

# Cold Weather Policy & Protection Plan



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## Scope:

Applies to all Bernard Rochefort Ltd. Employees and management, regardless of employment status, who are exposed to low temperatures and wind-chills while performing their duties.

## The Law:

25(2) (h) of the Occupational Health and Safety Act states that employers must take every precaution reasonable in the circumstances for the protection of a worker. This includes the development of cold environment policies and procedures to protect workers in cold environments. The Ontario Ministry of Labour recommends the Threshold Limit Values (TLV's) for hypothermia and frostbite for compliance purposes. These are published by the ACGIH (American Conference of Governmental Industrial Hygienists).

## Policy:

Bernard Rochefort Ltd. recognizes that construction operations involving physical work in cold environments combined can place workers at risk for hypothermia, frostbite and other cold weather injuries. As such, as part of the company's ongoing efforts to reduce and control unsafe conditions and acts in the workplace and to take every precaution reasonable for the protection of our workers, Bernard Rochefort Ltd. has implemented this cold weather policy (working in Cold Weather Conditions) which is intended to protect workers from the potential adverse effects of overexposure to cold. Bernard Rochefort Ltd. is committed to ensuring the effectiveness of this program by allowing for careful monitoring of temperature and wind-chill factors on those days where the temperatures reach -26 degrees Celsius and by ensuring that all workers are familiar with the Processes noted below to understand the risks of cold weather work and to recognize the symptoms of hypothermia and frostbite.

## Employer Responsibility:

The employer is responsible for ensuring that an effective policy and Cold Weather Protection Plan is in place during the months of December to March where risk is highest and, in particular, once temperatures are consistently at the -26 degree mark or lower. The employer is responsible for ensuring that an initial refresher course on recognizing the signs of hypothermia and frostbite is delivered prior to the cold weather season. The employer is responsible for ensuring that a cold weather protection plan is implemented and adhered to by supervision, management and workers.

## Accountability:

The employer is accountable to the Bernard Rochefort Ltd. Occupational Health and Safety Policy, their employees and the Ministry of Labour in this regard.

## Supervisor Responsibility:

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Supervisors are expected to exercise due diligence for personal safety when assigning work in extreme cold, and shall ensure that all employees are familiar with first aid procedures for illnesses. Any worker on any site who has been recently hired must have had the orientation process, particularly for cold weather work prior to commencing work at a site. The supervisor is responsible for making sure there is an adequate warm-up/break area and for ensuring that time is allotted to “buddy up” prior to the days’ work to allow for workers to be paired to monitor each other for signs and symptoms of hypothermia and frostbite.

## **Accountability:**

The supervisor is accountable to the Bernard Rochefort Ltd. Occupational Health and Safety Policy, the employer and the Ministry of Labour in this regard as well as the OH&S coordinator who will periodically monitor random locations during cold weather work to ensure the program is in effect.

## **Worker Responsibility:**

Workers are expected to comply with the processes noted below and to report immediately to their supervisor or first aide staff on scene if they recognize any symptoms in themselves or a co-worker. Workers are expected to follow the cold weather protection plan and to observe their “buddy” as well as themselves on a vigilant basis for signs and symptoms of extreme cold related illness.

## **Accountability:**

The worker is accountable to the OH&S Policy, their supervisor and ultimately the employer as well as the Ministry of Labour.

## **Occupational Health & Safety Coordinator Responsibility:**

The coordinator is responsible for ensuring that the cold weather protection plan is in effect on those days where temperature is below -26 Celsius.

## **Accountability:**

The coordinator is accountable to the President.

## **Approval & Acknowledgement:**

A handwritten signature in blue ink, consisting of a large, stylized initial 'G' followed by a long horizontal stroke.

Feb 1<sup>st</sup>, 2018

# Cold Weather Policy & Protection Plan



Rhéaume Rochefort

Date:

## Cold Weather Protection Plan

This plan is to be used during those periods that the Cold Weather Policy is in effect. It is expected that an awareness of cold weather-related illnesses is considered during the period of December 1<sup>st</sup> to March 30<sup>th</sup> of any calendar year, so the plan is in effect for that time frame.

