Submitted via e-mail to: rs@dir.ca.gov

November 20, 2018

Amalia Neidhardt
CAL/OSHA
P.O. Box 420603
San Francisco, CA 94142-0603

Re: Pactiv Comments on Proposed CAL/OSHA Standard for Heat Illness Prevention in Indoor Places of Employment

Dear Ms Neidhardt:

Thank you for providing Pactiv LLC (Pactiv) the opportunity to review this draft standard. Pactiv is a manufacturer of disposal paper and plastic disposal foodservice items, with 10 manufacturing and warehouse facilities in the State of California.

As noted in our detailed comments below, Pactiv has a number of concerns with the Standard as written. For each of our detailed comments/concerns, we have provided suggested revisions to the Standard. We request your agency revise the Standard in accordance with our suggested changes.

For the reasons stated below, Pactiv believes that this Standard, as currently drafted, would be infeasible to implement, would impose a significant regulatory burden on our manufacturing and warehousing facilities in the State of California and would not result in a material improvement in employee safety and health in regard to potential exposure to heath in the workplace. An overview of some of our key concerns is provided in the following bulletized list – however, please refer to our specific comments and suggested Standard changes for complete details:

- Pactiv believes that the Standard does not address a number of considerations that need to be taken into account for manufacturing and warehousing facilities, including, but not limited to:
    - The sheer number of separate work areas that can be present in manufacturing and warehouse environments.
    - The significant temperature variation that can occur between the different work areas within a facility.
    - The significant temperature variation that can occur within a specific work area, both during a shift and spatially.
    - The temperatures that employees are exposed to can significantly vary due to the variety of activities that an employee may perform over a shift.
- Pactiv is proposing revised language for the Standard that would address our concerns regarding compliance with the Standard in manufacturing and warehouse environments.

- Pactiv believes that the 82 degrees Fahrenheit threshold for Standard applicability is too low, and should be changed to 90 degrees Fahrenheit. It is also very confusing to have two separate temperature thresholds (82 and 90), as proposed in the current Standard, which would unnecessarily complicate compliance.
- Pactiv requests that the Wet Bulb Globe Temperature (WBGT) temperature should be added as an optional allowable measurement for heat index, as this is recommended under the National Institute for Occupational Safety and Health guidance, and is the specified indoor measurement method used in the Minnesota OSHA Heat Stress Standard.
- Pactiv believes that the wording in the Standard regarding requirements for employees that wear clothing that restricts heat removal, and employees working in a high radiant heat work areas, does not provide any clarifications regarding when precisely these requirements would apply. Pactiv is proposing revised language for the Standard that would provide reasonable clarifications regarding when the Standard would apply to these specific groups of employees.
- Pactiv believes that the temperature measurement requirements as proposed in the Standard are not clearly defined and thus are potentially either infeasible or unduly burdensome, and therefore is providing proposed revised language to address our concerns.
- Pactiv believes that the infeasibility determinations included under the Assessment and Control Measures Section can be easily be misunderstood or misinterpreted since no clarifications or directions are provided. Pactiv has proposed revised language for the Standard to address our concerns.

Our detailed comments are provided below. For ease of review, we have provided the applicable excerpted section from the Standard, followed by Pactiv's comments on that specific section.

I. Paragraph (a)(1): *This standard applies to all indoor work areas where the temperature equals or exceeds 82 degrees Fahrenheit when employees are present.*

- Pactiv Comments on (a)(1):
    - The Standard, including this specific paragraph, does not address a number of considerations that need to be taken into account for manufacturing and warehousing facilities, including:
        i. The temperature can significantly vary amongst work areas within a facility
        ii. The temperature can significantly vary within a specific work area, both during a shift and spatially.
        iii. In addition, this paragraph does not define a specific duration when employees must be present for the Standard to apply.
    - Given these variations, and the overall difficulty with implementing this Standard at our facilities, Pactiv believes that this 82 degrees Fahrenheit threshold for Standard applicability is too low, and should be changed to 90 degrees Fahrenheit.
    - Pactiv requests that the following clarifying sentence be added to Paragraph (a)(1) of the Standard to clarify these concerns:

