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Sent via email to: aneidhardt@dir.ca.gov

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Dear Ms. Neidhardt:

LADWP appreciates the opportunity to provide input and recommendations to the proposed Indoor Heat illness Prevention in places of employment. Specific comments and recommendations to the latest draft of proposed regulation are included below.

We believe the proposed Indoor Heat Illness Prevention Standard should not be applicable to workers who are subject to elevated temperatures for brief periods of time.

We propose amending the application section of the proposed Indoor Heat Illness Prevention Standard to read as follows,

(a)(1) This standard applies to indoor work areas where employees are exposed, for twenty (20) or more minutes in any sixty (60) consecutive minute period, to temperature as defined in this section that equal or exceed 82 degrees Fahrenheit.

I also propose amending the Exception to the definition of "Indoor" as follows (add the italicized phrase):

EXCEPTION: "Indoor" does not refer to motor vehicles equipped with functional air conditioner or any shaded area that meets the requirements of section 3395 and is used exclusively as a source of shade for employees covered by section 3395.

Rationale for amending applicability

There is no supporting evidence in the literature that associates a momentary exposure to 82°F with ill effects in a healthy working population.

In fact, the National Weather Service Heat Index chart referred to by OSHA in the proposed standard identifies a heat index of **less than 91°F as presenting a "lower" (Caution) risk level** that only triggers basic heat safety and planning. Further, the Heat Index chart associates the likelihood of heat disorders with **prolonged exposure and/or strenuous activity**.

The established trigger temperature of 82°F provides a substantial margin of safety over OSHA heat index lower risk level threshold (91°F) as well as the ACGIH TLV (90°F) and AL (86°F). Requiring implementation of a heat illness prevention program for workers momentarily exposed to 82°F is not reasonable.

Occupational illness is related to a "dose" of something sufficient to cause harm. "Dose" is a function of concentration (in this case, temperature) and duration of exposure (time) to that concentration.

Occupational Safety and Health Standards are established to prevent occupational illnesses from occurring by controlling employee exposure to, or below, that dose.

The proposed Indoor Heat Illness Standard establishes a trigger temperature (concentration) but does not establish corresponding exposure duration. Therefore this standard, as it is currently written, would be applicable anytime an employee enters a work environment where the temperature is at, or above 82°F, regardless of the exposure duration.

Rationale for amending definition of "Indoor"

With regard to heat stress, there are two primary sources that cause a worker's core body temperature to increase to dangerous levels:

1. Environmental conditions where work is occurring, and
2. The internal heat generated (metabolic heat production) by the work being done.

According to the American Conference of Governmental Industrial Hygienists (ACGIH) the metabolic work rate associated with sitting (such as in and/or operating a vehicle) would be approximately 115 watts. The Threshold Limit Value (TLV) for acclimatized workers with metabolic work rate of 115 watts is approximately 90°F (WBGT) and the Action Level (AL) for a non-acclimatized worker is approximately 86°F (WBGT).

There is evidence that the combination of ventilating trapped hot air (windows/doors) and introducing cool, moving air (vehicle air conditioner) can reduce the temperature inside of a vehicle parked in the sun on a day when outdoor temperature is 100°F by approximately 3°F per minute (Thrillist.com, 4/04/2016) in the first ten (10) minutes and up to 36% (135°F to 86 °F) after twenty (20) minutes.

Arizona State University (ASU) and University of California at San Diego, (UCSD used data to model the body temperature rise of a hypothetical 2-year old boy strapped into a car seat in a car parked in the sun

on a hot day and found that the core body temperature would meet the criteria for heatstroke (104°F) in approximately one hour.

Summary of Supporting Evidence:

1. Heat index of less than 91°F presents a “lower” (Caution) risk level (**OSHA**)
2. Likelihood of heat disorder is associated with prolonged exposure and/or strenuous activity (**OSHA**)
3. TLV and AL for Metabolic Work Rate associated with sitting (i.e., in a car) are 90°F and 86°F, respectively (**ACGIH**)
4. Temperature in a hot car that has a functional air conditioner can be cooled to a reasonable temperature in twenty (20) minutes (**Thrillist**)
5. Core body temperature is unlikely to rise to a dangerous level in 20 minutes as temperature inside of a hot car decreases (**ASU/UCSD**)

Thank you for allowing us to submit our recommendations. Please contact me at 818-771-4814 or nazir.fazli@ladwp.com if have any questions regarding above comments.

Thank you,



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