

**AN EMPLOYEE OWNED COMPANY**

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# **HEAT ILLNESS PREVENTION PROGRAM**



## Revision History

<b>Heat Illness Procedures Manual</b>		
Version 1.0	Approved by: Rich Hallinan	
Next Review:	Safety Manager: Dave Boucher	Date: October 4, 2018
	Author: Dave Boucher	Date: October 4, 2018

Version	Date Approved	Author	Revision Notes:
1.0	2018	Dave Boucher	Document Created
1.1	2020	Jorge Gomez	Added policies and references, fainting/syncope identification, updated Heat Index table, and other minor edits
1.2	2022	Jorge Gomez	Updated Links and bookmarks through the Manual, added to Section IV: Responding to Emergencies to further align with Cal/OSHA requirements and other minor edits.
1.3	September 18, 2024	Jorge Gomez	Added Cal/OSHA Title 8 Section 3396 Heat Illness Prevention requirements in Indoor Places of Employment, which required edits of nearly all sections of the manual and additional Appendices. Added checklist Appendices to guide recordkeeping efforts

# Heat Illness Prevention

## I. Applicability

This Heat Illness Prevention Procedures Manual has been created for NP Mechanical Inc. to comply with California Code of Regulations [Title 8, Section 3395, Heat Illness Prevention in Outdoor Places of Employment](#), and [Section 3396, Heat Illness Prevention in Indoor Places of Employment](#). The Heat Illness Prevention standard applies to any workplace where environmental or personal risk factors for heat illness are present.

## II. Responsibilities

### Department Managers

- Ensure that this procedures manual is implemented.
- Provide training to supervisory and non-supervisory employees before the employee begins work that should reasonably be anticipated to result in exposure to heat illness risks.
- Provide the means for corrective action.

### Supervisors

- Ensure employee compliance with the provisions of this manual.
- Provide adequate water and shade/cool down areas as specified in this document.
- Ensure the site Work Planning and Checklist form (Appendix G) is complete and posted at the job site.
- Evaluate work conditions before sending employees to perform work in hot outdoor conditions. Cal/OSHA defines a trigger temperature and “shade up” provisions when temperatures exceed 80°F, and “high heat” procedures at 95°F. Typically, temperatures above 80°F, especially with heavy physical work activities, would represent conditions where there is a risk of heat illness. Other factors, such as high humidity or work activities, restrict the body’s ability to cool itself (i.e., protective clothing), and could result in heat illness at lower temperatures.



## Employees

- Follow the procedures specified in this manual.
- Notify the supervisor or manager of deviations from this plan or if an employee experiences or notices symptoms of heat illness.

## Environmental Health and Safety

- Periodically review this manual and communicate any program changes to affected parties.
- Provide support and subject matter expertise.

The following designated person(s) have the authority and responsibility for implementing the provisions of this manual at this worksite.

Name	Title	Location
Jorge Gomez	Safety Manager	9129 Stellar Court, Corona, CA 92883
Jorge Gomez	Safety Manager	82855 Market St. Suite J Indio, CA 92201

## III. Company Policies and References

NP Mechanical Heat Illness Prevention policy can be accessed through the QR Code sticker or Posters posted throughout the warehouse.

## IV. Personal Risk Factors

Personal risk factors for heat illness include:

- **General Health & Age:** Those at greatest risk for heat-related illness include people greater than 65 years old, overweight, ill, or taking certain medications. Additional risk factors include fever, dehydration, heart disease, mental illness, poor circulation, and sunburn.
- **Acclimatization:** The temporary adaptation of the body to work in the heat occurs gradually with exposure to ambient heat. The body needs time to adapt to working in the heat. When temperatures rise suddenly, employees are at increased risk for heat illness while acclimating to the heat. Acclimatization is particularly important for employees returning to work after a prolonged absence, recent illness, or recently moving from a cool to hot climate. For heavy work under very hot conditions, four to fourteen days of progressively increasing work time is recommended. For less severe conditions, two to three days of increasing work activity and duration are recommended (See Appendix A).
- **Alcohol & Caffeine:** Alcoholic beverages, coffee, tea, or other drinks containing caffeine will dehydrate the body and increase the risk of heat illnesses.

