

MJ SHELTON GENERAL ENGINEERING, Inc.



Heat Illness Prevention Program

PURPOSE

To provide a safe and healthful working environment and protect MJ Shelton General Engineering, Inc. employees exposed to temperature extremes, radiant heat, humidity, or limited air movement while working from heat related illnesses.

POLICY

MJ Shelton General Engineering, Inc., employees regularly work in the summer heat and other situations where they are at risk for heat related illness. Therefore, employees are trained about heat related illness awareness, how to prevent heat related illnesses, the symptoms of heat related illnesses, and procedures to take if symptoms are present.

DEFINITIONS

Shade: The blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning. Shade may be provided by any natural or artificial means that does not expose employees to unsafe or unhealthy conditions and that does not deter or discourage access or use.

IMPLEMENTATION OF MJ SHELTON GENERAL ENGINEERING INC. HEAT ILLNESS PREVENTION PROGRAM

MJ Shelton General Engineering, Inc. will implement this Heat Illness Prevention Program when employees are at risk of heat related illnesses while they are working and exposed to a combination of environmental risk factors such as temperature extremes, radiant heat, humidity, limited air movement, protective clothing, workload severity, and duration.

CONTROLS FOR REDUCING HEAT EXPOSURE

MJ Shelton General Engineering, Inc. will reduce the potential for heat stress injury to employees using a variety of methods. This could include:

- Beginning jobs earlier and ending earlier to avoid the hottest portion of the day.
- Implementing more frequent breaks to allow employees to cool off and drink fluids.
- Allowing employees to take frequent rest breaks in shaded or air conditioned areas.
- Training supervisors and employees on the signs, symptoms, and remedies to heat stress regularly during the summer or during jobs where employees may be exposed to heat stress.

MONITORING THE WEATHER

Prior to each workday, the Compliance Administrator, General Manager, or Foreman will be responsible for reviewing the forecasted temperature to evaluate the risk level for heat illness (using www.nws.noaa.gov or another published weather forecast) at the worksite. This critical weather information will be taken into consideration, to determine if heat illness prevention

measures are necessary and when it will be necessary to make modifications to the work

California Dial-A-Forecast

Eureka 707.443.7062	Sacramento 916.979.3051
Hanford 559.584.8057	San Diego 858.297.2107
Los Angeles 805.988.6610	San Francisco 831.656.1725

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).

This type of advanced planning should take place all summer long.

PROVISION FOR WATER

Employees will have access to potable drinking water that is fresh, pure, suitably cool, and provided free of charge. The water shall be located as close as possible to the areas where employees are working. Where drinking water is not plumbed or otherwise continuously supplied, it is provided in sufficient quantity at the beginning of the work shift to provide one quart of water per employee per hour for drinking for the entire shift. A sanitary means to drink the water will be supplied to employees. When necessary, the company will institute replenishment procedures throughout the shift to ensure water is maintained on the work site at one quart per employee per hour. Employees will be notified of the location of potable drinking water and encouraged to drink frequently. Supervisors are responsible for ensuring an adequate amount of water is present on site throughout the day.

The Foreman will bring drinking water containers (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.

The Foreman will bring paper cone rims or bags of disposable cups and the necessary cup dispensers to ensure that enough disposable cups are made available for each worker and are kept clean until used.

As part of Effective Replenishment Procedures, the Foreman will check the water level of all containers every (how often) and more frequently when the temperature exceeds 90F. When the water level within a container drops below 50%, water containers will be refilled with cool water. To accomplish this task, the Foreman will carry additional water containers (i.e. 5 gallon bottles) to replace water as needed.

When the temperature exceeds 90 degrees, the Foreman will carry ice in separate containers, so that when necessary, it will be added to the drinking water to keep it cool.

The Foreman will check the work site and place the water as close as possible to the workers (i.e. no more than (feet) from the workers). If field terrain prevents the water from being placed as close as possible to the workers, the Foreman will bring bottled water or individual containers (in addition to disposable cups and water containers), so that workers can have drinking water readily accessible.

The Foreman will ensure that the water containers are relocated to follow along as the crew moves, so drinking water will be readily accessible.

The Foreman will be responsible for cleaning the water containers and ensuring that they are kept in sanitary condition (all necessary cleaning supplies are provided by the company).

