Brunel Energy, Inc.

Heat Illness

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1. Purpose

1.1. Brunel Energy, Inc., hereinafter referred to as; the "Company," has established a program compliant with OSHA best practices to reduce the risk of work-related heat illnesses.

2. Applicability

2.1. This policy applies to employees, subcontractors and/or visitor(s) of the Company. For the purposes of this policy, an employee shall be considered on the job whenever he/she is:

2.1.1. On or in, any Company or client property, including parking areas; or

2.1.2. On company time even if off Company premises (including paid lunch, rest periods and periods of being on call).

2.2. As a condition of employment, Company employees are required to abide by additional governmental or customer policies and requirements that may be imposed at a worksite in addition to the requirements of these policies and procedures. Nothing set forth in this policy constitutes, construes, or interprets in any way as a contract of employment.

3. Definitions

3.1. ***Acclimatization*** is the temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day.

3.2. ***Heat Illness*** is a serious medical condition resulting from the body's inability to cope with a particular heat load, and Heat Fatigue; Sunburn; Heat Rash; Heat Cramps; Heat Exhaustion; and Heat Stroke.

3.2.1. Heat Stress is a collection name for illnesses or disorders associated with excessive exposure to heat. These include:

3.2.2. Heat Cramps which are often the first indication of a heat related problem. Sharp, painful spasms in the muscles that are being heavily stressed and excessive sweating are symptoms.

3.2.3. Heat Rash, a prickly heat, which appears on the skin as tiny red raised vesicles in areas continuously wet with unevaporated sweat.

3.2.4. Heat Exhaustion or prostration is characterized by excessive sweating, but cold, pale, and clammy skin. Dizziness, blurred vision, and unconsciousness may accompany a rapid but weak pulse. Nausea, heat cramps and rapid, shallow panting may also be present.

3.2.5. Heat Stroke, considered a medical emergency, is a result of more heat being stored in the body than lost. Brain functions become impaired, and thermoregulation may break down entirely. Sweating ceases and deep core body temperature rises rapidly. Symptoms include collapse, flushed face, hot and dry skin, and noisy breathing. There

can be a loss of consciousness, convulsions, nausea, and vomiting. Pulse will initially be rapid and strong but may become weak in later stages of the illness. Death or permanent physical damage can result from a heat stroke.

3.3. ***Preventative recovery period*** is the amount of time to recover from the heat to prevent heat illness.

3.4. ***Shade*** is the blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. One indicator that blockage is not enough 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.

4. Responsibilities

4.1. Managers and supervisors are responsible for implementing and maintaining the Heat Illness Program in their work areas.

4.1.1. Managers and supervisors shall ensure employees have access to potable drinking water. Where it is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift.

4.1.2. Managers and supervisors must ensure personal factors that contribute to heat related illness shall be taken into consideration before performing a task where there is the possibility of a heat-related illness occurring. The most common personal factors that can contribute to heat related illness are age, weight/fitness, drug/alcohol use, prior heat related illness, etc.

4.1.3. Managers and supervisors will allow new or returning workers to take more frequent breaks, as they acclimatize, or build a tolerance for working in the heat.

4.2. Employees shall be able to recognize the signs and symptoms of heat stress exposure and take the necessary precautions to protect themselves and shall not work beyond their physical limitations. Employees shall notify their supervisor if there are any signs or symptoms of heat stress.

4.3. Employees will drink plenty of electrolyte drinks or water to stay hydrated, avoiding coffee, tea, or soda, which function as diuretics, further depleting the body of fluid.

5. Requirements

5.1. Employees will be provided with access to shade. Employees suffering from heat illness or believing a preventative recovery period is needed, shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling. Such access to shade shall always be permitted. See definition of “Shade.”

5.2. Physical work factors that can contribute to heat related illness shall be taken into consideration before performing a task. The most common physical factors that can contribute to heat related illness are type of work, level of physical activity and duration, clothing color, weight, and breathability.

5.3. Control Measures - Each work location involved in working in hot environments shall implement measures that must be in place to control the effects of environmental factors that can contribute to heat related illnesses. The most common environmental factors are air temperature, humidity, radiant heat sources and air circulation.

