



January 31, 2022

The Honorable Douglas L. Parker
Assistant Secretary
Occupational Safety and Health Administration
U.S. Department of Labor
200 Constitution Avenue NW
Washington, DC 20210

By electronic submission: www.regulations.gov

**Re: Advance Notice of Proposed Rulemaking Concerning Heat Injury and Illness
Prevention in Outdoor and Indoor Settings, 86 Fed. Reg. 59309 (Oct. 27, 2021), Docket
No. OSHA–2021–0009; RIN 1218–AD39**

Dear Assistant Secretary Parker:

The U.S. Chamber of Commerce's ("the Chamber") members include businesses in every market sector throughout the United States, many of whom would be subject to an OSHA standard regulating heat exposure.

For our members, the prevention of employee illness through exposure to heat is part of maintaining an effective workplace safety program. Our members have found, however, that it is extraordinarily difficult for them to determine when heat presents a hazard because each employee experiences heat differently.

Heat is unusual among occupational hazards, as employee characteristics beyond the control and very often beyond the knowledge of employers determine whether an employee is at risk. In addition to age, such idiosyncratic characteristics included physical condition, obesity, diseases such as diabetes, high blood pressure (hypertension), heart disease (including coronary artery disease and arrhythmia), and respiratory disease.¹ Medications (especially diuretics and beta-blockers) and illegal drugs may also interfere with an employee's ability to withstand heat. Other factors that can sharply vary are the intensity and length of work being performed, clothing worn, and the degree of sun and shade. These factors are so varied, so often unpredictable and so often unknown to employers as to constitute a substantial barrier to efforts to determine when employees require protection.

¹ E.g., Glen P. Kenny, Jane Yardley *et al*, *Heat stress in older individuals and patients with common chronic diseases*, 182(10) CANADIAN MED. ASS'N J. 1053 (2010), available at <https://doi.org/10.1503/cmaj.081050>; A.W. Tustin, D.L. Cannon *et al*, 60(8) J. OCCUP. & ENVIRON. MEDICINE e383, Risk factors for heat-related illness in U.S. workers: An OSHA case series (2018), available at <https://doi.org/10.1097/>; A.W. Tustin, G.E. Lamson *et al*, "Evaluation of occupational exposure limits for heat stress in outdoor workers—United States, 2011–2016," 67(26) MMWR—MORBIDITY AND MORTALITY WEEKLY REPORT 733 (2018), available at <https://doi.org/10.15585/mmwr.mm6726a1>.

Any Proposed Standard Must be Based on Evidence of a Significant Risk

The OSH Act, in section 3(8), requires that standards be “reasonably necessary or appropriate,” which the Supreme Court has construed to mean that OSHA must find that “significant risks are present and can be eliminated or lessened by a change in practices.” *Indus. Union Dep’t v. Am. Petroleum Inst.*, 448 U.S. 607, 642 (benzene) (1980).² Congress intended that OSHA regulate unacceptably severe occupational hazards rather than “establish a utopia free from any hazards.” 116 Cong. Rec. 37614 (1970), Leg. Hist. 480–82, noted in 81 Fed. Reg. 16286, 16290 (2016) (silica). In determining a significant risk, OSHA is guided by the oft-quoted one-in-a-thousand metric established by the Supreme Court:

Some risks are plainly acceptable, and others are plainly unacceptable. If, for example, the odds are one in a billion that a person will die from cancer by taking a drink of chlorinated water, the risk clearly could not be considered significant. On the other hand, if the odds are one in a thousand that regular inhalation of gasoline vapors that are 2% benzene will be fatal, a reasonable person might well consider the risk significant and take appropriate steps to decrease or eliminate it. Although the Agency has no duty to calculate the exact probability of harm, it does have an obligation to find that a significant risk is present before it can characterize a place of employment as “unsafe.”

448 U.S. at 655. Furthermore, to the extent heat is a harmful physical agent, OSH Act section 6(b)(5) applies and requires that, “Development of standards under this subsection shall be based upon research, demonstrations, experiments, and such other information as may be appropriate.” As discussed further below, another requirement is that the Secretary must also consider “the feasibility of the standard[.]”