(a)(1): This standard applies to all indoor work areas where the temperature equals or exceeds ~~82~~ 90 degrees Fahrenheit when employees are present. In facilities where temperatures can vary between work areas, the Standard only applies to those specific work areas within the facility where (a) the temperature equals or exceeds 90 degrees Fahrenheit, and (b) where employees are expected to work in that work area for an entire shift. In addition, if employees work in multiple work areas or multiple locations within a work area, compliance with the Standard only needs to be assessed for the work area/location that the employee spends the majority of their time during the shift.

II. Paragraph (a)(2): *Conditions under which an indoor work area is subject to all provisions of this standard, including subsection (e):*
(A) The temperature equals or exceeds 90 degrees Fahrenheit; or
(B) The heat index equals or exceeds 90 degrees Fahrenheit; or
(C) Employees wear clothing that restricts heat removal; or
(D) Employees work in a high radiant heat work area.

- Pactiv Comments on (a)(2):
  - Pactiv believes that a Wet Bulb Globe Temperature (WBGT) temperature should be added as an optional measurement for heat index. The National Institute for Occupational Safety and Health's Criteria for a Recommended Standard: Occupational Exposure to Hot Environments (2016) indicates that "[t]he WBGT index meets the criteria of a heat stress index," and provides guidance for its use in indoor environments. In addition, WBGT is the specified indoor measurement method used in the Minnesota OSHA Heat Stress Standard. Therefore, we request that the following be added to Paragraph (a)(2) of the Standard:
    i. B. The heat index or WBGT equals or exceeds 90 degrees Fahrenheit
  - Similar to our comments on Paragraph (a)(1), this specific paragraph does not address a number of considerations that need to be taken into account for manufacturing and warehousing facilities, including:
    i. The temperature can significantly vary within a specific work area, both during a shift and spatially.
    ii. The temperatures that employees are exposed to can significantly vary, similar to the temperature variation, but also due to the variety of activities that an employee may perform over a shift.
  - Pactiv has similar concerns regarding this paragraph's applicability to employees who wear clothing that restricts heat removal or work in high radiant heat areas, as again they do not address a number of considerations that need to be taken into account for manufacturing and warehousing facilities, including the fact that workers often don this equipment or work near high radiant heat areas for a relatively short period of time.
  - Pactiv requests that the following clarifications be added to Paragraph (a)(2) of the Standard to clarify these concerns:

    (a)(2): Conditions under which an indoor work area is subject to all provisions of this standard, including subsection (e):

(A) The selected temperature criteria (temperature, heat index or WBGT) equals or exceeds 90 degrees Fahrenheit; or

Note - In work areas where temperatures can vary during a shift, or where temperatures that employees are exposed to can vary during a shift, the Standard only applies where the selected temperature criteria equals or exceeds 90 degrees Fahrenheit, and when employees are expected to be exposed to this temperature for the entire shift.

~~(B) The heat index equals or exceeds 90 degrees Fahrenheit~~; or

(~~C~~B) Employees wear clothing that restricts heat removal; or

Note - The Standard only applies to employees that wear clothing that restricts heat removal when the clothing is required to be worn for more than one continuous hour per shift, and the selected temperature criteria in the work area equals or exceeds 90 degrees Fahrenheit

(~~D~~C) Employees work in a high radiant heat work area.

Note - The Standard only applies to employees that work in high radiant heat areas when the temperature in the normal work area nearest the high radiant heat source equals or exceeds 90 degrees Fahrenheit (temperature, heat index or WBGT), and when employees are exposed to this temperature for more than one continuous hour per shift.

