BEFORE THE

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
DIRECTORATE OF STANDARDS AND GUIDANCE

DOCKET NUMBER: OSHA-2021-0009-25504

RESPONSES TO OSHA HEARING QUESTIONS SUBMITTED BY THE FLEXIBLE PACKAGING ASSOCIATION ON PROPOSED REGULATION FOR HEAT INJURY AND ILLNESS PREVENTION IN OUTDOOR AND INDOOR WORK SETTINGS

89 Fed. Reg. 70689 (Aug. 30, 2024), as amended by
89 Fed. Reg. 94631 (Nov 29, 2024)

October 30, 2025

Andrew Levinson, MPH Director
Directorate of Standards and Guidance for Safety and Health
Occupational Safety & Health Administration
Department of Labor
200 Constitution Ave., NW
Washington D.C. 20210

To Whom it May Concern:

Introduction - The Flexible Packaging Association ("FPA") testified on June 23, 2025 before the Directorate for Safety and Health regarding OSHA's proposed heat illness and injury rulemaking. 89 Fed. Reg. 70689 (Aug. 30, 2024). We appreciated receiving the following questions from the hearing officer following our testimony.[1] Here are our responses.

1. Could you describe how members of your association or industry currently respond to heat-related illness and heat emergencies, and how they may overlap with the proposed emergency response and planning provisions in the proposed rule?

First Aid Teams, Periodic Heat Awareness Training, and Heat Risk Management and Mitigation - FPA's members have fully-trained First-Aid teams to meet other OSHA requirements that assist in any type of medical emergency, including heat injuries and illnesses. *See* 29 CFR§1910.151. They also conduct periodic training throughout the year for "First Aid" coordinators and teams, as well as conduct periodic training throughout the year for new and existing employees, particularly the teams of employees on the upper decks of the printing presses, upper tiers of lamination and extrusion towers, and loading docks, which are most likely to experience heat-related concerns. Member companies report that training emphasizes recognizing *symptoms* of heat-related exposures, including but not limited to confusion, agitation, slurred speech or dizziness associated with heat exposure. *Workers on the presses and laminators, particularly,* are trained to recognize muscle cramping, high pulse rates, dizziness, nausea, and agitation as symptoms of potential heat illness because a supervisor or manager may not recognize the symptoms until an employee loses consciousness and a remedial response is required.

FPA-owned facilities generally do have safety training materials in centralized first aid offices at each flexible packaging plant, but those training materials generally lack the detail that OSHA delineated in the proposed HIIPP, and of course, apply far more broadly to potential

[1] The Questions are presented in "INFORMAL RULEMAKING HEARINGFOR HEAT INJURY AND ILLNESS PREVENTION IN OUTDOOR AND INDOOR WORK SETTINGS Compilation of Public Hearing Questions, Docket No. 2021-0009-25565, at page 44.

injuries at a plant, including amputations, slip and fall scenarios, and other illnesses including symptoms and treatment of heat-related injuries.

Risk Management and Mitigation – FPA Members routinely conduct risk assessments related to heat injury concerns for both process areas and particular tasks, and they implement mitigating measures as a result of those assessments. In addition, if heat related incidents or injuries occur, FPA's members utilize risk and mitigation assessments as a means to avoid similar future incidents and/or add protective solutions as part of their workplace and environmental protection practices.

Fluids, Air Conditioning, & Popsicles - FPA members typically supply cool water and electrolyte drinks throughout a plant and loading docks to their employees (and also warn employees about consuming energy drinks). Most make popsicles available to employees on warm days. All members have accessible air-conditioned break rooms. (Note, however, that fluids other than water, as well as other foods, are not allowed in "clean rooms" where pharmaceutical and medical device packaging is manufactured, depending on what is being made.)

No Placarding or Periodic/Continuous Heat Monitoring - As a general matter, *none* of FPA's Environmental Health and Safety (EHS) Committee members report utilizing placarding in heat-sensitive areas. Nor to our knowledge, has any FPA facility implemented either periodic or continuous temperature monitoring in specific areas around printing presses or lamination processes, where heat injuries and illnesses are most likely to occur in this industry. We do not think that these mechanisms adds value, particularly given training and other ways of raising employee awareness.

2. In your written comment, you suggested that OSHA adopt one heat trigger instead of two (90F) or alternatively, identify a range of temperatures such as 80-90F or 85-95F and defer to employers to designate the trigger within that range for their work sites.

FPA companies generally utilize local weather reports to emphasize heat illness and injury awareness and safeguards, such as additional breaks and fluid intake, because their managers feel they are better gauges in general for when employees are not acclimated to potentially high-heat scenarios. In other words, employees in facilities around the Great Lakes are far more susceptible to heat exposure at lower temperatures than employees at facilities in the southeast who are exposed throughout the year to higher temperatures and high humidity. This is one reason that FPA suggested temperature ranges might be a better indicator to trigger proposed HIIPP activities should this rulemaking be finalized.