Using guidelines from the Canadian Center for Health and Safety, Bernard Rochefort Ltd. has developed this Cold Weather Protection Plan to protect workers from potential adverse effects from overexposure to cold weather.

Bernard Rochefort Ltd. has determined that a schedule of recording temperatures will take place once the temperature reaches -26 degrees Celsius. These temperatures will be recorded on a Temperature Log and will be collected by the Health and Safety Representative and/or Health and Safety Coordinator during the monthly inspections to check for compliance.

Prior to the commencement of the winter season, Bernard Rochefort Ltd. will commit to refresher training sessions for all workers on recognizing the signs and symptoms of hypothermia and frostbite. While this is covered as part of the first aid training, Bernard Rochefort Ltd. recognizes that this health issue is serious enough to warrant specific instruction. Any worker who has not had the benefit of this hypothermia and frostbite training at the start of the season (i.e. late or mid season hires) will receive instruction on recognizing the signs and symptoms as part of the orientation process from the Health and Safety Coordinator.

**NOTE:** THE Canadian Center for Health and Safety provides guides for determining work when work stoppages or breaks should occur. The guidelines are determined by ambient temperature and wind speed. Bernard Rochefort Ltd. has devised a work rest schedule based on these guidelines for when the temperature goes below -26 Celsius.

*Acclimatization: Most Bernard Rochefort Ltd. workers are outdoor workers and so are naturally acclimatized. In periods of extreme cold weather, however, if a new hire is made, this worker should not be placed on a schedule until he has had a period of acclimatization whereby he commences work (following work rest schedule) on a graduated basis (2 hours first day, 4 hours second day, 6 hours third day and 8 hours fourth and fifth day with no overtime till acclimated)*

## Plan

### Employer Responsibility:

The employer is responsible for ensuring that all staff is trained to recognize the signs and symptoms of hypothermia and frostbite in themselves and other workers. This will be accomplished via specific training provided by a health care or first aid professional prior to season start. This is to be scheduled by the Health and Safety Coordinator in conjunction with the Supervisor/foreman. The H&S Coordinator will deliver a session on those signs and symptoms for those hired mid/late season who would not have had the benefit of such a training course.

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The employer will ensure that there is a drug/alcohol policy in place to reduce the risk of increased exposure that these factors play in relation to hypothermia and frostbite.

The employer will ensure that the cold weather policy and cold weather protection plan are incorporated into the orientation process for all new hires and existing staff. As part of the new hire orientation and review of existing staff, workers will be asked to provide brief details on any medical condition or drug/medication requirement that may place them at higher risk of suffering adverse effects from cold exposure.

The employer will ensure that there is a first aid trained worker at each job site.

The employer will assign the task of monitoring daily temperatures to the foreman/lead hand on each site where outdoor work is being conducted. The employer is responsible for ensuring that the foreman/lead hand is a competent person.

The employer will reinforce with the Supervisor/lead hand the requirement for all workers to be in a buddy system during extreme cold weather temperatures.

The employer will ensure that there is an adequate warm-up/break area at each outdoor work location.

## **Supervisor Responsibility:**

The supervisor must take daily temperature readings at each site at 9:00 a.m., 12:00 and 3:00 p.m. and, on those days where work exceeds usually working hours, at 6:00 p.m. These temperatures are to be recorded on the daily temperature log and retained in the foreman's truck with all other inspection forms. These logs will be collected monthly by the Health and Safety Coordinator. These temperatures will be recorded on dates where temperatures reach -26 degrees Celsius or lower.

The supervisor is required to monitor wind-chill readings from Environment Canada. These will be obtained by calling Environment Canada at 677-7928 (located at the Sudbury airport) and will be done at the same time that the daily temperature readings are recorded.

## **Guidelines for Work Rest Schedule**

The following schedule is based on the ACGIH BEI-TLV (American Conference of Governmental Industrial Hygienists biological exposure indices – threshold limit values).

