# 1.0 Purpose

1.1 To define the requirements and responsibilities for recognizing, evaluating, and controlling employee heat related illness (HRI) in the workplace. The purpose of this policy is to ensure compliance with all Federal and State regulations.

Definitions

(1) Acclimatization means the body's temporary adaptation to work in the heat that occurs as a person is exposed to it.

(2) Drinking water means potable water. Water packaged as a consumer product is acceptable.

(3) Environmental factors for heat-related illness means working conditions that increase the susceptibility for heat related illness 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, and personal protective equipment worn by employees.

(4) Heat-related illness means a medical condition resulting from the body's inability to cope with a particular heat load, and includes, but is not limited to, heat cramps, heat rash, heat exhaustion, fainting, and heat stroke.

(6) Incidental exposure means employees performing work activities in an outdoor environment for a total of fifteen minutes or less in a sixty minute period. This applies every hour during the work shift.

(7) Outdoor environment means an environment where work activities are conducted outside. Environments such as vehicle cabs, sheds, and tents or other structures may be considered an outdoor environment when the environmental factors are not managed by engineering controls. Construction activity is considered work in an indoor environment when the outside walls and roof are erected.

(8) Personal factors for heat-related illness means factors that affect hydration or other physiological responses to heat.

# 2.0 Scope and Applicability

* 1. Work areas where temperatures exceed trigger levels outlined in Table 1, when working for more than 15 minutes each hour, must follow this procedure. Revisions encompass new regulations set forth by Federal and State regulations. Indoor work is still included within this procedure. This procedure should be followed unless project contract requirements exceed the requirements of this section. In such case, the more stringent requirements shall be followed.

TABLE 1 – TRIGGER TEMPERATURES

AT DEW POINT OF 50⁰ F

|  |  |  |
| --- | --- | --- |
| **Clothing/Personal Protective Equipment (PPE) Worn** | **Work in Direct Sun** | **Work in Shaded (or Indoor) Areas** |
| Standard Apollo construction work/safety clothing (hard hat, 4” shirt sleeves, long pants, boots) or coveralls over light clothing | 89⁰ F | 96⁰ F |
| Additional layer – coveralls - over standard Apollo construction work/safety clothing | 77⁰ F | 87⁰ F |
| Additional non-breathable layer - vapor barrier such as Tyvex or rubber, raingear, or other similar material | 52⁰ F | 62⁰ F |

* 1. When near trigger temperatures are forecasted, Supervisors must check weather periodically in order to ensure these requirements are implemented when trigger levels are reached. Current data distributed by a news station, organization, or

website, or similar, are suitable sources. An electronic weather station is also an acceptable method to monitor temperature.

2.2.1 Supervisors must check temperature **as often as necessary** to ensure HRI controls are implemented at the moment trigger temperatures are reached.

* 1. Supervisors can implement the minimum requirements of these procedures and forego monitoring for temperature, at their discretion, provided the minimum requirements are met once trigger levels are reached.

# 3.0 Exposure Control Methods

* 1. In addition to temperature, many factors can increase the risk for HRI. Factors such as humidity, radiant heat, air movement, conductive heat sources (heavy equipment), work load and duration, working in direct or shaded work areas, types of clothing and personal protective equipment (PPE) worn and personal factors: such as age, drinking alcohol, smoking, and/or poor diet all are contributing factors to HRI. Both Supervisors and employees need to know about these factors and seek to minimize these contributing factors whenever possible.
  2. Supervisors can reduce Many of these factors can be controlled Facilitating acclimation to weather and worker hydration are the top two factors contributing to HRI and are factors that Supervisors can control in the following ways:
     1. Acclimation: **Adjusting work times and activities.** Scheduling more strenuous work activities to be conducted during cooler parts of the day or starting work earlier to decrease the amount of time in hotter weather.
     2. Hydration: **Provide and encourage consumption of water.** NEVER run out of water onsite. Plan for providing at leas**t one quart of water per worker per hour.** It is acceptable to start the work shift with less water onsite, but Supervisors must pre-plan to supply water readily, in sufficient quantities.
  3. Supervisors must ensure that employees report HRI symptoms. If an employee complains of cramps, headache, anxiety, or tingling in hands (the beginning symptoms of HRI) or signs of heavy sweating, intense thirst, dizziness, fatigue, loss of coordination, nausea, impaired judgment, loss of appetite, hyperventilation, and/or cool moist skin (serious symptoms of heat stress), Supervisors must take action immediately. If HRI symptoms are observed, take action immediately by:
     1. **Monitor or and treat employee, as necessary.** Cool down the worker by moving the worker to a shaded area or air-conditioned (vehicle or trailer) environment, removing excess clothing and boots, provide cooling cloths, etc. Encourage intake of water and closely monitor the employee.
     2. If symptoms do not subside and symptoms such as hot, dry skin, extremely high body temperature with a rapid pulse, or the employee falls unconscious – **these are signs of heat stroke A MEDICAL EMERGENCY**

## – GET HELP IMMEDIATELY.

**4.0 Training**

4.1 Employees are responsible to monitor themselves for HRI, Supervisors are responsible to educate workers on HRI topics including: recognizing the symptoms of heat exposure; the importance and expectation of hydration, acclimation and reporting symptoms; personal risk factors increasing the susceptibility to HRI (age, medical conditions, un-healthy diet, and consumption of alcohol, nicotine, caffeine, and prescription drugs); removal of PPE during breaks; and emergency planning. A chart of symptoms of the progressive stages of HRI is attached.

## Employees are responsible to monitor themselves and co-workers for HRI, report symptoms immediately, consume adequate amounts of water, participate in maximizing acclimation and minimizing personal risk factors.

4.1.1 Supervisors must ensure they are **knowledgeable with the requirements** of applicable standard(s) and this procedure in order **to effectively train employees** to all Federal and State regulations.

# 5.0 Records

Documentation of employee training: Group Training Sign In Sheet

|  |  |  |
| --- | --- | --- |
| **6.0** | **References**  29 CFR 1910 | Occupational Safety and Health Standards (OSHA) |
|  | 29 CFR 1926  WAC 296-62  WAC 296-155 | Safety Standards for the Construction Industry (OSHA) Occupational Health Standards (WISHA)  Safety Standards for Construction Work (WISHA) |
| **7.0** | **Attachments** |  |

HEAT RELATED ILLNESS – KNOW THE SIGNS AND DANGERS

