Portable Heater OHS Safety Requirements – Know The Laws of Your Province

Portable heaters (aka space heaters) can be a useful way to supplement permanently installed heating systems or warm an outdoor workplace. But there are also risks. In addition to fires, explosions, carbon monoxide poisoning, and other hazards, portable heaters can lead to OHS orders and penalties. However, OHS regulation of portable heaters is less comprehensive than it is for other forms of equipment with the scope of regulation varying by jurisdiction.

Heater Type

The first variable is portable heater type:

- **General:** British Columbia, Nova Scotia, Prince Edward Island, and Yukon have general rules covering all types of temporary heaters, including but not limited to fuel-fired heaters that run on propane, diesel, kerosene or other combustible fuel.
- **Fuel-Fired Only:** OHS regulations in the other 10 jurisdictions have special requirements for fuel-fired heaters only.

Industry Type

Some provinces have specific portable heater requirements only

for certain industries:

- **Construction:** In Ontario and Québec, the portable heater-specific rules are in the OHS regulations governing construction work.
- **Mining:** In New Brunswick and Newfoundland, the only OHS requirements that expressly address portable heaters are contained in the mining regulations.
- **General + Mining:** Federal, Alberta, British Columbia, and Manitoba OHS laws have portable heating requirements for all industries as well as additional requirements for mining.

Other Safety Laws Apply

It's important to keep in mind that other OHS regulations may apply to all portable heaters, such as the general requirement that heat sources be kept away from compressed gas cylinders and other combustible materials. In addition, the power source of the heater might bring other requirements into play. Thus, for example, electric heaters are subject to electrical safety requirements under not just OHS regulations but also the Canadian Electrical Code and other applicable regulations and standards. In addition, OHS requirements that heat sources be kept away from combustible materials applies to any and all forms of heater.

Here's a summary of the portable heater-specific OHS rules in each part of Canada. Go to OHS Insider for a Portable Heaters Safety & Compliance Game Plan that you can implement at your site.

FEDERAL

1. A high-capacity portable open-flame heating device used in an enclosed workplace must:
    - Be located, protected, and used so that there's no

hazard of igniting tarpaulins, wood, or other combustible materials near the heating device.
- Be used only when there's ventilation provided.
- Be located so as to be protected from accidental contact, damage, or overturning.
- Not restrict a means of exit (*COHS Regs*, Sec. 2.17(1)).

2. If the heating device doesn't provide complete combustion of the fuel used in connection with it, it must be equipped with an exhaust system that discharges the products of combustion outside the enclosed workplace (*COHS Regs*, Sec. 2.17(2)).

ALBERTA

1. If the hazard assessment required by Part 2 of the OHS Code determines that a work area is not a hazardous location, an employer must ensure that flammable substances stored or used at the work area aren't stored in the immediate vicinity of the air intake of the fire box of a fired heater or furnace (*OHS Code*, Sec. 163(2)(c)(iii)).
2. An employer must ensure that intakes, exhausts and the fire box of a furnace or fired heater aren't located or operated in a Division 1, Zone 0, or Zone 1 hazardous location of any Class as defined in the *Canadian Electrical Code* (*OHS Code*, Sec. 168(4)).
3. An employer must ensure that a furnace or fired heater is not located or operated in a Division 2 or Zone 2 hazardous location of any Class as defined in the *Canadian Electrical Code*, unless:
    - The combustion process is totally enclosed except for the combustion air intake and the exhaust discharge.
    - All surfaces exposed to the atmosphere:
        - operate below the temperature that would

ignite a flammable substance present in the hazardous location, or
    - are shielded or blanketed in such a way as to prevent a flammable substance in the hazardous location from contacting the surface.
- The combustion air intake and exhaust discharge are equipped with a flame arresting device or are located outside the hazardous location (*OHS Code*, Sec. 168(5)).

4. If it's not reasonably practicable to comply with subsection (b) above, an employer must ensure that another effective safeguard is established (*OHS Code*, Sec. 168(6)).
5. An employer must ensure that a furnace or device used for heating mine air is designed, constructed and installed to and otherwise meets specifications certified by a professional engineer (*OHS Code*, Sec. 695(2)).

BRITISH COLUMBIA

1. Preventive maintenance of a ventilation system must include maintenance of combustion sources, such as furnaces, space heaters, and water heaters to assure proper burning and exhausting of waste gases so that recirculation of gases to the workplace won't occur (*OHS Regs*, Sec. 4.78(2)(e)).
2. An open flame heating apparatus must not be located in the same work area as a dry-cleaning machine and must have corrosion-resistant flue and draft hoods to conduct products of combustion to the outdoors (*OHS Regs*, Sec. 12.151).
3. A flame heating apparatus must not obtain combustion air from areas subject to contamination with dry cleaning solvent vapours (*OHS Regs*, Sec. 12.152).

