

CONFINED SPACES – PHYSICAL HAZARDS

IDENTIFY

In addition to dangerous atmospheres, confined spaces such as tanks, vats, vessels, hoppers, and bins can present physical hazards:

- Poor entry and exit
- Cramped working conditions
- Temperature extremes
- Rotating or moving equipment
- Reactive or corrosive residues
- Electrical hazards
- Uncontrolled movement of liquids or solids

Some of these hazards involve greater risk inside a confined space than outside.

For example: electrical flashover can be more dangerous in a cramped maintenance hole where there's limited escape, than in an electrical room with clear exits. A fire in a confined space can be far more dangerous than fire in an open work area.

COMMUNICATE AND CONTROL

The Workplace Safety and Health Regulation Part 15 outlines Manitoba's requirements dealing with confined spaces.

15.2 (1) – Safe work procedures requirements and training.

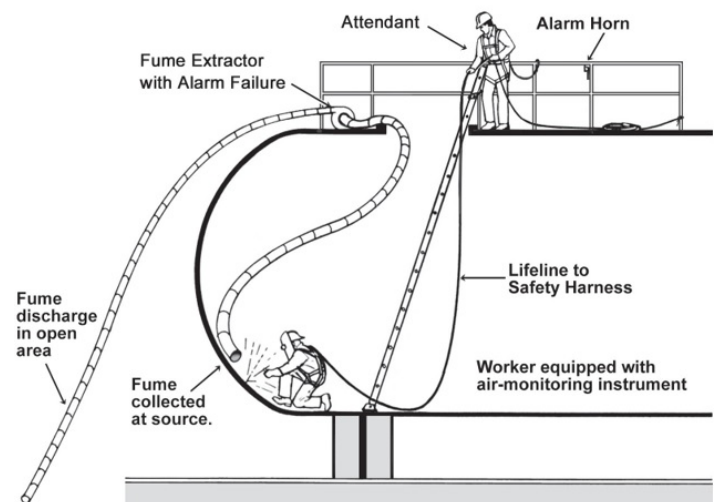
15.2(2) – The safe work procedures must include:

- a) Procedures for recognizing the risks associated with working in confined spaces and hazardous confined spaces.
- b) Procedures for isolating — including blanking, disconnecting, interrupting, and locking out — pipes, lines, and sources of energy from such spaces.
- c) Safety and personal protective equipment to be used.

15.3(2) – An employer must ensure that the structural integrity of a confined space or a hazardous confined space is maintained when its physical characteristics are altered in order to ensure safe access and egress by a worker.

What can we do to control some of the physical hazards?

- Wear safety harnesses and lifelines to make rescue more efficient in case of an emergency.
- Develop a rescue plan for the space and practice to make sure that everyone knows what to do.
- Use an entry permit system. This helps identify hazards and controls and keeps track of who is inside.
- Isolate the space by disconnecting supply and drain lines. Lockout the lines so they won't be reopened while you're working inside.
- Inspect the space for dangerous contents such as grain or sand that could slide, shift, and bury you inside.
- Lockout any electrical, hydraulic, or pneumatic equipment that could unexpectedly rotate, drop, roll, or snap shut in the space.
- Block and secure any equipment that could move because of gravity or stored momentum.



THE QUIZ

1. List two confined spaces that could present physical hazards:

- a) _____
- b) _____

2. List two physical hazards of a confined space:

- a) _____
- b) _____

3. A safety harness makes a rescue more efficient in case of emergency:

TRUE _____ FALSE _____

4. A confined space safe work procedure must be developed:

TRUE _____ FALSE _____

5. Employers are required to train workers in safe work procedures associated with confined spaces:

TRUE _____ FALSE _____

6. List two controls for confined space physical hazards:

- a) _____
- b) _____

7. List two components of a lockout procedure:

- a) _____
- b) _____

8. Workers must be trained in how to fit, care, and use their full body harness:

TRUE _____ FALSE _____

ANSWERS:

1. Tanks, vats, vessels, hoppers, bins; 2. Poor entry/exit, cramped conditions, temperatures, moving equipment, residues, electrical hazards, uncontrolled movement of liquids or solids; 3. TRUE; 4. TRUE; 5. TRUE; 6. Safety harness, rescue plan, entry permit, lockout/tagout, and/or inspection; 7. De-energize, apply lock, apply tag, and/or test for stored energy; 8. TRUE