

HEAT STRESS

1.0 Objective

The objective of this surveillance is to evaluate the effectiveness of actions taken by the laboratory to protect workers from the effects of heat stress. The Facility Representative or Environmental, Safety, and Health Support Specialist will observe work where heat stress is a risk and examine implementation of applicable administrative controls. The surveillance provides a basis for evaluating compliance with applicable DOE requirements and implementation of best industry practices.

2.0 References

- 2.1 DOE O 440.1A, *Worker Protection Management for DOE Federal and Contractor Employees*
- 2.2 DOE 5480.4, *Environmental Protection, Safety and health Protection Standards*
- 2.3 U.S. Environmental Protection Agency, Publication 9285.1-03, *Standard Operating Safety Guides*, June 1992

3.0 Surveillance Activities

In performing this surveillance, the Facility Representative or Environmental, Safety, and Health Support Specialist should recognize that mitigating the potential for heat stress is not governed by rigorous standards or requirements. Accordingly, wide latitude should be afforded to Industrial Hygienists monitoring worker health and safety. In performing this surveillance, the Facility Representative or Environmental, Safety, and Health Support Specialist completes the following activities:

Activity 1 - Review health and safety plan, work package, or other governing documents for work that involves potential for exposure to heat stress.

Activity 2 - Attend pre-job briefing

Activity 3 - Observe ongoing work activities at the work site for the administrative documents reviewed in Item 1.

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Surveillance No.: _____

Facility: _____

Date Completed: _____

Activity 1 - Review Work Planning Documents

The Facility Representative or Environmental, Safety, and Health Support Specialist selects a work activity that exposes workers to the risk of heat stress. Such activities include hazardous waste operations that require workers to wear impermeable encapsulating personal protective equipment, work in radiological control areas that necessitates work in anti-contamination clothing, work that involves highly strenuous activities at elevated temperatures, and work that is performed in confined spaces with elevated temperatures. For the selected work activity, the Facility Representative or Environmental, Safety, and Health Support Specialist reviews pertinent documents governing the work.

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1. Do the work documents explicitly identify heat stress as a hazard that workers will encounter?	_____	_____	_____
2. Do the work documents define work and rest periods during the work activities based on anticipated work rate, ambient temperature and other factors?	_____	_____	_____
3. Do the work documents require the presence of technicians to monitor worker physiological symptoms to detect indications of heat stress?	_____	_____	_____
4. Do the work documents include provisions for equipment or additional provisions to mitigate the potential for heat stress such as use of ice vests, forced cooling, field showers, or hose-down areas?	_____	_____	_____
5. Do the work documents include provisions for shelter or shaded areas to protect workers during rest periods and for availability of fluids to replace body fluid losses due to sweat?	_____	_____	_____

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Activity 2 - Attend Pre-job Briefing				
6.	Are risks associated with heat stress discussed at the briefing?	_____	_____	_____
7.	Are workers cautioned regarding symptoms of the onset of heat stress?	_____	_____	_____
8.	If additional personal protective equipment has been mandated to mitigate the potential for heat stress, is the use of this equipment discussed?	_____	_____	_____
9.	Are work and rest period requirements discussed during the briefing?	_____	_____	_____
Activity 3 - Observe Work Activities				
10.	Are work and rest cycles implemented in accordance with requirements in the work package documents?	_____	_____	_____
11.	Are industrial hygiene technicians present to monitor environmental and physiological conditions?	_____	_____	_____
12.	Do industrial hygiene technicians promptly monitor heart rate and body temperatures at the beginning of rest periods?	_____	_____	_____
13.	If heart rates exceed 110 beats per minute, are work cycles shortened by at least one-third?	_____	_____	_____
14.	If oral temperatures exceed 99.6°F, are work periods shortened by one-third?	_____	_____	_____
15.	Are fluids available for consumption by workers to make up for fluids lost during work periods?	_____	_____	_____
16.	Are shelter or shaded areas available to protect personnel during rest periods?	_____	_____	_____

17. Are workers using additional provisions to mitigate exposure to heat stress as specified in the work documents? _____

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CAUTION

Facility Representatives or Environmental, Safety, and Health Support

Specialists should avoid interrupting operators or maintenance personnel in their work. The Facility Representative or Environmental, Safety, and Health Support Specialist should wait for opportune times to transact business.

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
18. Can workers who are at risk to heat exposure describe symptoms that might indicate onset of heat stress?	_____	_____	_____
19. Can industrial hygiene technicians describe the circumstances under which work periods would be restricted or work suspended?	_____	_____	_____

OTHER:

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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NOTES/COMMENTS:

PERSONNEL CONTACTED: _____

**IF MORE SPACE IS NEEDED FOR FINDINGS, OBSERVATIONS, AND FOLLOWUP
ITEMS - USE ADDITIONAL SHEETS**

FINDINGS:

Finding No.: _____

Description: _____

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Finding No.: _____

Description: _____

Finding No.: _____

Description: _____

OBSERVATIONS:

Observation No.: _____

Description: _____

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Observation No.: _____

Description: _____

Observation No.: _____

Description: _____

FOLLOWUP ITEMS:

Followup Item No.: _____

Description: _____

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Followup Item No.: _____

Description: _____

Followup Item No.: _____

Description: _____

LABORATORY MANAGEMENT DEBRIEFED AND RESULTS: _____

Signature: _____ Date: _____

Facility Representative or
Environmental, Safety, and Health Support Specialist