exception (C) with broader and more simple language. Also see responses to comments 6.3 and 16.2.

Comment 8.3
The commenters state that the 15-day changes provide references to how an employer may comply with section 3395 by complying with the proposed regulation instead in the following subsections:

- Subsection 3396(a)(1) exception (C) Indoor locations that meet all of the following criteria are considered outdoors and are covered by section 3395 and not this section.
- Subsection 3396(a)(5) Employers may comply with this section in lieu of section 3395 for employees that go back and forth between outdoors and indoors.
- Subsection 3396(h)(2) Note: Where employees are covered by section 3395 and this section, the training program for this section can be integrated into section 3395 training.

The commenters assert that these changes essentially alter the scope and application of section 3395 without amending section 3395. The commenters state this is both improper and confusing for the regulatory community in trying to understand the interaction between sections 3395 and 3396. They believe that any change in the scope, purpose, and enforcement of section 3395 should be made by amending section 3395. The commenters recommend amending section 3395 by adding "Except as provided in section 3396" to subsection 3395(a).

Response to Comment 8.3
The Board has modified subsection (a)(1) exception (C) and deleted subsection (a)(5). These changes remove the provision that would allow employers to comply with the proposed regulation in lieu of section 3395. The Board is not persuaded that the note in subsection (h) would allow the employer to comply with section 3395 by complying with the proposed regulation. The note allows the flexibility to integrate the training program for the proposed regulation into section 3395 training. If the employer chooses to combine the training programs, all training requirements in sections 3395 and 3396 should be included. Therefore, the Board declines to make the recommended changes regarding the note.

Comment 8.4
The commenters assert that if an employer is complying with section 3395, because their workplace falls within the scope of section 3395, then the goal of the proposed section 3396 is being achieved by complying with section 3395. Furthermore, the commenters request data

and evidence be included in the public record of the quantifiable benefits of the proposed regulation for employees who are already covered under section 3395. Lastly, the commenters recommend the following amendment to the proposed regulation in subsection (a)(5):

> (5) This section shall not apply to employees working both indoors and outdoors whenever those employees are covered by section 3395. ~~Employers may comply with this section in lieu of section 3395 for employees that go back and forth between outdoors and indoors.~~

Response to Comment 8.4
While the Board is not persuaded by the commenters' argument and declines to make the proposed modification, the Board proposes to delete subsection (a)(5) and modify subsection (a)(1) exception (C) to broaden and simplify the exception for incidental indoor heat exposures.

Comment 8.5
The commenters assert that referencing section 3204 for access to records under section 3396 creates confusion as section 3204 was written for a different and broader purpose than section 3396. Consequently, the commenters state that rather than having access to only temperature and heat index readings, referencing section 3204 inadvertently requires access to the following:

> Any compilation of data, or any research, statistical or other study based at least in part on information collected from individual employee exposure or medical records or information collected from health insurance claims records, provided that either the analysis has been reported to the employer or no further work is currently being done by the person responsible for preparing the analysis.

Furthermore, the commenters state that the reason for access to records in section 3396 are inconsistent with section 3204, and recommend designated representative be defined in subsection 3396(b) of the proposed standard and not referenced by section 3204. The commenters recommend the following changes:

> Section 3396(b)(5) "Designated representative," means any individual or organization to whom an employee gives written authorization to exercise a right of access. A recognized or certified collective bargaining agent shall be treated automatically as a designated representative.
>
> Section 3396(e)(l)(B)(3) Records, as required by subsection (e)(l)(A), shall be retained for 12 months or until the next measurements are taken, whichever is later, the records shall be made available to employees, designated representatives ~~as defined in section 3204~~, and representatives of Cal/OSHA at the worksite and upon request."

Response to Comment 8.5

The Board is not persuaded by the commenters' arguments as section 3204 broadly applies to all workplaces within Cal/OSHA's jurisdiction and would not expand the requirements of section 3396. Therefore, the Board declines to make the commenters' proposed modification to add a definition of "designated representative" in subsection 3396(b), as this would create confusion with the current definition in section 3204. Accordingly, the Board also declines to remove the reference to section 3204 in subsection 3396(e)(l)(B)(3).

Comment 8.6

The commenters propose that vehicles with effective and functioning air conditioning be exempt entirely from the proposed regulation. The commenters assert that currently, the exemption for vehicles would offer exemption from the following:

- The employer shall measure the temperature and heat index, and record whichever is greater.
- The employer shall also identify and evaluate all other environmental risk factors for heat illness.

The commenters state that an employer would still be required to comply with the other requirements of section 3396 as listed below.

- Provision of water.
- Access to cool-down areas (such as the inside of a cool vehicle?).
- Use of control measures to minimize the risk of heat illness.
- Emergency response procedures.
- Acclimatization requirements where applicable.
- Training.
- Creation and implementation of a heat illness prevention plan.

Although the proposed regulation applies to "all indoor work areas where temperature equals or exceeds 82 degrees Fahrenheit when employees are present," based on the changes in the 15-day amendments, an employer need not record the temperature inside of an air-conditioned vehicle. However, the commenters assert that the employer would still need to monitor the temperature inside of the vehicle to determine how to comply with the requirements of the proposed regulation from which the air-conditioned vehicle has been exempted. The commenters request that if the inside of air-conditioned vehicle is indoors, then data and evidence be included in the public record of the quantifiable benefits of the proposed

regulation for employees who are working inside a vehicle with effective and functioning air conditioning. The commenters recommend the following changes:

> Subsection 3396(b)(12) "Indoor" refers to a space that is under a ceiling or overhead covering that restricts airflow and is enclosed along its entire perimeter by walls, doors, windows, dividers, or other physical barriers that restrict airflow, whether open or closed. All work areas that are not indoor are considered outdoor and covered by section 3395.
> EXCEPTION 2: Indoor does not refer to the interior passenger areas of a car, truck, van, bus, tractor or other vehicle with effective and functioning air conditioning.
>
> Subsection 3396(e)(1)(B)
> EXCEPTIONS to subsection (e)(1)
> ~~(B) Vehicles with effective and functioning air-conditioning.~~

Response to Comment 8.6
The Board is not persuaded by the commenter's arguments and declines to make the proposed change, as it is not necessary. A vehicle with an effective and functioning air-conditioning system that can reduce and maintain the temperature in the cab below 82 degrees Fahrenheit would not be covered by the proposed regulation.

Comment 8.7
The commenters state that they align themselves with the comments in letters submitted by the California Chamber of Commerce.

Response to Comment 8.7
Please see responses to comments 6.1 through 6.3 for the Board's responses to comments from the California Chamber of Commerce.

The Board thanks the commenters for their input and participation in the rulemaking process.

9. Richard Brandt, Manager - OSF Production Safety, Studio Health, Safety and Security, Netflix, by written comments dated August 22, 2023.

Comment 9.1
The commenter is concerned about subsection (a)(1) exception (C), a new exemption for rarely occupied/short-term spaces, such as storage sheds. They state the exception needs further elaboration because this can mean vaults and other possible confined spaces.

Response to Comment 9.1

In light of the broad consensus that subsection (a)(1) exception (C) presented significant challenges, the Board has rewritten exception (C) to make it broader and simpler to address incidental heat exposures. As it does not specify types of spaces, each workspace would need to be evaluated to determine whether it meets this exception.

Comment 9.2
The commenter seeks clarification of when temperatures are to be measured as required by subsection (e)(1) and the exceptions to subsection (e)(1). They ask when and how temperatures are to be measured, as well as what the criteria and devices are. Additionally, they ask who is responsible for the measuring and notifications.

Response to Comment 9.2
The Board is not persuaded by the commenter's argument that the temperature and heat index measurement requirements in subsection (e)(1) and the exceptions need clarification.

It is the employer's responsibility, with the active involvement of employees and their union representatives, to plan, conduct and record the measurements of temperature or heat index, whichever is greater, as required by subsection (e)(1). The employer shall establish and maintain accurate records of either the temperature or heat index measurements, whichever value is greater. The records shall include the date, time and specific location of all measurements and shall be made available to employees, designated representatives as defined in section 3204 and representatives of Cal/OSHA at the worksite and upon request.

When it is reasonable to suspect that subsection (e) applies, the number of measurements to take will depend on factors such as the number of work areas and times during the work shift when employee exposures are expected to be the greatest. The employer's measurements should be made at or as close as feasible to the work area where the worker is exposed and represents the environmental heat conditions at the worker's position.

Alternatively, the employer can forego the measurement requirements and utilize exception (A) to subsection (e)(1), which states that in lieu of complying with subsection (e)(1), an employer may assume a work area is subject to one or more of the conditions listed in subsection (a)(2). Such employers shall comply with subsection (e)(2).

Comment 9.3
The commenter is concerned with the "apparent tightening of when personal protective equipment (PPE) is required by removing consideration of administrative controls" in subsection (e)(2)(C). The commenter asks what PPE the rule is referencing.

Response to Comment 9.3
The Board notes that administrative controls were not removed from subsection (e)(2)(C) but were rather reordered to follow after the requirement to use feasible engineering controls. This

more accurately reflects that administrative controls do not always reduce temperatures but can help to minimize the risk of heat illness.

The comment misinterprets that the change to subsection (e)(2)(C) has resulted in a tightening of when PPE is required. The personal heat-protective equipment referenced in this subsection is defined in subsection (b)(13): "Personal heat-protective equipment" means equipment worn to protect the user against heat illness. Examples of personal heat-protective equipment that may be effective at minimizing the risk of heat illness in a particular work area include, but are not limited to: water-cooled garments, air-cooled garments, cooling vests, wetted over-garments, heat-reflective clothing, and supplied-air personal cooling systems.

Comment 9.4
The commenter seeks clarification that employers must contact emergency services in the event of heat illness in subsection (f)(2)(C). The commenter asks whether the construction/set medic and/or an on-site occupational nurse/doctor would still be the first line of defense, or it is 911 only.

Response to Comment 9.4
Subsection (f)(2)(C) does not prohibit the employer from having a construction/set medic and/or an on-site occupational nurse/doctor as the first line of defense. The employer's emergency response procedures must include procedures on contacting emergency medical services when responding to signs and symptoms of possible heat illness regardless of whether they have a construction/set medic and/or an on-site occupational nurse/doctor.

The Board thanks the commenter for their input and participation in the rulemaking process.

10. James T. Dufour, M.S., J.D., C.I.H., Attorney and Counselor at Law, Dufour Law, by written comments dated August 22, 2023.

Comment 10.1
The commenter states their clients include refuse collectors and recyclers, candy manufacturers, building material manufacturers, food processors, metal finishers, landscaping and horticulture product manufacturers and others. Those clients that have employees in outdoor working environments have effectively implemented the section 3395 outdoor heat illness prevention (HIP) standard, including its primarily administrative requirements, including shade, drinking water, work scheduling, training, supervision and emergency response, significantly reducing the risk of heat illness.

Although indoor heat illness risk involves some additional aspects, the same measures if effectively implemented through an indoor HIP standard as proposed are appropriate and should be incorporated as principal components of the proposed regulation.

The commenter supports the following provisions of the proposed regulation:

- Subsection (a)(1) scope and application and exceptions, in particular, (a)(1) exception (C), which reasonably addresses comments received in response to the initial publication of the proposed regulation and its public hearing. There are many of these "in and out" situations in client operations and the flexibility provided is more appropriate than the previous "at any time" approach.
- Subsection (e)(1) exception (B). The amendment expressly addressing vehicles by exemption from assessment and control measures for (B) vehicles with effective and functioning air conditioning is appropriate and should be included in the final rule. However, to further clarify the status of vehicles, open cab vehicles (such as excavators, loaders and industrial trucks) should be deemed subject to the outdoor HIP standard.
- Subsection (c) provision of water.
- Subsection (f) emergency response procedures.
- Subsection (g) acclimatization, except a definition of "close observation" should be included in subsection (b) definitions. The definition should, to the extent practicable, include objective criteria and alternatives. For example, an appropriate frequency of observations and/or alternatives, such as a buddy system.
- Subsection (h) training. The training provisions are reasonable and appropriate, although the provisions relating to an employer's emergency response obligations at subsections (G), (H), and (I) should be included instead in supervisor training at subsection (h)(2).
- Subsection (i) heat illness prevention plan.

Response to Comment 10.1

The Board acknowledges the commenter's support for these aspects of the proposed regulation. Subsection (a)(1) exception (C) was rewritten to make it broader and simpler based on numerous public comments received. The Board declines to make the suggested change to clarify the status of vehicles referenced in subsection (e)(1) exception (B) because open cabs are already considered outdoors per the definition of "indoors" in subsection (b). The Board also declines to add a definition of "close observation" to subsection (b), in order to keep the proposal consistent with section 3395. The phrase "closely observed" is the same as used in section 3395. Defining it in the proposed regulation would create a problematic inconsistency with section 3395. Lastly, the Board declines to make the suggested change to subsection (h), as this comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 10.2

The commenter states that their clients oppose the feasible engineering controls provisions in subsection (e)(2)(A). They are not cost-effective compared to the measures that have been shown to be effective at preventing heat illness in outdoor work, primarily through administrative controls and shade, which can be practically imported into indoor work as most of the proposed standard accomplishes. However, adding excessively expensive engineering

controls on top of automatically required engineered cool-down areas is not supported by substantial evidence as necessary to prevent indoor heat illness. This over-reach subverts the proposed safety order with grossly-underestimated costs in the Standardized Regulatory Impact Assessment (SRIA), seriously affecting employer resources regardless of size and type of business; not to mention concern over vexatious litigation of the feasibility of such controls.

The specific provision in the proposed regulation giving rise to these concerns is subsection (e)(2)(A) engineering controls:

> Engineering controls...
> 1. Use engineering controls to reduce the temperature, heat index or both, whichever applies, to the lowest feasible level, except to the extent that the employer demonstrates such controls are infeasible; and
> 2. Use engineering controls to otherwise minimize the risk of heat illness, except to the extent that the employer demonstrates such controls are infeasible.

Response to Comment 10.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 10.3
The commenter states that the requirement for feasible engineering controls in addition to cool-down areas is not supported by legal precedent or substantial evidence. The feasible engineering controls requirement are in addition to the cool-down areas required by subsection (d), which are by any definition, engineering controls with no express feasibility limitation. Their clients would concur with this requirement as the sole means of engineering control.

The commenter refers to the introductory cover letter's reference to the Appeals Board's Campbell Soup Company Decision After Reconsideration (DAR) - a noise citation abatement case (Cal/OSHA 77-0701, May 5, 1980) defining the employer's burden of proof as to show that a technology identified by Cal/OSHA must be implemented as far as it will go regardless of cost exposes the intent of the proposed regulation. Fortunately, this is not as clear a precedent as intended because after a successful writ of mandate petition in Sacramento Superior Court, the Appeals Board vacated this DAR and granted Campbell Soup's appeal.

Federal OSHA, although not controlling in California, uses a more balanced engineering and administrative control regime in comparable enforcement matters, including its noise standard and likely its eventual proposed indoor and outdoor heat illness standards despite having statutory authority to apply cost-benefit analysis.

The commenter urges the Board to make cool-down areas the primary engineering control, followed by a combination of administrative and practical engineering controls if necessary to provide effective heat illness prevention.

Response to Comment 10.3

In response to the comment, the Board has withdrawn the Campbell Soup DAR as a document relied upon from the rulemaking file on November 9, 2023. The remaining comment to make cool-down areas the primary engineering control is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 10.4

The commenter states the SRIA is inaccurate in that it exaggerates indoor heat illness prevalence and benefits, minimized cost estimates and does not provide substantial evidence to support the proposed standard. The SRIA fails to demonstrate that additional protective measures beyond the primarily administrative requirements of the outdoor HIP standard would significantly reduce indoor employee heat illnesses and deaths, which are very low compared to outdoor incidence (an average of less than 1 death and 185 heat illnesses in this State per year based on actual workers' compensation data for the years 2010 to 2018) without a standard in place. This study speculates that climate change may add to these figures and increase the benefit of the standard for employees. However, it is well established after more than two decades of outdoor heat illness regulation that the rules accomplishing most of the reduction in illness cases and fatalities were the administrative provisions: water, training of employees and supervisors, emergency response, low-cost shade and rest periods. In addition, as shown by the history of the outdoor HIP standard, it has been amended three times since its adoption in 2005, which is also available to the Board if the initial indoor HIP standard is not as effective as anticipated.

Response to Comment 10.4

The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 10.5

The commenter states the Board's action to publish a 15-day comment period prior to disclosing comments received in response to the initial proposed rulemaking suggests a rush to impose a difficult compliance schedule, especially if the engineering controls provision is retained. At the May 18, 2023, public hearing, Board representatives indicated the intent to have an indoor HIP standard in place by the summer of 2024. Their clients would be severely impacted if the feasible engineering controls provision in addition to cool-down areas are required because an effective date in early 2024 will not afford sufficient time to perform the subsection 3395(c) assessment and implementation of feasible engineering controls. The Board should substantially modify the standard's feasible engineering controls provision or, at a

minimum, establish a subsequent effective date for engineering controls (except cool-down areas) of at least one year after the initial effective date.

Response to Comment 10.5
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 10.6
The commenter states the proposed regulation is subject to California Environmental Quality Act (CEQA) requiring an environmental impact report (EIR). Based on any reasonable analysis of the potential costs of engineering controls implemented by the estimated 196,000 facilities believed to be affected by the proposed standard, the SRIA cost estimate of up to $1.1 billion in ten years, most of which is expected to be invested in engineering controls is extremely low and may not even reflect the cost of universal cool-down areas in nearly two thousand establishments. As most of these control measures will consume significant electrical power and water, there is substantial evidence that the indoor HIP standard will have a significant effect on the environment, including increased consumption of electricity and demands on the electrical grid, and electric generator plants primarily powered by fossil fuels producing regulated pollutants including greenhouse gases through thermal combustion processes. Consequently, CEQA requires the sponsoring agency, the Board, to prepare an EIR.

