

How to Create Confined Spaces Emergency and Rescue Plan



You can't let workers into confined spaces until you're sure you can safely get them out.

Six of the roughly 100 workers killed inside confined spaces every year are personnel sent in to rescue the workers inside. So, it's no coincidence that OHS regulations require employers who permit workers to enter confined spaces to have an emergency rescue plan, to protect not only the entrants but would-be rescuers. Here's how to create and implement such a plan.

What the OHS Laws Require

The OHS laws ban you from requiring or allowing a worker to enter a confined space unless and until you're sure you can rescue them if an emergency arises. Although the details vary slightly by jurisdiction ([click here](#) to see what your own province requires), the basic approach is the same everywhere: The competent person you're required to designate to perform a confined spaces hazard assessment for a particular space must address emergency and rescue procedures as part of his/her written report and indicate:

- Who and how many people are required to carry out the procedure;
- What kind of training these personnel need; and
- What kind of equipment they need.

The employer, perhaps in consultation with the JHSC, depending on the jurisdiction, must establish the definitive rescue procedure and incorporate into the entry plan for the space. Then, it's a matter of procuring the equipment, providing the training and practicing the procedure to ensure it's effective.

What CSA Z1006 Requires

While compliance with OHS regulations is the bare minimum, many employers take things to the next level by following more rigorous voluntary standards. One of the most popular confined space standards in Canada is On March 31, 2010, the CSA released a new confined space standard, CSA Z1006 *Management of Work in Confined Spaces*, which was first published in 2010. CSA Z1006 requires companies

to develop a plan for confined space emergencies and:

- Identifying the necessary resources to implement the plan effectively;
- Testing the plan at specified intervals;
- Communicating with and training personnel involved in rescue operations so that they can perform their responsibilities; and
- Communicating with external service providers, visitors, emergency response services, government authorities and the local community.

A 4-Step Compliance Plan

The overlap between CSA Z1006 and OHS requirements is noticeable and deliberate. That's because the drafters created the standard specifically for Canada by ensuring it ran in parallel with regulatory requirements. Result: You can use the following 4-step strategy to comply with both OHS rules and CSA Z1006.

Step 1: Develop Written Emergency Procedures

While all jurisdictions require written emergency procedures for confined space work, there are 2 different approaches:

- **Any confined space:** In 9 jurisdictions (AB, BC, NB, NL, NS, ON, PEI, QC, YK), emergency procedures are required for any and all confined spaces a worker enters (including 'restricted spaces' not hazardous enough to be considered 'confined spaces' in Alberta); and
- **Hazardous confined spaces:** The other 5 jurisdictions (FED, MB, SK, NWT, NU) require emergency procedures only for 'hazardous confined spaces'.

OHS regulations also offer little to no detail about what emergency procedures should include.

Exceptions:

- Six jurisdictions (FED, BC, QC, SK, NWT, NU) require emergency procedures to list the equipment, personnel, and other resources necessary for rescue; and
- Four jurisdictions (FED, AB, NB, NS) require the emergency procedures to include procedures for immediately evacuating the space if: (i) an alarm sounds; (ii) there are significant changes in the concentrations or percentages of oxygen, chemical agents or chemical mixtures inside the space reach dangerous levels; or (iii) other significant health and safety hazards arise inside the space.

Implementation Strategy: You should also include the above information in your own emergency procedures even if your jurisdiction doesn't specifically require it. Another excellent source of guidance is the WorkSafeBC confined space reference manual which recommends that emergency procedures consider:

- All hazards in the confined space previously identified in a hazard assessment;
- Dimensions of the space;
- Location of entry and exit points;
- Obstacles to removing an injured worker;
- Rescue equipment required;

- PPE for rescuers, including appropriate respirators;
- Communication between workers, rescuers, the supervisor and attendants or standby workers posted outside the space in charge of monitoring the workers inside and calling for immediate help if necessary;
- Procedures to follow immediately after an incident;
- Possible hazards that may arise during rescue, appropriate evaluation of these hazards and control methods for them; and
- Rescue methods for a worker who's unconscious, unresponsive or in distress.

