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Via Federal e-Rulemaking Portal

Stephen Schayer, Director
Office of Physical Hazards and Others, OSHA Directorate of Standards and Guidance
200 Constitution Ave., NW
Washington, DC 20210
osha.dsg@dol.gov

Re: Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings (Docket No. OSHA-2021-0009; RIN 1218-AD39)

To Whom It May Concern:

Environmental Defense Fund (“EDF”) respectfully submits the following comments to the Occupational Safety and Health Administration (“OSHA”) in response to its request for feedback regarding its proposed rule, *Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings*, published on August 30, 2024 (the “Heat Injury Proposal”).¹ EDF is a non-profit non-partisan organization that relies on science, economics, and law to address serious health and environmental problems. The documents cited to and relied on in these comments are hereby incorporated by reference as part of the rulemaking record.

EDF supports the Heat Injury Proposal as a critical step in OSHA’s efforts to develop strong heat stress and injury prevention standards to protect workers. As OSHA acknowledges in its proposed rule, heat is the leading cause of death among all weather-related phenomena in the United States.² Establishing robust heat standards would substantially reduce the risk posed to workers by occupational exposure to hazardous heat.³ Occupational exposure to hazardous heat is deeply intertwined with environmental justice, and, as OSHA notes in its proposed rule, this rule would have “a positive impact on underserved populations (e.g., low-income and Hispanic workers) by providing workplace protections from extreme temperatures that have a disproportionate impact on occupations held by individuals from underserved communities.” We strongly support OSHA’s Heat injury Proposal and its complementary research, education,

¹ Occupational Safety and Health Administration, *Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings*, 89 Fed. Reg. 70698 (Aug. 30, 2024) [hereinafter “Heat Injury Proposal”].

² Heat Injury Proposal at 70699.

³ Heat Injury Proposal at 70966.

and enforcement initiatives. We offer the following recommendations for OSHA's consideration, commend OSHA on this vital proposal, and urge its swift finalization.

- I. OSHA's Heat Injury Proposal is firmly rooted in the agency's statutory authority, supported by extensive record evidence, and crucial to protect workers from hazardous heat.
- II. OSHA should consider building on its heat trigger requirements to include strengthened protections for particularly vulnerable people groups.
- III. OSHA should consider supplementing its historical temperature data with reliable, up-to-date projections of future temperatures and humidity in terms of both averages and extremes.
- IV. OSHA should consider adding a "heat wave" component to its rule, including heightened protections for when workers are exposed to sudden heat spikes.
- V. OSHA should continue considering data from existing state-level heat standards, especially as more states begin to implement such standards.
- VI. OSHA should continue strengthening its important measures to make its rule culturally responsive.
- VII. OSHA's assessment of the economic impacts of heat standards should highlight co-benefits, humanitarian implications, environmental justice implications, and cost minimization.

I. OSHA's Heat Injury Proposal is firmly rooted in the agency's statutory authority, supported by extensive record evidence, and crucial to protect workers from hazardous heat.

Congress explicitly gave OSHA the responsibility and authority to address occupational risk like heat-related hazards through rulemaking and other actions. In the Occupational Safety and Health Act ("the Act"), 29 U.S.C. 651 et seq., Congress authorized the Secretary of Labor "to set mandatory occupational safety and health standards applicable to businesses affecting interstate commerce."⁴ Specifically, section 6(b) of the Act authorizes the promulgation, modification or revocation of occupational safety or health standards pursuant to detailed notice and comment procedures.⁵ The Act defines a safety or health standard as one that "requires conditions, or the adoption or use of one or more practices, means, methods, operations, or processes" that are reasonably necessary or appropriate to provide safe or healthful employment.

In its proposed rule, OSHA highlights its authority to promulgate a heat injury and illness prevention standard. OSHA notes that the Act authorizes it to "issue safety or health standards that are reasonably necessary or appropriate to provide safe or healthful employment."⁶ OSHA

⁴ 29 U.S.C. § 651(b)(3) (1970).

⁵ 29 U.S.C. § 655(b).

⁶ 29 U.S.C. § 652(8).

further explains that a standard is reasonably necessary or appropriate when “a significant risk of material harm exists in the workplace and the standard would substantially reduce or eliminate that workplace risk.”⁷ OSHA states that its heat protection standard easily falls within these requirements because workers in both indoor and outdoor work settings without adequate climate controls are at risk of hazardous heat exposure. The rule emphasizes that “exposure to hazardous heat in the workplace poses a significant risk of serious injury and illness.”