Response to Comment 10.6
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

11. Alex Oseguera, Director of Government Affairs, Waste Management, by written comments dated August 22, 2023.

Comment 11.1
The commenter states they have extensively implemented the administrative requirements, including providing drinking water and shade, contained in section 3395 at their facilities and in their refuse collection vehicle operations. These measures have proven to effectively minimize heat stress and illness amongst their employees. Consequently, the provisions of the proposed standard matching the requirements of the outdoor HIP standard should be maintained as the principal components of the proposed safety order.

The commenter supports the following provisions of the proposed regulation:

- Subsection (a)(1) scope and application and exceptions, in particular, subsection (a)(1) exception (C), which reasonably addresses comments received in response to the initial publication of the proposed regulation and its public hearing. There are many of these

"in and out" situations in their operations and the flexibility provided is more appropriate than the previous "at any time" approach.

- Subsection (e)(1) exception (B). The amendment expressly addressing vehicles by exemption from assessment and control measures for (B) vehicles with effective and functioning air conditioning is appropriate and should be included in the final rule. However, to further clarify the status of vehicles, open cab vehicles (such as excavators, loaders and industrial trucks) should be deemed subject to the outdoor HIP standard.
- Subsection (c) provision of water.
- Subsection (f) emergency response procedures.
- Subsection (g) acclimatization, except a definition of "close observation" should be included in subsection (b) definitions. The definition should, to the extent practicable, include objective criteria and alternatives. For example, an appropriate frequency of observations and/or alternatives, such as a buddy system.
- Subsection (h) training. The training provisions are reasonable and appropriate, although the provisions relating to an employer's emergency response obligations at subsections (G), (H), and (I) should be included instead in supervisor training at subsection (h)(2).
- Subsection (i) heat illness prevention plan.

Response to Comment 11.1
Please see response to comment 10.1.

Comment 11.2
The commenter opposes subsection (e) based on the overly stringent de facto modification defining infeasibility. Subsection (e)(2) requires employers to install engineering controls when workplace conditions meet the criteria in subsection (a)(2) except to the extent engineering controls are infeasible. The original text of the proposed standard, however, neither defines "infeasible" nor provides any criteria upon which an employer or Cal/OSHA could determine if engineering controls are infeasible. In the absence of a regulatory definition, infeasibility is subject to interpretation based on the plain meaning of the word "infeasible," the Legislature's mandate to the Board in Labor Code section 6720, and with reference to federal OSHA processes, which includes potential application of a cost-benefit analysis.

In the 15-Day Notice, the Board added to the administrative record the Appeals Board's Campbell Soup Company DAR (Cal/OSHA 77-0701, May 5, 1980). The notice provided no supporting explanation, only that the DAR was being added to the rulemaking file. The Campbell's Soup Company DAR is a noise citation abatement case, and the primary issue was whether engineering noise controls were feasible in Campbell's Soup Company's can manufacturing plant. The Appeals Board applied one of the most stringent standards for determining infeasibility, essentially requiring the installation of such controls to be physically impossible to be deemed infeasible. The only readily apparent purpose of including that decision in the administrative record is to create a definition of "infeasible" to apply to

engineering and other controls, without modifying the text of the regulation. The commenter states that because the 15-Day Notice invited comments on the inclusion of the listed materials in the administrative record, the following comments on subsection (e) are timely based on the effect of the Campbell's Soup Company DAR and its rationale regarding subsection (e) as adopted by the Board.

The Board's reliance on the initial Campbell's Soup Company DAR to establish the infeasibility criteria in the proposed standard is highly questionable because that decision was vacated under an order of the California Superior Court. This compounds the error already created by not defining the term in regulation or referring to a statutory definition as required by the Administrative Procedure Act.

Response to Comment 11.2
In response to the comment, the Board has withdrawn the Campbell's Soup Company DAR as a document relied upon for the proposed regulation on November 9, 2023.

Comment 11.3
The commenter states that the SRIA significantly underestimates the costs of compliance with the engineering controls requirements of the proposed standard because it did not apply the same standard for determining infeasibility that the Board proposes through its inclusion of the Campbell's Soup Company DAR in the administrative record. This error is patent in the first sentence of the SRIA's economic analysis of control measures, which states:

> This requirement mandates that employers use engineering ***or*** administrative control measures ***or*** provide personal heat-protective equipment when any of the regulatory thresholds have been reached. (SRIA p.26, emphasis added)

The SRIA assumes that employers have the option to use administrative controls or personal protective equipment in lieu of engineering controls. This assumption is manifested in the economic analysis as shown in Table 3 on page 28 and Table 4 on page 29 of the SRIA where it shows that only 60% of the affected Type 1 industries and only 25% of the affected Type 2 industries would install engineering controls. This is counter to the language in subsection (e)(2)(A), which states:

> Engineering controls. Engineering controls shall be used to reduce and maintain both the temperature and heat index to below 87 degrees Fahrenheit when employees are present... except to the extent that the employer demonstrates such controls are infeasible. When such controls are infeasible to meet the temperature and heat index thresholds, the employer shall:

1. Use engineering controls to reduce the temperature, heat index, or both, whichever applies, to the lowest feasible level, except to the extent that the employer demonstrates such controls are infeasible; and
2. Use engineering controls to otherwise minimize the risk of heat illness, except to the extent that the employer demonstrates such controls are infeasible.

Thus, once the conditions in subsection (a)(2) are met, the proposed standard mandates the installation of engineering controls. Even if the engineering controls will not result in full compliance with the temperature and heat index requirements, engineering controls still must be installed to reduce the temperature and heat index to the lowest feasible level. Simply stated, the proposed standard viewed in light of the stringent Campbell's Soup Company DAR infeasibility standard requires employers to install some sort of engineering control unless it is physically impossible to install any sort of engineering control.

This inconsistency between the SRIA's assumptions on when engineering controls will be required compared to the de facto infeasibility standard bootstrapped into the proposed standard by including the Campbell's Soup Company DAR into the administrative record results in the SRIA's analysis being flawed in multiple ways.

First, the SRIA does not consider all the regulatory conditions imposed on employers by the cool-down area requirements in the proposed standard. Cool-down areas for indoor employees - unlike the outdoor HIP standard - must meet specific temperature requirements unless the employer can meet the stringent Campbell's Soup Company infeasibility standard. Even then, the infeasibility standard applies only with respect to maintaining the cool-down area at a specific temperature. In most instances, employers will be required to implement some engineering controls listed in Table 2 to achieve the temperature requirements. The SRIA provides no evidence that simply purchasing a $120 pop-up shade structure will meet the temperature requirements of the proposed standard. Instead, if a cool-down area does not already exist, employers will be required to not only create a cool-down area, but also procure and operate portable cooling equipment, such as the portable cooling unit listed in Table 2 of the engineering controls analysis to meet the cool-down area temperature standard. Thus, even before addressing employees working in the conditions in subsection (a)(2), employers will already have significantly higher engineering control compliance costs to meet the proposed standard compared to what is estimated in the SRIA.

Second, the SRIA attempts to winnow down the estimated compliance costs by creating three types of industries based on how heat might be created in the indoor environments and then makes assumptions based on the percentage of employees in those industries that might be affected to arrive at a per-employee compliance cost. This is flawed because the costs for engineering controls are not based on the number of affected employees, but on the costs to make the workplace comply with the temperature and heat index standards, regardless of the number of employees that work in that environment.

The waste management industry is a prime example of how the SRIA's "cost-per-employee" methodology is flawed. One of the most important developments in waste management is the use of materials recovery facilities to segregate recyclable and organic materials from other wastes to meet California's landfill diversion and greenhouse gas reduction goals. Materials recovery facilities have large volumes of airspace where relatively few employees work compared to the square footage of the facility. The working areas of these facilities are both significantly affected by outdoor temperature and sunlight, as well as having indoor heat sources. The indoor heat sources include: internal combustion engines in heavy equipment that moves the various materials within the facility; the heat created by electric motors that run waste segregating equipment; and heat created by other friction sources in the waste segregating equipment. Accordingly, such facilities are likely to meet the conditions in subsection (a)(2) in the working areas in some weather conditions.

While Waste Management has installed cool-down rooms in many materials recovery facilities with a high level of effectiveness in preventing heat illness for our employees, under subsection (e)(2) of the proposed standard, materials recovery facilities will be required to have some sort of engineering controls installed in the working areas of these facilities. The large airspace within the working areas combined with various internal heat sources make it unlikely that the simple engineering controls analyzed in Table 2, such as a five-ton portable air conditioner, will achieve compliance with the proposed standard. To the contrary, it would appear under the Campbell's Soup Company stringent infeasibility standard, operators of materials recovery facilities will have to install very large ventilation and cooling systems that cool the entire airspace of a cavernous materials recovery facility because such systems would reduce the temperature or heat index to some level or otherwise minimize the risk of heat illness and is not physically impossible, which is the requirement of the proposed standard when subsections (e)(2)(A)(1) and (e)(2)(A)(2) are read in the context of the Campbell's Soup Company's infeasibility standard. These systems would in turn use a significant amount of electricity to operate the cooling and ventilation systems, significantly increasing recurring operating costs. Thus, it is more likely the costs to install cooling and ventilation systems for one materials recovery facility will exceed the $600,000 first-year compliance costs, and operating those systems will exceed the $200,000 annualized recurring costs listed for the entire North American Industry Classification System code 56 industry shown in Table 6 of the SRIA.

In the absence of the Board conducting a survey that includes both the number of facilities that would be impacted by the regulation, but also presenting facts about what employers must implement to comply with the regulation, the SRIA is fatally flawed because it does not have the requisite factual basis to estimate the compliance costs.

Third, the SRIA assumes that only 60% of Type 1 employers and 25% of Type 2 employers will install engineering controls, with the remainder of employers using either administrative controls or personal protective equipment. This is inconsistent with the regulatory language.

The SRIA must assume that 100% of these employers will incur some sort of engineering control costs in the absence of evidence that 60% of Type 1 employers and 25% of Type 2 employers can prove that it is physically impossible to install any sort of engineering controls in their workplace. Thus, the SRIA underestimates the costs for Type 1 and Type 2 employers to comply with the proposed standard without any consideration of whether the engineering controls analyzed in Table 2 will in fact achieve the requirements of the proposed standard, which as previously described, the effectiveness of the controls described in Table 2 are likely overestimated because they focus on cooling a subset of employees and not cooling the working environment.

Because of these flaws, the SRIA does not serve as substantial evidence to support the Board's compliance with the Administrative Procedure Act's economic impact analysis. Moreover, the SRIA fails to demonstrate that additional protective measures beyond the primarily administrative requirements of the outdoor HIP standard would significantly reduce indoor employee heat illnesses and deaths, which - under the baseline conditions that the law requires the SRIA to consider- are very low compared to outdoor incidence (an average of less than 1 death and 185 heat illnesses in this State per year based on actual workers' compensation data for the years 2010 to 2018). To the contrary, it is well established after more than two decades of outdoor heat illness regulation that the rules accomplishing most of the reduction in heat illness cases and fatalities were the administrative provisions: water, training of employees and supervisors, emergency response, low-cost shade and rest periods.

Response to Comment 11.3
Please see response to comment 11.2.

Comment 11.4
The commenter states that the proposed standard is arbitrary and capricious because it requires immediate compliance with expensive and onerous engineering control requirements without regard to the ability to procure and install engineering controls. The Board's action to commence the 15-day comment period prior to disclosing comments received in response to the initial proposed rulemaking suggests a rush to impose a difficult compliance schedule, especially if subsection (e)(2) is retained as written, including the stringent Campbell's Soup Company infeasibility standard.

At the May 18, 2023, public hearing, the Board representatives indicated the intent to have an indoor HIP standard in place by the summer of 2024. Waste Management, among many other industries, would be severely impacted if the requirements of subsection (e)(2) remain in addition to the requirements of subsection (d) to ensure cool-down areas meet the temperature requirements. These improvements are capital-intensive improvements requiring many months to procure and install equipment in an economy that has not fully recovered from the various supply chain impacts induced by the pandemic. There is not sufficient time to perform the subsection 3395(e) assessment, then implement engineering controls in 2024.

Response to Comment 11.4
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 11.5
The commenter states the proposed standard should be revised to create an iterative approach for imposing expensive and onerous engineering controls. They strongly urge the Board to allow employers to first employ the same administrative controls that have been effective in reducing outdoor heat illness - including using cool-down areas, providing water and conducting heat illness training - unless and until there is evidence that such measures are ineffective at improving indoor conditions. The Board could write regulatory standards that trigger Cal/OSHA to require employers to address the need for engineering controls. The commenter further suggests implementing the proposed standard without the mandate for engineering controls, and amending the regulation if the initial proposed standard is not as effective as anticipated. In addition, for situations in which cool-down areas must be constructed or modified, or if the Board nevertheless requires engineering controls in the proposed standard, the Board should, as urged in the previous comments, substantially modify the proposed standard to provide an implementation period for employers to construct or modify cool-down areas, as well as to grant at least one year after the initial effective date for employers to conduct the required analyses and construct engineering controls, should an analysis conclude engineering controls are appropriate and feasible.

Response to Comment 11.5
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 11.6
The commenter states the Board must prepare an EIR because there is substantial evidence the proposed standard may have a significant adverse impact on the environment. In the SRIA, the Board acknowledges that engineering controls required under the proposed standard will require electricity, including that the engineering controls could conflict with various energy conservation policies. In 2021, over 65% of the electricity generated in the State of California was generated using thermal and nonrenewable fuels. Having accepted that compliance with the proposed standard will increase the demand for electricity, the Board must analyze the potential adverse environmental impacts tied to increasing the demand for electricity, especially the air quality impacts from thermal and nonrenewable fuels. In addition, to the extent that the Board identifies administrative controls such as shifting work to cooler times of the day, as a means of compliance with the proposed standard, the Board needs to analyze the potential noise impacts associated with various activities such as waste collection occurring when more people are at home and not at work. The rulemaking record is devoid of evidence that the Board has analyzed any of the potential adverse environmental impacts that would

indirectly result from complying with this proposed standard. Adopting a final rule without conducting the required analysis would be a violation of the CEQA.

Response to Comment 11.6
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

12. Ryan Allain, Director, Government Affairs, California Retailers Association and Edwin Egee, Vice President, Government Relations, National Retail Federation, by written comments dated August 22, 2023.

Comment 12.1
The commenters oppose the currently proposed regulation, as it will undermine employers' ability to nimbly counter known or potential indoor heat stressors.

Response to Comment 12.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 12.2
The commenters state that section 3396's application thresholds of 82 degrees Fahrenheit under subsection (a)(1) are baseless. Furthermore, the commenters state that workers have different temperature points at which they experience physiological discomfort or detriment, and the response and management of heat stressors depend on work type and intensity, climate conditions, genetics and physical traits. The commenters assert that no scientific study shows that heat becomes unacceptable or dangerous starting at 82 degrees Fahrenheit and this threshold is subjective, uninformed, arbitrary and is based on convenience.

Response to Comment 12.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 12.3
The commenters state that the threshold under subsection (a)(2) lacks any scientific basis. Specifically, the commenters assert that triggers for subsection (e) for additional duties to assess and use control measures to mitigate the risk of heat illness are not based on any scientific research or data. Furthermore, the commenters state that the initial statement of reasons for employees working under these conditions face an increased risk of heat-related

death, illness and injury also lacks scientific support, which is troubling and inconsistent with rulemaking procedures.

Response to Comment 12.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 12.4
The commenters state that using the heat index as a threshold is especially a problem because a heat hazard assessment based on the heat index is appropriate only for outside locations. The commenters assert there is a brazen attempt to support regulatory measure with pseudo-science with subsection (b)(9) which inexplicably states that heat index refers to conditions in indoor work areas for section 3396. The heat index is not a scientifically reliable source to determine heat illness and requiring employers to record the heat index if it is greater than the temperature or relying on the heat index to determine what control measures to mitigate heat illness is not logically or legally sound.

Response to Comment 12.4
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 12.5
The commenters state subsection (a)(1) exception (C)'s attempt to exempt certain indoor work areas is unworkable because the “normally occupied” and “present” are not defined. Furthermore, the commenters assert there is an absence of scientific data showing that an indoor heat hazard is present in an area contiguous to an occupied location, which is another example of speculative rulemaking and will not survive future rulemaking. The commenters state that the undefined term “presence” in the location enough can run the clock, regardless of how short its duration is. Additionally, it is not clear if the time constraint is shared among all employees, or each employee gets his or her own fourteen minutes and fifty-nine seconds and why the exception does not apply one second later, which makes the time constraint’s purpose dubious. Lastly, the commenters assert the regulation does not specify how an employer is to verify that a location did not have employees’ presence for less than fifteen minutes in any one hour.

Response to Comment 12.5
To address the commenters’ concerns, subsection (a)(1) exception (C) is modified to make it broader and simpler. Please see response to comment 16.2. Regarding the comment that the regulation does not specify how an employer is to verify the duration of employees’ presence at a location, it is the employer’s responsibility to ensure that an employee’s incidental heat

exposure meets the criteria for the exception as well as to provide a safe and healthful working environment that complies with title 8 regulations.

