



## Working in Confined Spaces

### What is a confined space?

According to the Newfoundland and Labrador Occupational Health and Safety Regulations, a confined space means “an enclosed or partially enclosed space that is not designed or intended for human occupancy except for the purpose of performing work; has restricted means of access and egress; and may become hazardous to a person entering it as a result of its design, construction, location or atmosphere, the materials or substances in it, or any other conditions relating to it.” Tanks, boilers, attics, trenches, lift stations, penstocks would all be examples of spaces that might be considered a confined space.

### Hazards

Many confined spaces contain hazardous substances or dangerous conditions. Hazards and threats could include:

- Poor Air Quality - Atmospheres with oxygen content less than 20% (deficient) or more than 22% (enriched) are not safe.
- Toxic Gasses - Hydrogen sulphide, carbon dioxide, carbon monoxide, smoke, ammonia, chlorine, etc. are all potentially deadly.
- Flammable Atmospheres - A highly explosive atmosphere can be created when finely ground combustible materials such as grain, carbon, cellulose, fibers, plastics or flammable liquids are present.
- Mechanical, Electrical or Physical Hazards - Examples include moving parts, structural hazards, noise, temperature and visibility.
- Loose Materials or Liquids that May Engulf or Smother - Shifting or collapse of bulk material, barrier failures, etc.

### Control Measures

The dangers and risks associated with confined spaces are not always obvious. All hazards must be identified and either eliminated prior to entry, or all precautions must be taken for the safety of the person entering the confined space. An employer must ensure that no worker enters a confined space until:

- a risk assessment has been carried out for both the space and the work to be undertaken;
- written procedures have been developed and workers have been trained in these procedures;
- sources containing a hazardous substance leading to the confined space are safely and completely blocked off or disconnected;
- a written work permit has been developed and communicated to workers;
- appropriate atmospheric testing and monitoring is being conducted;
- the proper personal protective equipment has been identified;
- the worker(s) is qualified to safely enter and perform the work within the space;
- a confined space attendant has been assigned and is stationed outside the space; and
- an appropriate emergency response and rescue plan has been developed and individuals trained to carry out their duties under the plan.

### Training

Both entrant and attendant must have completed a 2 day Confined Space Entry (CSE) course from a training provider that has been approved by WorkplaceNL. Additional training that may be required includes: Fit Testing; Gas detection; First Aid; WHMIS; Fall Protection; and any training specific to the task at hand.

Many workers are injured and killed each year while working in confined spaces. Unless you are trained in confined space hazards and how to control them, never enter a confined space.