FPA also offered these alternatives because its members did not believe that there was a good explanation for proposing the use of two heat triggers, one for planning and the other for

implementing responses when the principal difference appears to be for mandatory paid 15-minute breaks rest breaks for affected employees when the high heat trigger is reached or exceeded. Thus, FPA recommended that OSHA utilize a single "trigger" for both planning and response because we concluded there might be near consensus on certain temperatures by region (e.g., 90° F) or a range of temperatures being "hot" in certain areas of the United States that would be a reasonable basis for an employer to implement measures such as heightened communications at a work site, particularly in process areas that are known to frequently (or always) exceed that temperature or temperature range when processes are running.

3. **In such a scenario, what evidence, if any, should OSHA require employers to show as the basis for selecting their trigger?**

Compilation of weather averages at different locations around the country are generally available from local or regional news channels and weather stations as the basis for selecting their trigger.

4. **You mentioned that some of your work areas require total respiratory protection. Do you know if any of those areas would be what you would consider a hot area, or one of the areas that might be covered under the standard?**

Many process areas in FPA member plants utilize *permeable* disposable work cover-ups. However, where respirable and permeable PPE are utilized, including medical and sterilization packaging process and lamination/extrusion areas, the room or area is air-conditioned. However, there may be instances, particularly in lamination and extrusion areas in medical device or pharmaceutical packaging areas where this might occur, even though typically such areas are fully air-conditioned. And while a great deal of impermeable and respiratory PPE equipment itself is cooled, employees wearing respiratory protection and/or impermeable protective clothing may suffer heat-related illness symptoms. For employees in such areas, recognizing heat injury is critical and process training, and protective gear training is therefore emphasized in flexible packaging plants.

5. **Is there a way to consider how adjustments might be made to the HIIPP for employees wearing vapor-impermeable clothing in a hot area to make sure that they're protected in that environment?**

Unless OSHA were to determine that *all employees* wearing vapor-impermeable clothing are automatically working "in a hot area," we are not sure what adjustments to the HIIPP would be appropriate. In sterilized rooms, additional procedures or requirements also could pose further risks to an employee, depending on a specific process. And FPA submits that such a response would be excessively costly and unnecessary in our industry, and thus any such adjustment requires the use of professional judgement on a case-by-case call.

6. Could you elaborate on how the required rest break would lead to longer work shifts? What types of salary structures already currently account for heat in your industry?

a. Shifts and the Specter of Unreasonably Long-Work Days

In most of the flexible packaging industry, plants operate 24-hours a day, except over weekends, in some cases. Employees are scheduled for 8-hour-to-12-hour shifts, depending on their preference and in some case, on an employee's specific assignment. Many employees prefer weekly 4-day, 12-hour shifts. However, during certain times of the year, assignments in specific process areas where there may be a reasonable expectation of high heat exposure, shifts could be limited to 8-hours. Coordinating 8-hour and 12-hour shifts pose a challenge by themselves to ensure process employees and supervising managers coverage.

Typically, both an 8-hour and a 12-hour shift includes an unpaid meal break (typically a half-hour – to – an hour) and two paid or unpaid mid-shift 15 minutes "floor breaks." Employees also are directed by supervisors to take a break if they need one for heat or other valid reasons, and such breaks are likely to be compensated. Thus, OSHA proposes that employees that work an 8-hour shift in high heat trigger work areas, would have 45-minutes to an hour-and-a-half for three daily compensated breaks. Since one of those breaks can be a meal break, and given that 15-minute breaks are generally taken already, FPA members generally do not regard the work day for those employees as a problem.

On the other hand, FPA members do see a problem if the work-day for employees that work 12-hr. shifts, would be expanded by the proposed requirement for a 15-minute paid break every two hours. That could add can add 1-1/2 hours to a work day, not counting a meal break (generally a half-hour to an hour). That would lead to a 14-15 hour-workday for some employees to accomplish 12 hours of work and paid rest.

As FPA attempted to explain in its comments to OSHA on the proposed HII rulemaking, a 14–to–15-hour workday is too long. Numerous studies have shown the effect of lengthy work days can compromise a worker's safety and the safety of those around them, by impairing cognitive function. [2] It also can disrupt a person's life and family responsibilities. While it is reasonable to expect that "mandating" breaks by law for employees that are exposed to high heat should help to alleviate the number of incidences of heat related illness and injury, lengthening an employee's time at work to accommodate the economic consequences of the breaks on the productivity of the work site will be resisted by affected employees and does not seem to be in anyone's business interests if they cause accidents and other ill-effects.