## V. Environmental Risk Factors

Environmental risk factors for heat illness are defined in the regulation as “working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun, and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees.” The Heat Index (HI) is the temperature the body feels when heat and humidity are combined. HI is applicable to areas and conditions where high humidity is a factor. The chart below shows the HI that corresponds to the actual air temperature and relative humidity. This chart is based upon shady, light wind conditions or indoor spaces. Exposure to direct sunlight can increase the HI by up to 15°F. This table can be used in consideration of the risk factors and the subsequent need for water, rest, and shade. Regardless of the actual ambient temperature, provision of water and shade as described above should be implemented whenever the HI exceeds 90°F (See Appendix B) outdoors or exceeds 82°F indoors.

NWS Heat Index		Temperature (°F)															
		80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
Relative Humidity (%)	40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
	45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
	50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
	55	81	84	86	89	93	97	101	106	112	117	124	130	137			
	60	82	84	88	91	95	100	105	110	116	123	129	137				
	65	82	85	89	93	98	103	108	114	121	128	136					
	70	83	86	90	95	100	105	112	119	126	134						
	75	84	88	92	97	103	109	116	124	132							
	80	84	89	94	100	106	113	121	129								
	85	85	90	96	102	110	117	126	135								
	90	86	91	98	105	113	122	131									
	95	86	93	100	108	117	127										
100	87	95	103	112	121	132											

**Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity**

Caution     
  Extreme Caution     
  Danger     
  Extreme Danger




Table 1. National Weather Service Heat Index and likelihood of heat disorders

## VI. Identifying Heat Illness

Heat illness is a group of serious and escalating medical conditions that can result from the body's inability to cope with a particular heat load. These illnesses include heat fatigue, heat cramps, heat rash, fainting/syncope, heat exhaustion, and heat stroke. For a full description of each illness and its associated symptoms, complete the Safety Source indoor/outdoor heat illness prevention training video.

Online Training:

- a. Indoor Heat Illness: Facts & Prevention – SS1099IE (English); SS1099IS (Spanish)
- b. Outdoor Heat Illness - SSC0020E (English); SSC0020ES (Spanish)

## VII. General Prevention

- Rest in shaded areas outdoors or cooling areas with a temperature below 82°F indoors
- Stay hydrated
- Avoid vigorous physical activities in hot and humid weather
- At work, if you must perform physical activities in hot weather:
  - Drink plenty of fluids, preferably water
  - Avoid alcohol, coffee, and tea
  - Take frequent breaks to hydrate yourself
  - As practical, wear hats, light-colored, and light/loose clothes

## VIII. Provision of Water

Employees are encouraged to drink water frequently. Water shall be fresh, pure, suitably cool, and provided to employees free of charge. The water shall be located as close as practicable to the areas where employees are working and be readily available.

- Supervisors are responsible for ensuring employees have an adequate supply of drinking water (See Appendix C).
- Supervisors shall encourage the frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties.
- Drinking water will be provided in sufficient quantities to provide 1 quart per employee per hour for the entire shift (at least 2 gallons per employee for an 8-hour shift).
- If there are effective procedures for replenishing the water supply during the shift, a minimum of 2 quarts of water per employee may be provided at the beginning of the shift.



## **IX. Shade, Cool-Down Area, and Rest**

A shaded area will be provided for outdoor workers when temperatures exceed 80°F. A cool-down area with a temperature maintained below 82°F must be provided for indoor workers when indoor temperatures exceed 82°F. The shade present and/or the cool-down area will be at least large enough to accommodate all employees on recovery, rest periods, or mealtime so that they can sit in a normal posture fully in the shade or cool-down area without having to be in physical contact with each other. This needs to accommodate all the employees who are on such a break at any point in time. This does not mean that employers are required to provide enough shade and cool-down space to accommodate all of the employees on the shift simultaneously. Employers may, for example, rotate the breaks and mealtimes among employees. The shade or cool-down area should be located as close as practicable to the areas where employees are working. (See Appendix D). For outdoor work, the shaded area shall be open to the air or ventilated and cooled, and access shall be always permitted. Canopies, umbrellas, or other temporary structures may provide shade, provided they block direct sunlight. Supervisors are responsible for:

- Ensuring that employees have access to shaded or air-conditioned areas (e.g. break room, or a vehicle whose air conditioning has been running and maintaining a cool interior) to prevent or recover from heat illness symptoms, or to take rest breaks.
- Emphasizing the importance of taking recovery or rest periods.
- Accommodating a preventative cool-down rest if the employee feels discomfort in the heat to prevent the onset of heat illness. An individual employee who takes a preventative cool-down rest shall:
  - Be monitored and asked if they are experiencing symptoms of heat illness.
  - Be encouraged to remain in the shade or cool-down area.
  - Not be ordered back to work until any signs or symptoms of heat illness have abated, but in no event less than five minutes in addition to the time needed to access the shade or cool-down area.

## X. High Heat Procedures

Additional high-heat procedures are required for outdoor workspaces when the temperature equals or exceeds 95°F. These procedures shall include the following, to the extent practicable:

- Ensure that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor when necessary. An electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable.
- Observe employees for alertness and signs or symptoms of heat illness.
- Remind employees throughout the work shift to drink plenty of water.
- Cal/OSHA requires close supervision of all new employee by a supervisor or designee for the first 14 days of the employee's employment, unless the employee indicates at the time of hire that he or she has been doing similar outdoor work for at least ten of the past 30 days for four or more hours per day.
- For agricultural work sites, mandatory ten-minute preventative cool-down rest periods shall be provided every two hours.

## **XI. Employee Emergency Procedures**

Any employee who recognizes the symptoms or signs of heat illness in themselves or in coworkers should immediately report this condition to their supervisor. When you recognize signs of heat illness in yourself or a co-worker:

- Move them to a shaded or cooled indoor area for a recovery period of at least five minutes.
- If the condition appears to be uncertain, severe (such as, but not limited to, decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior or convulsions) or the employee does not recover quickly, then emergency medical care is needed.
- Immediately report to your supervisor any symptoms or signs of heat illness you may be experiencing or observing in a co-worker.
- Call 9-1-1.

## **XII. Supervisor Emergency Procedures**

Supervisors must:

- Carry cell phones, radios, or other means of communication, ensure emergency services can be called, and verify that the radios or other means of communication are functional prior to each shift.
- Observe employees for alertness and signs or symptoms of heat illness. The Supervisor shall ensure effective employee observation/monitoring by implementing one or more of the following:
  - (A) Supervisor or designee observation of 20 or fewer employees, or
  - (B) Mandatory buddy system, or
  - (C) Regular communication with the sole employee, such as by radio or cellular phone.
- Know the exact work locations and have written and precise directions to the work site for emergency responders. Remind employees throughout the work shift to drink plenty of water.
- Conduct pre-shift meetings before the commencement of work to review the high-heat procedures, encourage employees to drink plenty of water, and remind employees of their right to take a cool-down rest when necessary.

- Keep a written copy of the NP Mechanical Heat Illness Prevention manual at the worksite, available to employees and Cal/OSHA representatives. The plan should be in English, the language understood by the majority of the employees.

### **XIII. Emergency Contact Procedures**

- Call 9-1-1.
- An employee exhibiting signs or symptoms of heat illness shall be monitored and shall not be left alone or sent home without being offered first aid on-site and/or being provided with emergency medical services.
- Be ready to provide emergency response personnel with directions to the work location.
- When working at remote locations, you must be able to provide concise directions to emergency response personnel for guidance (See Appendix E).
- Further emergency response guidance for supervisors is provided in Appendix F.

### **XIV. Response to Heat Stroke Symptoms**

- Victims of heat stroke must receive immediate medical treatment to avoid permanent organ damage.
- Always notify emergency services (9-1-1) immediately. If their arrival is delayed, they can give you further instructions for treatment of the victim.
- If possible, get the victim to a shady area to rest.
- Remove heavy clothing or change to lightweight attire.
- Cool the victim; effective cooling measures include:
  - Administering cool, non-alcoholic beverages such as water or sports drinks with electrolytes.
  - Applying cool or tepid water to the skin (i.e. spray the victim with cool water from a garden hose).
  - Providing a cool shower or sponge bath.
  - Move to an air-conditioned environment or fan the victim to promote evaporation.
  - Place ice packs under armpits and groins.