The proposed rule then details the history of heat as a recognized occupational hazard, noting that heat exposure has been considered a serious occupational hazard since 1931.⁸ Further, when the Act was established, heat was recognized as a preventable workplace hazard.⁹ Without a specific standard governing hazardous heat conditions in workplaces, OSHA has been enforcing section 5(a)(1) of the Act against employers that expose their workers to this recognized hazard. Between 1986 and 2023, OSHA issued at least 348 hazardous heat related citations under section 5(a)(1). OSHA’s numerous enforcement actions of hazardous heat conditions as violations under the Act, the legislative history supporting hazardous heat as a recognized occupational hazard, and the plain language of the Act all establish OSHA’s authority to promulgate this proposed rule.

Hazardous heat is a serious threat to worker safety. As OSHA notes in its proposed rule, heat is the leading cause of death among all weather-related phenomena.¹⁰ In a workplace setting, excessive heat can cause harmful health outcomes and even death, if not treated properly. Workplace heat contributes to heat stress, which is a person’s total heat load, from the following sources: (1) heat from the environment, including heat generated from workplace equipment; (2) metabolic heat from workplace movement; and (3) heat related to clothing or personal protective equipment.¹¹ OSHA notes that workers experience greater heat stress than non-workers because they are required to work through shifts with prolonged heat exposures, as well as complete tasks that require physical exertion and heavy protective equipment. As climate change exacerbates temperatures, humidity and the frequency and severity of heat waves, heat stress dangers will increase for workers.¹² OSHA’s proposed rule is critical to combatting these dangers and protecting workers from the harmful health outcomes of hazardous heat exposure, which are already severe and expected to grow.

⁷ Heat Injury Proposal at 70699.

⁸ Heat Injury Proposal at 70703.

⁹ Senate Debate on S. 2193, Nov. 16, 1970, reprinted in Legislative History of the Occupational Safety and Health Act of 1970, pp. 513–14 (1971) (Committee Print).

¹⁰ Heat Injury Proposal at 70699.

¹¹ Heat Injury Proposal at 70708.

¹² Colin Raymond et al., The Emergence of Heat and Humidity Too Severe for Human Tolerance, 6 SCI. ADVANCES eaaw1838-1, 01 (2020).

II. OSHA should consider building on its heat trigger requirements to include strengthened protections for particularly vulnerable people groups.

In its proposed rule, OSHA recognizes that a multitude and variety of stressors can interact to influence the risk of occupational heat-related health effects for individuals or groups of people. For example, excessive heat exacerbates existing health conditions like “asthma, diabetes, kidney failure, and heart disease.”¹³ Additionally, OSHA recognizes that “some groups may be more likely to experience adverse health effects from heat such as pregnant workers, while others are disproportionately exposed to hazardous levels of heat, such as workers of color in essential jobs, who are more often employed in work settings with a high risk of hazardous heat exposure.”¹⁴ While OSHA states that some specifics on how these risk factors interact with heat stress are currently unknown, it also states that “a majority of working-age adults live with or experience at least one risk factor, these factors should be considered an important component of understanding how individuals can be at increased risk for heat-related illness.”¹⁵

Even as more information develops on how multiple stressors interact to impact heat-related health effects, OSHA should consider how to reflect the impact of these other stressors in its regulation and should consider providing guidance to employers on how to consider the totality of stressors on employees when developing heat injury and illness prevention plans. Employers may inquire and learn about additional stressors when seeking the input and involvement of non-managerial employees and their representatives. For example, as OSHA notes, heat can exacerbate asthma. Exposure to particular pollutants can also exacerbate asthma symptoms. Individuals who are working at industrial facilities that emit air pollution known to exacerbate asthma may thus be even more susceptible to respiratory symptoms compounded by heat exposure. Relevant heat risk-compounding stressors for OSHA to consider include environmental factors (such as chemical exposures), existing health conditions, occupation-specific risks, ability to access health care, and socio-demographic factors, among others.

Rigorous scientific evidence supports the connection between various underlying health risks and increased heat related illness.¹⁶ For example, one study found that construction workers

¹³ Heat Injury Proposal at 70702.

¹⁴ *Id.*

¹⁵ Heat Injury Proposal at 70728.