Comment 12.6
The commenters state that making shipping containers ineligible for subsection (a)(1) exception (C) is not warranted. Shipping containers are usually not indoor work areas and when they are on job sites, they serve to hold items or equipment that employees use. The commenters assert the exception's three requirements are haphazard and will rule out containers converted into office-like space, conflicts with existing regulatory definition of intermodal containers, under which shipping containers can and should be exempt from the indoor heat illness standard.

Response to Comment 12.6
Please see responses to comments 6.2 and 16.2.

Comment 12.7
The commenters state the requirements for cool-down areas as specified in subsection (d) are an onerous burden on employers and are infeasible. Furthermore, the commenters provide an example in which warehouse workers experience varying temperatures, depending on if bay doors are opened or closed. Therefore, the commenters assert, that if the temperature exceeds 82 degrees Fahrenheit for even one second, employees can take preventative cool-down rests for as long as they wish, and an employer would have no recourse against this abuse. The threshold does not consider business and operational needs and is based on an unproven 82 degrees Fahrenheit or higher that does not indicate there is a threat at that level and will lead to unjust economic loss.

Response to Comment 12.7
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 12.8
The commenters state that subsection (g) pertaining to Cal/OSHA's rigid acclimatization protocols ignores the well-established science that acclimatization is based on multiple factors and most workers are naturally acclimatized because they live in a particular area. Furthermore, the commenters assert the threshold temperature has not been proven to be dangerous for every employee in every location and does not elucidate what closely observing employees during a heat wave entails. The commenters state the fundamental issue is that heat exposure is not a workplace hazard but a public hazard, and Cal/OSHA should adhere to the science and recognize this issue.

Response to Comment 12.8

The comment is not specifically directed to the proposed modification in subsection (g) noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 12.9
The commenters state that Cal/OSHA must acknowledge that individuals react differently to heat and given how individualized the reaction to heat is, Cal/OSHA should state in the rulemaking record the fact that if an individual suffers a heat illness, it does not mean the employer's program is not compliant.

Response to Comment 12.9
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 12.10
The commenters state that the standard must be reasonably feasible and regulate core body temperature to be effective.

Response to Comment 12.10
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 12.11
The commenters state that the proposed modifications do not contain sufficient guardrails to prevent abuse while simultaneously creating significant administrative and financial burdens on employers. Furthermore, the commenters assert that successful implementation will be nearly impossible with substantial reductions in productivity with the required monitoring during cool-down breaks, which will remove potentially two employees from their work for an entire shift. The commenters propose establishing an upper limit for frequency and duration of breaks for preventative cool-down breaks.

Response to Comment 12.11
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 12.12
The commenters state the definition of preventative cool-down rests as recovery periods appears to imply that California Labor Code subsection 226.7(c) effective January 1, 2027, would also apply requiring employers to pay employees one additional hour of pay each time an employer objects to such practice. Furthermore, the commenters assert this would create a financial incentive for employees to request breaks regardless of need and for unscrupulous

employers to abuse this standard and prevent employees from exercising their rights to preventative cool-down breaks.

Response to Comment 12.12
The Board is not persuaded by the commenters' arguments as this language is identical to the outdoor heat regulation and every effort has been made to keep the proposed regulation consistent with section 3395. Employers have successfully complied with the language used in section 3395 and Cal/OSHA has not been made aware of any employee abuse of this provision. Furthermore, the language of Labor Code subsection 226.7(c) in effect now and currently referenced in section 3395 is the same as that of Labor Code subsection 226.7(c) that will take effect in 2027.

Comment 12.13
The commenters state the standard does not address alternative, authoritative and recognized practice guidelines for heat illness prevention provided by the American Conference of Governmental Industrial Hygienists (ACGIH). Furthermore, the commenters recommend language that accounts for ACGIH methodology by adopting ACGIH's Heat Stress and Strain (2022) methodology to ensure preventative cool-down breaks remain reasonable and an objective method of ensuring heat stress remains below the Threshold Limit Value (TLV).

A Web Bulb Globe Temperature Index (WBGTi) measurement as an alternative to heat index or temperature, the commenters assert, is not specified in the proposed rule. The commenters recommend the standard should allow for demonstration of employee exposure below the ACGIH TLV as an alternative performance standard to demonstrate assessment and control measures. Furthermore, the commenters state that the TLV can include the metabolic rate in Watts and should be considered alternatively to humidity because humidity can vary inside versus outside a building and within sections of the same building. The commenters state that evaluating each room is burdensome for employers and does not provide protection for employees. Additionally, if the TLV is used, feasibility interpretation questions are avoidable, and employers should be able to monitor core body temperature or heart rate to better protect employees and employers. The commenters recommend the following modification:

(e)(3) Alternative Means.

(A) Employers may utilize ACGIH evaluation methods to evaluate exposures to heat strain. Where evaluation measures ensure that employee exposure is less than the TLV, section (e)(2) shall not apply.
(B) Employers may utilize physiological measurements or environmental WBGTi-TWA measurements representative of an employee's work shift to determine conformance with the TLV.

(C) Employee preventative cool-down breaks may be moderated by objective physiological or environmental WBGTi-TWA measurements demonstrating conformance to the TLV.

Response to Comment 12.13
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

13. Chris Seymour, Strategic Initiatives Coordinator – SEIU Public Division, Fight for $15 and a Union California Steering Committee; Olivia Garcia, McDonald's, San Jose; Alondra Hernandez, Burger King, Oakland; Angelica Hernandez, McDonald's, Los Angeles; Laura Pozos, McDonald's, Los Angeles; Pablo Narvaez, KFC, Fremont, by written comments dated August 22, 2023.

Comment 13.1
The commenters support the additional language of subsection 3396(e)(1)(B) to require temperature measurements "where employees work and at times during the work shift when employee exposure are expected to be the greatest." The commenters recount the experience of a McDonald's worker who stated that the lobby of the restaurant always feels cooler than the kitchen because the air-conditioning works there but is insufficient or broken in the kitchen. The worker asserts that McDonald's prioritizes the comfort of their customers and does not care about jeopardizing employee health.

Response to Comment 13.1
The Board appreciates the commenters' support for this aspect of the proposed regulation.

Comment 13.2
The commenters support the modifications of subsection 3396(e)(1)(B)(3) that requires employers to make heat records available to employees and to designated representatives, as defined in section 3204.

Response to Comment 13.2
The Board appreciates the commenters' support for this aspect of the proposed regulation.

Comment 13.3
The commenters support subsection 3396(f)(2)(C) requiring employers to include "contacting emergency medical services" in their response procedures when employees show signs of heat illness. The commenters recount an employee's report that managers have failed to call

paramedics when workers are experiencing heat illness. The commenter cites a KFC franchise owner in La Puente who "screamed" at a worker to come in to work in a hot store even though the worker was experiencing signs and symptoms of heat illness.

Response to Comment 13.3
The Board appreciates the commenters' support for this aspect of the proposed regulation.

Comment 13.4
The commenters request reconsideration of their suggested modification and asserts that functioning air conditioning is the only way to control heat in restaurants. The commenters state that six excessive heat complaints were filed by fast-food workers since the May 18, 2023, hearing on the proposed regulation. In addition, the twenty-seven heat-related complaints filed with their original comments cite broken or ineffective air conditioning, or air conditioning that managers do not turn on, as reasons for overheated conditions in the workplace. The commenters recount the experiences of workers in Cinnabon in Northridge in June, where employees experienced symptoms of heat stress, walked off the job, which lead to an ineffective repair of the air conditioning by management. The commenters recommend the following addition to subsection 3396(e)(2)(A):

> In establishments with radiant heat sources, when other engineering controls fail to reliably and consistently maintain temperatures below the action threshold, the employer shall provide air conditioning and ensure its proper functioning unless the employer demonstrates that doing so is infeasible.

Response to Comment 13.4
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 13.5
The commenters request reconsideration of their suggested modification and asserts that managers routinely prevent fast-food workers from taking meal and rest breaks and have called workers crazy and said they were lying when they complained about the unsafe levels of heat and joked that excessive heat is a way to burn calories. The commenters recommend that cool-down breaks be mandatory when the threshold standard applies.

Response to Comment 13.5
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 13.6
The commenters request reconsideration of their suggested modification and states that the threshold temperature in subsection (e)(2)(A) of 82 degrees Fahrenheit in workplaces with radiant heat sources, such as restaurants, places workers at risk for heat illness and recommends the threshold temperature be lowered.

Response to Comment 13.6
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 13.7
The commenters request reconsideration of their suggested modification and recommends that the Heat Illness Plan as required by subsection (i)(5) include measures for functioning and effective air conditioning, mandatory cool-down breaks, and a lower temperature threshold which would afford organizations and employees the ability to reference the requirement.

Response to Comment 13.7
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 13.8
The commenters request reconsideration and recommends that the statement of reasons be clarified and memorialized that the multi-employer policy applies to the proposed standard.

Response to Comment 13.8
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

The Board thanks the commenters for their input and participation in the rulemaking process.

14. Nick Chiappe, Government Affairs Associate, California Trucking Association, by written comments dated August 22, 2023.

Comment 14.1
The commenter requests clarification for the application of subsection 3396(c) for commercial vehicles that do not begin or return to an employer's facility. The commenter asserts it is infeasible for employers to provide potable water at the beginning of the shift and should not be a violation if an employer implements a policy for an employee driver to maintain and provide themselves with water.

Response to Comment 14.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 14.2
The commenter states the current language is vague and does not provide flexibility for commercial vehicle operators who depart and return to their personal residences. The commenter recommends an exemption from subsection 3396(c) if adequate training is provided with resources on where water can be provided during a shift or by encouraging the use of personal water storage devices within their vehicle when it is unfeasible for an employer to provide water especially at the start of a driver's shift.

Response to Comment 14.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

15. Louis Blumberg, Senior Climate Policy Advisor, Adrienne Arsht – Rockefeller Foundation Resilience Center, by written comments dated August 22, 2023.

Comment 15.1
The commenter supports the adoption of the proposed high heat standard for indoor workers at the October meeting, or at the latest, the November meeting.

Response to Comment 15.1
The Board acknowledges the commenter's support for the proposed standard.

Comment 15.2
The commenter recommends the threshold temperatures should be 80 degrees Fahrenheit, which is supported by science and is consistent with the outdoor standard and with the standard in Oregon.

Response to Comment 15.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

16. Helen Cleary, Director, Phylmar Regulatory Roundtable (PRR) Occupational Safety and Health (OSH) Forum, by written comments dated August 22, 2023.

Comment 16.1
The commenter appreciates Cal/OSHA's attempt to address industry concerns regarding applicability of the requirements on storage sheds and workers moving between indoor and outdoor spaces; however, they remain concerned with the expansive and unnecessary scope and impact this proposed standard will have on every workplace in the State of California. This concern was underscored after members critically analyzed the new exception (C) in subsection (a)(1) and the significant implications of the use of "contiguous" in subsection (a)(1) exception (C)2.

Their member facilities include large buildings that are used for storage or for vehicle dispatch and may also contain smaller enclosed offices and work areas. These smaller work areas may be housed within the larger structure or connected by a corridor. Many of these larger spaces, because they are not normally occupied, are either maintained above the proposed temperature triggers, or are not temperature controlled. It can be common for workers to traverse through the corridors and large open spaces to get to their actual workspace, which is typically ventilated, or temperature controlled. These large open spaces would not meet the definition of outdoor and because they are contiguous with active workspaces, they do not meet the exemption criteria. However, despite temperatures being above the triggers (82 and 87 degrees Fahrenheit), workers walking through or accessing them for short periods of time would not be at risk of heat illness. Other examples of areas that are inappropriately included in this standard are emergency stairwells, large indoor airplane hangars, and indoor car parking areas.

As drafted, the proposed regulation requires the entire structure, not just the offices inhabited by employees, to be actively monitored and managed to ensure temperatures are maintained below 87 degrees Fahrenheit anytime employees are present. This includes after regular office hours when HVAC systems are typically adjusted to save energy and costs. If the employer can prove it is infeasible to reduce the temperature, employees will still need to be constantly monitored or managed with administrative controls or personal heat-protective equipment. The application of the rule to these types of indoor spaces would not substantially reduce the risk of heat exposure or improve the safety and health of the worker. Yet, it will require constant oversight and management by the employer. Failure to differentiate occupancy and employee use in large indoor areas or sections like stairwells will not only create a financial drain on the company, but if engineering controls are put in place in these areas at a time when the California Energy Commission is struggling to find ways to meet current and future electrical demand, it will further stress California's electric grid. In addition, unnecessary use of engineering controls, such as air conditioning, is not in alignment with the sustainability efforts directed in Governor Newsom's Executive Order N-8-231. They do not believe this level of regulation is reasonable or a practical use of California's energy and employer resources.

Especially when the employee is simply passing through the area and the risk of heat illness is low or non-existent.

The commenter's overall concern can be distilled down to the fact that the proposed standard unnecessarily labels every employee in the State as an indoor or outdoor worker subject to management under the requirements in section 3395 or section 3396, without exception. As the commenter has highlighted in previous comments, this is regardless of an actual risk of heat illness. To reduce this overly broad scope it is imperative that the Board consider a third compliance option.

Truly effective occupational safety and health regulations target the workplaces that create occupational hazards and protect employees at a considerable risk of exposure. This proposed regulation fails to accomplish this. Unfortunately, it will waste valuable resources and call into question the credibility of not only the health and safety professionals who will work to implement the onerous requirements but the Board and Cal/OSHA as well.

The commenter urges the Board to consider this unnecessary impact and direct Cal/OSHA to draft a reasonable solution focused on workers with an actual, substantial risk of occupational exposure to heat. Specifically, they propose an exemption that does not just change the classification of the structure from indoor to outdoor, but an exception that considers duration of exposure.

Response to Comment 16.1
The Board has rewritten and expanded subsection (a)(1) exception (C) to make it broader and simpler. The modification will also address the commenter's concerns about parts of buildings that are used on a limited basis. Where it is infeasible to use engineering controls to cool a large space, the employer may use administrative controls and/or personal heat protective equipment.

Comment 16.2
The commenter appreciates inclusion of the exception (C) in subsection (a)(1); however, their members are concerned about overly prescriptive elements and confusing language. Specifically, the addition of "vehicles and shipping containers," which inappropriately identifies just two types of spaces that meet the overly broad definition of "indoor." The exceptions listed in subsection (C)1. and 3. sufficiently describe the types of spaces that meet the exception criteria and including "vehicles and shipping containers" is not necessary.

For example, a shipping container located in a warehouse with workers assigned to unload it would not meet the criteria in subsections 1. or 3. It is reasonable to assume that workers with a possible risk of heat illness would be unloading for more than 15 minutes in an hour and it would be difficult to argue that the space is not normally occupied if a worker is assigned to perform specific duties inside the space. A worker's occupation of a vehicle that creates a risk of

heat illness is also captured in the exception criteria in subsections 1. or 3. for the same reasons.

Their members have repurposed actual shipping containers as outside storage units for maintenance and equipment. Employee access to these storage areas is incidental and for short periods of time. These situations and containers accurately meet the exception criteria in subsections 1. through 3. But, because they are a "shipping container," they would not fall under the exception.

The commenter was encouraged to hear at the August 17, 2023 Board meeting, Cal/OSHA is planning to address industry concerns regarding shipping containers. To reduce concerns surrounding both vehicles and shipping containers while still maintaining the intent, the commenter suggests deleting "vehicles and shipping containers" from the proposed text. As an alternative, Cal/OSHA can craft Frequently Asked Questions (FAQs) that provide examples of the types of workspaces that do and do not meet the exception criteria. An FAQ is the appropriate place to include these types of specifics.

The commenter also recommends changing the use of "locations" to "spaces" in subsection (a)(1) exception (C). They believe that using spaces is more accurate in this subsection than location, which refers to geography and is not a type of "indoor" environment the regulation is trying to describe.

Cal/OSHA's attempt to address workers that go back and forth between outdoor and indoor has created a new burden for employers to follow both standards. The added exception implies that indoor spaces that meet the listed criteria must be treated as outdoor. They are hopeful this is not the intent and recommend the revision below to clarify employers may solely follow section 3396 for spaces that meet the listed criteria in the subsection (a)(1) exception in (C).

The commenter recommends the following changes to the scope and application of section 3396:

> (1)(C) Indoor spaces ~~locations~~ that meet all of the following criteria may be ~~are~~ considered outdoors and are covered by section 3395 and not this section. ~~This exception does not apply to vehicles or shipping containers.~~ Criteria for this exception are:
> 1. The indoor space ~~location~~ is not normally occupied when employees are present or working in the area or at the worksite; and
> ~~2. The indoor location is not contiguous with a normally occupied location; and~~
> ~~2.~~ 3. Employees are present in the indoor space ~~location~~ for less than 15 minutes in any one-hour period.

(1)(D) For indoor spaces not normally occupied or used for persons to momentarily pass through, the employer is not required to comply with this section.

Response to Comment 16.2
The Board agrees, in part, with the commenter's suggestion. As a result, the Board proposes to modify the proposed text in subsection (a)(1) exception (C) to delete the criterion that the indoor location is not contiguous with a normally occupied location. Subsection (a)(1) exception (C) has been further modified to broaden the incidental exposures. In addition, it addresses stakeholders concerns about vehicles without effective and functioning air conditioning and shipping or intermodal containers during loading, unloading, or related work. Also see response to comment 6.3.

The Board disagrees with the commenter's suggestion to add exception (D) to subsection (a)(1) as written. The Board's newly revised subsection (a)(1) exception (C) will exempt incidental heat exposures where an employee is exposed to temperatures at or above 82 degrees Fahrenheit and below 95 degrees Fahrenheit for less than 15 minutes in any 60-minute period.

