Health and Safety Standard

WORKING IN HOT AND COLD CONDITIONS

1 PURPOSE

This standard aid SaskPower staff to determine the appropriate thermal protection and mitigation processes required to enhance worker safety.

This standard supports the SaskPower Health, Safety and Environment Policy and establishes the requirements for managing the risks associated for employees working in thermal extremes.

2 SCOPE

This standard highlights SaskPower's requirements for identifying heat and cold hazards and their mitigation techniques.

This standard does not cover other physiological environmental hazards such as severe weather, low or high atmospheric pressure, and poor air quality.

The use of the word "shall" within this standard denotes a mandatory action, whereas the use of the word "should" or "may" denotes a recommended action.

3 DEFINITIONS

The following definitions apply to this standard:

Acclimatized – is the process in which an individual adjusts to a gradual change in environment.

Heat Stress – is any set of environmental and workload conditions, which places excessive demands on the normal regulation of body temperature.

Wind Chill - refers to the combined chilling effect of wind and temperature on humans.

4 REQUIREMENTS

All normal work will be performed within Occupational Health and Safety, Hot Conditions Guidelines and Cold Conditions Guidelines for outside work and in compliance with *The Occupational Health & Safety Regulations, 2020*.

A plan for working in hot or cold conditions begins with the identification and assessment of exposure hazards in the workplace and providing appropriate controls.

4.1. IDENTIFYING HEAT EXPOSURE HAZARDS

All tasks, assignments and circumstances where heat exposure hazards, such as heat stress exist shall be identified and documented in a hazard/aspect and risk assessment (HARA).

Where known heat exposure hazards exist, a hazard mitigation plan should exist.

4.2. HEAT EXPOSURE CONTROL METHODS

Where practicable heat exposure hazards shall be removed. Where heat exposure hazards cannot be removed, controls shall be used to reduce exposure.

- Engineering controls are the preferred controls where practicable and include:
  - Isolation, relocation, redesign or substitution to remove heat sources from work areas.
  - Use available Air Conditioning Systems.
  - Use local exhaust to remove heat from work processes.
  - Use screens, awnings or other appropriate material to shield or block sources of heat.
  - Insulate hot equipment and surfaces to contain radiant heat.
  - Maintain equipment so that heat created by malfunction is eliminated.
  - Use labour saving devices to reduce hot work.
  - Automate or replace hot processes if practicable.
- Administrative controls include:
  - Increasing the frequency and duration of cool down breaks according to Working Under Hot Conditions Guideline Saskatchewan Occupational Health and Safety document.
  - Using additional employees for the job.
  - Ensuring that employees and supervisors understand the signs and symptoms of heat exposure.
  - Rotating employees in and out of work areas.
  - Pacing the work to avoid overheating.

  - Allowing employees enough time to get adjusted to heat before assuming a full work load.
  - Provide adequate supplies of drinking water or other cool liquids and encourage workers to drink small amounts frequently.
  - Increasing the frequency and duration of cool down/rest breaks according to Work Safe Sask – Hot Condition Guidelines

- Personal Protective Equipment (PPE) shall be used where engineering and administration controls do not effectively reduce the heat exposure hazard:
  - PPE shall be selected where hazard/aspect and risk assessment identify the requirement.
  - PPE shall be arc rated and/or high visibility where hazard/aspect identification and risk assessment identify the requirement.
- It is preferable to establish layers of protection by combining the three control types.

4.3. IDENTIFYING COLD EXPOSURE HAZARDS

All tasks, assignments and circumstances where cold exposure hazards, such as wind chill exist shall be identified and documented in a hazard/aspect and risk assessment (HARA).

4.4. COLD EXPOSURE CONTROL METHODS

Where practical cold exposure hazards shall be removed and where cold exposure hazards cannot be removed controls shall be used to reduce exposure.

- Engineering controls are the preferred controls where practicable and include:
  - Equipment design such as covering metal handles/bars with thermal insulating material or designing machines and tools so that they can be operated without having to remove mittens or gloves.
  - Install heating systems.
  - Use of enclosures and barriers to block winds that will deflect heat.
- Administrative controls include:
  - Using additional employees for the job.
  - Ensuring that all employees and supervisors understand the signs and symptoms of cold exposure.
  - Rotating employees in and out of work areas.
  - Pace the work to avoid sweating.
  - Allowing employees enough time to get acclimatized to cold and protective clothing before assuming a full work load.

  - Increasing the frequency and duration of warm up/rest breaks according to Work Safe Sask – Working in Cold Conditions Fact Sheet

- PPE shall be used where engineering and administration controls do not effectively reduce the cold exposure hazard:
  - Appropriate winter wear shall be worn where needed.
  - Winter wear shall be arc rated and/or high visibility where hazard/aspect identification and risk assessment identify the requirement.
- It is preferable to establish layers of protection by combining the three control types (Engineering, Administrative and PPE).

4.5. TRAINING

Divisions shall provide information on Working in Hot & Cold Conditions that includes:

- Hazards, signs and symptoms of exposure.
- Selection, use and maintenance of PPE.
- Personal controls for working in hot & cold conditions.
- The use of Saskatchewan Labour Relations and Workplace Safety publication for work requirements in hot conditions.
- Emergency supplies and equipment when required.

5 IMPLEMENTATION

The requirements of this version of the standard are to be met within **six** months of the approval date at which time the previous version will be superseded.

6.1 INTERNAL RESOURCES

Related Policies:	Health, Safety and Environment Policy Hazard /Aspect and Risk Assessment (HARA) Policy
Related Standards:	Hazard /Aspect and Risk Assessment (HARA) Standard
Additional Information:	Safety and Environment Rule Book

6.2 EXTERNAL RESOURCES

Related Legislation:	*The Employment Act (Saskatchewan)* *The Occupational Health & Safety Regulations, 2020*
References:	WorkSafe Saskatchewan – Hot Conditions Guidelines
Related Standards:	CSA Z1010-2018 Management of work in extreme conditions
Additional Information:	Environment Canada Wind Chill Calculation Chart Work Warm Up Schedule for Outdoor Activity Chart (OH&S)

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