III. Paragraph (b) DEFINITIONS: *"High radiant heat work area" means a work area where the globe temperature is at least 5 degrees Fahrenheit greater than the "temperature," as defined in this subsection.*

- Pactiv Comments on (b) – "High radiant heat work area" definition:
  - This definition does not address a number of considerations that need to be taken into account for manufacturing facilities, including:
    i. The temperature from a piece of equipment emitting radiant heat can often vary significantly due to equipment cycling, start-up/shut-down activities, etc.
    ii. The temperatures that employees are exposed to from radiant heat can also significantly vary. Employees will often only be exposed to radiant heat for short periods of time during a shift, due to the variety of activities that an employee may perform over a shift, as well as the varying nature of the radiant heat source itself.
  - Given the potential for varying high radiant heat temperatures and varying employee exposures, Pactiv believes that this definition imposes an undue burden on our manufacturing facilities. If the Standard were to include this definition as written, Pactiv would be faced with an unreasonable amount of temperature monitoring on potentially an hourly basis.
  - Pactiv requests that the "High radiant heat work area" definition be revised as follows::
    - "High radiant heat work area" means a work area where ~~the globe temperature is at least 5 degrees Fahrenheit greater than the "temperature," as defined in this subsection~~:

a) There is a radiant heat source nearby, such as machinery, oven, etc. AND
b) The temperature in the normal work area nearest the high radiant heat source equals or exceeds 90 degrees Fahrenheit (temperature, heat index or WBGT) AND
c) Employees are exposed to at least a globe temperature that is at least ~~5~~ 10 degrees Fahrenheit greater than the temperature in the normal work area nearest the high radiant heat source; AND
d) Employees are exposed to this elevated temperature for more than 1 continuous hour per shift.

IV. Paragraph (b) DEFINITIONS: *"Temperature" means the dry bulb temperature in degrees Fahrenheit obtainable by using a thermometer freely exposed to the air without considering humidity or radiant heat, to measure the temperature in the immediate area where employees are located.*

- Pactiv Comments on (b) – "Temperature" definition:
  - Similar to some of our prior comments, this definition does not address a number of considerations that need to be taken into account for manufacturing and warehousing facilities. The term "immediate areas where employees are located" is too vague, and would present a number of challenges for Pactiv were it to be included in the Standard as written.
  - At Pactiv locations, we have a variety of different positions working in each work area, all of which are exposed to varying temperatures during a shift. If the Standard were to include this definition as written, Pactiv would be faced with an unreasonable amount of temperature monitoring on potentially an hourly basis in all the various work areas at our locations. Pactiv believes that this definition imposes an undue burden on our facilities, as assessing the temperature in the "immediate area where employees are located" would not be practical.
  - Pactiv requests that the "Temperature" definition be revised as follows::
    - "Temperature" means the dry bulb temperature in degrees Fahrenheit obtainable by using a thermometer freely exposed to the air without considering humidity or radiant heat, to measure the temperature in the immediate area where employees are located. However, temperatures only need to be assessed in a work area if employees are expected to be present in a specific location within the work area continuously during a shift. In addition, if employees work in multiple work areas or multiple locations within a work area, temperatures only need to be assessed in the work area/location that the employee spends the majority of their time during the shift.

V. Paragraph (d)(2)(A): *Access to Cool-Down Areas*
An individual employee who takes a preventative cool-down rest (A) shall be monitored and asked if he or she is experiencing symptoms of heat illness;….

- Pactiv Comments on (d)(2)(A):
  - The paragraph's wording with respect to "monitoring" employees is vague and needs to be clarified. As written, this could be interpreted as continuous monitoring, which would impose an undue burden on our facilities, as our Pactiv manufacturing and warehouse facilities would not have the resources for performing continuous monitoring.
  - Pactiv requests that the wording in the Access to Cool-Down Areas be revised as follows:

    An individual employee who takes a preventative cool-down rest (A) shall be monitored <u>at least once per hour</u> and asked if he or she is experiencing symptoms of heat illness;….

VI. Paragraph (e)(1): *Assessment and Control Measures*
(1) As specified in subsections (e)(1)(A) through (e)(1)(D), the employer shall measure and record the temperature or heat index, whichever is greater, and shall identify and evaluate all other environmental risk factors for heat illness.