Comment 16.3
The commenter states their members do not believe the criteria listed in subsection (a)(1) exception (C)2. and the use of "contiguous" is clear or provides additional value to the exception or regulation. A restroom or storage area located inside of a building would be part of the larger definition of indoor and is not considered an outdoor place of employment subject to section 3395. To eliminate the concern while still maintaining the intent, they suggest deleting the term "contiguous" and recommend Cal/OSHA craft FAQs to clarify the intent.

Response to Comment 16.3
Please see response to comment 16.2.

Comment 16.4
The commenter appreciates and supports the newly proposed subsection (a)(5). It provides needed clarity and is a rational solution to their previously expressed concerns regarding workers that go between indoor and outdoor spaces. Additional language that clarifies employers may continue complying with section 3395 is needed for further improvement. This will ensure individual workplaces are accurately managed and employer responsibilities align with the primary work environment of their operations. It will also prevent unnecessary duplication and changes to successful outdoor heat illness prevention plans already implemented and support business continuity for employers and employees while maintaining employee protections.

Furthermore, not including this additional language creates ambiguity and implies employers currently following section 3395 are now required to be covered under the indoor standard, section 3396. Requiring employers with outdoor operations to switch from outdoor

requirements to indoor requirements would expand the scope and applicability of the outdoor heat standard, section 3395, without following the required rulemaking process; this is inappropriate and creates excessive burden not previously considered. It is also inappropriate for such a significant requirement to be included in a 15-Day Notice without considering the economic impact this will have on employers currently following the outdoor heat standard.

If the Board's intention is to impose indoor heat requirements on outdoor operations for employees who go back and forth, it is necessary that the Board provide evidence and data that demonstrates the outdoor heat standard does not adequately address the employees it was originally designed to protect and appropriately propose modifications to the outdoor heat standard, under a new rulemaking. The commenter recommends the following change to subsection (a)(5):

> (5) Employers may comply with this section in lieu of section 3395 for employees that go back and forth between outdoors and indoors. Employers with primary outdoor operations may continue to comply with section 3395 in lieu of this section.

Response to Comment 16.4
The Board appreciates the commenter's support for this aspect of the proposed regulation. The Board has rewritten subsection (a)(1) exception (C), which will cover employees with limited indoor heat exposures. Consequently subsection (a)(5) has been deleted.

Comment 16.5
The commenter supports the proposed changes to the definition of "clothing that restricts heat removal," subsection (b)(3). Their members believe that the revisions are appropriate and align with advances in fabrics and design of clothing employees wear to enhance their health, safety and comfort at work.

Some members are concerned that lightweight coveralls worn by workers over their clothing may be perceived by inspectors as "clothing that restricts heat removal." These coveralls are lightweight, breathable and used to prevent uniforms and personal clothing from getting soiled; they are not used to protect the wearer from chemical, biological, physical, radiological or fire hazard, nor do they protect from contamination. For these reasons, they do not believe coveralls meet this definition and request Cal/OSHA to provide an FAQ to alleviate concern and potential misinterpretations.

Response to Comment 16.5
The Board appreciates the commenter's support for this aspect of the proposed regulation. The Board will take this comment under advisement when creating guidance documents and FAQs.

Comment 16.6

The commenter supports the consideration of feasibility that has been added to the definition of "cool-down area," subsection (b)(4). This revision acknowledges operational and physical limitations employers and employees may encounter in the workplace.

Response to Comment 16.6
The Board appreciates the commenter's support for this aspect of the proposed regulation.

Comment 16.7
Regarding subsection (e), the commenter has significant concerns regarding temperature taking, the ambiguity of feasible engineering controls and the requirements to maintain temperature records at the worksite. To help employers determine engineering controls that will satisfy Cal/OSHA's definition of feasible, the commenter recommends the agency provide guidance and examples prior to a rule becoming effective. This is necessary to allow employers time to prepare and ensure compliance.

Response to Comment 16.7
The Board will take this comment under advisement when creating guidance documents and FAQs.

Comment 16.8
The commenter supports subsection (e)(1) exception (B) that allows employers to forgo temperature taking and recording if the vehicle has air conditioning. This is one practical consideration in this overly complex and operationally challenging section.

Response to Comment 16.8
The Board appreciates the commenter's support for this aspect of the proposed regulation.

Comment 16.9
The commenter appreciates that the Board accepted their recommended changes in subsection (e)(2)(C). This revision ensures this section is written accurately.

Response to Comment 16.9
The Board appreciates the commenter's support for this aspect of the proposed regulation.

Comment 16.10
The commenter states the change to the title of subsection (g) does not accurately describe the subsequent requirements in this section and should be changed back to what was originally proposed. "Close observation" is exactly what is required of the employer in this section, and it is not accurate to state that this section is "acclimatization." The definition of acclimatization is specific to a process the body experiences and this section is specific to a worker being watched. Despite this title being used in the outdoor heat standard, it is not appropriate to continue to inaccurately describe this element in the General Industry Safety Orders of title 8.

This subsection does not appropriately consider the inherent limitations of monitoring solo workforces. Requiring critical infrastructure workers to work in pairs so that everyone is monitored may not be possible due to limited man-hours and emergency operations. This will have unintended consequences on the communities these workers serve, especially during emergency operations. They strongly urge the Board to revise this section so that requirements can be appropriately applied to solo workforces. For example, remote observation and communication via voice and electronic means should be acceptable. This section should also be drafted to allow innovative technologies such as biometric monitoring.

Response to Comment 16.10
The Board is not persuaded by the commenter's argument that the title of subsection (g) acclimatization does not accurately describe the subsequent requirements in this section and should be changed back to what was originally proposed. The change was made to be consistent with section 3395 to avoid any potential confusion or conflict between regulations.

The Board declines to make additional revisions specific to remote observation of solo workforces and the use of technologies such as biometric monitoring. The requirements in subsection (g) are essentially the same requirements as in section 3395, and employers have been successfully complying with these requirements for many years.

Comment 16.11
The commenter appreciates the added note to subsection (h) that allows employers to combine training programs and training requirements from section 3395 and section 3396. This will help streamline the administrative process and reduce potential confusion amongst workers.

Response to Comment 16.11
The Board appreciates the commenter's support for this aspect of the proposed regulation.

Comment 16.12
The commenter points out that at least eight heat index readings in the chart in Appendix A differ from the National Weather Service (NWS) Heat Index Chart 2019 that is referenced in the documents relied upon in this rulemaking. This is both concerning and disappointing, particularly because at least one of the heat indexes in the actual NWS Chart 2019 is below the temperature threshold in the regulation and the chart in Appendix A reflects a heat index which would trigger employer requirements. For example, when the temperature is 82 degrees Fahrenheit, and relative humidity is 70%, the heat index in the NWS Chart referenced by the 15-Day Notice is listed at 86 degrees Fahrenheit and the heat index included in Appendix A lists the heat index at 88 degrees Fahrenheit. The commenter recommends Cal/OSHA review all the heat index measurements in the chart and revise for accuracy.

Response to Comment 16.12

In response to the comment, the Board reviewed the heat index values in appendix A. The Board has identified the discrepancies noted by the commenter and has updated them in the appendix A.

The Board thanks the commenter for their input and participation in the rulemaking process.

17. Greg Stevenson, Environmental Manager, Basalite Building Products, LLC, by written comments dated August 22, 2023.

Comment 17.1
The commenter states that their facilities and operations have extensively implemented the administrative requirements, including providing drinking water and shade, contained in section 3395 which have proven to effectively minimize heat stress and illness among their employees. Consequently, the provisions of the outdoor HIP standard similarly applicable to prevent indoor heat illness are appropriate and should be maintained as a principal component of the proposed regulation.

The commenter supports the following provisions of the proposed regulation:

- Subsection (a)(1) scope and application and exceptions, in particular, subsection (a)(1) exception (C), which reasonably addresses comments received in response to the initial publication of the proposed regulation and its public hearing. There are many of these "in and out" situations in our operations and the flexibility provided is more appropriate than the previous "at any time" approach.
- Subsection (e)(1) exception (B). The amendment expressly addressing vehicles by exemption from assessment and control measures for exception (B) vehicles with effective and functioning air conditioning is appropriate and should be included in the final rule. However, to further clarify the status of vehicles, open cab vehicles (such as excavators, loaders and forklifts) should be deemed subject to the outdoor HIP standard.
- Subsection (c) provision of water.
- Subsection (f) emergency response procedures.
- Subsection (g) acclimatization, except a definition of "close observation" should be included in subsection (b) definitions. The definition should, to the extent practicable, include objective criteria and alternatives. For example, an appropriate frequency of observations and/or alternatives, such as a buddy system.
- Subsection (h) training. The training provisions are reasonable and appropriate, although the provisions relating to an employer's emergency response obligations at subsections (G), (H) and (I) should be included instead in supervisor training at subsection (h)(2).
- Subsection (i) heat illness prevention plan.

Response to Comment 17.1
Please see response to comment 10.1.

Comment 17.2
The commenter states that the lack of detail in subsection (e)(1)(B)1. and 2. will seriously affect employers, regardless of size and type of business and will increase the volume of vexatious litigation that they face. The requirement for measurements to be taken "where employees work and… when employee exposures are expected to be the greatest" is exceptionally vague and open to abuse by all parties. The commenter asserts that this entire piece of legislation hinges on an accurate assessment of risks to workers but what is given is a word salad that will be litigated in court for years to come. The commenter states that Cal/OSHA's laziness in not attempting to include even basic requirements like the number of measurements required per worker at a location, or how close to the worker do the measurements need to be performed is unworkable and very disappointing.

Response to Comment 17.2
Please see response to comment 9.2.

Comment 17.3
The commenter opposes subsections (b)(9) and (11) testing equipment requirement. The commenter argues that they will have to buy a six-inch globe thermometer to measure radiant heat along with a dry bulb temperature and relative humidity at a cost of $2,200, which is the price for a Testo 0602-0743 six-inch globe and Testo 400 digital thermometer set from T Equipment. If only one of these required thermometers are purchased at each of the 196,000 affected facilities the cost would be $431,200,000, and they are still to take their first measurement.

The commenter states that if they are able to use the much cheaper and more plentiful integrated WBGT meters at $100 to $400 each the additional costs of monitoring for this new rule would be dramatically reduced but would still be in the order of $19,600,000 to $78,400,000. There are even WBGT models that can be worn on the worker, which is likely the most accurate place to collect exposure data.

This over-reach subverts the proposed regulation with grossly underestimated costs in the SRIA.

Response to Comment 17.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 17.4

The commenter states that the SRIA for the proposed regulation fails to demonstrate that additional protective measures beyond the primarily administrative requirements of the outdoor HIP standard would significantly reduce indoor employee heat illnesses and deaths, which are very low compared to outdoor incidence (an average of less than one death and 185 heat illnesses in this State per year based on actual workers' compensation data for the years 2010 to 2018) without a standard in place. This study speculates that climate change may add to these figures and increase the benefit of the standard for employees. However, it is well established after more than two decades of outdoor heat illness regulation that the rules accomplishing most of the reduction in illness cases and fatalities were the administrative provisions: water, training of employees and supervisors, emergency response, low-cost shade and rest periods. In addition, as shown by the history of the outdoor HIP standard, it has been amended three times since its adoption in 2005, which is also available to the Board if the initial indoor HIP standard is not as effective as anticipated.

Response to Comment 17.4
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

Comment 17.5
The commenter states that based on any reasonable analysis of the potential costs of engineering controls implemented by the estimated 196,000 facilities believed to be affected by the proposed standard, the SRIA cost estimate of up to $1.1 billion in ten years, most of which is expected to be invested in engineering controls is extremely low and may not even reflect the cost of universal cool-down areas in nearly two thousand establishments. Nonetheless, as most of these control measures will consume significant electrical power and water, there is substantial evidence that the indoor HIP standard will have a significant effect on the environment, including increased consumption of electricity and demands on the electrical grid and electric generator plants primarily fueled by natural gas as its combustion produces regulated pollutants, including greenhouse gases. Consequently, CEQA requires the sponsoring agency, the Board, to prepare an EIR. There is no information in the rulemaking record that this process had been planned or completed.

Response to Comment 17.5
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

18. Anne Katten, Pesticide and Work Safety Project Director, California Rural Legal Assistance Foundation (CRLAF); AnaStacia Wright, Worksafe; Estella Cisneros, California Rural Legal Assistance, Inc.; Beth Malinowski, SEIU State Council; and Carmen Comsti, California Nurses Association, by written comments dated August 22, 2023.

Comment 18.1

The commenters support that subsection (a)(1) exception (C) for certain employer controlled indoor work locations specifies that locations that meet these criteria are considered outdoors and are therefore covered by section 3395. Workers who work both indoors and outdoors need the protections afforded by both regulations because exposure conditions are different indoors and outdoors. Since the proposed indoor regulation follows the same format as the outdoor regulation employers will be able to combine training and other requirements in a straightforward manner.

The commenters strongly support the decision to consider vehicles and shipping containers as indoor workspaces covered by section 3396 and to exclude both from this exception. Both vehicles and shipping containers capture and concentrate outdoor heat, so it is very important to control this heat with all feasible controls. In addition, employees operating extremely hot vehicles are at elevated risk of injuring themselves and others in accidents if they develop heat illness symptoms. In addition to employees operating vehicles, it is important that airplane cabin cleaners are also protected from excessive indoor heat exposure.

The commenters are concerned that the exception removes all obligation for the employer to control the temperature in these non-contiguous buildings that would be allowed to be occupied up to 15 minutes per hour. They interpret these “not normally occupied and not contiguous” locations to include storage rooms, utility rooms and even plumbed bathrooms that are in separate structures without a common wall, but this should be addressed either in definitions or interpreted in a FAQ document. Feasible ventilation and insulation should be required in these locations especially given that the proposed exception allows work in these locations up to 15 minutes per hour, which can constitute 25% of an 8-hour day.

The commenters are unclear whether or not the employer would be required to monitor the temperature in these non-contiguous, not normally occupied indoor locations but some monitoring would seem to be required to determine appropriate administrative controls, such as scheduling the short-term work in these locations during cooler parts of the day or limiting trips to these locations on hotter days.

The commenters state some cooling should be provided on hot days in bathrooms that have plumbing and electricity so that employees will not limit fluid intake to avoid having to use the bathroom and to prevent a scenario where a worker passes out in the bathroom and then develops heat stroke or falls and hits their head. This exception would disproportionately impact employees in packing houses and dairies where restrooms are often not connected to the barn/building where the work is being performed.

The commenters are concerned that this exception will create unnecessary challenges to enforcement and make employer’s recordkeeping more burdensome.

Response to Comment 18.1
The Board acknowledges the commenters' support for some aspects of the proposed regulation. However, in light of the broad consensus that subsection (a)(1) exception (C) presented significant challenges, the Board has modified exception (C).

Comment 18.2
The commenters state the temperature requirements in burn units are adequately addressed by feasibility requirements outlined in subsection (e)(2)(A). As Eric Berg explained at the Board meeting on August 17, 2023, an exception is not needed for hospital burn units because the proposed regulation's provision regarding feasibility of engineering controls is sufficient to address the issue regarding the periodic need for high indoor heat in hospital burn units. Other requirements under the standard would and should still apply, including administrative controls, personal heat-protective equipment, cool-down areas and exposure assessments. Administrative controls (particularly breaks and adequate staffing to reduce heat exposure time in the patient rooms) and access to cool-down areas are critical needs for staff in burn units.

Response to Comment 18.2
The Board appreciates the commenters' support for this aspect of the proposed regulation.

Comment 18.3
The commenters state that subsection (a)(5) is too broad and should be eliminated. Employees who go back and forth between indoors and outdoors may be working at considerable distance from the indoor location during parts of the workday. In such circumstances they need ready access to drinking water and need shade and other protections when the ambient temperature reaches 80 degrees Fahrenheit when working outdoors.

Response to Comment 18.3
The Board agrees with the commenters' suggestion. As a result, the Board has deleted subsection (a)(5).

Comment 18.4
The commenters support the increased specificity in the definition of "clothing that restricts heat removal" but remains concerned that the definition excludes many types of clothing and PPE that restrict heat removal.

Response to Comment 18.4
The Board appreciates the commenters' support for this aspect of the proposed regulation. The Board will take this comment under advisement when creating guidance documents and FAQs.

Comment 18.5

The commenters support the increased specificity in subsection (e)(1)(B) requiring that both initial and follow-up temperature or heat index measurements be taken where employees work and at times when employee exposures are expected to be the greatest.

Response to Comment 18.5
The Board appreciates the commenters' support for this aspect of the proposed regulation.

Comment 18.6
The commenters support the revision to subsection (e)(1)(B)3 which requires that records of temperature or heat index measurements be made available to employees and also to designated representatives as defined in section 3204 both at the worksite as well as upon request. This will help employees understand the extent of exposure to heat in the workplace and how it is being addressed.

Response to Comment 18.6
The Board appreciates the commenters' support for this aspect of the proposed regulation.

Comment 18.7
The commenters strongly support the added specification of the employer's emergency response procedures "including contacting emergency medical services" in subsection (f)(2)(C). Prompt medical attention for heat illness saves lives and prevents long-term disability.

Response to Comment 18.7
The Board appreciates the commenters' support for this aspect of the proposed regulation.

Comment 18.8
The commenters are disappointed to see that many of their suggestions to make the regulation more worker protective are not incorporated into this revision. The standard could and should be stronger, but they do not wish to delay adoption of an indoor heat standard and request their concerns be addressed in the final statement of reasons if a second set of revisions is not possible.

Response to Comment 18.8
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

The Board thanks the commenters for their input and participation in the rulemaking process.

19. Kevin Riley, PhD, MPH, Director, UCLA Labor Occupational Safety and Health (LOSH) Program, by written comments dated August 22, 2023.

