Chapter 57: Heat Illness Prevention

General Requirements

1 Purpose

The purpose of these requirements is to prevent heat illness. They cover identifying high-heat working conditions and implementing controls to mitigate the hazards of working in those conditions. They apply to workers, supervisors, field construction and service managers and points of contact, the heat illness prevention program manager, and subcontractors. These requirements must be followed when work activities (outdoor or indoor) could reasonably be expected to expose workers to the risk of heat illness, namely, when temperatures exceed 80°F.

Workers who are exposed to extreme heat or work in hot environments indoors or outdoors, or even those engaged in strenuous physical activities, may be at risk of heat stress. Exposure to extreme heat can result in occupational illnesses caused by heat stress, including heat stroke, heat exhaustion, heat syncope (fainting), heat cramps, heat rashes, or even death.

2 Requirements

2.1 Provision of Water

Workers must have access to potable drinking water that is fresh, pure, and reasonably cool. The water must be located as close as practicable to the work location. Each worker must have access to a minimum of one quart of water per hour for the duration of the entire shift. Re-usable containers for individual use and drinking cups must not be shared or used in common.

2.2 Access to Shade

When the outdoor temperature in the work area exceeds 80°F and workers are present, one or more areas of shade must be maintained at all times that are either open to the air or provided with ventilation or cooling. The amount of shade must be at least enough to accommodate the number of workers on recovery or rest periods, and each worker should be able to sit in normal posture without having to come into physical contact with another worker. The shade must be located as close as practicable to the work location. Where it is infeasible or unsafe to provide a shade structure, alternate methods for providing access to shade or other cooling measures are allowed if they provide equivalent protection or are at least as effective as shade in allowing workers to cool.

- Workers must be allowed and encouraged to take preventative cool down breaks, distinct from normal rest breaks, as needed to protect themselves from heat illness. Access to shade must be permitted at all times.
• An individual worker who takes a preventative cool down break must
  – Be monitored and asked if he or she is experiencing symptoms of heat illness
  – Be encouraged to remain in the shade
  – Not return to work until signs of heat illness have abated or have rested for a minimum of five minutes
• First aid or emergency response must be provided if a worker exhibits or reports symptoms of heat illness while working or during a preventative cool down break.

2.3 High Heat

When the temperature equals or exceeds 95°F, supervisors must

• Maintain effective mean of communication by voice, observation, or electronic means so that workers at the work site can contact a supervisor or designee or emergency medical services when necessary. Electronic devices may be used for this purpose only when reception is reliable.
• Ensure workers are observed for alertness and signs or symptoms of heat illness. Observation/monitoring may be done by implementing one of the following:
  – Supervisor or designee observation of 20 or fewer employees
  – Mandatory buddy system
  – Regular communication with sole worker such as by cell phone or radio
  – Other effective means of communication
• Designate one or more workers on each work site as authorized to call for emergency medical services, and allow other workers to call for emergency services when no designated person is available
• Remind workers throughout the workday to drink plenty of water
• Review high-heat practices in pre-shift meeting before work begins

2.4 Emergency Response

The following measures must be implemented to ensure effective emergency response:

• Ensuring effective communication as outlined in Section 2.3
• Responding to signs and symptoms of possible heat illness
  – If a supervisor or designee observes, or another worker reports, any signs or symptoms of heat illness in any worker, the supervisor must take immediate action and respond appropriately, depending on the severity of the illness.
  – If the signs or symptoms are indicators of severe heat illness (examples include decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior, convulsions), emergency response procedures must be implemented. Contact SLAC Site Security (ext. 5555) if not life threatening, otherwise call 911 then contact SLAC Site Security (ext. 5555).
• Monitoring a worker exhibiting signs or symptoms of heat illness and not leaving them alone or sending them home without offering first aid and/or providing with emergency services
- Transporting an affected worker to a place where they can be reached by emergency responders only if the transport can be done safely without causing additional harm to the worker or other persons involved.
- Making sure all workers working in high-heat conditions review and are aware of the location where the work is taking place, and are able to give clear and precise directions to the work location.

2.5 Acclimatization

All workers must be closely observed during a heat wave, defined as a period when the predicted temperature will be at least 80°F and at least 10°F higher than the average daily high temperature in the preceding five days. If a worker has been newly assigned to work in high-heat conditions he or she must be closely observed by their supervisor or designee for their first 14 days of work in such conditions.

2.6 Training

Workers, and their supervisors, whose work tasks or assignments should reasonably be anticipated to result in exposure to the risk of heat illness (typically temperatures above 80°F) in outdoor or indoor environments, must complete the following training:

- ESH Course 416, Heat Illness Prevention (ESH Course 416)

3 Forms

The following forms and systems are required by these requirements:

- None

4 Recordkeeping

The following recordkeeping requirements apply for these requirements:

- None

5 References

**SLAC Environment, Safety, and Health Manual** (SLAC-I-720-0A29Z-001)

- Chapter 57, “Heat Illness Prevention”
- Chapter 37, “Emergency Management”
  - Emergency Management: Emergency Notification, Response, and Reporting Procedures (SLAC-I-730-0A14C-002)

Other Documents

- Title 8, California Code of Regulations, “Industrial Relations”, Division 1, “Department of Industrial Relations”, Chapter 4, “Division of Industrial Safety”, Subchapter 7, “General Industry Safety Orders”,

22 June 2021 SLAC-I-730-0A21S-064-R000 3 of 4