- Pactiv Comments on (e)(1):
  - Pactiv has a number of concerns with this paragraph as written:
    i. As noted in our comments on Paragraph (a)(2), Pactiv believes that a Wet Bulb Globe Temperature (WBGT) temperature should be added as an optional measurement for heat index.
    ii. Measuring both the temperature and heat index (along with the WBGT, as we have suggested) seems excessive and would potentially create confusion for implementation of the Standard at our Pactiv facilities. Pactiv recommends this wording be revised to be more clear.
    iii. The requirement to "record" temperatures is vague and needs to be clarified as to frequency, etc. and the manner in which such recording must be done.
    iv. The requirement to "identify and evaluate all other environmental risk factors for heat illness" is excessively vague and compliance would be difficult if not impossible to assess. As mentioned in a number of our comments, the temperature can significantly vary within a specific work area, both during a shift and spatially, and the temperatures that employees are exposed to can significantly vary. Requiring Pactiv to evaluate "all other environmental risk factors for heat illness" for each work area and for the varying activities that Pactiv employees perform in each work area would place an undue burden on Pactiv.
  - Pactiv requests that the following clarifications be added to Paragraph (e)(1) of the Standard to address these concerns:
    - (1) As specified in subsections (e)(1)(A) through (e)(1)(D), the employer shall measure and record the temperature, <u>heat index or WBGT</u>, ~~whichever is greater~~, <u>in each work area where employees are expected to be present in a specific location within a work area and work continuously during a shift</u> and shall identify and evaluate ~~all~~ other environmental risk factors for heat illness for work areas <u>where the selected temperature criteria</u>

(temperature, heat index or WBGT) equals or exceeds 90 degrees Fahrenheit in the work area, and when employees are exposed to this temperature continuously during a shift.

- Measuring and recording of temperatures shall be required at least once per shift.

VII. Paragraph (e)(1)(A): *Assessment and Control Measures*
(A) The employer shall establish and maintain accurate records of temperature or heat index measurements, as applicable. The records shall include the date, time, and specific location of all measurements.

- Pactiv Comments on (e)(1)(A):
  - Pactiv believes that this paragraph needs to be clarified to specify the frequency of temperature recordkeeping, as the current wording is vague.
  - Pactiv also believes that the recordkeeping requirements are vague and would impose an undue burden on Pactiv as written.
  - Pactiv also notes that its understanding that these temperature or heat index records are not personal individual employee exposure records, because these are more "area" readings and not individualized samples.
  - Pactiv requests that the following clarifications be added to Paragraph (e)(1)(A) of the Standard:
    - (A) The employer shall establish and maintain accurate records of temperature or heat index measurements, as applicable, which must be recorded at least once per shift. Temperature or heat index monitoring and associated records are only required for each work area where employees are expected to be present in a specific location within a work area continuously during a shift. In addition, if employees work in multiple work areas or multiple locations within a work area, monitoring/records only need to be maintained in the work area/location that the employee spends the majority of their time during the shift. The records shall include the date, time, and specific location of all measurements, and must be retained for at least 6 months. No records are required to be maintained for work areas within a facility where the temperature is below 90 degrees Fahrenheit.

VIII. Paragraph (e)(1)(B): *Assessment and Control Measures*
(B) Temperature or heat index measurements, as applicable, shall be representative of employee exposures and include measurements taken at times during the work shift when employee exposures are expected to be the highest.
1. Initial measurements shall be taken as soon as subsection (e) applies.
2. Measurements shall be taken again when they are reasonably expected to be 10 degrees or more above the previous measurements.