Comment 19.1

The commenter is concerned that subsection (a)(5) is too vague and leaves outdoor workers at an increased risk of exposure to heat than the existing outdoor heat standard allows. This language seems to indicate that employers with outdoor workers who go indoors at some point during the workday and for an unspecified amount of time could opt to follow section 3396 with its threshold of 87 degrees Fahrenheit for temperature or heat index, rather than the more protective threshold of 80 degrees Fahrenheit, that section 3395 requires. It could also result in outdoor workers losing access to shade, drinking water and other provisions required under section 3395.

Some clarification is needed to specify what proportion of time outdoors versus indoors Cal/OSHA deems reasonable for employers to opt for section 3396 – ideally, employers should be given the option to follow section 3396 only if employees spend the vast majority of their workday indoors.

The commenter states that the concerns about this language also underscore the challenges in establishing two different action thresholds for outdoor and indoor work, a recommendation they and other stakeholders had made during the last round of comments in May 2023.

Response to Comment 19.1
The Board agrees with the commenter's suggestion. As a result, the Board has deleted subsection (a)(5).

Comment 19.2
The commenter supports the increased specificity in the definition of "clothing that restricts heat removal" but remains concerned that the definition excludes many types of clothing and PPE that restrict heat removal, as noted in their comments from May 2023. This is particularly true in the case of workers wearing various forms of respiratory protection.

Response to Comment 19.2
The Board appreciates the commenter's support for this aspect of the proposed regulation. The Board will take this comment under advisement when creating guidance documents and FAQs.

Comment 19.3
The commenter supports the increased specificity in subsection (e)(1)(B) of requiring that both initial and follow-up temperature or heat index measurements be taken where employees work and at times when employee exposures are expected to be the greatest.

Response to Comment 19.3
The Board appreciates the commenter's support for this aspect of the proposed regulation.

Comment 19.4

The commenter supports the revision to subsection (e)(1)(B)3 which requires that records of temperature or heat index measurements be made available to employees and also to designated representatives as defined in section 3204 both at the worksite as well as upon request. This will help employees understand the extent of exposure to heat in the workplace and how it is being addressed.

Response to Comment 19.4
The Board appreciates the commenter's support for this aspect of the proposed regulation.

Comment 19.5
The commenter strongly supports the added specification of the employer's emergency response procedures "including contacting emergency medical services" in subsection (f)(2)(C). Prompt medical attention for heat illness saves lives and prevents long-term disability.

Response to Comment 19.5
The Board appreciates the commenter's support for this aspect of the proposed regulation.

Comment 19.6
The commenter is disappointed that the Board did not make additional modifications recommended by LOSH and other stakeholders during the last comment period, including adopting lower action thresholds to align with the existing section 3395 and requiring that training be offered in a language and educational level that workers understand. The commenter urges the Board to reconsider these issues to ensure the new indoor standard is as robust and effective as possible for the diverse workforce across the state.

Response to Comment 19.6
The comment is not specifically directed to any of the proposed modifications noticed by the Board on August 4, 2023, and is therefore outside the scope of the 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

20. Jeremy Lawson, Staff Chief of Safety and EMS Programs, Department of Forestry and Fire Protection (CAL FIRE), by written comments dated August 22, 2023.

Comment 20.1
The commenter states that subsection (a)(1) exception (C) defines indoor places that are to be considered outdoor and covered under section 3396. Fighting fires indoors is not explicitly exempted from these regulations. While likely not intended to restrict or limit the ability of firefighters to fight structural fires indoors, without an exemption it could be implied incorrectly. The commenter believes that firefighting activities should be exempted from the requirements of this regulation. Firefighters frequently spend more than 15 minutes fighting a fire within a structure in a given hour. Should CAL FIRE be required to follow this regulation for

firefighting activities, a firefighter would be required to exit an indoor space no later than 15 minutes past their point of entry, regardless of the fire activity. This requirement would have a significant impact on the operational capabilities of CAL FIRE and could present a life safety concern for personnel. Should a firefighter be required to exit the indoor space before the fire is extinguished, there is a potential for the fire to increase in size, complexity and intensity. As building or structural fires grow, they have a potential to spread to other nearby buildings and/or create a separate wildland fire as a result. This presents a safety concern for not only the CAL FIRE employees responding to extinguish these fires, but for communities and the general public. Our firefighters are conditioned and trained and our procedures for structural firefighting meet all requirements of section 3395 and subsections 5144(g)(3) and (4) for immediately dangerous to life or health (IDLH) atmospheres. This includes access to rapid cooling measures, radio communication, a buddy system, close supervision and observation and implementing emergency response procedures when necessary.

Additionally, the commenter states that mobile equipment workshop and aircraft hangar operations should be considered for addition under subsection (a)(1) exceptions of the proposed regulation. The commenter believes that anytime the garage and/or hangar roll-up style doors are opened, the indoor location should be considered an outdoor work location covered by section 3395. The need to open these doors frequently and have them remain open, including to move vehicles and/or aircraft, does not allow for effective engineering controls to keep the location cool as an indoor workplace. The doors are not able to be kept closed, as it can create an IDLH atmosphere due to the inability to circulate outdoor airflow when engines are running. These specific workplace exemptions under subsection (a)(1), will allow CAL FIRE to continue protecting employees from heat-related injuries and illnesses under the outdoor regulation requirements while maintaining the operational abilities and readiness required as a first response agency.

<u>Response to Comment 20.1</u>
The Board agrees with the comment that firefighting activities should be exempted from the requirements of this regulation and proposes a new exception (D) to subsection (a)(1), which exempts emergency operations directly involved in the protection of life or property from the proposed regulation.

The Board is not persuaded by the commenter's arguments and declines to add mobile equipment workshop and aircraft hangar operations as exceptions to subsection (a)(1). Effective local exhaust ventilation in accordance with section 5143 and adequate make-up air are necessary to prevent exposures from vehicle exhaust in indoor locations. Employers cannot rely on open doors to prevent such exposures.

The Board thanks the commenter for their input and participation in the rulemaking process.

21. Steve Johnson, Associated Roofing Contractors of the Bay Area Counties, by written comments dated August 17, 2023.

Comment 21.1
The commenter distributed a handout at the August 17, 2023 Board meeting. The handout contained information on WBGT vs. heat index from the NWS website and the section on the heat index was highlighted. The highlighted section notes that the heat index is based on work carried out by Robert G. Steadman in 1979, An Assessment of Sultriness, Parts I and II, where he discussed factors that would impact how hot a person would feel under certain conditions. It incorporates 21 parameters and assumptions, including: a body mass of 147.7 pounds, a height of 5'7", actively walking 3.1 miles per hour, wearing clothing that consists of pants and short sleeve shirt, heat tolerance, in the shade, etc. This formula became the "heat index." It is the traditional measurement of heat stress due to high temperatures and high humidity. It also included the heat index equation and an example of a table for determining the heat index. The commenter notes on the handout that the heat index is based on a study that is 44 years old.

Response to Comment 21.1
The Board is not persuaded by the commenter's argument and declines to modify the proposed regulation. The heat index equation has been widely used and accepted as a heat screening tool over the years. Subsection (e)(1)(C) has been modified to allow employers to use instruments that utilize NWS heat index equations or tables to measure the heat index.

The Board thanks the commenter for their input and participation in the rulemaking process.

SUMMARY AND RESPONSE TO WRITTEN COMMENTS RESULTING FROM THE SECOND 15-DAY COMMENT PERIOD

1. Luisa Gratz, President, ILWU Local 26, by written comments dated November 27, 2023.

Comment 1.1
The commenter requests a section be added to the proposed regulation that protects workers that load and unload shipping containers and truck vans. The commenter asserts that this is physically challenging and is frequently performed under production standards, algorithms, in these physical structures without air circulation, temperature and humidity control, and under fear of discipline.

Response to Comment 1.1
The Board acknowledges the commenter's concerns and has proposed to modify the exception (C) in subsection (a)(1) of the proposed regulation to exclude loading and unloading of shipping containers. This modification will address the hazards of indoor heat illness for employees loading and unloading shipping containers.

Comment 1.2
The commenter asserts that the location for monitoring the heat index in a warehouse is critical to the effectiveness of the proposed standard. As an example, newly constructed warehouses have high ceilings, are two-three stories in height, have racks with materials which intercept air circulation and heat is stored during the day and rises to the higher levels where there may not be air circulation or cooling provided for workers.

Response to Comment 1.2
The comment is not specifically directed to any of the proposed modifications noticed by the Board on November 9, 2023, and is therefore outside the scope of the second 15-Day Notice.

Comment 1.3
The commenter urges the Board to pass a meaningful enforceable standard.

Response to Comment 1.3
The Board acknowledges the commenter's concerns and will strive to adopt a standard that is both meaningful and enforceable.

Comment 1.4
The commenter requests an explanation for workers so that they can read and understand appendix A, heat index chart. This will allow workers to easily calculate the heat index and monitor their own work environment.

Response to Comment 1.4
The comment is not specifically directed to any of the proposed modifications noticed by the Board on November 9, 2023, and is therefore outside the scope of the second 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

2. Michael Miiller, Director of Government Relations, California Association of Winegrape Growers; Matthew Allen, Vice President, State Government Affairs, Western Growers; Tricia Geringer, Vice President of Government Affairs, Agricultural Council of California; Timothy A. Johnson, President/CEO, California Rice Commission; Christopher Valadez, President, Grower-Shipper Association of Central California; Roger Isom, President/CEO, California Cotton Ginners and Growers Association, Western Agricultural Processors Association; Bryan Little, Director, Employment Policy, California Farm Bureau; Joani Woelfel, President and CEO, Far West Equipment Dealers Association; Casey Creamer, President, California Citrus Mutual; Rick Tomlinson, President, California Strawberry Commission; Manuel Cunha, Jr., President, Nisei Farmers League; Todd Sanders, Executive Director, California Apple Commission, California Blueberry Association, California Blueberry Commission, Olive Growers Council of California; Richard Matoian, President, American Pistachio Growers; Ian LeMay, President, California Fresh Fruit Association; Pete

Downs, President, Family Winemakers of California; Tim Schmelzer, Vice President, California State Relations, Wine Institute; and Mike Montna, President/CEO, California Tomato Growers Association, by written comments dated November 27, 2023.

Comment 2.1

The commenters state that 87 degrees Fahrenheit is assumed to be inherently dangerous without scientific or medical data. For example, Washington's outdoor heat exposure regulation states that it "Does not apply to incidental exposure. Incidental exposure means an employee is not required to perform a work activity outdoors for more than 15 minutes in any 60-minute period." The commenters recommend the following amendment, which is taken from existing law in Washington:

> (a)(1)
> Exceptions
> (C) This section does not apply to incidental heat exposures where an employee is exposed to temperatures above 82 degrees Fahrenheit for less than 15 minutes in any 60 minute period ~~and not subject to any of the conditions listed in subsection (a)(2)~~.

Response to Comment 2.1

The Board is not persuaded by the commenters' arguments and declines to adopt the commenters' proposed modification to remove the conditions included in subsection (a)(2) of the proposed regulation, as it can be inherently dangerous to work at high temperatures even for short periods depending on relative humidity, nature of the work performed, and other factors. However, the Board recognizes the need for practical implementation of the proposed regulation and considered NIOSH's recommendation[8] to establish a higher threshold. Therefore, the Board proposes a maximum temperature for incidental heat exposures to be below 95 degrees Fahrenheit. This temperature will allow for more feasible compliance with the proposed regulation, align with the high heat threshold of 95 degrees Fahrenheit in section 3395 and follow the same scientific logic as NIOSH's recommended work/rest schedules.

Comment 2.2

[8]Jacklitsch B, Williams WJ, Musolin K, et al. Criteria for a Recommended Standard: Occupational Exposure to Heat and Hot Environments: Revised Criteria 2016. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (NIOSH). February 2016; DHHS (NIOSH) Publication 2016-106. https://www.cdc.gov/niosh/docs/2016-106/pdfs/2016-106.pdf?id=10.26616/NIOSHPUB2016106l

The commenters assert that, as a matter of public policy, no additional protections for workers are achieved by applying the proposed regulation to the inside of air-conditioned vehicles since vehicles are considered "shade" under section 3395. Furthermore, bringing vehicles into the proposed regulation causes confusion due to the crossover between section 3395 and section 3396. There is no measurable additional safety by requiring compliance with both section 3395 and section 3396 when an employee is inside of a vehicle with effective and functioning air conditioning. The commenter recommends the following:

> (a)(1)
> Exceptions
> <u>(D) Vehicles with effective and functioning air conditioning.</u>

<u>Response to Comment 2.2</u>
The comment is not specifically directed to any of the proposed modifications noticed by the Board on November 9, 2023, and is therefore outside the scope of the second 15-Day Notice. If the air conditioning is effective and cools air below 82 degrees Fahrenheit, the location is not covered by this proposal.

<u>Comment 2.3</u>
The commenters oppose the removal of complying with section 3396 in lieu of section 3395 for employees that go back and forth between outdoors and indoors and recommend the following:

> (a) Scope and Application.
> <u>(5) This section shall not apply to employees working both indoors and outdoors whenever those employees are covered by section 3395.</u>

Furthermore, the commenters assert that the new amendment requires compliance with dueling heat illness prevention standards for the same workers, same workplace, and the same shift. While intending to address the exact same safety issue (heat illness prevention), those standards are inconsistent.

As an example, the commenters state that the requirements for measuring "temperature" are different between section 3395 and proposed section 3396. Outdoor requirements provide that "the thermometer should be shielded while taking the measurement, e.g., with the hand or some other object, from direct contact by sunlight" and to the contrary, the proposed indoor requirements provide for the use of "a thermometer freely exposed to the air without considering humidity or radiant heat." Furthermore, the definition of "radiant heat" in the proposed indoor requirements, "sources of radiant heat include the sun...." Therefore, the

existing outdoor standard literally requires consideration of the sun when taking the temperature, while the proposed indoor standard would prohibit consideration of the sun. The commenters question how these contradictory provisions would be applied relative, for example, to an indoor cool-down area that has windows to the exterior when used by outdoor workers.

Response to Comment 2.3

The Board is not persuaded by the commenters' arguments and declines to adopt the commenter's proposed modification to allow employers to only comply with section 3395 for employees working both indoors and outdoors. Every effort was made to ensure the proposed regulation is consistent with section 3395. The proposed regulation's intent is to offer effective protection for employees working indoors that cannot be adequately accomplished by the application of section 3395 alone.

The Board disagrees that there is conflict between the two regulations. The recommendation in section 3395 to shield a dry bulb thermometer when taking a temperature measurement is to prevent an inaccurate high reading by blocking radiant heat from the sun. The same concept is applied in the proposed regulation when taking a temperature that, by definition, excludes consideration of radiant heat.

Additionally, since the proposed regulation and section 3395 are consistent with each other, employers may develop and adopt one unified Heat Illness Prevention Program to address both outdoor and indoor heat illness for their worksite.

Comment 2.4

The commenters provide another example of an inconsistency with the definition of "personal risk factors." The proposed regulation refers to the use of "medications" while section 3395 refers to the use of "prescription medication" that affect the body's water retention or other physiological responses to heat. The commenters question why "prescription" is not included in the definition of "personal risk factors for heat illness" in the proposed regulation and why medications that are prescribed are to be considered only for outdoors.

Response to Comment 2.4

The comment is not specifically directed to any of the proposed modifications noticed by the Board on November 9, 2023, and is therefore outside the scope of the second 15-Day Notice.

Comment 2.5

Another inconsistency, the commenters assert is the definition of "heat wave" and its application to only section 3396. The commenters question the broad applicability to the rest of the definitions and are concerned of the inadvertent effect on the applicability of several other

title 8 sections. The commenters assert that they believe the definitions in section 3396 are not intended to be broadly applied and recommend the following amendment to avoid confusion as to the intended application. The commenters recommend the following technical amendment:

> (b) Definitions (for the purpose of this section only)
> (10) "Heat wave" means any day in which the predicted high outdoor temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees Fahrenheit greater than the average high daily outdoor temperature for the preceding five days~~, for the purpose of this section only~~.

Response to Comment 2.5
The comment is not specifically directed to any of the proposed modifications noticed by the Board on November 9, 2023, and is therefore outside the scope of the second 15-Day Notice.

Comment 2.6
The commenters state that if an employee working outdoors is brought indoors to cool down only, and if the space is not used exclusively as a cool down area, it is then considered an indoor area and falls under the proposed section 3396. Furthermore, the commenters assert that if an employee goes inside of an air-conditioned building and that building is not used exclusively as a cool down area, then the employee would be considered indoors under the proposed regulation. To resolve the above stated problem, the commenters recommend the following amendment.

> (b)(13)
> EXCEPTION: Indoor does not refer to a shaded area that meets the requirements of subsection 3395(d). This exception applies only to employees during a cool-down period provided under subsection 3395(d). ~~and is used exclusively as a source of shade for employees covered by section 3395.~~

Response to Comment 2.6
The comment is not specifically directed to any of the proposed modifications noticed by the Board on November 9, 2023, and is therefore outside the scope of the second 15-Day Notice.

The Board thanks the commenters for their input and participation in the rulemaking process.