4. Before a heating system is installed or used in an underground working, the design, specifications, and operating procedure must be submitted to the Board for approval (*OHS Regs*, Sec. 2.27(1)).
5. The heating device installed or used in an underground working must be:
    - Located at least 25 m (80 ft) outside an entrance to an underground working.
    - Vented to prevent flue gases from entering the underground working.
    - Equipped with an automatic fuel shutoff if the fire goes out.
    - Manually restarted after an automatic shutdown (*OHS Regs*, Sec. 2.27(2)).
6. The following heating devices must not be located in an underground working or within 25 m (80 ft) of the portal:
    - An open flame heater.
    - A liquefied petroleum gas or natural gas heater.
    - A heater, torch or burner using fuel with a flash point of less than 40°C (104°F) (*OHS Regs*, Sec. 22.29).

MANITOBA

1. An employer must ensure that a worker doesn't refill a tank connected to a heating device with a combustible or flammable liquid while the device is in operation or is hot enough to ignite the liquid (*WSH Regs*, Sec. 19.6(2)(a)).
2. If a heating device is installed inside a magazine at a mine, the employer must ensure that:
    - The heating device:
        - doesn't directly involve the combustion of fuel,
        - is enclosed in a compartment or enclosure,

and
- meets the requirements of Part 11 of the Regulations.

- All exposed surfaces of the heating device are maintained at a temperature that doesn't exceed 100°C.
- A continuous record of the temperature within the magazine is maintained at all times the heating system is in operation.
- A barrier that prevents explosives or their containers from coming into contact with the heating device is maintained, or the heating device is maintained at least the minimum distance from explosives or their containers in accordance with the heating device's manufacturer's specifications (*of Mines Reg*, Sec. 6.8(1)).

3. The compartment or enclosure referred to in □(a)□(ii) above must be separate from the explosives and constructed of noncombustible materials (*of Mines Reg*, Sec. 6.8(2)).

NEW BRUNSWICK

1. An employer must ensure that any proposed method of heating the underground mine ventilating air is approved in writing by an engineer as being capable of heating the required volume of air without adversely affecting the health or safety of employees (*Underground Mine Reg*, Sec. 49).
2. An employer must designate and clearly identify an area as a fire hazard area if methane is present in the area or if there's an unusual susceptibility to the creation of a fire by smoking, by open flame or by other means of producing heat or fire in the area (*Underground Mine Reg*, Sec. 79(1)).

NEWFOUNDLAND & LABRADOR

1. An employer must ensure that only non-combustible materials are used for the construction of structures and enclosures underground for a heating device (*OHS Regs*, Sec. 572).

NOVA SCOTIA

1. An employer must locate, install, operate, inspect, and maintain temporary space heating equipment so as to prevent the unintended ignition of any material (*Safety Gen. Reg,* Sec. 102).
2. Where space heating equipment is powered by a combustible fuel, the employer must ensure that:
    - The equipment is located on the ground or above a non-combustible floor of sufficient thickness to prevent the transference of enough heat to cause a fire below.
    - If located above a combustible floor, the equipment is separated from the combustible floor by 75 mm of non-combustible material covered by sheet metal extending 600 mm beyond the heating equipment on all sides (*Safety Gen. Reg,* Sec. 103).

NORTHWEST TERRITORIES

1. An employer must ensure that portable fire extinguishers are placed no more than 9 m from an industrial open-flame portable heating device that’s in use (*OHS Regs*, Sec. 395(1)(a)).
2. An employer must ensure that workers aren’t required or permitted to replenish a tank on a heating device with a combustible or flammable liquid while the device is in

operation or is hot enough to ignite the liquid (*OHS Regs*, Sec. 400(1)(b)(i)).
3. A worker must not replenish a tank on a heating device with a flammable or combustible liquid while the device is in operation or is hot enough to ignite the liquid (*OHS Regs*, Sec. 400(2)(b)).

NUNAVUT

1. An employer must ensure that portable fire extinguishers are placed no more than 9 m from an industrial open-flame portable heating device that's in use (*OHS Regs*, Sec. 395(1)(a)).
2. An employer must ensure that workers aren't required or permitted to replenish a tank on a heating device with a combustible or flammable liquid while the device is in operation or is hot enough to ignite the liquid (*OHS Regs*, Sec. 400(1)(b)(i)).
3. A worker must not replenish a tank on a heating device with a flammable or combustible liquid while the device is in operation or is hot enough to ignite the liquid (*OHS Regs*, Sec. 400(2)(b)).

