



HEALTH, SAFETY &
ENVIRONMENTAL MANUAL

5.4.17.1 Safe Work Procedure – Thermal Hazards – Heat

Initial HIRA Score: **20** Residual HIRA Score: **5** Critical Task: **No**

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Thermal Hazards

Supervisors will monitor their crews and follow these steps as needed

Step 1: Training

- Measurements alone cannot guarantee worker protection from heat stress. It is essential workers learn to recognize the early signs and symptoms.
- The ideal heat stress response plan would let workers regulate their own pace by “listening to their body”.
- A Heat Stress Response Plan must be communicated and organized during the Job Hazard Analysis.

Step 2: Workplace Humidex

- A thermal hygrometer is a simple way to measure the temperature and relative humidity, however these are rarely available to supervisors. In the case where a hygrometer is not available, use the local weather data.
- Once you have the temperature and humidity, use Table A to determine the humidex value.
- From Table B select *Humidex 1* or *Humidex 2* according to the amount of physical activity involved and the level of acclimatization. Although the Heat Stress Response (Table B) is based on workplace measurements not weather reports, it can be used where specific measurements are unavailable.

Step 3: Adjust for Clothing

- The humidex plan assumes workers are wearing regular summer clothes (light shirt, pants, underwear, socks, and work boots).
- If workers are wearing cotton overalls on top of clothing, add 5°C. to the workplace humidex measurement.
- Estimate the correction factor for other clothes or PPE.

Step 4: Adjust for Radiant Heat

- For outdoor work in direct sunlight between 10 am and 5 pm, add 1 - 2°C to your humidex measurement. Adjust for cloud cover.

The Heat Stress Plan is only a guide. Never ignore a person’s signs and symptoms. Workers should always “listen to their body”.

Initial HIRA Score	Associated Task	Hazards	Controls	Residual HIRA Score
10	Thermal Hazards	<ul style="list-style-type: none"> • Heat stress and related illness • Cold stress and related illness • Property damage • Slip, Trip, Fall 	<ul style="list-style-type: none"> • Consult J-AAR's hot and cold weather policies • Ensure trenches are adequately dewatered in the winter/fall • Keep clothing and PPE in good condition and as dry as possible • Wear PPE and clothing appropriate for the conditions • Ensure equipment is kept as clean as possible to avoid build up of ice/mud on the access treads • Keep/ensure the constructor keeps all areas of access and egress clear of snow and ice 	5