The company will reimburse the supervisors for any cost incurred for them to fill up their water containers as needed on a daily basis or to purchase necessary disposable cups or cleaning supplies. **The Foreman will be given a per diem of (amount) per week for the purchase of water and/or drinking water supplies.**

The Foreman will point out daily the location of the water coolers to the workers and remind them to drink water frequently. When the temperature exceeds 90 degrees F, the Foreman 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.

The Foreman will use audible devices (such as whistles or air horns) to remind employees to drink water.

When the temperature equals or exceeds 95F or during a heat wave, the Foreman will increase the number of water breaks, and will remind workers throughout the work shift to drink water.

During employee training, the importance of frequent drinking of water will be stressed.

PROVISION FOR SHADE

Sufficient access to shade will be provided at every job site. When the weather forecast predicts temperatures for the following day of 80 degrees Fahrenheit or above, supervisors are instructed to designate one or more areas with shade at all times while employees are present that are either open to the air or provided with ventilation or cooling. Shade will be available from the beginning of the shift throughout the workday.

Shade for employees will also be made available on days when the temperature does not exceed 80 degrees Fahrenheit upon an employee's request.

Employees will be allowed and encouraged to take a cool-down rest in the shade for a period of no less than five minutes at any time when they feel the need to do so to protect themselves from overheating. An individual employee who takes a preventative cool-down rest shall be monitored and asked if he or she is experiencing symptoms of heat illness; shall be encourage to remain in the shade; and shall not be ordered back to work until any signs or symptoms of heat illness have abated, but in no event less than 5 minutes in addition to the time needed to access the shade. If an employee exhibits signs or reports symptoms of heat illness while taking a preventative cool-down rest during a preventative cool-down rest period, the Foreman, or designee shall provide appropriate first aid or emergency response.

The designated shade area will provide quality shade capable of accommodating the entire crew present at any time, so they can sit in a normal posture fully in the shade without having to be in physical contact with each other. The shaded area shall be located as close as practicable to the

areas where employees are working. The space will have accommodations that prevent employees direct contact with the dirt.

When provision of a shade area is unfeasible or unsafe, the company may utilize alternative procedures for providing access to shade that provide equivalent protection as a shade area. For example, the interior of a vehicle with working air conditioning may be used as shade if the passenger area is large enough to accommodate the entire crew, and the vehicle is left running with the air conditioning on.

Each Foreman will bring shade structures to the site, to accommodate the employees on the shift and either chairs, benches, sheets, towels or any other items to allow employees to sit and rest without contacting the bare ground. However, chairs, benches, etc., are not required for acceptable sources of shade such as trees.

The Foreman will ensure that shade structures are opened and placed as close as practical to the workers when the temperature equals or exceeds 80F. When the temperature is below 80F, the shade structures will be brought to the site, but will be opened and set in place upon workers 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.

The Foreman will point out the daily location of the shade structures to the workers as well as allow and encourage employees to take a five minute cool-down rest in the shade, when they feel the need to do so to protect themselves from overheating

The Foreman will ensure that the shade structures are relocated to follow along with the crew and double-check that 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, the Foreman 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.

In situations where it is not safe to provide shade (example winds of more than 40 mph), the Compliance Administrator, General Manager, or Foreman will document how this determination was made, and what steps will be taken to provide shade upon request.

For non-agricultural employers, in situations where it is not safe or feasible to provide shade, the Compliance Administrator, General Manager, or Foreman will document how this determination was made, and what steps will be taken to provide shade upon request or other alternative cooling measures with equivalent protection.

HIGH HEAT PROCEDURES

MJ Shelton General Engineering, Inc. will implement high-heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit. This includes:

- Ensuring 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.

- Observing employees for alertness and signs or symptoms of heat illness.
- Reminding employees throughout the work shift to drink plenty of water.
- Close supervision of a new employee by a supervisor or designee for the first 14 days of the employee's employment by the employer.
- Designating one or more employees on each worksite as authorized to call for emergency medical services, and allowing other employees to call for emergency services when no designated employee is available.
- 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
- When temperatures reach 95 degrees or above, the company shall ensure that employees take a mandatory minimum ten minute preventative cool-down rest period every two hours. The preventative cool-down rest period may be provided concurrently with any other meal or rest period required by existing labor law. If the workday will extend beyond eight hours, then an additional preventative cool-down rest period will be required for every two additional work hours.