¹⁶ Jacqueline E. Cardoza, et al., *Heat-Related Illness is Associated with Lack of Air Conditioning and Pre-Existing Health Problems in Detroit, Michigan, USA: A Community-Based Participatory Co-Analysis of Survey Data*, *Int J 17 Environ Res Public Health* 5704, 5704-5707, (Aug. 7, 2020) [Hereinafter “Heat Related Illness is Associated with Lack of Air Conditioning”]; Sanjgna Karthick, et al., *Assessment of the Impact of Hot Weather Conditions on the Respiratory Health, Level of Fatigue, and Injuries of Construction Workers*, *Architecture Structures and Construction* 1, 3-5 (May 2024) [Hereinafter “Assessments of the Impacts of Hot Weather”]; Jared A. Fisher, et al., *Summertime Extreme Heat Events and Increased Risk of Acute Myocardial Infarction Hospitalizations*, *27 J Expo. Sci. Environ. Epidemiol.* 276, 276-279 (May, 2017); Julia Nawaro, et al., *Heat Waves and Cardiovascular Events in*

above 50 years of age had higher odds of experiencing heat-related illness and injuries than workers less than 50 years of age.¹⁷ Another study found that people with pre-existing health conditions that rated their health as poor were nearly 3 times as likely to experience heat exhaustion than people without pre-existing health conditions.¹⁸ That study concluded that “pre-existing self-reported health status was associated with heat-related illness.”¹⁹ These studies show that pregnancy, asthma, diabetes, kidney failure, heart disease, and old age have associations with a significantly heightened risk of heat-related illness.

OSHA should consider this information and determine which health conditions may warrant an adjusted initial and secondary heat trigger. Additionally, OSHA should consider adjusting its other heat protections to adequately protect vulnerable individuals from excess heat. For example, OSHA could add additional breaks, include additional shaded rest areas, ensure adequate water availability, and update heat prevention plans accordingly. Furthermore, OSHA could also ensure that there is additional supervision for individuals with underlying health conditions, giving special consideration to particularly vulnerable groups to ensure its standard sufficiently protects all workers.

Another way OSHA can protect vulnerable groups is to incorporate additional protections for particularly risky work activities into its rule and complementary efforts. In its proposed rule, OSHA recognizes that heat risk is exacerbated for some occupations, since some workers may be required to work through shifts with prolonged heat exposure, complete tasks that require physical exertion, and use protective equipment that may increase heat stress while decreasing a workers’ ability to cool down.²⁰ Occupations at heightened risk of heat-related injury or illness include agricultural workers, construction workers, commercial fishermen, lineman, utility workers, miners, and transportation workers.²¹ Within occupations, heat-related risks can be higher for particular work activities. For example, one study found that construction workers involved in “infrastructure project types had higher odds of experiencing” heat-related injuries in workplaces compared to workers involved in residential project types.²² OSHA can consider the example of Minnesota’s heat protection standards, which consider the type of work being performed (light, moderate, or heavy) to determine whether additional heat protections are

Milan, Italy: A Geospatial Case-Crossover Approach Using Data from Emergency Medical Services, 19 *Med. Sci. Forum* 5, 6-8 (May 2023); Sanjgna Karthick, et al., *Impact of Construction Workers’ Physical Health and Respiratory Issues in Hot Weather: A Pilot Study*, Conference Paper: ASCE Proceedings of Transportation Consortium of South-Central States (July 2022).

¹⁷ Assessments of the Impacts of Hot Weather at 6.

¹⁸ Heat Related Illness is Associated with Lack of Air Conditioning at 5707.

¹⁹ *Id.*

²⁰ Heat Injury Proposal at 70708.

²¹ MEMIC, *The Heat is (Still) On, Especially in These Jobs* (Aug 9, 2023), <https://www.memic.com/workplace-safety/safety-net-blog/the-heat-is-still-on-especially-in-these-jobs>.