## **XV. Employee and Supervisor Training**

All employees, including supervisors, who may work outdoors in conditions where there are environmental risk factors for heat illness shall be provided with Heat Illness Prevention training on the information contained in this document prior to being exposed to high heat, and annually thereafter, including:

- Environmental and personal risk factors for heat illness, as well as the added burden of heat load on the body caused by exertion, clothing, and personal protective equipment.
- Procedures for complying with the Cal/OSHA requirements.
- The importance of frequent consumption of water, up to 4 cups per hour, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties.
- The importance of acclimatization.
- The different types of heat illness, and the common signs and symptoms of heat illness.
- Importance of employees immediately reporting symptoms or signs of heat illness in themselves, or in co-workers.
- Employer's procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided.
- Procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider, including clear and precise directions to the work site.

In addition, prior to supervising employees performing work that should reasonably be anticipated to result in exposure to the risk of heat illness, effective training on the following topics shall be provided to the supervisor:

- The supervisor shall be trained on their responsibilities in this Heat Illness Prevention Program manual.
- The procedures the supervisor is to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.
- How to monitor weather reports, and how to respond to hot weather advisories.

# Appendices

## Appendix A – Acclimatization Guidance

The body needs time to adapt when temperatures rise suddenly. When ambient temperatures rise to levels higher than employees are accustomed to, supervisors must act effectively by taking the following measures:

- Monitor the weather and be aware of sudden heat wave(s) or increases in temperatures to which employees haven't been exposed to for several weeks or longer.
- “Heat Wave” is defined as any day in which the predicted high temperature for the day will be at least 80°F, and at least 10°F higher than the average high daily temperature in the preceding five days.
- Cut short or re-schedule the workday during a heat wave or heat spike (e.g., a sudden increase in daytime temperature of 9°F or more). During the hot summer months, the work shift may start earlier in the day or later in the evening.
- Lessen the intensity of work for new employees during a two-week break-in period (i.e. scheduling slower paced, less physically demanding work during the hot parts of the day and the heaviest work activities during the cooler parts of the day). New employees may be assigned to a “buddy” or experienced coworker to watch each other closely for discomfort or symptoms of heat illness.
- Closely observe all employees during a heat wave and monitor for possible symptoms of heat illness. For employees working in remote locations, maintain frequent communication by phone or radio.
- Train employees and supervisors on the importance of acclimatization.
- For heavy work under very hot conditions, a period of four to fourteen days of progressively increasing work time is recommended. For less severe conditions, two to three days of increasing work activity and duration are recommended.

# Appendix B - Weather Monitoring for Outdoor Sites

## Recommended Equipment

Supervisors may find a HI chart, radio, cell phone, and thermometer helpful in monitoring the weather. Supervisors can access the [National Weather](#)

[Service \(NWS\)](#) for weather based on location zip code, or check the Weather Channel TV Network to view the extended weather forecast in order to plan in advance of the work schedule, know whether a heat wave is expected, and if additional schedule modifications will be necessary.

Supervisors without internet access can call the California “Dial a forecast” numbers:

<a href="#">Eureka 707-443-7062</a>	<a href="#">Los Angeles 805-988-6610 (#1)</a>
<a href="#">Hanford 559-584-8047</a>	<a href="#">Sacramento 916-979-3051</a>
<a href="#">Hanford 559-584-8047</a>	<a href="#">San Diego 858-675-8706(#1)</a>

## Supervisors

Prior to each workday, supervisors should:

- Review the forecasted temperature and humidity for the worksite and compare it against the National Weather Service HI guideline to evaluate the risk level for heat illness.
  - Employees working in direct sunlight are at greater risk, and there is a need to adjust the HI down 15°F.
- Monitor the weather (using NWS or with the aid of a simple thermometer) at the worksite. This critical weather information will be taken into consideration to determine when it will be necessary to make modifications to the work schedule (such as stopping work early, rescheduling the job, working at night or during the cooler hours of the day, increasing the number of water and rest breaks).
- Use a thermometer at the work location or NWS and check the temperature every 60 minutes to monitor for sudden increases in temperature to ensure that once the temperature exceeds 80°F, the shade structures are opened and accessible to workers, and to make certain that once the temperature equals or exceeds 95°F additional high-heat procedures are implemented.