- Pactiv Comments on (e)(1)(B):
  - Pactiv has a number of concerns with this paragraph as written:
    i. The requirement for measurements to be "representative of employee exposures" is vague and needs to be clarified. As mentioned in a number

of our comments, the temperature can significantly vary within a specific work area, both during a shift and spatially, and the temperatures that employees are exposed to can significantly vary. The phrase "representative of employee exposures" does not provide sufficient clarity for Pactiv's manufacturing and warehousing settings, and would be unduly burdensome unless clarified.

ii. The requirement for measurements to be "taken at times during the work shift when employee exposures are expected to be the highest" is unduly burdensome as written. For example, employees could be exposed to an elevated temperature for extremely short periods of time (e.g., less than 1 minute) – in other scenarios, employees could be walking to their break after working in a location that is provided "spot" comfort cooling.

iii. The requirement that "[i]nitial measurements shall be taken as soon as subsection (e) applies" is vague and needs to be clarified. As mentioned in a number of our comments, the temperature can significantly vary within a specific work area, both during a shift and spatially, and the temperatures that employees are exposed to can significantly vary. The phrase "[i]nitial measurements shall be taken as soon as subsection (e) applies" does not provide sufficient clarity for Pactiv's manufacturing and warehousing settings, and would be unduly burdensome unless clarified.

iv. The requirement that "[m]easurements shall be taken again when they are reasonably expected to be 10 degrees or more above the previous measurements" is unduly burdensome. As mentioned in a number of our comments, the temperature can significantly vary within a specific work area, both during a shift and spatially, and the temperatures that employees are exposed to can significantly vary. Requiring frequent temperature monitoring of all work areas to detect a 10 degree Fahrenheit temperature increase or more in any one work area would not be practical. Pactiv proposes that a National Weather Service Heat Advisory or similar heat warning would be a much simpler and practical trigger for conducting additional measurements.

- Pactiv requests that the following clarifications be added to Paragraph (e)(1)(B) of the Standard:

i. (B) Temperature or heat index measurements, as applicable, shall be ~~"representative of employee exposures~~ <u>required for those locations within a work area where employees are expected to work continuously during a shift</u> and ~~include~~ measurements <u>shall be taken where employees are expected to spend the majority of their time during the shift</u>.

1. Initial measurements shall be taken as soon as <u>practical after</u> subsection (e) applies.

2. <u>Additional measurements shall be conducted when the National Weather Service issues a Heat Advisory or similar heat warning. These additional measurements should be conducted as soon as feasible, but generally within approximately 4 hours of receiving notice of the Heat Advisory or similar heat warning.</u>

IX. Paragraph (e)(1)(D): *Assessment and Control Measures*
(D) The employer shall have effective procedures to obtain the active involvement of employees and their union representative in performing the following:
1. Designing, conducting, and recording the measurements of temperature or heat index, as applicable.
2. Identifying and evaluating all other environmental risk factors for heat illness.

- Pactiv Comments on (e)(1)(D):
  - Pactiv requests that the following clarifications be added to Paragraph (e)(1)(D) of the Standard:
    (D) The employer shall have effective procedures to obtain the active involvement of employees and their union representative <u>(if applicable)</u> in performing <u>or developing a plan for</u> the following:
    1. Designing, conducting, and recording the measurements of temperature or heat index, as applicable.
    2. Identifying and evaluating ~~all~~ other <u>applicable</u> environmental risk factors for heat illness.

X. Paragraph (e)(2): *Assessment and Control Measures*
(2) The employer shall use control measures as specified in subsections (e)(2)(A) through (e)(2)(C) to minimize the risk of heat illness. The selection of control measures shall be based on the environmental risk factors for heat illness present in the work area.at times during the work shift when employee exposures are expected to be the highest.

- Pactiv Comments on (e)(2):
  - Pactiv has a number of concerns with this paragraph as written:
    i. The requirement for selecting control measures "based on the environmental risk factors for heat illness present in the work area" is excessively vague as written. As mentioned in a number of our comments, the temperature can significantly vary within a specific work area, both during a shift and spatially, and the temperatures that employees are exposed to can significantly vary. Requiring Pactiv to select control measures "based on the environmental risk factors for heat illness present in the work area" would place an undue burden on Pactiv given the number of work areas, temperature variations within work areas, the variety of employee activities within work areas, etc.
    ii. The requirement for selecting control measures "at times during the work shift when employee exposures are expected to be the highest" is unduly burdensome as written. Employees could be exposed to an elevated temperature for extremely short periods of time (e.g., less than 1 minute) – in other scenarios, employees could be walking to their break after working in a location that is provided "spot" comfort cooling.