However, with regard to heat, there is a lack of well-regarded criteria on when OSHA and employers can determine a significant risk is present. Until recently, it was thought (predominantly because of its use by OSHA³) that the Heat Index Chart published by the National Weather Service was a valid reference, but it has since been established that the legends in that chart that identify certain conditions as warranting “caution,” “extreme caution,” “danger,” “extreme danger,” lack any scientific basis.⁴ Research to date has focused

² Although the opinion was originally that of a plurality, it was later followed by a majority of the Court. *Am. Textile Mfgs. Inst. v. Donovan*, 452 U.S. 490, 506 n. 25, 514 n. 32 (1981); see also *N. America’s Bldg. Trades Unions v. OSHA*, 878 F.3d 271, 283 n.3 (D.C. Cir. 2017), citing *Nat’l Maritime Safety Ass’n v. OSHA*, 649 F.3d 743, 750 n.8 (D.C. Cir. 2011); *AFL-CIO v. OSHA*, 965 F.2d 962, 973 n.13 (11th Cir. 1992); *ASARCO, Inc. v. OSHA*, 746 F.2d 483, 490 (9th Cir. 1984).

³ E.g., T. Galassi, Mem. to OSHA Regional Administrators: “Extreme heat-related outdoor inspections” (2012, July 19).

⁴ *United States Postal Service*, Nos. 16-1713, 16-1813, 16-1872, 17-0023, 17-0729 (filed July 29, 2020) (Judge Calhoun), directed for review on other issues, Aug. 31, 2020; A. G. Sapper, *An Emperor Without Clothes: No Scientific Basis to Rely on NWS Heat Index Chart*, PROF. SAFETY J. 22 (Sept. 2020), available at www.assp.org/docs/default-source/psj-articles/sisapper_0920.pdf?sfvrsn=6521b547_2.

on isolating effects of heat, not determining risk. Thus, while there is data showing that as temperature increases, so does the incidence of heat illness,⁵ there is no data of which we are aware that indicates at what point, or in what conditions, the risk of such illness becomes significant.⁶ The absence of such data from the recent comprehensive survey by a large group of scholars⁷ is indicative. Studies to date do not control for the number of workers not made ill by the heat conditions. Yet, without that, no one can say what the risk is, let alone judge its significance.⁸

This point was recently noted by an administrative law judge at the Occupational Safety and Health Review Commission in her decision in a recent heat illness case involving the General Duty Clause.⁹ There, Judge Sharon Calhoun heard the testimony of an expert on heat illness employed by OSHA, and stated:

Dr. Tustin was unable to quantify the degree of risk to which outdoor workers would be exposed in 100°F weather. Counsel for the Postal Service cross-examined Dr. Tustin regarding a scenario in which 1000 carriers are working on a day when the temperature is 100°F:

Q.: Can you tell me in that scenario how many employees -- what percentage of employees working in that 100-degree day would experience a heat-related illness?

Dr. Tustin: No.

Q.: You can't tell me how likely it is?

Dr. Tustin: I can't give you an exact number as far as a number of employees who will have an illness, no.

Q.: When you say you can't give me an exact number; can you give me any number?

⁵ E.g., A.W. Tustin, *et al*, *Evaluation of Occupational Exposure Limits For Heat Stress in Outdoor Workers—United States, 2011–2016*, 67 MMWR MORB. MORTAL. WKLY. REP. 733–737 (2018), [dx.doi.org/10.15585/mmwr.mm6726a1](https://doi.org/10.15585/mmwr.mm6726a1); June T. Spector, *et al*, *Heat-Related Illness in Washington State Agriculture and Forestry Sectors*, 57 AM. J. IND. MED. 881 (2014).

⁶ E.g. a recent study by two OSHA employees, Zaw Maung and Aaron W. Tustin, *The Heat Death Line: Proposed Heat Index Alert Threshold for Preventing Heat-Related Fatalities in the Civilian Workforce*, 30 J. ENVIRON. & OCCUP. HEALTH POLICY 138, 143 (2020) (“we were unable to compute the specificity of the proposed HI [heat index] of 80 alert threshold because we had no information about noncases”), journals.sagepub.com/doi/10.1177/1048291120933819; and June T. Spector, *et al*, *Heat-Related Illness in Washington State Agriculture and Forestry Sectors*, 57 AM. J. IND. MED. 881 (2014) (“Further work is needed to elucidate the relationship between heat exposure and occupational injuries”), <https://doi.org/10.1002/ajim.22357>.