## Appendix C - Provision of Water

### Recommended Equipment (for locations with non-plumbed potable water)

Water and drink containers, ice, cleaning equipment, whistle or horn.

### Supervisors

#### Procedures for the Provision of Water:

- Fresh, pure, suitably cool water will be provided to workers free of charge.
- a. The designated person will bring not less than one drinking water container (of 5 to 10 gallons each) to the site so that at least 2 quarts per employee are available at the start of the shift. When the predicted temperature equals or exceeds 80°F, the designated person will provide enough drinking water so that each employee can drink at least 1 quart per hour and will encourage them to do so.

NOTE: The average number of Company employees on a job site, per day/shift, is 6.

- b. The designated person will bring bags of disposable cups to the job site to ensure enough is available for each worker and kept clean until used.
- c. As part of the Company's Effective Replenishment Procedures, the designated person will check the water level of all containers every 30 minutes, and more frequently when the temperature exceeds 95°F. When the water level within a container drops below 50%, water containers will be refilled with cool water. To accomplish this task, the designated person will carry 1-2 additional 5-gallon water containers to replace water as needed.
- d. When the temperature exceeds 95 degrees, the designated person will carry ice in separate containers to add to the drinking water to keep it cool as necessary.
- e. The designated person will check the work site and place the water as close as possible to the workers, but not less than 50 feet from the workers. If field terrain prevents the water from being placed as close as possible to the workers, the designated person will bring bottled water or individual containers (in addition to disposable cups and water containers), so that workers can have drinking water readily accessible.



- f. The designated person will relocate water containers to follow along as the work moves, so drinking water is readily available.
- g. The designated person will be responsible for cleaning the water containers and ensuring they are kept in sanitary condition (all necessary cleaning supplies are provided by the company).
- h. The company will reimburse the designated person for any cost incurred filling up their water containers or purchasing necessary disposable cups or cleaning supplies. The company will furnish the designated person with expense reimbursement forms for this purpose and will issue reimbursement checks with each payroll period (if the person has turned in the appropriate form).
- i. The designated person will point out daily the location of the water coolers to the workers and remind them to drink water frequently.
- j. When the temperature exceeds or is expected to exceed 85°F, the designated person will hold a brief 'tailgate' meeting each morning to review with employees the importance of drinking water, the number and schedule of water and rest breaks, and the signs and symptoms of heat illness.
- k. The designated person will use audible devices (such as whistles or air horns) to remind employees to drink water.
- l. The designated person will increase the number of water breaks, and remind workers throughout the work shift to drink water whenever temperatures equal or exceed 95°F.
- m. During employee training, the importance of frequent drinking of water will be stressed

Water containers will be relocated to follow along as the work moves, so drinking water will be readily accessible. During hot weather or high indoor heat work conditions, the water will be cooler than the ambient temperature, but not so cool as to cause discomfort.

- For indoor work areas, the water will be located at:
  - A. Main Office (9129 Stellar Court, Corona, CA 92883) There are multiple water dispensers near the breakroom entrance next to the main restrooms. There are also water dispensers in the Will Call lobby next to the restroom and in the HR lobby. There are also additional water dispensers in the breakroom located on the second floor. Employees will be encouraged to drink frequently. And/or for outdoor work, the location must be in the cool-down areas and as close as possible to the areas where workers are working. Employees will be informed of the daily location of the water coolers and encouraged to drink frequently.
  - B. Indio Shop/Office (82855 Market St. Suite J Indio, CA 92201): The Company has designated a refrigerator in the shop entrance leading to the office with water bottles that both shop/office employees can use.

## Appendix D – Access to Shade and Cool-Down Areas

### Recommended Equipment

For outdoor work, portable canopies, large beach-style umbrellas, or other shade structures, and chairs, benches, sheets, and towels. For indoor work, a thermometer and hygrometer to measure temperature and relative humidity levels to determine heat index.