5.4. Proper acclimation to the temperature will dramatically increase the ability of employees to work at a hot job and will decrease the risk of heat-related illnesses and unsafe exposure at the hot job. Most employees who work in the southern portion of the United States experience acclimation as a natural progression of the hot season.

6. Procedure

6.1. Each work site shall develop site specific procedures but shall include the minimum:

6.1.1. Location of hydrating stations

6.1.2. Acceptable hydrating sources

6.1.3. Identify and reporting systems.

6.2. Bring at least 2 quarts of water per employee at the start of the shift and the supervisors/designated persons will monitor water containers every 30 minutes, and employees are encouraged to report to supervisor/designated person low levels or dirty water.

6.3. Supervisors will provide frequent reminders to employees to drink frequently.

6.4. Place water containers as close as possible to the workers.

6.5. When drinking water levels within a container drop below 50%, the water shall be replenished immediately, or water levels should not fall below the point that will allow for adequate water during the time necessary to effect replenishment.

6.6. Disposable/single use drinking cups will be provided to employees or provisions will be made to issue employees their own cups each day.

6.7. Supervisors will set up an adequate number of umbrellas, canopies, or other portable devices at the start of the shift and will relocate them to be closer to the crew, as needed.

6.8. Non-agricultural employers can use other cooling measures if they demonstrate that these methods are as effective as shade.

6.9. Working hours will be modified to work during the cooler hours of the day, when possible.

6.10. When a modified or shorter work-shift is not possible, more water and rest breaks will be provided.

6.11. Supervisors will continuously check all employees and stay alert to the presence of heat related symptoms.

6.12. Supervisors will carry cell phones or other means of communication, to ensure that emergency services can be called and check that these are functional at the worksite prior to each shift.

6.13. Every morning, workers will be reminded about address and directions to the worksite to inform medical responders and emergency procedures.

6.14. All newly hired workers will be assigned a buddy or experienced coworkers to ensure that they understand the training and follow the company procedures.

7. Training

7.1. Training in the following topics shall be provided to all supervisory and non-supervisory employees:

7.1.1. The environmental and personal risk factors for heat illness.

7.1.2. The importance of 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.

7.1.3. The distinct types of heat illness and the common signs and symptoms of heat illness.

7.1.4. The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms, or signs of heat illness in themselves, or in co-workers.

7.1.5. The company procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary.

7.1.6. The company procedures for contacting emergency medical services, and if necessary; transporting employees to a point where an emergency medical service provider can treat them.

7.1.7. The company procedures for ensuring that, in the event of emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders.

7.2. Supervisors must receive training in the prevention of heat related illnesses prior to supervising employees working in heat. Supervisors will be trained in the company’s heat illness emergency response procedures to prevent heat illness and procedures to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

7.3. Communication for employees shall be in a form readily understandable by all affected employees.

7.4. The company shall ensure all contractors, subcontractors, staffing companies, etc., employees (including temporary) working outdoors have been trained in heat illness prevention upon initial hire and annually thereafter.

8. Recordkeeping

8.1. The Company shall maintain training records.

9. Appendix

9.1. Heat Stress Prevention Action Table

10. Reference

10.1. OSHA – Safety and Health Topics - Heat

10.2. OSHA – Heat Illness Prevention Campaign

Heat Stress Prevention Action Table

Category	Ambient Temp. (°F) Regular Work Clothes, (i.e., FRC)	Ambient Temp. (°F) Regular Work Clothes with Additional PPE *	Action Steps
1	<90°F	<80°F	No specific heat stress action steps
2	90-99°F	80-89°F	Ready access to fluids, consumption should be 8 to 12, 8-ounce cups of water per day. Periodic breaks. Monitor employees for symptoms by supervision.
3	100-104°F	90-99°F	All Category 2, plus document at least one prevention technique listed below and a work/rest schedule. • Provide shading. • Supplied air respirators using compressed air Cool Vests or Vortex Coolers • Use spot cooling (misting fan, air coolers or air conditioning) near or in work area. • Use the Buddy System • Limit Time of Exposure • Forced air ventilation. • Use Temporary Insulation • Reflective barriers for radiant heat
4	>105°F	>100°F	All Category 3, plus document at least two or as many as applicable prevention technique listed above and implement a work/rest schedule

* Additional PPE = slicker suits, acid/chemical suit, TyChem®) (i.e. chemical protection) or any impermeable protective suit.