

The **BSO Plus Safety Topic** is a review designed from the BSO Plus agenda. This safety topic is your way to stay current on the safety information over the 3 years between BSO Plus and BSR.

CONFINED SPACE ENTRY / SAFETY ATTENDANT

CONFINED SPACES

What is a confined space?

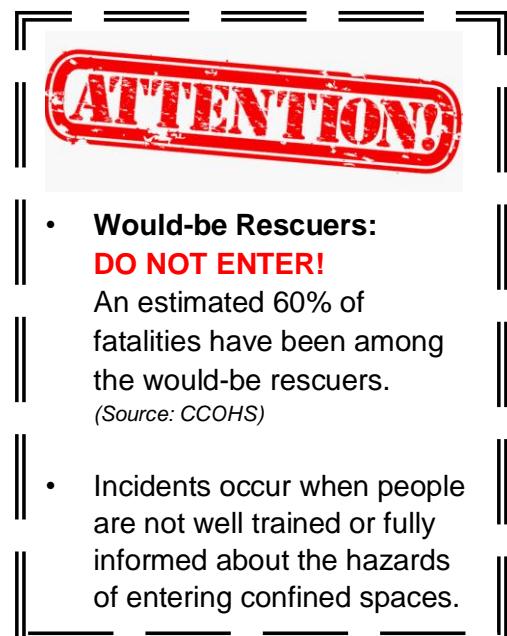
In Ontario, confined spaces in most workplaces fall under the Occupational Health and Safety Act (OHSA) and are regulated under Ontario Regulation 632/05 – Confined Spaces (see Regulation 632/05, s. 3 for exceptions).

“Confined Space” means a fully or partially enclosed space,

- a) that is not both designed and constructed for continuous human occupancy, and
- b) in which atmospheric hazards may occur because of its construction, location or contents or because of work that is done in it

Both conditions must be met for an area to be considered a confined space under the OHSA.

Examples of confined spaces include storage vessels, process tanks, furnaces, pits, rail cars, some trenches and manholes deeper than 4 feet, and tarped and boarded enclosures.



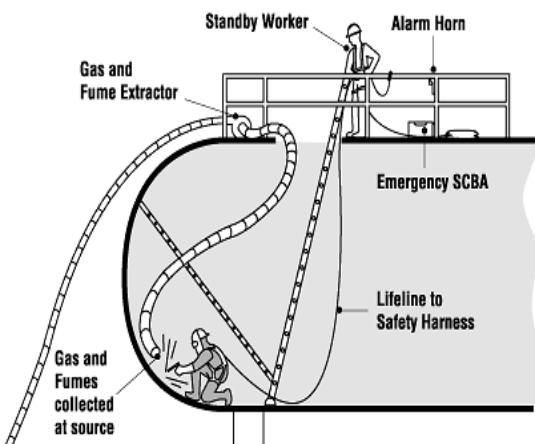
Employer Responsibility:

Before letting a worker enter a confined space, the employer must develop, implement and maintain a written **Confined Space Program** meeting the requirements of the confined space regulation. The employer shall also ensure that an adequate **written plan**, including procedures for the control of hazards identified in a hazard assessment has been developed.

Worker Responsibility:

Before entering a confined space, workers must:

- Be trained in Confined Space Entry
- Review the hazard assessment, the written confined space entry plan, and the rescue plan
- Sign a Confined Space Safe Work document
- Have a qualified Safety Attendant outside the confined space
- Be logged in and out of the Confined Space



What are the hazards associated with confined space?



Atmospheric Hazards

The atmosphere in confined spaces can become hazardous due to limited air circulation as well as a build-up of toxic gases from material stored in the confined space.

The air may also be contaminated by material that enters the space from the outside. Even the work being performed inside a confined space – welding, for example - can contribute to or create an atmospheric hazard.

Examples of hazardous atmospheres include:

- flammable, combustible, or explosive
- toxic
- oxygen deficient (less than 19.5%)
- oxygen enriched (greater than 23%)

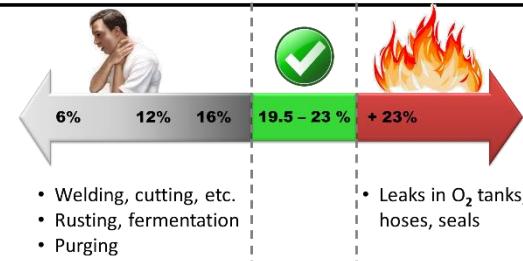
Physical Hazards

Physical hazards may present a greater danger inside an enclosed space than they do outside. For example, noise and vibration are intensified in confined spaces.

Many of the physical challenges with confined spaces involve getting in and out. Openings may be small or in awkward locations. Even large openings can present dangers if they require ladders and hoists, both of which can hinder escape.

Examples of physical hazards include:

- Cramped work spaces
- Rotating or moving equipment
- Reactive or corrosive residues
- Electrical hazards
- Slick or wet surfaces



Nitrogen gas is an asphyxiant that can rapidly displace oxygen in an enclosed space. It is a colorless, odorless, tasteless gas at normal atmospheric conditions.

The human body is very slow to sense low-oxygen environments, so exposure to high concentrations of this gas can kill you without any warning signs.

Nitrogen can be found on local sites in purging and utility stations. **"Purging"** involves removing contaminants inside the confined space by displacement with air to achieve acceptable atmospheric levels.

This gas should only be used by trained and qualified personnel with authorization from Operations.

CONFINED SPACE SAFETY ATTENDANT

Ontario Regulation 632/05 s. 15 outlines the legal requirements for a confined space safety attendant. The Safety Attendant's role is to continuously monitor the worker(s) inside a confined space.

The confined space safety attendant:

- must be assigned by the employer any time a worker is to enter a confined space,
- must be in constant communication with all workers inside the confined space, using a means of communication described in the plan
- must be provided with an adequate device for summoning a rescue response,
- must be stationed outside and near the entrance that will best allow the attendant to monitor the safety of the worker inside, provide the worker with assistance, and summon a rescue response if required, and
- shall not enter the confined space at any time.

