

PURPOSE/APPLICATION

This Safe Work Practice is to provide guidance in choosing the safest course of action in the event of a lightning storm.

The nature of our business often requires us to work outdoors. Each year lightning kills approximately 10 Canadians and injures 100 to 150. Anytime work is being performed outdoors there may be a potential for serious or fatal injury if proper precautions are not taken during a lightning storm.

Direct strikes are responsible for only 5% of lightning-related deaths and injuries. There are two other types of hazardous phenomena are caused by lightning; Ground current and side flash which account for 60 to 80% of lightning-related injuries and deaths.

- a. A ground current occurs when lightning hits the ground, spreads out and sends a current through a victim.
- b. Side splash occurs when lightning hits a tall object, travels partly down the object and then jumps to a nearby victim.

PPE

- No additional requirements

TRAINING

- Review this Safe Work Practice

HAZARDS & CONCERNS

- Exposure to Electrical Energy
- Fires caused by lightning
- Falling trees/poles/tall structures
- Weather conditions



GENERAL PRECAUTIONS

THE DO's

- DO** Plan for a safe day, check the weather forecast first
- DO** Review any incoming weather in the daily tailgate meeting and discuss the plan for a response
- DO** Watch the skies for developing thunderstorms and listen for thunder
- DO** Plan for a safe place to muster in the event of lightning. Review the plan as part of your HIAC
- DO** Stay away from tall objects if caught outdoors far from shelter (this includes trees, poles, wires, and fences). Go to a low-lying area but be on the alert for possible flooding
- DO** Get to a safe place. A safe location is a fully enclosed building with wiring and plumbing. Sheds, picnic shelters, tents or covered porches do not protect you from lightning. If no sturdy building is close by, get into a metal-roofed vehicle and close all the windows
- DO** Alert other workers in the area of the situation (muster horns, radios, phones, etc.)
- DO** Follow the 30/30 Rule at a minimum (refer to the 30/30 Rule section below)

THE DON'Ts

- DON'T** Handle electrical equipment, or plumbing; these are all electrical conductors
- DON'T** Shelter under tall trees or structures
- DON'T** Return to the work area to pack up if work is suspended for the day

Applying the 30 & 30 Rule

When the sound of the thunder comes **30** seconds or less from when the lightning is seen, it is time to implement the muster order. Initiate the muster signal and move to an enclosed grounded building. If there is no appropriate building available stay in a rubber-tired vehicle.

Allow **30** minutes before returning to work from the last time the thunder is heard 30 seconds or less after the lightning is seen. The 30-minute wait is reset at each occurrence.



First aid for lightning victims

- Lightning victims do not carry an electrical charge and can be safely touched.
- Call for help. Victims may be suffering from burns or shock and should receive medical attention immediately. Activate you Emergency Response Plan, Call 9-1-1 or your local ambulance service.
- Give first aid. If breathing has stopped, administer CPR (cardio-pulmonary resuscitation).

REFERENCES / ADDITIONAL INFORMATION

Environment Canada

National Weather Service

Canadian Centre for Occupational Health and Safety

REGULATIONS

Alberta OHS Code

Part 12 General Safety Precautions

British Columbia OHS Regulation

Part 4: General Conditions

Saskatchewan OHS Regulation

PART 3 General Duties

Manitoba OHS Regulation

Part 46 General Provisions

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