If schedule modifications are not possible and workers have to work during a heat wave, the Foreman will provide a tailgate meeting to reinforce heat illness prevention with emergency response procedures and review the weather forecast with the workers. In addition, the Foreman will institute alternative preventive measures such as provide workers with an increase number of water and rest breaks every (numbers hours), supervise workers to ensure that they do stop work and take these breaks, and observe closely all workers for signs and symptoms of heat illness.

The Foreman will assign each employee a “buddy” to be on the lookout for signs and symptoms of heat illness and ensure that emergency procedures are initiated when someone displays possible signs or symptoms of heat illness.

SAMPLE HIGH HEAT PROCEDURES

The General Manager or Foreman will ensure that effective communication by voice, observation, or electronic means is maintained so that employees at the worksite can contact a supervisor when necessary. If the General Manager or Foreman is unable to be near the workers to observe them or communicate with them, then 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.

The Foreman will observe employees for alertness and signs and symptoms of heat illness.

The Foreman will remind employees throughout the work shift to drink plenty of water.

The Foreman will closely supervise a new employee, or assign a “buddy” or more experienced coworker for the first fourteen days of the employee's employment by the employer, 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 thirty days for four or more hours per day

FIRST AID AWARENESS AND ACTIONS IN THE EVENT OF A HEAT RELATED ILLNESS

The following chart helps employees recognize the main types of heat related illnesses, symptoms, and the appropriate treatment to reduce the effects of the heat related illness.

INDEX located next page.



Condition	Symptoms	Treatment
Heat rash	<ul style="list-style-type: none"> • Skin irritation • Red clusters of pimples or small blisters 	<ul style="list-style-type: none"> • Rest frequently in cool areas. • Bathe regularly. • Keep affected area dry.
Sunburn	<ul style="list-style-type: none"> • Painful, red skin 	<ul style="list-style-type: none"> • Avoid repeated sun exposure. • Bathe in cool water. • Apply cold compresses. • Apply moisturizing lotion. • Get medical help if fever, blisters or severe pain develops.
Heat cramps	<ul style="list-style-type: none"> • Muscle spasms in arms, legs or abdomen 	<ul style="list-style-type: none"> • Move person to a cooler location. • Stretch muscles for cramps. • Give cool water or electrolyte – containing fluid to drink. • Seek medical attention if cramps don't subside in an hour.
Fainting (Heat Syncope)	<ul style="list-style-type: none"> • Sudden dizziness • Light-headedness • Unconsciousness 	<ul style="list-style-type: none"> • Move person to a cooler location. • Give cool water or electrolyte – containing fluid to drink. • Watch victim closely after the event to ensure they are OK.
Heat exhaustion	<ul style="list-style-type: none"> • Headaches • Clumsiness • Dizziness / lightheadedness / fainting • Weakness / exhaustion • Heavy sweating / clammy / moist skin • Irritability / confusion • Nausea / vomiting • Paleness • Fast pulse • Shallow breathing 	<ul style="list-style-type: none"> • Move person to a cooler place (do not leave alone). • Loosen and remove heavy clothing that restricts evaporative cooling. • If conscious, provide small amounts of cool water to drink. • Fan person, spray with cool water, or apply a wet cloth to skin to increase evaporative cooling. • Call 911 if not feeling better within a few minutes.
Heat stroke	<ul style="list-style-type: none"> • Sweating may or may not be present • Red or flushed, hot, dry skin • Bizarre behavior • Mental confusion or loss of consciousness • Panting / rapid breathing • Rapid, weak pulse • Seizures or fits • Unconsciousness 	<ul style="list-style-type: none"> • Call 911 • Move person to a cooler place (do not leave alone). • Cool worker rapidly. • Loosen and remove heavy clothing that restricts evaporative cooling. • Fan person, spray with cool water, or apply a wet cloth to skin to increase evaporative cooling.

ACCLIMATIZING

MJ Shelton General Engineering, Inc., will monitor the weather and in particular be on the lookout for sudden heat wave(s), or increases in temperatures to which employees haven't been exposed to for several weeks or longer.

During the hot summer months, the work shift will start earlier in the day or later in the evening.