- Pactiv requests that the following clarifications be added to Paragraph (e)(2) of the Standard:

  (2) The employer shall use control measures as specified in subsections (e)(2)(A) through (e)(2)(C) to minimize the risk of heat illness. The selection of control measures shall ~~be based on~~ consider the applicable environmental risk factors for heat illness present ~~in the work area~~ in each work area where employees are expected to work continuously during a shift and where employees are expected to spend the majority of their time during the shift.~~at times during the work shift when employee exposures are expected to be the highest.~~

XI. Paragraph (e)(2): *Assessment and Control Measures*

(A) Engineering controls. Engineering controls shall be used to reduce the temperature or heat index, as applicable, to the lowest temperature or heat index possible, except to the extent that the employer can demonstrate that such controls are not feasible. Engineering controls include, but are not limited to,: isolation of hot processes, isolation of employees from sources of heat, air conditioning, cooling fans, cooling mist fans, natural ventilation when the outdoor temperature is lower than the indoor temperature, local exhaust ventilation, shielding, and insulation of hot surfaces.

- Pactiv Comments on (e)(2)(A):
  - Pactiv has a number of concerns with this paragraph as written:
    i. The requirement for using Engineering Controls "to reduce the temperature or heat index, as applicable, to the lowest temperature or heat index possible" is vague and unduly burdensome to Pactiv as written. A requirement to reduce the temperature or heat index to the lowest temperature or heat index possible is impractical, counterproductive to energy efficiency and would increase electricity usage and associated greenhouse gas emissions.
    ii. The exception wording for using Engineering Controls - "to the extent that the employer can demonstrate that such controls are not feasible" - is vague as written. Pactiv believes that additional clarification needs to be added regarding making an infeasibility determination.
    iii. Many Pactiv facilities have employee comfort cooling systems that direct cool air to specific locations within a work area. Pactiv requests that this be reflected in the wording within this paragraph.
  - Based on these concerns, Pactiv requests that Paragraph (e)(2)(A) be revised as follows:

    (A) Engineering controls. Engineering controls shall be used for the specific work areas subject to the Standard to reduce the temperature or heat index, as applicable, to ~~the lowest temperature or heat index possible~~ less than 90 degrees Fahrenheit in those work areas where employees are exposed to temperatures or heat indexes equal to or greater than 90 degrees Fahrenheit continuously during a shift, except to the extent that the employer can demonstrate that such controls are not feasible. Feasibility shall consider both technological and economic feasibility, and

use recognized and generally accepted good engineering principles relating to heating, ventilation, and air conditioning. Engineering controls include, but are not limited to: isolation of hot processes, isolation of employees from sources of heat, "spot" cooling of specific work area locations, air conditioning, cooling fans, cooling mist fans, natural ventilation when the outdoor temperature is lower than the indoor temperature, local exhaust ventilation, shielding, and insulation of hot surfaces.

XII. Paragraph (e)(2): *Assessment and Control Measures*
(B) Administrative controls. Where engineering controls are not feasible or do not reduce the temperature or heat index, as applicable, to below 90 degrees Fahrenheit or to below 82 degrees Fahrenheit where employees wear clothing that restricts heat removal or work in high radiant heat work areas, administrative controls shall be implemented, except to the extent that the employer can demonstrate that such controls are not feasible. Administrative controls include, but are not limited to: acclimatizing employees, rotating employees, scheduling work earlier or later in the day, using work/rest schedules, reducing work intensity or speed, changing required work clothing, and using relief workers.