⁷ Margaret C. Morrissey, Douglas J. Casa *et al*, *Heat Safety in the Workplace: Modified Delphi Consensus to Establish Strategies and Resources to Protect the US Workers*, 5(8) GEOHEALTH e2021GH000443 (2021), available at doi.org/10.1029/2021GH000443.

⁸ Cf. Maung and Tustin, *supra* note 6 (unable to compute specificity without information about noncases).

⁹ *United States Postal Service*, Nos. 16-1713, 16-1813, 16-1872, 17-0023, 17-0729 (pp. 57-58) (filed July 29, 2020) (Judge Calhoun), *directed for review on other issues*, Aug. 31, 2020.

Dr. Tustin: I can tell you, like I said before, that there's a dose-response relationship, and it's --from the data that I've seen, it's more likely that employees will become sick on a 100-degree day compared to an 80-degree day. But I can't give you an exact number.

Q.: Can you tell me, on a 100-degree day with 1,000 employees working outside under identical conditions, what percentage will sustain a heat-related illness that is "serious" by your definition?

Dr. Tustin: No.

Q.: Do you recall during your deposition giving testimony about the likelihood that a cohort of workers would experience heat-related illness? . . . [Reading from deposition]: QUESTION: "The employees that would develop an illness, what sort of characteristics would you expect to see in those employees, if any?"

ANSWER: "Like I said, I can't predict. If you gave me a cohort of workers at the beginning of the day, and so predict which workers are going to develop a heat-related illness, I don't think I can do that -- I could do that." Do you recall giving that testimony?

Dr. Tustin: Yes.

Q.: Do you agree with it?

Dr. Tustin: Yes.

... Dr. Tustin's testimony establishes incidents of heat-related illness are likely to increase as the heat index rises above 80°F, but it does not establish the magnitude of the risk or its significance.

Therefore, before OSHA can issue a standard that will actually help employers protect their employees from heat hazards, rather than just serve as a basis for enforcement, the agency must *now* commission or request additional studies—perhaps by the National Institute of Occupational Safety and Health—to determine certain necessary information.

The Need for Clear Compliance Criteria

There is another requirement that will govern the adoption of a heat illness standard. The last sentence of section 6(b)(5) states: "Whenever practicable, the standard promulgated shall be expressed in terms of objective criteria and of the performance desired." The key word in the sentence is "objective." It means that whether an employer has met a standard's performance criterion must, in the words of common dictionary definitions, be "perceived without distortion by personal feeling, prejudices, or interpretations."¹⁰

¹⁰ MERRIAM-WEBSTER'S UNABRIDGED ONLINE DICTIONARY (2021) ("expressing or dealing with facts or conditions as perceived without distortion by personal feelings, prejudices, or interpretations"); *see also* AMERICAN HERITAGE DICTIONARY 1212 (4th ed. 2000) (sense 3a, "Uninfluenced by emotions or personal prejudices"; 3b, "Based on observable phenomena; presented factually"); RANDOM HOUSE DICTIONARY 1336 (2d ed. 1987) ("not influenced by personal feelings, interpretations, or prejudice; based on facts; unbiased"); WEBSTER'S THIRD NEW INTERNATIONAL

This point was emphasized by a well-regarded presidential task force assigned to review OSHA standards and provide guidance to the agency in rulemaking. In the 1970s, OSHA standards came under severe criticism for their lack of flexibility and clarity. The presidential task force assigned to investigate stated as to performance standards the importance of adopting only “objective” criteria: “The key to using a performance standard for regulating safety in the workplace is to design the standard so that compliance with it can be objectively measured. Only in that way can employers and employees know what the obligations are before an accident occurs.”¹¹

As a practical matter, the only way that compliance with a performance standard can be “objectively” measured is for the standard to set out a measurable end point representing adequate protection from the hazard in question. Examples are in OSHA’s noise standard¹² and toxic material standards.¹³ Indeed, when OSHA adopts standards permitting employers to not comply with certain requirements when employers have “objective data” showing a lack of hazard, OSHA defines “objective data” so as to require numerically-expressed information.¹⁴ The difficulty in regulating heat exposure is that a specific threshold representing protection will vary by individual employee.