3. Robert Moutrie, Policy Advocate, California Chamber of Commerce, on behalf of American Composites Manufacturers Association; Associated Builders and Contractors, California; Associated Roofing Contractors of the Bay Area Counties; California Association of Joint Powers Authorities; California Association of Sheet Metal and Air Conditioning Contractors, National Association; California Association of Winegrape Growers; California Attractions and Parks Association; California Chamber of Commerce; California

Construction and Industrial Materials Association; California Cotton Ginners and Growers Association; California Farm Bureau; California Framing Contractors Association; California Fresh Fruit Association; California League of Food Producers; California Retailers Association; California Tomato Growers Association; California Walnut Commission; Chemical Industry Council of California; Family Business Association of California; Housing Contractors of California; PCI West – a Chapter of the Precast/Prestressed Concrete Institute; Residential Contractors Association; Western Agricultural Processors Association; Western Growers Association; and Western Steel Council, by written comments dated November 28, 2023.

Comment 3.1

The commenters appreciate the attempt to broaden the exemption contained in subsection (a)(1) exception (C) from specific spaces (excluding vehicle and shipping containers) in the first 15-day change, however the language in the second 15-day change appears non-functional due to an apparent drafting issue. For context, this exemption was [originally] proposed as applying to storage sheds or other temporary indoor spaces that are far from powered structures or do not have air conditioning and are only used rarely. However, in the second 15-day change, its provisions would seem to exclude those very structures.

The commenters state the new subsection (a)(1) exception (C) provides that the proposed regulation "does not apply to incidental heat exposures where an employee" meets two conditions. First, the exposure must be less than 15 minutes in any 60-minute period - this requirement is clear, feasible, and effective. The second requirement, however, appears to erase the entire exemption; the exemption does not apply if the exposure is "subject to any of the conditions listed in (a)(2)."

The commenters state that subsection (a)(2)'s requirements are slightly above the scope of the regulation itself - where the proposed regulation is triggered at 82 degrees Fahrenheit, and subsection (a)(2) applies whenever the temperature "equals or exceeds 87 degrees Fahrenheit…" or when it exceeds 82 degrees Fahrenheit if restrictive clothing is worn. Whether the threshold is 82 or 87 degrees Fahrenheit, the core issue is that removing any structure above 87 degrees Fahrenheit from the exemption erases the entire exemption.

Any storage shed or small indoor space on a warm day will rise above 87 degrees Fahrenheit. The whole purpose of the exemption was to allow brief exposures above this threshold. As a result, limiting the exemption to situations that are essentially outside the scope of the regulation renders the exemption essentially pointless. To give the exemption a functional purpose, it needs to exempt structures that would otherwise fall under the scope of the regulation. The commenters propose the following amendment for exception (C):

(C) This section does not apply to incidental heat exposures where an employee is exposed to temperatures above 82 degrees Fahrenheit for less than 15 minutes in any 60-minute period ~~and not subject to any of the conditions listed in subsection (a)(2)~~.

This amendment would do the following:

- Preserve the core of the provision—exempting suitably brief exposure from coverage.
- Remove the provision which makes the exemption unworkable—the inclusion of subsection (a)(2) as a limitation.

The commenters proposed amendment is in line with Washington State's Outdoor Heat Regulation, which provides that it "does not apply to incidental exposure. Incidental exposure means an employee is not required to perform a work activity outdoors for more than 15 minutes in any 60-minute period. This exemption may be applied every hour during the work shift."

The functional consequences of not addressing the above concern with subsection (a)(1) exception (C) will include:

- Any momentary entry into a storage shed to grab a tool triggers temperature measurement obligations under subsection (e)(1).
- Any momentary entry into an impromptu indoor space triggers a hierarchy of control obligations, including potentially installing engineering controls in the impromptu space.
- Obligations under subsections (c) and (d) regarding provision of water and access to cool down areas.

Response to Comment 3.1
Please see response to comment 2.1.

Comment 3.2
The commenters are concerned with the deletion of subsection (a)(5), which was an imperfect but appreciated attempt to address any concerns about differences in compliance between the proposed regulation and section 3395. With the deletion of subsection (a)(5), the commenters are concerned that employers (particularly smaller/mid-sized employers) will need to train on/review two standards where using one would be simpler to train on and implement. Also, minor differences exist between the two, including the temperature measurement requirements and the definition of personal risk factors for heat illness.

Response to Comment 3.2
Please see response to comment 2.3.

Comment 3.3

The commenters note that the 15-day change added an exemption from subsection (e)(1) (relating to temperature measurement) for "vehicles with effective and functioning air conditioning." They believe this exemption is better placed in subsection (a) (Scope).

The commenters state that exempting vehicles with "effective and functioning air conditioning from only subsection (e)(1) —and not subsection (e)(2) relating to control measures—creates a problem of documentation. Though an employer is theoretically not required to have their employees comply with subsection (e)(1) and test the temperature of a vehicle upon entering it—they still have to document that their control measure (in this case, air conditioning) was "used to reduce and maintain both the temperature and the heat index below 87 degrees …." In order to demonstrate that its control measure was effective, employers will be asked for documentation … which appears to necessitate temperatures be taken. In other words, in order to document compliance with subsection (e)(2), employers are still effectively required to comply with subsection (e)(1), rendering the exemption ineffective. In practical terms, this means employers will still need to engage in the unnecessary and wasteful act of taking the temperature in a vehicle equipped with air conditioning in order to demonstrate compliance.

To address this problem, the commenters urge an amendment to treat air-conditioned vehicles similar to their treatment in the protection from wildfire smoke regulation, section 5141.1, which exempts "[e]nclosed vehicles in which the air is filtered by a cabin air filter…" as part of its scope in subsection 5141.1(a)(2)(B).

The commenters state this change would still require employers to ensure that their vehicles have functioning air conditioning—the core of the present provision - but avoid the unnecessary documentation issue noted above. In addition, this change would have the added benefit of preventing outdoor workers from jumping between the outdoor and indoor heat regulations when they step into an air-conditioned vehicle.

The commenters additionally note this change would functionally not eliminate obligations to provide water and cool down opportunities, as the worker would be covered by such obligations before they step into the vehicle under the existing section 3395 if they work outside. Conversely, if they work in an indoor environment prior to stepping into the vehicle, that indoor space will be covered by the proposed regulation and will require such measures if the temperature meets the relevant threshold.

Specifically, they urge the following changes:

> (a) Scope and Application.
> (1) This section applies to all indoor work areas where the temperature equals or exceeds 82 degrees Fahrenheit when employees are present.
> EXCEPTIONS:
> …

(E) This section does not apply to vehicles with effective and functioning air conditioning.

Response to Comment 3.3
The comment is not specifically directed to any of the proposed modifications noticed by the Board on November 9, 2023, and is therefore outside the scope of the second 15-Day Notice. If the air conditioning is effective and cools air below 82 degrees Fahrenheit, the location is not covered by this proposal.

Comment 3.4
The commenters note the definition of "heat wave" was amended to add the phrase "for the purpose(s) of this section only." Prior to the second 15-day change, the phrase appeared in one other definition (heat index), but in no other definitions. The inclusion of this language in two definitions, but no others, suggests that other definitions in this section may apply outside of this regulation. These definitions include terms that may have slightly different definitions in other contexts, such as "acclimatization," "engineering control," "indoor," "relative humidity," "shielding," "temperature," or "union representative." In order to address ambiguity related to which definitions apply for purposes of the proposed regulation only, they urge the following amendment:

(b) Definitions.
The following definitions apply for purposes of this subsection only.
…
(9) "Heat index" means a measure of heat stress developed by the National Weather Service (NWS) for outdoor environments that takes into account the dry bulb temperature and the relative humidity. ~~For purposes of this section, h~~ Heat index refers to conditions in indoor work areas. Radiant heat is not included in the heat index.

(10) "Heat wave" means any day in which the predicted high outdoor temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees Fahrenheit greater than the average high daily outdoor temperature for the preceding five days~~, for the purpose of this section only~~.

Response to Comment 3.4
The comment is not specifically directed to any of the proposed modifications noticed by the Board on November 9, 2023, and is therefore outside the scope of the second 15-Day Notice.

The Board thanks the commenters for their input and participation in the rulemaking process.

4. Anne Katten, Pesticide and Work Safety Project Director, California Rural Legal Assistance Foundation; Ana Vicente, California Rural Legal Assistance Inc.; Navnit Puryear, California School Employees Association; Enrique Huerta, Climate Resolve; Beth Malinowski, SEIU

State Council; Jassy Grewal, UFCW Western States Council; and AnaStacia Nicol Wright, Worksafe, by written comments dated November 28, 2023.

Comment 4.1

The commenters support narrowing the proposed 15 minute per hour exception in exception (C) to subsection (a)(1) so that it only applies if the temperature or heat index does not exceed 87 degrees Fahrenheit when employees are present or exceed 82 degrees Fahrenheit when employees work in a high radiant heat area or wear clothing that restricts heat removal. Without these limits, employees could be compelled to work without protection of the standard in indoor areas at extremely hot temperatures for fully 25% of an eight-hour workday. This would put workers at risk of serious illness or even fatality, as Eric Berg explained at the last Standards Board meeting.

Even with these limitations, the commenters remain concerned that a 15 minute per hour exception will allow far more than incidental heat exposure. They are also concerned that it will be very challenging and time consuming to enforce and will make employer's recordkeeping more burdensome.

Additionally they are unclear about how compliance with this proposed exception will be documented given that the assessment and control measures subsection of the regulation, subsection (e)(1)(B), only requires that measurements be taken "where employees work and at times during the work-shift when exposures are expected to be the greatest" and "again when reasonably expected to be ten degrees or more above the previous measurement."

In light of the foreseeable enforcement challenges, the commenter also opposes the proposed inclusion of 15 minute per hour work in vehicles and shipping containers in subsection (a)(1) exception (C). Both vehicles and shipping containers capture and concentrate outdoor heat so it is very important to control this heat with all feasible controls.

Response to Comment 4.1

Please see responses to comments 1.1 and 2.1. Shipping containers and intermodal containers will be excluded from subsection (a)(1) exception (C). The Occupational Safety and Health Appeals Board considers an exception to the application of a safety order to be an affirmative defense, for which the employer bears the burden of proving it satisfies the terms of the exception.

Comment 4.2

Regarding the new exception (D) to subsection (a)(1), the commenters recognize the need for some exception for unforeseen emergency operations directly involved in the protection of life or property but, at minimum, more explanation of the types of work this would and would not encompass should be included in the Final Statement of Reasons and an FAQ document.

Prevention of serious health risks to employees is of course also always more important than the protection of property.

Response to Comment 4.2
This would apply to active firefighting and rescue operations, and public safety operations necessary to protect life. The Board will make a recommendation to Cal/OSHA to develop an FAQ to correspond to this new exception.

Comment 4.3
The commenters strongly support deletion of subsection (a)(5). Employees who go back and forth between indoors and outdoors could still be working at a considerable distance from the indoor location during parts of the workday. In such circumstances, they need ready access to shade and drinking water when working outdoors.

Response to Comment 4.3
The Board acknowledges and thanks the commenters for their support for the deletion of subsection (a)(5).

Comment 4.4
The commenters support the addition of the definition of "high radiant heat source" which adds clarity.

Response to Comment 4.4
The Board acknowledges and thanks the commenters for their support for the definition of “high radiant heat source” in subsection (b)(12).

Comment 4.5
The commenters oppose the industry request to exempt work in vehicles with working air conditioning from the proposed regulation because it takes some time for air conditioning to cool a vehicle down to 82 degrees Fahrenheit and air conditioning systems can lose effectiveness over time or break down and need repair. They note also that for interpretation of the exception to the assessment of control measures in subsection (e)(1)(B), which was proposed in the first 15-day notice of revisions, a definition for “effective and functioning vehicle air condition system” is needed in the regulation or at the very least in the Final Statement of Reasons and FAQs for interpretation of the regulation.

Response to Comment 4.5
The comment is not specifically directed to any of the proposed modifications noticed by the Board on November 9, 2023, and is therefore outside the scope of the second 15-Day Notice. If the air conditioning is effective and cools air below 82 degrees, the location is not covered by this proposal.

Comment 4.6
The commenters state it is important for training to cover the requirement for close observation during acclimatization. They propose the following modification:

> (h)(1)
> (D) the concept, importance, and methods of acclimatization including the requirement of close observation during acclimatization pursuant to the employer's procedures under subsection (i)(5).

Response to Comment 4.6
The comment is not specifically directed to any of the proposed modifications noticed by the Board on November 9, 2023, and is therefore outside the scope of the second 15-Day Notice.

Comment 4.7
The commenters thank the Board for making some modifications that narrow proposed exceptions based on their past comments. Workers cannot be made to face further significant delay; real protections must be put immediately in place through emergency measures if there is any further extended delay. This past year has been the hottest on record and scientists predict the next year will be even hotter. The risk to the health and safety of workers is growing as the at-risk workforce is also increasing. Five years is already too long for workers to wait for this essential protection. While they recommend the aforementioned suggestions to provide for a more effective standard, the proposal represents the basis for an effective standard to start protecting California workers from the dangers of indoor heat. They urge the Board to adopt it, or emergency measures, as soon as possible.

Response to Comment 4.7
The Board acknowledges the commenters' support for the proposed regulation and thanks the commenters for their input and participation in the rulemaking process.

5. Daniel I. Glucksman, Senior Director for Policy, International Safety Equipment Association, by written comments dated November 28, 2023.

Comment 5.1
The commenter believes subsection 3396(c) should follow other state and federal agencies and allow electrolyte replenishment beverages as acceptable alternatives to water. The commenter also asks that a reference to electrolyte beverages be included in the definition of "provision of water." In some cases, electrolyte replenishment powder can be mixed with fresh, pure water. The commenter references the following: Washington State's outdoor heat exposure regulation's definition of "drinking water;" OSHA regulation on portable drinking water dispensers; OSHA's Water Rest Shade Program; comments from OSHA's Small Business Regulatory Enforcement Fairness Act discussions with small entity reviewers; and NIOSH Criteria for a Recommended Standard Occupational Exposure to Heat and Hot Environments. In

addition, the commenter urges the Board to review the American Society for Safety Professionals (ASSP) A10.50 when it becomes available.

Response to Comment 5.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on November 9, 2023, and is therefore outside the scope of the second 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

6. Helen Cleary, Director, Phylmar Regulatory Roundtable (PRR) Occupational Safety and Health (OSH) Forum, by written comments dated November 28, 2023.

Comment 6.1
The commenter sees the need for an indoor heat regulation to protect workers at risk of occupational heat strain. However, they do not agree or support the assertion that a worker is at risk of heat illness when they simply walk into, or through, a space that is 87 degrees Fahrenheit and above. Workload, physical activity, endurance, time spent exposed to the high-heat conditions, in addition to an individual's personal risk factors are all key elements that this regulation does not consider. The commenter understands and supports the goal to keep the regulation simple and they are not advocating inclusion of these factors in the regulation. However, without considering contributing factors beyond temperature and heat index, there needs to be some measured approach that ensures this regulation is practical, and necessary, for the thousands of California employers and workers it will impact. As drafted, the proposed standard unnecessarily includes workers who are not at risk of occupational heat stress and this will waste valuable time and employer resources.

Since the beginning of this rulemaking, the commenter has recommended that the time spent exposed to the temperature triggers needs to be considered in an effective indoor heat standard. They specifically recommended that the rule should not apply for momentary exposures and suggested, for simplicity, less than 15-minutes in a one-hour timeframe be used to determine applicability. They were pleased to see in the first 15-Day Notice that such an exception was included. However, they were concerned that the proposed language that excluded shipping containers and contiguous areas would unnecessarily limit the application of the exception to situations that do not create a risk of heat illness. Specifically, the use of repurposed shipping containers as storage units and the act of employees traversing through areas to get to their actual workspaces that are climate controlled. This includes indoor parking structures, stairwells and large buildings for equipment storage and vehicle dispatch. These types of areas meet the proposed standard's definition of "indoor" but are not occupied for long periods, cannot be climate controlled or, for energy efficiency, should not be maintained under 87 degrees Fahrenheit. Most importantly, movement and temporary occupation of these areas do not create a risk of heat illness.

The commenter urges the Board to propose a practical solution to address short duration and incidental exposures to heat in indoor spaces. If an exception that can be reasonably applied for these types of situations is not offered, they ask for data and studies that validate an automatic temperature trigger of 87 degrees Fahrenheit that will result in occupational heat stress.

Response to Comment 6.1
Please see response to comment 2.1.

Comment 6.2
The commenter appreciates the attempt to address concerns including incidental exposure to heat with the modifications in the second 15-Day Notice. Unfortunately, the deletions from the previous draft and new exception (C) in subsection (a)(1) does not solve the issue they communicated in previously submitted comments. The proposed new exception (C) in subsection (a)(1) will require repurposed shipping containers, storage units and unoccupied indoor spaces accessed for short amounts of time, to be managed in the same way as workspaces employees spend all day working inside. This is not reasonable.

The proposal to exclude incidental heat exposures that are less than 15-minutes in a 60-minute period is highly restrictive due to the limited window of 82 – 87 degrees Fahrenheit. It defeats the purpose of allowing short duration exposures to be excluded from the burdensome elements in the rule and will create new elements of complexity to manage.

It is very likely that the effort to determine if the situation meets the parameters will outweigh the benefit of utilizing the exception – by the time the employer determines that the temperature falls within the five-degree window, the worker will have left the space. In addition, the benefit of trying to control temperatures in indoor parking structures, stairwells and large unoccupied spaces to below 87 degrees Fahrenheit most likely will not be worth the cost and expended energy. In addition, repurposed shipping containers and storage sheds simply cannot be temperature controlled. Despite this, short duration exposures that meet the conditions in subsection (a)(2) (i.e., 82 degrees Fahrenheit with heat restrictive clothing and 87 degrees Fahrenheit) will create little to no risk of heat illness.