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**Table 4**

**TLVs Work/Warm-up Schedule for Outside Workers based on a Four-Hour Shift\*\***

Air Temperature - Sunny Sky		No Noticeable Wind		Wind 8 km/h (5 mph)		Wind 16 km/h (10 mph)		Wind 24 km/h (15 mph)		Wind 32 km/h (20 mph)	
<u>°C (approx)</u>	<u>°F (approx)</u>	<u>Max. work Period</u>	<u>No. of Breaks</u>	<u>Max. Work Period</u>	<u>No. of Breaks</u>	<u>Max. Work Period</u>	<u>No. of Breaks</u>	<u>Max. Work Period</u>	<u>No. of Breaks</u>	<u>Max. Work Period</u>	<u>No. of Breaks</u>
-26° to -28°	-15° to -19°	Normal Breaks		Normal Breaks		75 min.	2	55 min.	3	40 min.	4
-29° to -31°	-20° to -24°	Normal Breaks		75 min.	2	55 min.	3	40 min.	4	30 min.	5
-32° to -34°	-25° to -29°	75 min.	2	55 min.	3	40 min.	4	30 min.	5	Non-emergency work should cease	
-35° to -37°	-30° to -34°	55 min.	3	40 min.	4	30 min.	5	Non-emergency work should cease			
-38° to -39°	-35° to -39°	40 min.	4	30 min.	5	Non-emergency work should cease		Non-emergency work should cease			
-40° to -42°	-40° to -44°	30 min.	5	Non-emergency work should cease		Non-emergency work should cease		Non-emergency work should cease			
-43° & below	-45° & below	Non-emergency work should cease		Non-emergency work should cease		Non-emergency work should cease		Non-emergency work should cease			

\*2013 TLVs® and BEIs® - Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. Cincinnati: American Conference of Governmental Industrial Hygienists (ACGIH), 2013, page 202.

**Table Instructions:**

The max work period indicates how long a worker can work at the temperature listed in the row and the wind factor listed in the column. The number of breaks associated to it are the breaks required within that 4 hour shift. Example, if exposed to -40° to -42°C with no noticeable wind, worker can only work 30 minutes at a time and must have 5 breaks during the shift. This works out to 2hrs of work and 2hrs of breaks or 20 minute breaks at every maximum work period time of 30 consecutive minutes.

The supervisor must allow, prior to job start, each worker to pair up with a co-worker. This buddy system will help provide additional monitoring for symptoms of hypothermia and frostbite. For new workers hired after December 1 who have not had the benefit of the cold weather training, it will be expected that the supervisor will pair these workers with a worker who has already been trained to recognize the signs and symptoms of hypothermia and frostbite. The Health and Safety Coordinator will go over the signs and symptoms with this new hire at point of orientation.

# Cold Weather Policy & Protection Plan



All employees are expected to be constantly vigilant and aware of all signs of hypothermia, frostbite and to look for these symptoms in workers during the course of cold weather work.

Supervisors must allow workers who are reporting hypothermia and frostbite symptoms the opportunity to obtain relief immediately. The symptoms and treatment guidelines are noted in paragraphs below (Retrieved from CSAO).

## **HYPOTHERMIA--*signs and symptoms***

When the body can no longer maintain core temperature by constricting blood vessels, it shivers to increase heat production. Maximum severe shivering develops when the body temperature has fallen to 35°C (95°F). The most critical aspect of hypothermia is the body's failure to maintain its deep core temperature. Lower body temperatures present the following signs and symptoms:

- persistent shivering--usually starts when core temperature reaches 35°C (95°F)
- irrational or confused behavior
- reduced mental alertness
- poor coordination, with obvious effects on safety
- reduction in rational decision-making.

In addition, acute exertion in cold can constrict blood vessels in the heart. This is particularly important for older workers or workers with coronary disease, who may have an increased risk of heart attack.

## **HYPOTHERMIA—*stages***

### **Mild**

- shivering
- blue lips and fingers
- poor coordination.