For new employees, the Foreman will try to find ways to lessen the intensity of the employees work during a two-weeks break-in period (such as 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 (early morning or evening). Steps taken to lessen the intensity of the workload for new employees will be documented.

The Foreman will be extra vigilant with new employees and stay alert to the presence of heat related symptoms.

The Foreman will assign new employees a “buddy” or experienced coworker to watch each other closely for discomfort or symptoms of heat illness.

During a heat wave, the Foreman will observe all employees closely (or maintain frequent communication via phone or radio) and be on the lookout for possible symptoms of heat illness.

MJ Shelton General Engineering, Inc. training for employees and supervisors will include the importance of acclimatization, how it is developed and how these company procedures address it.

EMERGENCY PROCEDURES

Prior to assigning a crew to a particular worksite, the Foreman will provide workers with a map along with clear and precise directions (such as streets or road names, distinguishing features and distances to major roads) of the site, to avoid a delay of emergency medical services.

Prior to assigning a crew to a particular worksite, the Foreman will ensure that a qualified, appropriately trained and equipped person will be available at the site, to render first aid if necessary.

Prior to the start of the shift, the Foreman will determine if a language barrier is present at the site and take steps (such as assigning the responsibility to call emergency medical services to the foreman or an English speaking worker) to ensure that emergency medical services can be immediately called in the event of an emergency.

All foremen and supervisors will 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.

When an employee is showing symptoms of possible heat illness, Foreman will 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, the Foreman will 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

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.

During a heat wave or hot temperatures, workers will be reminded and encouraged to immediately report to their supervisor any signs or symptoms they are experiencing.

MJ Shelton General Engineering, Inc. training for employees and supervisors will include every detail of these written emergency procedures (located in the Foreman Binder).

HANDLING A SICK EMPLOYEE

When an employee displays possible signs or symptoms of heat illness, a trained first aid worker or supervisor will check the sick employee and determine whether resting in the shade and drinking cool water will suffice or if emergency service providers will need to be called. Do not leave a sick worker alone in the shade, as he or she can take a turn for the worse!

When an employee displays possible signs or symptoms of heat illness and no trained first aid worker or supervisor is available at the site, call emergency service providers.

Call emergency service providers immediately if an employee displays signs or symptoms of heat illness (loss of consciousness, incoherent speech, convulsions, red and hot face), does not appear to be alert or coherent to a reasonable or prudent person, or does not get better after drinking cool water and resting in the shade. While the ambulance is in route, initiate first aid (cool the worker; place in the shade, remove excess layers of clothing, place ice pack in the armpits and join area and fan the victim). Do not let a sick worker leave the site, as they can get lost or die (when not being transported by ambulance and treatment has not been started by paramedics) before reaching a hospital!

If an employee does not appear alert or coherent and displays signs or symptoms of severe heat illness (loss of consciousness, incoherent speech, convulsions, red and hot face), and the worksite is located more than 20 min away from a hospital, call emergency service providers, communicate the signs and symptoms of the victim and request Air Ambulance.

TRAINING

Training is provided to employees prior to job assignment.

Employee Training: Training in the following topics is provided to all supervisory and non-supervisory employees:

- 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 identifying, evaluating, and controlling exposures to the environmental and personal risk factors for heat illness.
- The importance of frequent consumption of water.
 - The different types of heat illness and the common signs and symptoms of heat illness.
 - The importance of immediately reporting to the employer or designee symptoms or signs of heat illness.
 - Procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary.

- Procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by medical service personnel.
- How to provide clear and precise directions to the work site. Who on the company staff is designated to ensure emergency procedures are invoked when appropriate.

Supervisor Training: Prior to assignment to supervision of employees working in the heat, training on the following topics will occur:

- The information provided for employee training.
- Procedures the supervisor will follow to implement controls as determined by the employer.
- Procedures the supervisor will 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.

MJ Shelton General Engineering, Inc. will ensure that all supervisors are trained prior to being assigned to supervise other workers. Training will include this company's written procedures and what steps supervisors will follow when employees' exhibit symptoms consistent with heat illness.

MJ Shelton General Engineering, Inc. will ensure that all employees and supervisors are trained prior to working outside. Training will include the company's written prevention procedures.