As shared in public comment at the November 16, 2023, Board meeting, the commenter continues to advocate that the exemption for incidental exposures should not have an associated temperature trigger. In response, Deputy Chief of Health, Eric Berg, stated that the Agency would not do that. The reason given was if a worker performed high exertion activities for 15 minutes in 110 degrees Fahrenheit temperatures, they could die. The commenter points out that this is an extreme example that borders not meeting the exception (i.e., 15 minutes) and if the employee were performing a high-exertion work activity it would not be considered an “incidental” occupational exposure. Mr. Berg did not offer an example that is representative of the types of situations and spaces the exemption was designed to exclude and the commenter is concerned about walking through a space or grabbing a tool in an unoccupied

storage shed. Moreover, the Board has not offered any scientific data that validates high-exertion work activities in a space that is between 82-87 degrees Fahrenheit for less than 15-minutes will result in heat stress or actual heat illness. The lack of additional "documents relied upon" for this proposed change in the second 15-Day Notice indicates the Board did not rely on data or scientific reasoning that supports limiting the exemption to a five-degree window, below 87 degrees Fahrenheit.

It is unreasonable and infeasible to require the employer to know and actively manage all situations that are highly impacted by individual risk factors not related to the assigned job duties (i.e., age, obesity, blood pressure, alcohol and drug intake and diet). Especially when the worker's behavior in the workplace is incidental to their specific work task, their movement is not monitored, the area is not controlled, and the time exposed is as short as traversing a parking structure, climbing a set of stairs, or obtaining a tool.

If the Board contends that a temperature trigger is required for incidental exposures to meet the exception, the commenter proposes a temperature of 95 degrees Fahrenheit. This will align with the outdoor regulation for high heat conditions and the Board's proposal in the first 15-Day Notice of Modifications for short duration exposures to follow the outdoor heat requirements in section 3395.

To support their recommendation of 95 degrees Fahrenheit, they provide the NIOSH's recommended Work/Rest Schedule to prevent heat stress. The temperature trigger of 95 degrees Fahrenheit is significantly lower than NIOSH's recommended rest-to-work ratio when performing "heavy work" for a period of 15 minutes in its Heat Stress Work/Rest Schedules Fact Sheet. For example, NIOSH recommends a 45-minute rest period if a worker performs heavy work for 15 minutes when it is 105 degrees Fahrenheit. If there is 60% humidity or more, NIOSH recommends adding nine degrees Fahrenheit to the temperature. Using a trigger of 95 degrees Fahrenheit with 60% humidity, the adjusted temperature would equal 104 degrees Fahrenheit and require 40 minutes of rest for 20 minutes of heavy work. Also, NIOSH's rest recommendation for 45 minutes of heavy work in 95 degrees Fahrenheit temperatures is 15 minutes and workers performing moderate and light work may not need to rest at all.

Their recommendation of 95 degrees Fahrenheit would be protective and prevent death during situations, as suggested by Deputy Chief, Eric Berg, and more practical than the proposed 87 degrees Fahrenheit. Despite the proposed exception not being labeled as a work/rest schedule, it follows the same scientific logic as NIOSH's work/rest recommendations and requires the employer to respond with preventative and protective measures if the temperature and time spent extends beyond the allowable parameters – the additional requirements in the proposed standard would ensure that exposures longer than 15-minutes are managed with additional protections, including engineering and administrative controls.

The Board's proposed rulemaking relies on a NIOSH publication on Heat Stress Hydration and the commenter recommends NIOSH's recommended Work/Rest Schedule is relied upon for the Board to propose a temperature trigger that is higher than 87 degrees Fahrenheit.

In support of a higher temperature trigger in the exception, the commenter also offers the Oregon OSHA's current heat illness prevention regulation, OAR 437-002-0156. Oregon's rule is initially triggered by a heat index of 80 degrees Fahrenheit but only requires water, rest, communication, and training. This aligns with Cal/OSHA's Outdoor Heat standard. More importantly, Oregon OSHA's Heat Illness Prevention regulation does not apply to "incidental heat exposures where an employee is not required to perform work activities for more than 15 minutes in any sixty-minute period." This regulation has been in effect since June 2022 and the commenter is not aware of it being ineffective at protecting workers through the hot summers of 2022 and 2023.

In addition, Oregon OSHA's regulation allows employers to follow NIOSH's Work/Rest Schedule as an option for compliance when temperatures are over 90 degrees Fahrenheit. Oregon OSHA also allows an additional compliance option during high-heat conditions, (over 90 degrees Fahrenheit), when the employer implements additional elements including a written heat illness prevention plan that addresses use of Personal Protective Equipment, heat restrictive clothing and intensity of work. To comply, the employer may implement a simplified work rest schedule of ten minutes every two hours; 15 minutes every hour when the heat index is greater than 100 degrees Fahrenheit. This approach also aligns with Cal/OSHA's Outdoor Heat regulation. Again, these protections are for non-incidental exposures over 15-minutes in a 60-minute period.

The commenter acknowledges that the requirement to implement specific work/rest schedules differs from Cal/OSHA's proposed indoor heat illness prevention strategy; however, they offer this comparison because the duration and objective to reduce occupational heat stress aligns with the proposed exception (C) in subsection (a)(1) and illustrates that limiting Cal/OSHA's exception to a window of 82 – 87 degrees Fahrenheit is unnecessary and overly-restrictive. Again, it is important to point out that NIOSH's recommendation for a 45-minute rest period when a worker performs heavy work for 15 minutes is triggered by a temperature of 105 degrees Fahrenheit. This is 18 degrees higher than the proposed 87 degrees Fahrenheit maximum, which does not consider exertion, and is based on actual scientific studies and data on occupational heat stress.

To appropriately limit the scope and unnecessary impact, while addressing the Board's concern to protect employees performing high-exertion work activities for short periods, the commenter recommends the following:

> (1)(C) This section does not apply to incidental heat exposures where an employee is exposed to temperatures above 82 degrees Fahrenheit <u>and below 95 degrees</u>

> Fahrenheit for less than 15 minutes in any 60-minute period. ~~And not subject to any of the conditions listed in subsection (a)(2).~~

Response to Comment 6.2
The Board agrees with the commenter's suggestion. As a result, the Board proposes to modify the proposed text in subsection (a)(1) exception (C) to limit the scope of the exception to below 95 degrees Fahrenheit.

Comment 6.3
Workers that move between indoor and outdoor spaces are still not adequately addressed in this regulation. This will create confusion, duplication, and unnecessarily use resources without improving worker safety. Workers should be managed under regulations specific to their operations – if a worker is primarily outdoors, they should be protected under the already established section 3395. If they primarily work indoors, employers should follow the indoor heat requirements.

Their members appreciated and supported the intent of subsection (a)(5) that was proposed in the first 15-Day Notice. They highlighted concerns with the proposed language and recommended revisions to the text but agreed that clarification was needed. They were surprised to see this exception was completely deleted in the second 15-Day Notice and were not aware, as Eric Berg indicated at the November 16, 2023, Board meeting, stakeholders requested deletion.

As drafted, the proposed indoor heat standard will create confusion and unnecessarily impact outdoor work situations that are effectively being managed under section 3395. To help correct this, the commenter recommends the following language:

> (a)(5) Employers may comply with this section in lieu of section 3395 for employees that go back and forth between outdoors and indoors. Employers with primary outdoor operations may continue to comply with section 3395 in lieu of this section.

Response to Comment 6.3
The Board is not persuaded by the commenter's arguments and declines to make the commenter's proposed modification, as it would be difficult to determine what "primary" means in certain operations. It would be difficult or impossible to enforce such a provision. The risk of heat illness does not necessarily correlate with the nature of the primary work. Jobs that are primarily outdoors could pose greater risk indoors, depending on the environment and tasks involved. Furthermore, employees who go back and forth between indoors and outdoors might be working far from the indoor location at times during the workday. In such circumstances, they need ready access to drinking water and need shade and other protections when the ambient temperature reaches 80 degrees Fahrenheit when working outdoors. Also see response to comment 2.3.

Comment 6.4
The commenter continues to be concerned about the ability to comply when managing remote and solo workers under this standard. Specifically, the phrases "encourage," "shall be monitored," "closely observed," "offered onsite first aid" in subsections (d), (f), and (g), indicate the need for a supervisor to be physically present; this will not be possible and is not a reasonable expectation. However, they do support the need for the employer to provide effective communication, training, and emergency response procedures for these employees working by themselves and in remote locations. If the Board does not rectify these valid concerns, they recommend the Division draft practical FAQs that address employers' operational challenges in the field.

Response to Comment 6.4
The comment is not specifically directed to any of the proposed modifications noticed by the Board on November 9, 2023, and is therefore outside the scope of the second 15-Day Notice. Please note that these same phrases are used in subsections 3395(d), (f), and (g) and employers have successfully complied with these requirements over the years.

Comment 6.5
The commenter supports the added language that emergency operations are exempt from the standard. This is an important consideration that will help employers and workers committed to the safety of their communities.

Response to Comment 6.5
The Board acknowledges the commenter's support for this aspect of the proposed modification.

Comment 6.6
The commenter appreciates the clarification added to the standard by inclusion of an accurate definition of "high radiant heat source."

Response to Comment 6.6
The Board acknowledges the commenter's support for this aspect of the proposed modification.

Comment 6.7
The commenter is glad to see the National Weather Service Heat Index Chart (2019) has been corrected. However, they note that since requirements are triggered at 87 degrees Fahrenheit, the bottom two-thirds of the chart is not necessary and creates more paperwork with no value added.

Response to Comment 6.7

The Board disagrees with the comment that the bottom two-thirds of the chart is not necessary and creates more paperwork without any added value. This is because the proposed subsection (e)(1)(A) requires employers to accurately record and maintain either the temperature or the heat index measurements, whichever is higher. In addition, it is important to know the higher value between the temperature and the heat index for accurate assessment of heat illness risks and implementation of effective risk mitigation strategies. The risks vary significantly when comparing a temperature or heat index of 120 degrees Fahrenheit to 87 degrees Fahrenheit.

Comment 6.8
The commenter understands the hazard of heat to workers and agrees that employers need to protect them from heat illness in the workplace. As drafted, the proposed indoor heat regulation includes arduous requirements for situations that will produce little to no risk of occupational heat stress.

The commenter asserts that California employers and businesses should not be compelled to maintain and manage structures that are not meant to be occupied to a temperature below 87 degrees Fahrenheit. The application of the rule to these types of indoor spaces would not substantially reduce the risk of occupational heat illness or improve the safety and health of the worker. Yet, it will require constant oversight and management by the employer along with significantly increased energy consumption and cost. Failure to differentiate occupancy and employee use will not only create a financial drain on the company, but if engineering controls are put in place in these areas at a time when the California Energy Commission is struggling to find ways to meet current and future electrical demand, it will further stress California's electric grid.

They do not believe this level of regulation is reasonable or a practical use of California's energy and employer resources, especially when the employee is simply passing through the area and the risk of heat illness is low or non-existent.

Response to Comment 6.8
Please see response to comment 2.1.

The Board thanks the commenter for their input and participation in the rulemaking process.

SUMMARY AND RESPONSE TO WRITTEN COMMENTS RESULTING FROM THE THIRD 15-DAY COMMENT PERIOD

1. Norma Wallace, CSRM, Executive Director-JPA, Tuolumne County Superintendent of Schools, by written comments dated January 3, 2024.

Comment 1.1

The commenter requests guidance for school bus drivers when transporting in the extreme heat as well as classroom temperature parameters for school staff.

Response to Comment 1.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on December 22, 2023, and is therefore outside the scope of the third 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

2. Manuel Cunha, Jr., President, and Geoffrey H. Sims, Esq., General Counsel, Nisei Farmers League, by written comments dated January 4, 2024.

Comment 2.1
The commenters provided background information on how the outdoor heat regulation was promulgated. The commenters also summarized the requirements of the proposed regulation. The commenters object and oppose the proposed regulation in its entirety. The commenters assert that there is no scientific or factual basis for imposition of the proposed regulation.

The commenters state that the proposed regulation lacks any scientific or medical basis explaining the need for additional regulatory requirements. When Cal/OSHA was directed to establish working condition regulations pertaining to outdoor worksites in the 1980s, it followed the death of an employee who had crawled beneath a truck, seeking cover from the sun, as well as deaths of other agricultural workers.

The Schwarzenegger Administration established heat regulations in 2005, but these regulations did not address indoor facilities. Following the tragic death of Maria Isabel Vasquez Jimenez in 2008, Cal/OSHA enacted, on an emergency basis, regulations that have since been codified as section 3395.

The commenters state that it is unclear what has prompted the new regulatory requirement to impose similar mandates for employers who have workers toiling in indoor worksites during high temperature extremes. The commenters believe this creates an unjust burden on the agricultural industry. It is inferred that the proposed regulation is intended to apply to all industries where workers work in indoor work environments and the proposed regulation requires employers to use "engineering controls" to fabricate barriers between the heat-producing source and the employees. These "engineering controls" include air conditioning, cooling, fans, evaporative coolers, or natural ventilation.

Generally, agricultural worksites do not produce heat as a routine byproduct of the sorting, packaging, or other processing of agricultural products, whether the products be crops, tree crops, or animal husbandry. Although agricultural work activities may take place in covered or indoor facilities, there is no heat production byproduct that occurs from this work, as one finds

in other industries, such as ironwork, sheet metal fabrication, and other machine-aided production.

The commenters also argue that the proposed regulations lack clarity and are overly broad. The commenters further object to the proposed subsection 3396(d)(1) pertaining to workers' "access to cool down areas." The proposed regulation is unclear how the employer will be able to fabricate additional covered space that workers may use for cool-down periods "without having to be in physical contact with each other." The commenters question whether employers are being encouraged to use air conditioning or other mechanical means to mitigate high temperatures in these cool-down areas - which is contrary to California's air pollution standards surrounding use of additional machinery during peak power usage periods in the course of extreme weather conditions.

Additionally, proposed subsection (d)(2)(C) requires employers, or their management teams, to make medical assessments to determine if "signs or symptoms of heat illness have abated." This places an undue burden on the employer, exposing employers to liability for determinations that should be best made by medical practitioners.

The commenters request that the agricultural industry be specifically excluded from requirements imposed under the proposed section 3396. At the very least, they urge the Board to retract and reconsider the proposed regulation in its entirety.

Response to Comment 2.1
The comment is not specifically directed to any of the proposed modifications noticed by the Board on December 22, 2023, and is therefore outside the scope of the third 15-Day Notice.

The Board thanks the commenter for their input and participation in the rulemaking process.

3. Anne Katten, MPH, Pesticide and Work Safety Project Director, California Rural Legal Assistance Foundation; AnaStacia Nicol Wright, JD, Worksafe; Maegan Ortiz, Instituto de Educacion Popular del Sur de California (IDEPSCA); Margaret Reeves, Staff Scientist, Pesticide Action Network; Jassy Grewal, MPA, UFCW Western States Council; Mitch Steiger, Legislative Representative, California Federation of Teachers (CFT); Ana Vicente, California Rural Legal Assistance Inc.; Jonathan Parfrey, Executive Director, Climate Resolve; and Beth Malinowski, Government Relations Advocate, SEIU California, by written comments dated January 12, 2024.

Comment 3.1
The commenters urge the Board to adopt the standard because a specific indoor heat regulation is long overdue and urgently needed even though they are concerned that it is not as protective as it should be.

The commenters state that adoption of this rule will complete an action in California's Extreme Heat Action Plan under Track B, Goal 2, E4 on p. 23 and is well-aligned with Governor Newsom's statement when he launched HeatReadyCA.com last summer stating, "You [workers] have the right to be protected from heat hazards at work, including education on how to stay safe and the ability to take preventative measures to avoid heat illness."

Response to Comment 3.1
The Board acknowledges the commenters' support for the proposed regulation.

Comment 3.2
The commenters support exclusion of vehicles without effective and functioning air conditioning, and shipping or intermodal containers during loading, unloading or related work from the exception which exempts indoor work at or above 82 degrees Fahrenheit and below 95 degrees Fahrenheit for less than 15 minutes in any 60-minute period from protection of this standard. Both vehicles and shipping containers capture and concentrate outdoor heat so temperatures could be expected to rise during a 15-minute work period.

Response to Comment 3.2
The Board acknowledges the commenter's support for these aspects of the proposed regulation.

Comment 3.3
While the commenters recognize that there is not enough time for any more revisions to this proposal, for the record, they do not think that raising the upper temperature limit for this exception from 87 degrees Fahrenheit to 95 degrees Fahrenheit is justified or health protective. They strongly oppose allowing this exception without adjusting for high humidity, and especially when employees are wearing clothing that restricts heat removal or are working in high radiant heat areas because these conditions greatly increase the dangers of working at temperatures between 82 and 95 degrees Fahrenheit even for short time periods.

This would seem to exempt from coverage by the standard a laundry worker who is directed to work 15 minutes every hour in a highly humid room where the temperature is 94 degrees Fahrenheit as long as their other work area is at a temperature or heat index (slightly) below 82 degrees Fahrenheit. They are similarly concerned with the implications of this change for healthcare workers, including nurses, regularly staffing high heat acute care settings like burn units and birthing centers.

The commenters note that NIOSH's work/rest schedules for workers wearing chemical resistant suits advise a schedule of 15 minutes work and 45 minutes rest for heavy work at 90 degrees Fahrenheit and to stop moderate or heavy work at 95 degrees Fahrenheit. Performing moderate to heavy work at 81 degrees Fahrenheit during the remainder of an hour does not constitute rest and they are confident that NIOSH did not envision that this table would be used

to exempt employees from training, supervision and other requirements related to heat illness prevention and recognition.