²² Assessments of the Impacts of Hot Weather at 7.

necessary. Minnesota’s standard also provides wet bulb globe temperature (WBGT) trigger levels based on the type of work activity.²³

If OSHA amended its proposed rule to provide additional protections for particularly vulnerable people, it would be in line with other rules the agency has promulgated and finalized. For example, OSHA’s rule on Formaldehyde (1910.1048) creates additional protections for medically vulnerable people. The rule mandates a series of safety measures for workers exposed to formaldehyde, including supervision, medical examinations when a worker is exposed to particular levels of formaldehyde, and required protective equipment. Part 1910.1048(1)(3)(i) of the rule requires the administration of a medical disease questionnaire to all workers, designed to elicit information on any evidence of “eye, nose, or throat irritation; chronic airway problems or hyperreactive airway disease; allergic skin conditions or dermatitis; and upper or lower respiratory problems.”²⁴ If a worker’s medical history reveals the presence of any such issues, then the employer must provide an additional medical examination, resulting in a medical report related only to a worker’s exposure to formaldehyde.²⁵ The medical report may recommend certain limitations on the employee’s exposure to formaldehyde or changes in the use of protective equipment, including additional use of a respirator to reduce that worker’s exposure.²⁶ The employer must then follow the medical report’s recommendations, providing any necessary protective equipment and adjusting the worker’s schedule as advised. Similarly, here, OSHA could consider including processes for employers to assess and account for relevant medical vulnerabilities and other compounding factors in implementing heat-related protections.

III. OSHA should consider supplementing its historical temperature data with reliable, up-to-date projections of future temperatures and humidity in terms of both averages and extremes.

In its proposed rule, OSHA cites several studies that establish the connection between temperature and heat related injuries, illnesses or fatalities. Some of these studies accounted for protective equipment, acclimatization status, and time water availability. However, all the studies cited use retrospective temperature and humidity data, including historic, weather monitor-based temperature and dew-point measurements. OSHA’s data shows that heat definitively causes injuries, illness, and death and establishes the importance of the proposed rule. However, because it does not include studies that use projected temperature data, the proposal likely understates future risk profiles.²⁷

²³ Heat Injury Proposal at 70707.

²⁴ 29 C.F.R. § 1910.1048(l)(4) (2025).

²⁵ 29 C.F.R. § 1910.1048(l)(7)(i) (2025) (“This written opinion shall contain the results of the examination except that it shall not reveal specific findings or diagnoses unrelated to occupational exposure to formaldehyde.”).

²⁶ 29 C.F.R. § 1910.1048(l)(7)(i)(B) (2025).

²⁷ See, e.g., Jan Kyselý et al., *Estimating Extremes in Climate Change Simulations Using the PeaksOver-Threshold Method with a Non-Stationary Threshold*, 72 GLOB. & PLANETARY CHANGE 55 (2010).

OSHA should consider updating its rule to include information about expected future heat risks across the relevant regions and timescales for this action, which would further underscore the necessity, urgency, and benefits of this rule. For example, in his article *The Emergence of Heat and Humidity Too Severe for Human Tolerance*, scientist Colin Raymond explains that climate models project the first 35°C wet-bulb temperature occurrences (the upper maximum of a human’s ability to shed heat) to occur by the mid-21st century. Additionally, several studies utilizing climate modeling project that cities will experience heatwaves that are increasingly intense, more frequent, and longer lasting.²⁸ One research paper explains that for many heavily populated cities, “there may well be three to four times as many extreme heat events by 2050 compared to today, with some large metropolitan areas projected to exceed 50 extreme heat events annually.”²⁹ By establishing that extreme temperatures and heat waves are expected to progress exponentially, these studies highlight the urgency of OSHA’s proposed rule. Given that extreme temperatures and sudden heat waves are likely to become a staple of our future, it is critical to implement strong heat protections for workers exposed to these extremes.

Additionally, OSHA should consider adding data to its proposed rule on distributional inequities of heat exposure and vulnerability, including information based on individual experiences of heat. Various groups are disproportionately exposed to heat stress, including outdoor workers, lower-income workers, people of color, and people lacking immigration status. One study notes that vulnerability to heat waves is a “combined result of the socio-economic, physiological, climatological, as well as behavioral variables.”³⁰ The study also notes that an increase in “exposure and sensitivity” leads to a an “increase in vulnerability.”³¹ OSHA’s should consider including studies exploring the unequal burden of heat on vulnerable groups to ensure that all workers are adequately protected.

IV. OSHA should consider adding a “heat wave” component to its rule, including heightened protections for when workers are exposed to sudden heat spikes.