### **Moderate**

- mental impairment
- confusion
- poor decision-making
- disorientation
- inability to take precautions from the cold
- heart slowdown
- slow breathing.

### **Severe**

In severe cases, hypothermia resembles death. Workers must be treated as though they are alive.

Symptoms of severe hypothermia include

- unconsciousness
- heart slowdown to the point where pulse is irregular or difficult to find
- no shivering
- no detectable breathing.

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## **HYPOTHERMIA--*first aid***

Stop further cooling of the body and provide heat to begin rewarming.

- Carefully move casualty to shelter. Sudden movement or rough handling can upset heart rhythm.
- Keep casualty awake.
- Remove wet clothing and wrap casualty in warm covers.
- Re-warm neck, chest, abdomen, and groin--but not extremities.
- Apply direct body heat or use safe heating devices.
- Give warm, sweet drinks, but only if casualty is conscious.
- Monitor breathing. Administer artificial respiration if necessary.
- Call for medical help or transport casualty carefully to nearest medical facility.

## **FROSTBITE--*signs and symptoms***

Frostbite is a common injury caused by exposure to severe cold or by contact with extremely cold objects. Frostbite occurs more readily from touching cold metal objects than from exposure to cold air. That's because heat is rapidly transferred from skin to metal. The body parts most commonly affected by frostbite are face, ears, fingers, and toes. When tissue freezes, blood vessels are damaged. This reduces blood flow and may cause gangrene. Frostbite symptoms vary, are not always painful, but often include a sharp, prickling sensation. The first indication of frostbite is skin that looks waxy and feels numb. Once tissues become hard, the case is a severe medical emergency. Severe frostbite results in blistering that usually takes about ten days to subside. Once damaged, tissues will always be more susceptible to frostbite in future.

## **FROSTBITE--*first aid***

- Warm frostbitten area gradually with body heat. ***Do not rub.***
- Don't thaw hands or feet unless medical aid is distant and there is no chance of refreezing. Parts are better thawed at a hospital.
- Apply sterile dressings to blisters to prevent breaking.
- Get medical attention.

## **RISK FACTORS**

Various medical conditions can increase the risk of cold injury:

- heart disease
- asthma/bronchitis
- diabetes
- vibration/white finger disease.

**NOTE: HYPOTHERMIA CAN BE FATAL, EVEN AFTER FIRST AID IS GIVEN. ANYONE SUSPECTED OF SUFFERING FROM HYPOTHERMIA SHOULD NOT BE SENT HOME OR LEFT UNATTENDED UNLESS THAT ACTION HAS BEEN APPROVED BY A PHYSICIAN.**

**IF THERE IS ANY DOUBT AS TO WHAT TYPE OF COLD WEATHER DISORDER THE WORKER IS SUFFERING FROM, CALL FOR IMMEDIATE MEDICAL ASSISTANCE. Bernard Rochefort Ltd. WOULD RATHER REACT IN A PROACTIVE MANNER IN THIS SITUATION THAN TO HAVE SOMEONE SUFFER UNDUE HARM FROM UNCERTAINTY.**

# Cold Weather Policy & Protection Plan



## Worker Responsibilities:

Workers are responsible for ensuring that they are not reporting to work with the effects of alcohol or drugs in their system. These elements increase the risk of adverse effects from hypothermia. Everyone is reminded that there will be strict enforcement of the drug and alcohol policy at Bernard Rochefort Ltd. .

Workers are responsible for working in the “Buddy System” on those days where hypothermia and frostbite are a risk. As part of the buddy system, workers are responsible for observing their “buddy” for signs of hypothermia and frostbite reporting these to the foreman/lead hand on site.

As noted previously in this plan, workers are encouraged to report any of those health factors/conditions that may put them at a greater risk of adverse effect due to hypothermia and frostbite (for example; diabetic conditions, certain medications, extreme fatigue, high blood pressure, cardiac conditions, etc.).

## Approval & Acknowledgement:

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Rhéaume Rochefort

Feb 1<sup>st</sup>, 2018

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Date:

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