The commenters also express their concern that this exception will be challenging to enforce. They are unclear about how compliance with this proposed exception will be documented given that the assessment and control measures subsection of the regulation (e)(1)(B) only requires that measurements be taken "where employees work and at times during the work-shift when exposures are expected to be the greatest" and "again when reasonably expected to be 10 degrees or more above the previous measurement." It is therefore critical that the Division and Standards Board staff explain how it will be enforced in the Final Statement of Reasons and that the Division provides criteria for adequate record keeping in FAQs.

They would also like to highlight for the Board's attention an article published January 8, 2024, by the SF Chronicle, "California is poised to protect workers from extreme heat — indoors." The article details issues similar to what employee advocates have been expressing throughout the adoption process for this standard.

Response to Comment 3.3
The Board acknowledges the commenters opposition for raising the upper temperature limit of the exception to 95 degrees Fahrenheit. However, there was broad consensus that requiring the upper temperature limit to conditions listed in subsection (a)(2) would make the exception (C) unusable. The Board recognized the need for practical implementation of the proposed regulation and considered NIOSH's recommendation to establish a higher threshold. Therefore, the Board has proposed a maximum temperature for incidental heat exposures to be below 95 degrees Fahrenheit. This temperature will allow for more feasible compliance with the proposed regulation, align with the high heat threshold of 95 degrees Fahrenheit in section 3395 and follow the same scientific logic as NIOSH's recommended work/rest schedules.

Subsection (a)(1) exception (C) is intended to exempt an incidental indoor heat exposure and if an employee is directed to work in an area for 15 minutes every hour, that would be considered their regular work and an incidental exposure.

Regarding the commenters concern about the enforcement of this exception, the Occupational Safety and Health Appeals Board considers an exception to the application of a safety order to be an affirmative defense, for which the employer bears the burden of proving it satisfies the terms of the exception.

The Board thanks the commenter for their input and participation in the rulemaking process.

4. Helen Cleary, Director, Phylmar Regulatory Roundtable (PRR), Occupational Safety and Health (OSH) Forum, by written comments dated January 12, 2024.

Comment 4.1

Since the beginning of this rulemaking, the commenter has recommended that time spent exposed needs to be considered for a practical indoor heat standard. They continue to maintain their previous recommendation that short, incidental exposures should not be limited by a temperature trigger. However, because of the Division's clear stance that any exclusion would require a temperature limitation, they recommended a temperature trigger of 95 degrees Fahrenheit in their comments submitted on November 28, 2023.

The commenter appreciates that the Board accepted their recommendation of 95 degrees Fahrenheit as a temperature trigger in the third 15-Day Notice. As detailed in their comments submitted on November 28, 2023, 95 degrees Fahrenheit aligns with section 3395 for high heat conditions and follows the scientific logic of the NIOSH's recommended work/rest schedule.

However, despite their support of the proposed change, the commenter highlights that a temperature trigger of 95 degrees Fahrenheit, or any other temperature limitation, does not adequately address workers momentarily accessing storage units to obtain supplies or a tool. As drafted, the proposed standard still unnecessarily includes workers who are not at risk of occupational heat stress; this will waste valuable time and employer resources.

In addition, the commenter is concerned that limiting the exception to 95 degrees Fahrenheit implies that every employer in the State of California will be required to create, implement, and manage a Heat Illness Prevention Program and training simply because they have a single outdoor storage shed or a HVAC that may malfunction. This is despite the low probability of occurrence and low risk of actual heat illness from incidental exposure. This includes every office worker and building in California with state-of-the-art HVAC systems - such a scope is unreasonable and unnecessary.

Occupational safety and health regulations should not be drafted to capture every extreme one-off situation. Effective regulations target known occupational hazards and workers at risk. Heat illness is not an occupational risk for office workers. In addition, the outdoor heat regulation effectively manages and protects workers who will temporarily access outdoor storage sheds. The commenter continues to believe that the Board unnecessarily expanded the scope and impact of the indoor heat regulation, and this is a missed opportunity for smart public policy.

Response to Comment 4.1

The Board acknowledges the commenter's support for the proposed modification on subsection (a)(1) exception (C).

The Board is not persuaded by the commenter's argument that every office worker and building in California with state-of-the-art HVAC systems will be covered by the proposed regulation. Any buildings with effective and functioning HVAC system that maintain the

temperature below 82 degrees Fahrenheit will be outside the scope of the proposed regulation. If the HVAC system malfunctions, it will be covered by sections 3328 and/or 5142.

Regarding employers with outdoor storage sheds, the proposed regulation allows the employer with employees working in both indoor and outdoor areas to provide one comprehensive training which includes the requirements of section 3395 and the proposed regulation. The Heat Illness Prevention Program required by the proposed regulation may be included as a part of the employer's Injury and Illness Prevention Program or Heat Illness Prevention Plan required by section 3395. Workers momentarily accessing storage units to obtain supplies or a tool would not have sufficient exposure to high heat to be exposed to the hazard of heat illness.

Comment 4.2
To alleviate frustration and scrambling by all stakeholders during future rulemakings, the commenter suggests the Board and Division review and conduct what many in industry refer to as a post-mortem. They have looked back and reviewed their experience during this rulemaking process and offer the following observations for Board consideration.

In response to industry concerns about the proposed text, the Division, some Board members, and labor advocates highlighted that during the pre-rulemaking process multiple revisions and nine drafts were proposed based on stakeholder and employer feedback. The commenter believes it is important to point out that, during this time, one of the primary issues they highlighted was the lack of consideration of an exception that addressed low-risk, low-exposures in indoor spaces that cannot be climate controlled. Issues affecting workers already managed by the outdoor heat regulation who will briefly enter spaces that meet the definition of "indoor" were also discussed at advisory committee meetings and submitted comments. However, neither were addressed during pre-rulemaking or in the original draft proposed on March 31, 2023.

The Division and Board finally attempted to address some or part of these concerns in *three* 15-Day Notices without consultation with stakeholders, including the Board, on how the proposed language would impact various operations in the state. Two of these 15-Day Notices were issued over the holidays. Review of the proposed text in the first 15-Day Notice and the second 15-Day Notice clearly illustrate that the exceptions proposed were unnecessarily complex, convoluted, and limiting. They believe that the resulting frustration and stakeholder scramble could have been avoided if effective dialogue was facilitated prior to issuing substantial revisions in multiple 15-Day Notices. Instead, stakeholders were left to propose solutions during 15-day time periods, over two holidays, that would meet the Division's unknown parameters. They were unaware that the Division's intent and goal was to have an exclusion based on a temperature trigger until the Thursday, November 16, 2023, Board meeting; written comments were due six working days later on the Tuesday after Thanksgiving. This has essentially run out the clock leaving the Board with a flawed draft to vote on. Moreover, thousands of employers

in the State will be left to implement and manage the burdensome and convoluted requirements in the final regulation.

The commenter respectfully recommends that the Board and Division review and evaluate this experience and ensure future regulations are not drafted and proposed in a similar way.

Response to Comment 4.2
The Board will consider the commenter's recommendation.

The Board thanks the commenter for their input and participation in the rulemaking process.

5. Robert Moutrie, Policy Advocate, California Chamber of Commerce, on behalf of American Composites Manufacturers Association; Associated Roofing Contractors of the Bay Area Counties; California Association of Winegrape Growers; California Chamber of Commerce; California Cotton Ginners and Growers Association; California Farm Bureau; California Framing Contractors Association; California Fresh Fruit Association; California Tomato Growers Association; California Walnut Commission; Housing Contractors of California; PCI West – a Chapter of the Precast/Prestressed Concrete Institute; Residential Contractors Association; Western Agricultural Processors Association; Western Growers Association; and Western Steel Council, by written comments dated January 12, 2024.

Comment 5.1
The commenters state they were involved in the development and implementation of the outdoor heat Illness regulation and have significant experience with how to effectively prevent heat illness. They take the safety and health of employees very seriously, and although the commenters oppose the proposed regulation, they are providing comments to improve the final text, should it be passed by the Board.

The commenters state that two fundamental limitations of the proposed subsection (a)(1) exception (C) are that the exposure must be brief, less than 15 minutes in a 60-minute period, and even a momentary exposure cannot be above 95 degrees Fahrenheit. This exception only applies to an indoor space that falls within a temperature range of 13 degrees and is used briefly, but also not occur in a container or a vehicle. These thresholds make the exception rarely applicable and seem to create absurd outcomes.

For example, a storage shed that is distant from any power line or main facilities may rise in temperature above 95 degrees Fahrenheit on a hot summer day. The commenters express concern that, if an employee steps inside the shed for 10 seconds to obtain necessary items, this exposure will trigger the full obligation of the proposed regulation, including control measures and measurements. The commenters state that 95 degrees Fahrenheit is too low a threshold for brief exposures. They recommend elimination of the 95 degrees Fahrenheit

threshold entirely as brief exposures are less dangerous by their nature. The commenters also recommend a 115 degrees Fahrenheit threshold for less than 5 minutes in a 60-minute period.

The third 15-day change reverts back to the same principle contained in a prior draft of excluding containers defined as, "shipping or intermodal containers during loading, unloading, or related work." The commenters state that the exclusion of containers does not appear to be based on science or health concerns and limiting the exception to non-shipping containers makes little sense. A shipping container is not qualitatively different than a storage shed, a trailer, or a bungalow in that it restricts airflow, has a roof, and four walls. Additionally, the commenters question why shipping containers used in one fashion should be treated differently than others since they are used for their intended purpose of storing things, which includes activities of loading and unloading.

Furthermore, the commenters assert that present judicial interpretation of section 3395 makes clear that un-air-conditioned vehicles are covered by section 3395. However, the third 15-day change suggests that un-air-conditioned vehicles are covered by section 3396 instead of section 3395 as per present judicial interpretation. The commenters state this issue must be addressed to clarify whether un-air-conditioned vehicles fall under section 3395 or section 3396 because un-air-conditioned vehicles are specifically not excepted even if briefly used. To address these issues, the commenters recommend the following changes:

> (C) This section does not apply to incidental heat exposures where an employee is exposed to temperatures at or above 82 degrees Fahrenheit and below ~~95~~115 degrees Fahrenheit for less than 15 minutes in any 60-minute period. ~~This exception does not apply to the following:~~
>
> ~~1. Vehicles without effective and functioning air conditioning; or~~
> ~~2. Shipping or intermodal containers during loading, unloading, or related work.~~

The commenters hope that these issues are addressed prior to the proposed regulation going to the Board for a vote or be addressed in an FAQ or subsequent revision.

Response to Comment 5.1

The Board is not persuaded by the commenters' arguments and declines to adopt the commenters' proposed modification. The proposed temperature limit of 95 degrees Fahrenheit aligns with the high heat threshold in section 3395 and follows the same scientific logic as NIOSH's recommended work/rest schedules. Workers momentarily accessing storage sheds to obtain necessary items would not have sufficient exposure to high heat to be exposed to the hazard of heat illness.

Shipping or intermodal containers excluded from application of subsection (a)(1) exception (C) are limited to "during loading, unloading, or related work" to address shipping containers that are repurposed as storage units at worksites, which may be similar to sheds, trailers, or bungalows in their features. These containers should be treated different from shipping containers used as storage units as loading, unloading, or related operations involve moderate to high level of exertion and there is increased risk of heat illness based on the Division's experience.

Any vehicles meeting the definition of indoor as defined in subsection (b)(13) will be covered by the proposed regulation unless they are explicitly covered by section 3395.

The Board thanks the commenters for their input and participation in the rulemaking process.

6. **Michael Miiller, Director of Government Relations, California Association of Winegrape Growers; Matthew Allen, Vice President, State Government Affairs, Western Growers; Tricia Geringer, Vice President of Government Affairs, Agricultural Council of California; Timothy A. Johnson, President/CEO, California Rice Commission; Christopher Valadez, President, Grower-Shipper Association of Central California; Roger Isom, President/CEO, California Cotton Ginners and Growers Association, Western Agricultural Processors Association; Bryan Little, Director, Employment Policy, California Farm Bureau; Joani Woelfel, President and CEO, Far West Equipment Dealers Association; Casey Creamer, President, California Citrus Mutual; Rick Tomlinson, President, California Strawberry Commission; Manuel Cunha, Jr., President, Nisei Farmers League; Todd Sanders, Executive Director, California Apple Commission, California Blueberry Association, California Blueberry Commission, Olive Growers Council of California; Richard Matoian, President, American Pistachio Growers; Ian LeMay, President, California Fresh Fruit Association; Pete Downs, President, Family Winemakers of California; Tim Schmelzer, Vice President, California State Relations, Wine Institute, by written comments dated January 12, 2024.**

Comment 6.1
The commenters appreciate the recent amendments' attempt to address their previously stated concerns. However, by placing the cap at 95 degrees Fahrenheit for incidental heat exposure, this exception will rarely be useful, especially for a vehicle. The commenters recommend the following amendment:

> Scope and Application (a)(1)
> Exceptions
> (C) This section does not apply to incidental heat exposures where an employee is exposed to temperatures above 82 degrees Fahrenheit and below ~~95~~ 115 degrees

Fahrenheit for less than 15 minutes in any 60-minute period. ~~This exception does not apply to the following:~~

~~1. Vehicles without effective and functioning air conditioning; or~~
~~2. Shipping or intermodal containers during loading, unloading, or related~~ ~~work.~~

(D) Vehicles with effective and functioning air conditioning.

The commenters state that the recommended amendment is borrowed from Washington's existing outdoor heat exposure that excludes incidental heat exposure. They support the 115 degree Fahrenheit cap suggested by the California Chamber of Commerce as it is a reasonable cap.

The commenters are concerned that the proposed regulation would also apply to outdoor agricultural employees who are already covered by existing section 3395 when they are in a vehicle that has effective and fully functioning air conditioning. There would be no added safety benefit for outdoor agricultural employees when they enter a vehicle that would be cooler than the outdoors.

The commenters assert that without addressing their concerns, few employees would see any benefit from the exemption. They also note that the proposed regulation needs clarification to provide the highest level of health and safety.

Response to Comment 6.1
The Board is not persuaded by the commenter's arguments and declines to make the proposed change, as it is not necessary. If the air conditioning is effective and cools air below 82 degrees Fahrenheit, the location is not covered by this proposal. Regarding the California Chamber of Commerce's suggested amendment, please see response to comment 5.1.

The Board thanks the commenters for their input and participation in the rulemaking process.

ADDITIONAL DOCUMENTS RELIED UPON

1. Bernard TE, Caravello V, Schwartz SW and Ashley CD. WBGT Clothing Adjustment Factors for Four Clothing Ensembles and the Effects of Metabolic Demands. Journal of Occupational and Environmental Hygiene. 2007; 5 (1): 1–5. https://doi.org/10.1080/15459620701732355

2. Division of Occupational Safety and Health (Cal/OSHA) Heat Illness Prevention Enforcement Q&A. Updated July 2018. Accessed June 6, 2023. https://www.dir.ca.gov/dosh/heatIllnessQA.html

3. Cal/OSHA Policy and Procedures Manual. C-1C, Multi-Employer Worksite Inspections. Revised December 8, 2000. https://www.dir.ca.gov/DOSHPol/P&PC-1C.pdf

4. Cal/OSHA Policy and Procedures Manual. C-1D, Dual-Employer Inspections. Revised December 12, 2017. https://www.dir.ca.gov/DOSHPol/P&PC-1D.pdf

5. Definition of "Cup." *Merriam-Webster.com*. Updated June 21, 2023. Accessed June 22, 2023. https://web.archive.org/web/20230627225544/https://www.merriam-webster.com/dictionary/cup

6. Garzón-Villalba XP, Wu Y, Ashley CD and Bernard TE. Heat stress risk profiles for three non-woven coveralls. Journal of Occupational and Environmental Hygiene. 2018; 15 (1): 80–85. https://doi.org/10.1080/15459624.2017.1388514

7. U.S. Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Weather Service (NWS) Heat Index Chart 2019. Accessed July 24, 2023. https://web.archive.org/web/20190718054317/https://www.wrh.noaa.gov/psr/general /safety/heat/heatindex.png

8. NWS Heat Index Equation. Modified May 12, 2022. Accessed July 24, 2023. https://www.wpc.ncep.noaa.gov/html/heatindex_equation.shtml

9. U.S. Department of Health and Human Services (DHHS), Centers for Disease Control and Prevention (CDC), National Institute for Occupational Safety and Health (NIOSH). Heat Stress Hydration. DHHS (NIOSH) Publication No. 2017-126. https://www.cdc.gov/niosh/mining/userfiles/works/pdfs/2017-126.pdf

10. United Steelworkers of Am., AFL-CIO-CLC v. Marshall, 647 F.2d 1189 (D.C. Cir. 1980). https://casetext.com/case/united-steelworkers-of-america-afl-cio-clc-v-marshall-2

These documents are available for review BY APPOINTMENT Monday through Friday, from 8:00 a.m. to 4:30 p.m., at the Board's office at 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833. Appointments can be scheduled via email at oshsb@dir.ca.gov or by calling (916) 274-5721.

ADDITIONAL DOCUMENTS INCORPORATED BY REFERENCE

None.

DETERMINATION OF MANDATE

This standard does not impose a mandate on local agencies or school districts as indicated in the Initial Statement of Reasons.

ALTERNATIVES CONSIDERED

The Board invited interested persons to present statements or arguments with respect to alternatives to the proposed standard. No alternative considered by the Board would be (1) more effective in carrying out the purpose for which the action is proposed; or (2) would be as effective as and less burdensome to affected private persons than the adopted action, or (3) would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law. Board staff were unable to come up with any alternatives and no alternatives were proposed by the public that would have the same desired regulatory effect.