### Supervisors

- **Procedures for Access to Shade for Outdoor Places of Employment**

- a. Shade structures will be brought to the site to accommodate at least the number of employees on recovery or rest periods during the shift, and either chairs, benches, sheets, towels, or any other items to allow employees to sit in a normal posture fully in the shade without having to be in physical contact with each other or the bare ground.
  - i. Before trees or other vegetation are used to provide shade, the thickness and shape of the shaded area will be evaluated to ensure that sufficient shadow is cast to protect workers throughout the workday as the shade moves.
  - ii. In situations where it is not safe or feasible to provide access to shade, the unsafe or unfeasible conditions will be documented, and alternative procedures will be used to provide access to shade that provides equivalent protection.
- b. Shade structures will be placed as close as practical to the workers, when the temperature exceeds 80°F. When the temperature is at or below 80°F, the shade structures will be brought to the site but will be opened and set in place upon worker(s) request. **Note:** The interior of a vehicle may not be used to provide shade unless the vehicle is air-conditioned, and the air conditioner is on and has cooled the interior of the vehicle before being used as shade.
- c. The daily location of the shade structures is known to the workers, as well as allow and encourage employees to take a minimum five-minute preventative cool-down rest in the shade when they feel the need to do so to protect themselves from overheating. A worker who takes a preventative cool-down rest break will be monitored, encouraged to remain in the shade, and asked if they are experiencing symptoms of heat illness. In no case will the worker be ordered back to work until signs and

symptoms of heat illness have abated, and in no less than 5 minutes in addition to the time needed to access the shade.

- d. Shade structures will be relocated to follow along with the employee work groups, and double-check they are as close as practical to the employees, so that access to shade is provided at all times. In situations where trees or other vegetation are used to provide shade (such as in orchards), the supervisor will evaluate the thickness and shape of the shaded area (given the changing angles of the sun during the entire shift), before assuming that sufficient shadow is being cast to protect employees.
- e. Except for employers in the agricultural industry, cooling measures other than shade (e.g., use of misting machines) may be provided in lieu of shade if the employer can demonstrate that these measures are at least as effective as shade in allowing employees to cool.

- **Procedures for Access to Cool-Down Areas for Indoor Places of Employment**

- a. Cool-down area(s) will be located at: 1) Main Office/Shop – Break Room 2) Indio Office/Shop - Conference Room

The temperature in the indoor cool-down areas will be maintained at less than 82°F. The AC will be set below 82°F and NEVER above this temperature. A sign will be posted next to the thermostat designated for the cool-down areas with the following message “This thermostat is designated to a Cool-Down Area, keep below 82°F”.

- b. The cool-down area(s) will be available at the site to accommodate all of the workers who are on a break at any point in time and will be large enough so that all workers on a break can sit in a normal posture fully in the cool-down area(s) without having to be in physical contact with each other.

Workers will be informed of the location of the cool-down area(s) and will be encouraged and allowed to take cool-down breaks in the cool-down area(s) whenever they feel they need a break. A worker who takes a preventative cool-down rest break will be monitored and asked if they are experiencing symptoms of heat illness. In no case will the worker be ordered back to work until signs or symptoms of heat illness have abated (see the section on Emergency Response for additional information). If a worker exhibits signs or symptoms of heat illness while on a preventative cool-down rest, then appropriate first aid or emergency response will be provided. Preventative cool-down rest periods will be at least 5 minutes, in addition to the time needed to access the cool-down area.

## Appendix E – Temperature Assessment Indoors

### Recommended Equipment

A thermometer and hygrometer to measure temperature and relative humidity levels to determine heat index. Alternatively, a heat index monitor that calculates heat index directly.

