

E&B Oilfield Services Inc.	Activity: ALL WORK Heat Related Illness		Doc No:	HAZ-ID
			Initial Issue Date	4/1/2015
			Revision Date:	4/1/2016
HAZARD IDENTIFICATION AND ASSESSMENT			Revision No.	1
			Next Revision Date:	4/1/2017
Preparation: Jessica Lee	Authority: Danny Abegglen	Issuing Dept: Safety	Page:	1 of 5

Purpose

- **Heat Related Illness**

Key Responsibilities

- E&B Management will provide task appropriate training to all employees for heat related illness
- Supervisors / Leads are required to ensure all employees have adequate training
- E&B Employees should make sure they feel comfortable before left on their own while in training

Hazard and Risk Identification

- **Heat stroke**, the most serious form of heat-related illness, happens when the body becomes unable to regulate its core temperature. Sweating stops and the body can no longer rid itself of excess heat. Signs include confusion, loss of consciousness, and seizures. **"Heat stroke is a medical emergency that may result in death! Call 911 immediately.**



- **Heat exhaustion** is the body's response to loss of water and salt from heavy sweating. Signs include headache, nausea, dizziness, weakness, irritability, thirst, and heavy sweating.
- **Heat cramps** are caused by the loss of body salts and fluid during sweating. Low salt levels in muscles cause painful cramps. Tired muscles—those used for performing the work—are usually the ones most affected by cramps. Cramps may occur during or after working hours.
- **Heat rash**, also known as prickly heat, is skin irritation caused by sweat that does not evaporate from the skin. Heat rash is the most common problem in hot work environments.

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Risk Assessment

Hazards are classified and ranked based on severity. The program identifies hazards are classified/prioritized and addressed based on the risk associated with the task. (See the risk analysis matrix outlining severity and probability).

Heat related injuries can happen during all work activities.

E&B OILFIELD SERVICES INC. RISK ASSESSMENT MATRIX – HEAT RELATED ILLNESS

CONSEQUENCE					PROBABILITY				
Severity	People	Assets	Environment	Reputation	A	B	C	D	E
					Not Done	Rarely	Once a week	Several Times in a Week	Multiple Times in a Day
0	No health effect	No damage	No effect	No impact		X			
1	Slight health effect	Slight damage	Slight effect	Slight impact		X			
2	Minor health effect	Minor damage	Minor effect	Limited impact		X			
3	Major health effect	Localized damage	Localized effect	Considerable impact		X			
4	Single fatality	Major damage	Major effect	National impact	X				
5	Multiple fatalities	Extensive damage	Massive effect	Global impact	X				

Key	Manage for continuous improvement (Low)	Incorporate risk reduction measures (Medium)	Intolerable (High)
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Risk Controls/Methods to Ensure Identified Hazards Are Addressed and Mitigated

E&B has established a complete heat illness prevention program to prevent heat illness. This includes: provide workers with water, rest and shade; gradually increase workloads and allow more frequent breaks for new workers or workers who have been away for a week or more to build a tolerance for working in the heat (**acclimatization**); modify work schedules as necessary; plan for emergencies and train workers about the symptoms of heat-related illnesses and their prevention; and monitor workers for signs of illness. **Workers new to the heat or those that have been away from work and are returning can be most vulnerable to heat stress and they must be acclimatized.**

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To prevent heat related illness and fatalities:

- Drink water every 15 minutes, even if you are not thirsty.
- Rest in the shade to cool down.
- Wear a hat and light-colored clothing.
- Learn the signs of heat illness and what to do in an emergency.
- Keep an eye on fellow workers.
- "Easy does it" on your first days of work in the heat. You need to get used to it.

If workers are new to working in the heat or returning from more than a week off, and for all workers on the first day of a sudden heat wave, implement a work schedule to allow them to get used to the heat gradually. Working in full sunlight can increase heat index values by 15 degrees Fahrenheit. Keep this in mind and plan additional precautions for working in these conditions.

Remember these three simple words: Water, Rest, Shade. Taking these precautions can mean the difference between life and death.

JSA Sample

The following describes how identified hazards are addressed and mitigated:

Basic Job Step	Potential Injury or Hazards	Mitigation / Tools
Working in heat all day: Walking a gas line Reclamation crew planting new seed Roustabouts Cleaning up pipe	Heat Stroke	Drink lots of water Get plenty of rest Take breaks in the shade Gradually work up to getting used to working in the heat.



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Other Info

Condition	Symptoms	First-aid and treatment
Heat cramps	Painful cramps, especially in the legs Flushed, moist skin	Move to a cool place and rest. Remove excess clothing and place cool cloths on skin; fan skin. Give cool sports drinks containing salt and sugar, such as Gatorade. Stretch cramped muscles slowly and gently.
Heat exhaustion	Muscle cramps Pale, moist skin Usually has a fever over 100.4° F (or 34° C) Nausea Vomiting Diarrhea Headache Fatigue Weakness Anxiety, and faint feeling	Move to a cool place and rest. Remove excess clothing and place cool cloths on skin; fan skin. Give cool sports drinks containing salt and sugar, such as Gatorade. If no improvement or unable to take fluids, call your adolescent's doctor or take your child to an emergency department immediately. IV (intravenous) fluids may be needed.
Heat stroke	Warm, dry skin high fever, usually over 104° F (or 40° C) Rapid heart rate Loss of appetite Nausea Vomiting Headache Fatigue Confusion Agitation Lethargy Stupor	Move to a cool place and rest. Call 911 or your local emergency medical service. Heat stroke is a life-threatening medical emergency and needs to be treated by a doctor. Remove excess clothing and drench skin with cool water; fan skin. Place ice bags on the armpits and groin areas. Offer cool fluids if alert and able to drink.

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	Seizures, coma, and death are possible	
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