ONTARIO

1. A fuel-fired heating device at a construction project must be located, protected and used in such a way that there's no risk of igniting a tarpaulin or similar temporary enclosure or combustible materials adjacent to it (*OHS Const. Project Regs*, Sec. 49(1)).
2. No fuel-fired heating device may be used in a confined or enclosed space unless there's an adequate supply of air for combustion and adequate general ventilation (*OHS Const. Project Regs*, Sec. 49(2)).
3. A fuel-fired heating device must be protected from damage and overturning (*OHS Const. Project Regs*, Sec.

49(3)).
4. No fuel-fired heating device may be located so as to restrict any means of egress (*OHS Const. Project Regs*, Sec. 49(4)).
5. A fuel-fired heating device that generates noxious products of combustion must discharge the products of combustion outside the building or structure in which it's located (*OHS Const. Project Regs*, Sec. 49(5)).

PRINCE EDWARD ISLAND

1. The employer must ensure that liquid fuel or gas for a temporary heating device in excess of one day's supply is required to:
    - Be stored in safe conditions.
    - Not be stored in a building or structure other than a fire-resistant room constructed for the purpose.
    - Not be stored adjacent to a means of egress (*OHS Act General Regs*, Sec. 7.1).

2. The employer must ensure that a fuel fired heating device, including a temporary furnace:
    - Is placed on the ground or on a non-combustible floor; Exception: it may be placed upon a wooden floor if it's separated therefrom by 76 mm (3 in.) of non-combustible material covered by sheet metal and extending 600 mm (23.6 in.) beyond all sides of the device.
    - Is located, protected and used that it won't ignite:
        - tarpaulins or similar temporary enclosures, or
        - wood or other combustible materials.

- Is provided with a securely supported short metal pipe to discharge the products of combustion outdoors where necessary;
- where specified by the manufacturer, is vented to the outside atmosphere to remove harmful or noxious fumes, and
- is used only where there's adequate general ventilation while workers are in the building or structure (*OHS Act General Regs*, Sec. 7.2).

3. The employer must ensure that portable heaters are not:
    - used in a confined space, or
    - located in or adjacent to a means of egress (*OHS Act General Regs*, Sec. 7.3).

4. An approved fire extinguisher of adequate size must be readily available at the location of every temporary heating device (*OHS Act General Regs*, Sec. 7.4).

QUÉBEC

1. Any equipment providing a temporary heating supply system must be safely installed and operated (*Safety Code for Const.*, Sec. 3.11.1).
2. It's illegal to use a heating system which burns gasoline or naphtha (*Safety Code for Const.*, Sec. 3.11.2).
3. Any oil or fuel or gas heating system must have a vent pipe, with the exception of systems where the flame is in direct contact with the air (*Safety Code for Const.*, Sec. 3.11.3).
4. Any fuel-fired heating system must be:
    - So located, protected and used that there's no risk of igniting:

        - tarpaulins or any other similar temporary shelter; or
        - wood or any other combustible material adjacent thereto.
    - Used in an enclosed area only if there's:
        - sufficient air supply for normal combustion; and
        - sufficient ventilation.
    - Protected from any damage or overturning.
    - Located so as not to block the means of egress.
    - Connected to a metal chimney, if used to burn a solid fuel, to discharge the products of combustion outside the building.
    - Connected to the liquid fuel tank by means of piping well protected against any damage (*Safety Code for Const*., Sec. 3.11.4).

5. An electric air-heater must be certified in accordance with CAN/CSA Standard C22.2 No. 46, Electric Air-Heaters, applicable at the time of its manufacture (*Safety Code for Const*., Sec. 3.11.5).
6. Oil heating equipment must be installed in accordance with CSA Standard B139 – 1971 Installation Code for Oil Burning Equipment (with the exception of clause 12.3 of that Code) (*Safety Code for Const*., Sec. 3.11.6).

SASKATCHEWAN

1. An employer, contractor or owner must ensure that portable fire extinguishers are placed no more than 9 m from an industrial open-flame portable heating device that's in use (*OHS Regs*, Sec. 25-3(2)(a)).
2. An employer or contractor must ensure that workers aren't required or permitted to replenish a tank on a

heating device with a combustible or flammable liquid while the device is in operation or is hot enough to ignite the liquid (*OHS Regs*, Sec. 25-8(1)(b)(i)).

3. A worker must not replenish a tank on a heating device with a flammable or combustible liquid while the device is in operation or is hot enough to ignite the liquid (*OHS Regs*, Sec. 25-8(2)(b)).

YUKON

1. Portable fire extinguishers of an appropriate type, size and quantity must be provided and maintained where temporary oil, gas, or electric heaters are in operation (*WSC Regs*, Sec. 1.70(2)(d)).
2. Open-flame heating equipment must:
    - Have corrosion-resistant flue and draft hoods to take the combustion products to the outdoors.
    - Not be located in the same area as dry-cleaning equipment.
    - Not receive its combustion air from areas subject to contamination with dry-cleaning solvent vapours (*WSC Regs*, Sec. 13.03(3)).