### Procedures for Temperature Assessment for Indoor Workspaces

- Hygrometers and thermometers will be used throughout the workplace to monitor temperature and heat index. Monitoring instruments will be maintained in working condition per manufacturer’s recommendations. Heat index shall be based on the heat index chart in Appendix A of Section 3396, which has been reproduced in Section II.B of this document. Initial measurement will be taken where employees work and at times during the shift when exposures are expected to be greatest and when it is suspected to equal or exceed 82°F. Measurements will be taken again when they are reasonably expected to be 10 degrees Fahrenheit or more above the previous measurements.
  - Receiving Area
  - Copper Fab
  - Gas Fab area
  - The center of the fab shop – Indio location ONLY
- The temperature and heat index will be measured and recorded by the Warehouse Manager or Supervisor. Employees will be encouraged to be involved in the planning, conducting, and recording of measurements.
- Records of the temperature or heat index measurements, whichever value is greater, will be retained for 1 year or until the next measurements are taken, whichever is later, and made available to employees or their representatives upon request.

## Appendix F – Control Measures for Indoor Work

### Procedures for Implementing Control Measures

- Control measures will be implemented when either of the following occur:
  - a. Indoor temperature or heat index is 87°F or higher.
  - b. Indoor temperature is 82 °F or higher and workers are either:
    - I. Wearing clothing that restricts heat removal or
    - II. Working in an area with high radiant heat.
- Feasible engineering controls will be implemented first to reduce the temperature and heat index to below 87°F (or below 82°F for workers working in clothing that restricts heat removal or working in high radiant heat areas). Administrative controls will be added if feasible engineering controls are not enough to comply with the standard. If both feasible engineering and administrative controls are not enough to decrease the temperature and minimize the risk of heat illness, then personal heat-protective equipment will be provided.
  - a. The following engineering controls will be implemented to lower the indoor temperature, heat index, or bot to the lowest feasible level
    - a. Air conditioning (Cooling fans, HVAC systems, evaporative coolers)
    - b. Increasing natural ventilation (opening doors and windows when temperatures outdoors are lower than indoors).
- The following administrative controls will be implemented if all feasible engineering controls have been implemented and heat exposure risks haven't been sufficiently reduced
  - a. Modified work schedule to time of day when temperatures are cooler.
  - b. Shorten shifts during heat waves.
  - c. Implement mandatory rest breaks in cool-down area(s). Increase the duration of break as heat stress rises.
  - d. Rotate job function among employees to minimize exertion and heat exposure. Mark heat sources clearly and inform employees of heat hazards if workers must be in proximity to heat sources

- e. Require workers to work in pairs or groups during extreme heat so they can monitor each other for signs of heat illness.

# Appendix G – Emergency Response

## Recommended Equipment

First aid kit, radios, cell phones, smartphones, or other forms of communication, flashlights, and reflective vests.

## Written Response Procedures

Supervisors must have a written response procedure developed for each location. This must include a map along with clear and precise directions (such as streets or road names, distinguishing features, and distances to major roads) at a remote, off-campus site, to avoid a delay in emergency medical services (Appendix E).

Before starting work, supervisors must:

- During a heat wave or hot temperatures, remind and encourage workers to immediately report to their supervisor any signs or symptoms they are experiencing.
- Ensure a qualified, appropriately trained, and equipped person will be available at the site, to render first aid if necessary.
- Determine if a language barrier is present at the site and take steps to ensure emergency medical services can be immediately called in the event of an emergency.
- Carry cell phones or other means of communication, to ensure that emergency medical services can be called, and check that these are functional at the worksite prior to each shift.

## Emergency Response

- Take immediate steps to keep the stricken employee cool and comfortable once emergency service responders have been called (to reduce the progression to more serious illness).
- At remote locations such as rural farms, lots, or undeveloped areas, designate an employee or employees to physically go to the nearest road or highway where emergency responders can see them.
- If daylight is diminished, the designated employee(s) shall be given a reflective vest or flashlights in order to direct emergency personnel to the location of the worksite, which may not be visible from the road or highway.



## Remote Location Emergency Response Information

Work Location (include map for remote locations): \_\_\_\_\_

Directions to the Work Location:

\_\_\_\_\_

Nearest Medical Care facility:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Directions to Medical Care facility:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Indicate means of communication:

\_\_\_\_\_

Phone Number (if applicable):

\_\_\_\_\_

Means of transport to nearest Medical Care location:



# Appendix H – Checklist

## Heat Illness Prevention Work Planning and Site Checklist

Supervisors may complete the attached checklist forms to supplement this procedure manual document when temperatures are expected to meet or exceed 80°F for outdoor work, or when indoor temperatures exceed 87°F (or 82°F in a high radiant heat area or when wearing clothing that restricts heat removal).