In addition, CSA Z1006 says that there should be a written emergency response plan for rescuing entrants from a confined space that covers:

- The situations in which the type or types of rescue identified by the plan as options, such as self-rescue, external rescue or entry rescue, will be used;
- How the entry team and emergency response members will effectively communicate with each other;
- When emergency team members performing specific roles will be deployed;
- How the equipment needed to rescue entrants will be brought to the site, set up and operated;
- The procedures to be followed during a rescue; and
- The emergency medical care and materials that will be available to treat the injured on site.

[Click here](#) for a Checklist you can use to ensure that your company's confined space emergency plan covers all the necessary areas.

Step 2: Provide Equipment Required by the Plan

Your plan must specify the PPE and rescue equipment required for dealing with an emergency. Be sure the required equipment is kept at or near the entrance of the confined space where it's readily available to attendants and rescue workers who need to use it.

Implementation Strategy: If possible, rescue should be effected from outside the space without requiring rescue personnel to enter. The first choice is self-rescue, which is effected when entrants evacuate on their own. Unfortunately, that may be impossible if entrants are injured or face obstructions blocking evacuation.

The next best choice is to extract the entrant using equipment outside the confined space so rescue personnel don't need to enter. Many jurisdictions specifically require employers to ensure that entrants wear a full body harness attached to a lifeline anchored to a fixed location outside the space that's tended at all times by an attending worker trained to initiate rescue procedures.

Exception: Lifelines aren't required if they're impracticable or would themselves pose a danger to the entrants, e.g., via tangling or creating trip hazards.

Having rescue personnel enter the confined space is the last resort to be used when self-rescue and non-entry rescue can't be carried out.

In any case, CSA Z1006 recommends that all equipment used for confined space

rescue, including PPE, be:

- Inspected prior to use to ensure that it's operable in accordance with the manufacturer's recommendations and applicable standards;
- Certified or recertified in accordance with the manufacturer's recommendations and applicable standards; and
- Used in accordance with the manufacturer's recommendations and applicable standards.

Step 3: Train Workers on Emergency Plan

As with all other safety procedures, you must train workers on the confined space emergency procedures, including:

- Entrants (in NL, workers must complete a government-approved confined spaces entry program before being allowed to enter a confined space);
- Attendants; and
- Rescue personnel (you don't actually have to provide the training to outside personnel you rely on to conduct rescue operations at your site).

Implementation Strategy: Several jurisdictions require attendants or rescue workers to have specialized training or certification, including:

- **Federal:** At least one attendant must have basic first aid and cardiopulmonary resuscitation (CPR) certification;
- **Manitoba:** Standby worker/attendant must be qualified as a first aider;
- **Newfoundland:** Attendant must: (i) hold a valid standard-level first aid certificate issued by the Canadian Red Cross Society or St. John Ambulance, and (ii) be trained in artificial respiration and CPR;
- **Ontario:** Rescue personnel must be trained in first aid and CPR;
- **Prince Edward Island:** A person adequately trained in CPR must be conveniently available when employees enter a confined space with a hazardous or potentially hazardous atmosphere;
- **Saskatchewan:** A holder of a class A qualification in first aid must be immediately available when workers enter a hazardous confined space; and
- **Northwest Territories/Nunavut:** A holder of a Level 1 first aid qualification certificate must be immediately available when workers enter a hazardous confined space.

CSA Z1006 recommends that companies have a documented process to ensure that all workers, attendants, and rescuers involved in confined space work have the necessary physiological and psychological capability to safely perform their assigned duties.

Step 4: Conduct Practice Drills

Some jurisdictions, such as BC and YK, specifically require employers to conduct annual practice drills on the confined space emergency plans. Québec requires rescue procedures to be tested. And CSA Z1006 requires rescues to be practiced at least twice a year or prior to entry into a confined space. But drills or test runs are advisable even if they aren't required in your jurisdiction. After all, it's better to work out any kinks in your emergency plan when lives aren't actually at stake. According to CSA Z1006, a drill should consist of a simulated rescue from a simulated or actual confined space from which rescuers could be called upon to remove workers. If you discover any problems during a drill, make

sure you change the emergency plan accordingly and retrain workers on the updated plan.