[2] See, e.g., García, A. M., & Gonzalez, C. (2020). "Work hours, fatigue, and the risk of occupational injury: A meta-analysis." Occupational Health Psychology*, 25(2), 190-206. Knauth, P. (2007). "Working time, health, and safety." *Industrial Health*, 45(5), 504-511.

6.2 What Types of Salary Structures Already Currently Account for Heat in Your Industry?

In FPA's comments on the proposed heat rule, we thought it worth noting for OSHA that certain job salary structures likely already take heat exposure in certain processes into account. For instance, in the lamination processes in the flexible packaging industries, experienced and/or more highly trained employees may be expected to be exposed to areas with higher heats, and thus, they are generally more highly compensated based on experience (as well as tenure). To our knowledge, however, employees who clean presses or work on the loading docks do not get paid more just because they are willing to accept more heat risks. Thank you for allowing us to clarify our comments.

IV. Conclusion and Contacts

FPA appreciates this opportunity to provide additional comments and suggestions regarding its understanding of OSHA's proposed heat standard. We would be happy to answer any questions that the Directorate's staff may have with regard to FPA's comments. They can be directed to me, and we will find the appropriate person to field them.

Respectfully submitted,

Kyla Fisher,
Director of Regulatory Affairs
kfisher@flexpack.com

185 Admiral Cochrane Drive
Suite 105
Annapolis, MD 21401

Tel (410) 694-0800
Fax (410) 694-0900

www.flexpack.org

FOR IMMEDIATE RELEASE

Tim Wright
Public Relations Account Executive
The Cyphers Agency
tim@thecyphersagency.com
410-280-5451

Flexible Packaging Association Releases 2025 Economic Impact Report
Industry Contributes $151 Billion to the U.S. Economy and Supports Nearly 400,000 Jobs

Annapolis, MD, October 27, 2025 — The Flexible Packaging Association (FPA), the leading advocate and voice for the growing U.S. flexible packaging industry, released its *2025 Economic Impact of the U.S. Flexible Packaging Industry* report, prepared by John Dunham & Associates, with new analysis underscoring the industry's substantial role in fueling the U.S. economy. According to the report, the flexible packaging industry drives $151.4 billion in total economic output and supports nearly 400,000 American jobs across all 528 sectors of the U.S. economy.

"Flexible packaging is one of those industries that most people never think about, but can't live without," said Dan Felton, President & CEO of the Flexible Packaging Association. "From food and medicine to critical household goods, flexible packaging keeps products protected, extends shelf life, and helps reduce waste. This report shows just how vital our sector is, supporting hundreds of thousands of American jobs and strengthening local economies in every state."

By the Numbers – The Industry's National Footprint

- $151.4 billion in total U.S. economic output (≈0.5% of GDP)
- 398,780 total jobs supported nationwide
  - 98,420 direct jobs in packaging manufacturing
  - 155,520 supplier jobs
  - 144,840 induced jobs
- $33.46 billion in wages and benefits
  - $8.7 billion from direct employment
  - $14.7 billion from suppliers
  - $10 billion from induced impacts
- $13.35 billion in federal, state, and local taxes generated

Flexible packaging—used in products such as pouches, wraps, and films—plays a vital role across manufacturing, food and beverage, healthcare, and consumer goods. Its lightweight, resource-efficient design reduces transportation costs, extends shelf life, and minimizes material use, making it one of the fastest-growing and most sustainable packaging segments in the U.S. Beyond production, flexible packaging generates a powerful ripple effect across the economy—supporting raw material suppliers, logistics, design, finance, and professional services in every state. The 2025 study quantifies these connections, illustrating the industry's broad economic influence from the factory floor to the national level.

"The flexible packaging sector doesn't just produce packages—it produces opportunity," Felton added. "As our members continue to invest in new materials, technologies, and recycling innovations, the economic and environmental value of flexible packaging will only continue to grow."
The full *2025 Economic Impact of the U.S. Flexible Packaging Industry* report, including national, state, and congressional district level data, is available for download at www.flexpack.org/economic-impact.

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About the Flexible Packaging Association (FPA)
The Flexible Packaging Association is the voice of the U.S. manufacturers of flexible packaging and their suppliers. The association's mission is connecting, advancing, and leading the flexible packaging industry. Flexible packaging represents $51.5 billion in direct economic impact in the U.S. and is the second largest and one of the fastest growing segments of the U.S. packaging industry. Flexible packaging is produced from paper, plastic, film, aluminum foil, or any combination of those materials, and includes bags, pouches, labels, liners, wraps, rollstock, and other flexible products. Learn more at FlexPack.org.