Supervisor	Department	Location	Temperature	Date

Employees Affected:

- |           |           |
|-----------|-----------|
| 1. _____  | 13. _____ |
| 2. _____  | 14. _____ |
| 3. _____  | 15. _____ |
| 4. _____  | 16. _____ |
| 5. _____  | 17. _____ |
| 6. _____  | 18. _____ |
| 7. _____  | 19. _____ |
| 8. _____  | 20. _____ |
| 9. _____  | 21. _____ |
| 10. _____ | 22. _____ |
| 11. _____ | 23. _____ |
| 12. _____ | 24. _____ |

<b>Drinking Water Plan</b>			
At least 4 cups of water are required for each employee per hour for an entire shift.			
<input type="checkbox"/> Plumbed	<input type="checkbox"/> Water Cooler	<input type="checkbox"/> Bottled	<input type="checkbox"/> Other (describe)
Other: How will you supply sufficient drinking water?			

<b>Shade or Vehicle with AC (Outdoor Work or Cool-Down Area for Indoor Work if Shade/Vehicle Temperatures Below 82°F)</b>			
May be provided by natural or artificial means. Must be an area that allows body to cool.			
<input type="checkbox"/> Structure	<input type="checkbox"/> Tree	<input type="checkbox"/> Vehicle with AC	<input type="checkbox"/> Canopy
Other: How will you supply adequate shade for cooling?			

<b>Engineering Controls (Indoor Work)</b>			
Use engineering controls to reduce work temperature, heat index, or both. If this can't be done, demonstrate why it is not feasible below and complete the administrative box.			
<input type="checkbox"/> Air Conditioning (Cooling Fans, HVAC, Evaporative Cooler)	<input type="checkbox"/> Natural Ventilation	<input type="checkbox"/> Insulation/ Isolation/ reflective shielding to block radiant heat	<input type="checkbox"/> Other
Other: How will you supply engineering controls for cooling?			
If not feasible, explain why (move to next box to fill out administrative controls):			

**Administrative Controls (Indoor Work)**

When engineering controls are not feasible or not sufficient to cool the indoor workspace below 82°F, administrative controls must be implemented. Choose one or, ideally, several methods:

<input type="checkbox"/> Schedule work early in the day or in the evening when temperatures are cooler outdoors	<input type="checkbox"/> Acclimatization	<input type="checkbox"/> Employee rotations	<input type="checkbox"/> Reduce hours
<input type="checkbox"/> Change work clothing to cooler options	<input type="checkbox"/> Other (Describe below)		

Other: What administrative controls will you implement to prevent heat illness?

**Personal Heat-Protective Equipment (Indoor Work)**

When engineering controls do not lower temperatures below 82°F, and administrative controls do not minimize the risk of heat illness, personal heat-protective equipment will be provided. Choose the personal heat-protective equipment that will be used:

<input type="checkbox"/> Water and/or air-cooled garments	<input type="checkbox"/> Supplied air personal cooling systems	<input type="checkbox"/> Insulated suits	<input type="checkbox"/> Heat reflective clothing
<input type="checkbox"/> Infrared reflecting face shields	<input type="checkbox"/> Other (Describe below)		

Other: What personal heat-protective equipment will you implement to prevent heat illness?

**Emergency Medical Procedures**

All employees must be able to provide clear and precise directions to the work site.

Cell phone service available

If no cell service available, describe emergency plan below

What are the procedures for contacting emergency medical services and for transporting employees to a point where they can be reached? Where is the nearest phone?

For remote locations, list employees on site trained in First Aid:

**High Heat Procedures (Outdoors) - Required when temperatures expected to exceed 95°F**

If possible, limit strenuous tasks to morning or late afternoon hours. Rest breaks in shade must be provided at least 10 minutes every 2 hours (or more if needed). Effective means of communication, observations, and monitoring for signs of heat illness are required at all times. Pre-Shift meeting required

Direct Supervision       Buddy System       Reliable cell or radio

contact

Other (Describe below)

Other: What effective means of communication, observation, and monitoring for signs of heat illness will you use?