The Importance of Feasibility, and the Perception of Feasibility

Economic and technological feasibility are legal requirements for OSHA standards.¹⁵ However, much of what makes an employee susceptible to heat illness is unpredictable or out of the employer’s control or knowledge, such as the employee’s physical condition. For many of our members, another difficulty is that measures such as acclimatization and work-rest cycles threaten to directly and substantially impair their employees’ productivity and therefore their employer’s economic viability. For these reasons, OSHA must be sure that the requirements of the proposed standard are both technologically *and* economically feasible.

DICTIONARY 1555-1556 (1966) (“expressing or involving the use of facts without distortion by personal feelings or prejudices (an ~ analysis) (~ tests)”).

¹¹ REPORT OF THE PRESIDENTIAL TASK FORCE, OSHA SAFETY REGULATION, at p. 19 (1977) (P. MacAvoy, ed.). *See also id.* at 20 (the employer’s “compliance with the requirement is objectively measurable”) and at 19 (“If properly phrased, employees can readily determine whether their employer is complying”).

¹² See 29 C.F.R. § 1910.95(b)(1) (referring to numerical noise levels “listed in Table G-16”).

¹³ *E.g.*, 29 C.F.R. §§ 1910.1000(e) (referring to numerical air contaminant levels in tables); 1910.1025(e)(1)(i) (referring to numerical permissible exposure limit).

¹⁴ *E.g.*, OSHA’s recently-adopted silica standard defines “objective data” as “information, such as air monitoring data from industry-wide surveys or calculations based on the composition of a substance, demonstrating employee exposure to respirable crystalline silica associated with a particular product or material or a specific process, task, or activity.” § 1926.1153(b). The terms “air monitoring data” and “calculations” necessarily mean numerical data.

¹⁵ *Nat’l Maritime Safety Ass’n v. OSHA*, 649 F.3d 743, 752 (D.C. Cir. 2011); *Steelworkers v. Marshall*, 647 F.2d 1189, 1272-73, 1301 (D.C. Cir. 1980), *cert. denied*, 453 U.S. 913 (1981).

The Chamber also respectfully submits that, for a standard to succeed at protecting employees, employers must also *perceive* the standard to be feasible and therefore something they can implement. OSHA must respect limits employers have, such as with acclimatization and work-rest cycles. OSHA should heed carefully these comments by a group of scholars about the recommendations they made to prevent heat injury:¹⁶ “If the proposed heat safety recommendations can realistically be implemented with limited disruption of workers' standard working procedures (i.e., feasible), employers are more likely to adopt the safety practices.” “Recommendations that are both evidenced-based and feasible are more likely to be adopted as they limit interruption in standard working procedures and limit cost.”

EEOC Guidance Poses Obstacles to Employee Protection

We also urge that, in the drafting of a proposed standard, OSHA consult the U.S. Equal Employment Opportunity Commission to seek ways of easing a difficulty that conscientious employers encounter when seeking to protect their employees from heat.

A group of scholars who convened to recommend measures to prevent heat illness gave as examples of desirable “heat hygiene practices” the following: “identifying workers with risk factors for heat-related illnesses, medical surveillance (*e.g.*, physical examination)....”¹⁷ The scholars explained: “As certain risk factors or medical conditions increase susceptibility to heat-related illnesses, it is important for employers to recognize these factors as they may compromise workers’ health, well-being, and work capacity in the heat.”¹⁸

As the recent *Sturgill* case¹⁹ illustrates, however, guidance issued by the EEOC under federal civil rights statutes such as the Age Discrimination in Employment Act (ADEA), 42 U.S.C. § 12112, and the Americans with Disabilities Act (ADA), 42 U.S.C. § 12101 *et seq.*, often prevent employers from adjusting work tasks to take into account personal conditions such as age, body-mass index, morbidities and medications. EEOC guidance indicates that, even before health-related inquiries that are job-related and consistent with business necessity made be made, the employer must have “a reasonable belief, based on objective evidence that: (1) an employee’s ability to perform essential job functions will be impaired by a medical condition; or (2) an employee will pose a direct threat due to a medical condition.”²⁰ The referenced

¹⁶ Morrissey, Casa *et al*, *supra* note 7.