OSHA’s rule should not only consider the heat events that are common today, but also protect workers from the high WBGT scenarios and heat waves that are projected to become increasingly frequent and severe in the future. In its proposed rule, OSHA notes that the human body fares worse during heat waves. OSHA highlights one study that found that 15% of all heat related injuries in California occurred on the first day of a heat wave, while 30% of heat related

²⁸ Binbin Peng et al., *Reexploring the Conception of Heat-Health Risk: From the Perspectives of Dimensionality and Spatiality*, 1 *Society for Risk Analysis* 1, 2-5 (2024); IPCC, 2023: *Climate Change 2023: Synthesis Report*. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 35-115; Meehl & Tebaldi, *More Intense, More Frequent, and Longer Lasting Heat Waves in the 21st Century*, 305 *Science* 994, 994-997 (Aug. 13, 2004).

²⁹ *Id.*

³⁰ Suresh Kumar Rathi et al., *A Heat Vulnerability Index: Spatial Patterns of Exposure, Sensitivity and Adaptive Capacity for Urbanites of Four Cities in India*, 19 *International Journal of Environmental Research and Public Health* 283, 284-286 (Dec. 2021).

³¹ *Id.*

injuries occurred after working one to four days into a heat wave.³² OSHA addresses these risks by requiring that “if any changes that could increase employee exposure to heat occur, then an employer must evaluate any affected work areas to identify where there is a reasonable expectation that employees are or may be exposed to heat at or above the initial heat trigger.”³³ The rule specifically notes that a “local heat wave” could be the impetus for such a change.³⁴ Given the significant amount of data supporting that workers are more susceptible to heat related injuries during heat waves, OSHA could strengthen its rule by: (1) providing additional protective standards during heat waves, like mandating additional rest breaks, providing additional access to shade, providing additional access to water, and increasing employers’ monitoring of workers; (2) ensuring that workers acclimate properly to sudden increases in heat; (3) lowering the initial and secondary triggers during heat waves; and/or (4) setting an overall working temperature cap to protect workers from extreme heat.

Additionally, we encourage OSHA to include a definition for “heat wave” to facilitate heat wave-related protections. The agency could consider the following definition of heat wave from the World Meteorological Organization (WMO): “Heatwaves consist of [a] period of abnormally hot weather that can last from a few days to months where the maximum and minimum temperatures are unusually high to a location. The minimum temperature is as important as the maximum temperature as cooler nights allow the body to recover and if the nights are unusually hot, higher temperatures will be reached earlier in the day and last for longer.”³⁵

V. OSHA should continue considering data from existing state-level heat standards, especially as more states begin to implement such standards.

OSHA should continue tracking state-level heat standards and incorporating relevant data on health outcomes, implementation strategies, and equity considerations across industries. OSHA should also consider consulting with officials, worker representatives, or other stakeholders from states with heat standards for further input on best practices and lessons learned. Currently, six states have promulgated permanent or temporary workplace heat standards: Maryland, Colorado, Minnesota, Oregon, Washington and California. OSHA’s proposed rule summarizes each of these states’ heat-specific standards, noting that each state’s standard differs in the scope of its coverage.³⁶ For example, OSHA notes that Minnesota’s standard covers only indoor workplaces, while California’s and Washington’s standards cover only outdoor workplaces.

³² Heat Injury Proposal at 70760 (citing Prudhomme, J. & Neidhardt, A. Cal/OSHA investigations of heat-related illness 2006 (Memorandum), Sacramento, CA: State of California, Department of Industrial Relations, Division of Occupational Safety and Health, Research and Standards Health Unit, (2007, Oct. 18) www.dir.ca.gov/dosh/heatillnessinvestigations-2006.pdf).

³³ Heat Injury Proposal at 70777.

³⁴ *Id.*

³⁵ World Meteorological Organization, *Heatwave: Natural Hazards*, (2025) <https://wmo.int/topics/heatwave>

³⁶ Heat Injury Proposal at 70707.

OSHA also notes that state rules differ in the methods used for triggering protections against hazardous heat. For example, Minnesota’s standard considers the type of work being performed and provides WBGT trigger levels based on the type of work activity, while California’s and Oregon’s standards only go into effect when the ambient temperature has reached 80°F. Washington’s rule combines ambient temperature readings with the breathability of workers’ clothing, and California, Washington, Colorado, and Oregon all have additional protections triggered by “high heat.”³⁷ All state standards, except Minnesota, require employers to provide at least one quart of water per hour for each employee, require some sort of emergency response plan, include provisions related to acclimatization of workers, and require access to shaded break areas. Additionally, several states require employers to create a written heat illness prevention plan in English as well as whatever language is understood by the majority of workers at a given workplace.