Compliance Administrator or Foreman will train employees on the steps that will be followed for contacting emergency medical services, including how they are to proceed when there are non-English speaking workers, how clear and precise directions to the site will be provided as well as stress the need to make visual contact with emergency responders at the nearest road or landmark to direct them to their worksite.

When the temperature exceeds 75 degrees F, the Foreman will hold short 'tailgate' meetings to review the weather report, reinforce heat illness prevention with all workers and provide reminders to drink water frequently, to be on the lookout for signs and symptoms of heat illness and inform them that shade can be made available upon request.

The Foreman will assign new employees a "**buddy**" or experienced coworker to ensure that they understood the training and follow company procedures.

SUPERVISOR'S QUICK CHECKLIST TABLE:

Use this table as a quick reference for Heat Illness Prevention Plan requirements

#1 At 75° F	#2 At 80° F (#1 + these items)	#3 At 90° F (#1&2 + these items)	#4 At 95° F (#1-3 + these items)
<ul style="list-style-type: none"> • Check weather forecast • Remind employees to drink water • Be on the look-out for signs/symptoms of heat illness • Conduct Heat Illness Prevention training. 	<ul style="list-style-type: none"> • Provide/erect shade structure for all employees, or ensure shade is available • Allow for cool-down periods • Ensure 1 quart water per hour per employee 	<ul style="list-style-type: none"> • Conduct "Tailgate" meeting each morning • Check water level every hour • Add water or ice when level is 50% or lower 	<ul style="list-style-type: none"> • Increase water breaks every 2 hours • Closely monitor workers • Closely monitor new workers for acclimation • Provide 10-minute cool-down every 2-hours

NOAA's National Weather Service

Heat Index Temperature (°F)

	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
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	126	130					
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

CODE OF SAFE PRACTICES – HEAT ILLNESS PREVENTION

Heat stress can be a serious health hazard for field employees. MJ Shelton General Engineering, Inc. has a written Heat Illness Prevention Program. Training is provided to Supervisors to ensure compliance with required guidelines, which include the following:

- Monitoring Temperatures, and taking action to prevent heat illness at 85 degrees and initiating high heat procedures at 95 degrees.
- Providing Fresh Water Daily at all jobsites in quantity to provide one quart per hour per person. Employees will be encouraged to drink one quart of water per hour.
- Establishing Means of Providing Shade.
- Allowance for Acclimatization.
- Enforcement of Rest Breaks.
- Medical Attention.
- Employee Training.

Serious conditions caused by heat exposure include (not all-inclusive):

- Heat Exhaustion symptoms include: Weakness, Fatigue, Blurred Vision, Dizziness, and Headache. Signs to look for include: High pulse rate, Extreme Sweating, Pale Face, Lack of Balance.
- Heatstroke symptoms include: Chills, Restlessness, and Irritability. Signs to look for include: Red Face, Hot Dry Skin, Disorientation, Erratic Behavior, Shivering, Collapse, Convulsions.

Employees will follow the emergency medical procedures outlined in the job site safety manual to obtain medial aid for a victim of heat illness. Employees have been trained how to contact emergency services and give specific directions to the job site location. As a last resort, the victim will be transported to meet emergency personnel in an air conditioned vehicle.

IN THE EVENT OF A HEAT ILLNESS EMERGENCY

1. When employee displays possible signs or symptoms of heat illness, a trained first aid worker or supervisor will check the sick employee and determine whether resting in the shade and drinking cool water will suffice or if emergency service providers will need to be called. Do not leave a sick worker alone in the shade, as he or she can take a turn for the worse!
2. Contact local emergency services by calling 911 if a telephone or cellular phone service is available. Otherwise, use CB channel 9, or any other radio frequency available and inform anyone monitoring that you have an emergency and need help immediately.
3. When contact has been made with emergency personnel instruct them that you are in Name of City, in Name of County, county.
4. Inform the operator the best way to reach your location if it is remote or a new development that might not yet be on a street map.
5. Identify the nearest landmarks that will help emergency personnel identify your worksite. Be as specific as possible.
6. If the area is remote, and roads are hard to describe, and an air-conditioned vehicle is available to transport the victim safely, tell the emergency personnel or dispatcher that you will meet them at the nearest marked street or highway. Inform the dispatcher which street or highway that is.
7. Inform Name of Contact at the main office immediately after you are sure emergency responders are on the way to assist the victim.