- Pactiv Comments on (e)(2)(B):
  - Pactiv has a number of concerns with this paragraph as written:
    i. Pactiv restates its objectives to using the vague and imprecise wording for triggering potential Administrative Controls ("below 90 degrees Fahrenheit or to below 82 degrees Fahrenheit where employees wear clothing that restricts heat removal or work in high radiant heat work areas"). As noted previously, these do not take into account the significant number of variables in manufacturing and warehousing settings.
    ii. The exception wording for using Administrative Controls - "to the extent that the employer can demonstrate that such controls are not feasible" - is vague as written. Pactiv believes that additional clarification needs to be added regarding making an infeasibility determination.

  - Based on these concerns, Pactiv requests that Paragraph (e)(2)(A) be revised as follows:

    (B) Administrative controls. Where engineering controls are not feasible or do not reduce the temperature or heat index, as applicable, in a specific work area subject to the Standard to below 90 degrees Fahrenheit ~~or to below 82 degrees Fahrenheit where employees wear clothing that restricts heat removal or work in high radiant heat work areas~~, administrative controls shall be implemented for those specific work areas, except to the extent that the employer can demonstrate that such controls are not feasible. Feasibility shall consider both technological and economic feasibility, and use recognized and generally accepted principles related to heat stress management. Administrative controls shall also be used for employees that wear clothing that restricts heat removal or work in high radiant heat work areas, but only

when these employees are subject to the requirements of this Standard. Administrative controls include, but are not limited to: acclimatizing employees, rotating employees, scheduling work earlier or later in the day, using work/rest schedules, reducing work intensity or speed, changing required work clothing, and using relief workers.

XIII. Paragraph (e)(2): *Assessment and Control Measures*
(C) Personal heat-protective equipment. Where engineering controls are not feasible or do not reduce the temperature or heat index, as applicable, to below 90 degrees Fahrenheit or to below 82 degrees Fahrenheit where employees wear clothing that restricts heat removal or work in high radiant heat work areas and administrative controls are not feasible practicable, personal heat-protective equipment shall be used to reduce the risk of heat illness, except to the extent that the employer can demonstrate that use of such equipment is not feasible. Personal heat-protective equipment that can reduce the risk of heat illness includes, but is not limited to: water-cooled garments, air-cooled garments, cooling vests, wetted over-garments, heat-reflective clothing, and supplied-air personal cooling systems.

- Pactiv Comments on (e)(2)(C):
  - Pactiv has a number of concerns with this paragraph as written:
    i. Pactiv restates its objectives to using the vague and imprecise wording for triggering potential Personal Heat-Protective Equipment ("below 90 degrees Fahrenheit or to below 82 degrees Fahrenheit where employees wear clothing that restricts heat removal or work in high radiant heat work areas"). As noted previously, these do not take into account the significant number of variables in manufacturing and warehousing settings.
    ii. The exception wording for using Personal Heat-Protective Equipment - "to the extent that the employer can demonstrate that such controls are not feasible" - is vague as written. Pactiv believes that additional clarification needs to be added regarding making an infeasibility determination.
    iii. Pactiv believes that including language that references employees wearing clothing that restricts heat removal should not be included, as donning additional Personal Heat-Protective Equipment in addition to clothing that restricts heat removal would only likely add to the heat stress of the employees.
  - Based on these concerns, Pactiv requests that Paragraph (e)(2)(A) be revised as follows:

    (C) Personal heat-protective equipment. Where engineering controls are not feasible or do not reduce the temperature or heat index, as applicable, in a specific work area subject to the Standard to below 90 degrees Fahrenheit ~~or to below 82 degrees Fahrenheit where employees wear clothing that restricts heat removal or work in high radiant heat work areas~~ and administrative controls are not feasible, personal heat-protective equipment shall be used to reduce the risk of heat illness, except to the extent that the employer can demonstrate that use of such equipment is not feasible. Feasibility shall

consider both technological and economic feasibility, and use recognized and generally accepted principles related to heat stress management. Personal heat-protective equipment that can reduce the risk of heat illness includes, but is not limited to: water-cooled garments, air-cooled garments, cooling vests, wetted over-garments, heat-reflective clothing, and supplied-air personal cooling systems.