¹⁷ Morrissey, Casa *et al*, *supra* note 7.

¹⁸ *Id.*

¹⁹ *A.H. Sturgill Roofing, Inc.*, 27 BNA OSHC 1809, 1815-1817 (OSHC 2019).

²⁰ EEOC Enforcement Guidance on Disability-Related Inquiries and Medical Examinations of Employees under the Americans with Disabilities Act, *available at* www.eeoc.gov/policy/docs/guidance-inquiries.html.

scholars characterized employer concerns about this as a “barrier” “that can impede heat safety program implementation....”²¹

If employers are to be expected to protect employees from problems dealing with heat caused by unknown health conditions or medications, employers must therefore have more flexibility than is currently afforded by EEOC guidance to make inquiries of their employees. We therefore urge OSHA to consult with EEOC to seek ways of easing a difficulty that conscientious employers encounter when seeking to protect their employees from heat. Just as important as flexibility is clarity on what employers may ask. Uncertainty about what employers may ask *will* discourage inquiries by employers needed to protect employees.

We therefore urge OSHA to not only consult with EEOC to determine what can be done to permit employers to make the noted inquiries, but to write into OSHA’s proposed standard a *clear* statement of what OSHA understands the above laws to permit. OSHA should *not* just provide a link to EEOC’s web page or EEOC guidance, and leave employers to puzzle out for themselves how to reconcile the apparently competing demands of two federal agencies. For example, employers would find especially useful a provision beginning as follows: “Note: OSHA understands from consultation with the U.S. Equal Employment Opportunity Commission (EEOC) that employers may, consistent with the Age Discrimination in Employment Act (ADEA), 42 U.S.C. § 12112, and the Americans with Disabilities Act (ADA), 42 U.S.C. § 12101 *et seq.*, make the following inquiries of employees to ensure their protection from heat conditions, even before the employer has information that the employee may have special susceptibility to them:”

The Need for A Sunset Provision

Finally, if OSHA moves forward with a proposed standard, we urge OSHA to include a seven-year sunset provision—that is, a provision stating that the standard will expire after seven years after its last compliance date becomes effective, with the expectation that OSHA would pursue a revised standard reflecting updated data and understandings.

Once a standard becomes effective, compliance efforts by employers uncover previously unforeseen difficulties. The Lockout/Tagout Standard, 29 C.F.R. § 1910.147, is a good example of this, as is the Process Safety Management Standard, 29 C.F.R. § 1910.119. After the many years of experience that both OSHA and employers have had with them, were they to be sun-setted and replaced by standards based on actual experience, their replacements would be much different than they are today.

A sunset provision would especially be needed in a standard on heat illness, as key aspects of the science of heat illness are now barely developed, and there is at this time no obvious way that a standard can be written that would be both realistic and effective in

²¹ Morrissey, Casa *et al*, *supra* note 7. In identifying this as a “barrier,” the authors characterized it as follows: “Legal implications may include screening procedures that identify high risk individuals and physiological data collection (e.g., Americans with Disabilities Act, HIPAA).”

preventing heat illness. Although OSHA can always re-examine its standards, especially if its enforcement branch should run into difficulties, it has shown that it has little incentive to re-open a standard to address *employers'* compliance difficulties. Sunsetting would provide that incentive and show that OSHA is serious about ensuring that its standards are reasonably necessary and appropriate and reflect the latest data and understanding of the hazard.

Conclusion

The Chamber appreciates OSHA taking the extra step to conduct this ANPRM. Heat is a very complicated hazard and any effort to regulate it must recognize its complexity. Accordingly, the Chamber encourages OSHA to conduct more outreach, such as stakeholder meetings, prior to developing a proposed regulation. Finally, any heat standard will, necessarily, impact many small businesses. OSHA should, therefore, convene a small business review panel as called for under the Small Business Regulatory Enforcement Fairness Act if it moves forward with a standard.

Sincerely,



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