OSHA’s rule is consistent with these state standards and incorporates relevant data on health outcomes and lessons learned from all these states. OSHA should ensure that, as additional states add heat standards, its rule continues to align with best practices. It is especially critical that OSHA continue its efforts to monitor state-level data given the agency’s position on the complexities of creating microclimate-specific standards.

VI. OSHA should continue strengthening its important measures to make its rule culturally responsive.

OSHA’s rule should incorporate input from workers, making sure that standards are culturally responsive and ensuring that materials are accessible in terms of languages and delivery methods. OSHA’s proposed rule already diligently ensures that its required Heat Injury and Illness Prevention Plans (HIIPPs) are culturally responsive. The rule requires that a HIIPP is available in a language that each employee, supervisor, and heat safety coordinator understands. This approach requires that all HIIPPs are translated into languages that employees, supervisors, and heat safety coordinators understand.

Additionally, upon determining that the high heat trigger is met or exceeded, an employer must notify all employees of specific information relevant to the prevention of heat hazards “in a language and at a literacy level understood by employees.”³⁸ The rule also states that if one or more employees is illiterate, an employer must ensure that someone is available to read the HIIPP in a language that each employee understands.³⁹ OSHA could strengthen its cultural responsiveness by adding in opportunities for workers to provide feedback on how effectively HIIPPs are being communicated, and by implementing other recommendations shared by workers of different backgrounds and their representatives in response to this proposal.

³⁷ *Id.*

³⁸ Heat Injury Proposal at 70755.

³⁹ *Id.*

VII. OSHA’s assessment of the economic impacts of heat standards should highlight co-benefits, humanitarian implications, environmental justice implications, and cost minimization.

OSHA has conducted a robust economic analysis, and in addition to the information included, we encourage OSHA to further assess the co-benefits of increased worker productivity and quality of life, which would only further underscore the importance of these protections. For instance, OSHA’s rule should also account for the humanitarian benefits of a heat standard, including creating a more comfortable and dignified working environment for employees. Additionally, OSHA’s rule should recognize industry’s incentive to learn and adapt, which will likely lower compliance costs.

OSHA’s proposed rule already reflects some of these principles, including its economic analysis showing that regulated parties will minimize cost, as well as its completion of an equity assessment. OSHA recognizes industry’s incentive to learn and adapt to heat-related safety changes in the workplace. OSHA should consider adding additional analysis of worker productivity, quality of life, and long-term preservation of the workforce to further strengthen its economic conclusions in support of the rule.

Regarding OSHA’s equity assessment, the agency concluded that the proposed standard would “have a positive impact on underserved populations, such as low-income and Hispanic workers, by providing workplace protections from extreme temperatures that have a disproportionate impact on occupations held by individuals from underserved communities.”⁴⁰ OSHA should consider adding further evidence from the research on how underserved populations, like low-income groups and people of color, are disproportionately negatively impacted by hazardous heat. There is a wealth of scientific literature on the connection between poor health outcomes for vulnerable people groups and hazardous heat. One such study concludes that vulnerable populations “such as the elderly, young children, low-income communities, communities of color, and individuals with existing health problems have a higher health burden of heat exposure.” The study also notes that “health disparities related to heat exposure are well documented.”⁴¹ Another research article explains the importance of an equity-centric approach when trying to understand the negative impacts of hazardous heat since “vulnerable populations, such as low-income communities and the elderly, often bear the brunt of extreme heat events.”⁴²

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⁴⁰ *Id.*

⁴¹ Heat Related Illness is Associated with Lack of Air Conditioning at 5707.

⁴² Consolata Wangechi Macharia & Lawrence M Kiage, Conceptualizing Heat Vulnerability: Equity-Centered Approaches for Comprehensive Resilience in a Changing Climate, 120 *Natural Hazards* 1, 2-5 (March 2024).

We thank OSHA for its attention to occupational heat-related injury and illness, as well as its consideration of these comments. We urge OSHA to swiftly finalize this vital proposed rule.

Respectfully submitted,

/s/ Gabrielle (Elle) Stephens

Gabrielle (Elle) Stephens

Stephanie Jones

Peter Zalzal

Environmental Defense Fund

estephens@edf.org

sjones@edf.org

pzalzal@edf.org