XIV. Paragraph (g)(1): *Close Observation during Acclimatization*
All employees shall be closely observed by a supervisor or designee when the temperature in the work area is at least 82 degrees Fahrenheit and at least 10 degrees Fahrenheit higher than the average high daily temperature in the work area during the preceding five days.

- Pactiv Comments on (g)(1):
  - The paragraph's wording with respect to employees being "closely observed" is vague and needs to be clarified. As written, this could be interpreted as continuous observation, which would impose an undue burden on our facilities, as our Pactiv manufacturing and warehouse facilities would not have the resources for performing continuous observation.
  - The requirement to closely observe employees when temperatures are at least 80 degrees Fahrenheit and "at least 10 degrees Fahrenheit higher than the average high daily temperature in the work area during the preceding five days" is unduly burdensome. As mentioned in a number of our comments, the temperature can significantly vary within a specific work area, both during a shift and spatially, and the temperatures that employees are exposed to can significantly vary. Consequently, meeting this requirement as written would not be practical.
  - Pactiv requests that the wording in this paragraph be revised as follows:

    All employees shall be ~~closely~~ observed by a supervisor or designee at least once per shift when the temperature in a work area subject to this Standard equals or exceeds 90 degrees Fahrenheit, and when employees are reasonably expected to be exposed to this temperature continuously during a shift.

XV. Paragraph (g)(2): *Close Observation during Acclimatization*
An employee who has been newly assigned to any of the following shall be closely observed by a supervisor or designee for the first 14 days of the employee's employment:
(A) To a work area where the temperature or heat index, as applicable, equals or exceeds 90 degrees Fahrenheit; or
(B) To work involving the use of clothing that restricts heat removal where the temperature equals or exceeds 82 degrees Fahrenheit; or
(C) To a high radiant heat work area where the temperature equals or exceeds 82 degrees Fahrenheit.

- Pactiv Comments on (g)(2):

- The paragraph's wording with respect to employees being "closely observed" is vague and needs to be clarified. As written, this could be interpreted as continuous observation, which would impose an undue burden on our facilities, as our Pactiv manufacturing and warehouse facilities would not have the resources for performing continuous observation.
- The wording with respect to employees wearing clothing that restricts heat removal and employees exposed to high radiant heat areas should be revised to address our previous comments.
- Pactiv requests that the wording in this paragraph be revised as follows:

  An employee who has been newly assigned to any of the following shall be ~~closely~~ observed by a supervisor or designee at least once per shift for the first 14 days of the employee's employment:
  (A) To a work area where the temperature or heat index, as applicable, equals or exceeds 90 degrees Fahrenheit, and the employee is reasonably expected to be exposed to this temperature continuously during a shift; or
  (B) To work involving the use of clothing that restricts heat removal where the temperature equals or exceeds 90 degrees Fahrenheit for the selected temperature criteria (temperature, heat index or WBGT); or
  (C) To a high radiant heat work area where the temperature in the normal work area nearest the high radiant heat source equals or exceeds 90 degrees Fahrenheit for the selected temperature criteria (temperature, heat index or WBGT) and the employee is expected to be exposed to at least a globe temperature that is at least 10 degrees Fahrenheit greater than the temperature in the normal work area nearest the high radiant heat source for more than 1 continuous hour per shift.

In our Company, the safety and health of our employees is paramount. We are committed to protecting our employees against the potential hazard of heat illness by implementing generally recognized and accepted engineering principles and industry practices that are feasible and do not impose an undue regulatory burden on the Company.

We look forward to working with you on incorporating our comments into the Standard. I would be happy to meet with you to review our comments in detail, or set up a conference call to discuss them. If you have any questions or need additional information, please contact me at (847) 482-2675 or mrehor@pactiv.com.

Sincerely,

Michael W. Rehor

Michael W. Rehor
Pactiv Director, Environmental Health and Safety