9 Things to do to Prevent Confined Space Fatalities and Costly OHS Violations



Confined Spaces Compliance Game Plan

Work becomes 150 times more dangerous when it's carried out inside a confined space. There are roughly 100 confined spaces-related <u>fatalities</u> in Canada each year, more than half of them to <u>would-be rescuers</u>. Compliance with OHS requirements would have prevented almost all of these deaths. In addition to endangering lives, <u>inadequate confined safety measures</u> expose your company to the risks of stop work orders, massive fines and even <u>criminal liability</u> if the violation is the result of 'wanton recklessness.' Here's a strategy you can implement to ensure your confined spaces safety measures are effective and compliant with OHS requirements.

Step 1: Identify the Confined Spaces at Your Workplace

The first step in complying with OSHA confined spaces requirements is determining if you have any confined spaces in your workplace, i.e., spaces that:

- Are enclosed or partially enclosed;
- Are big enough to enter but not designed for human occupancy; and
- Have restricted means of entry and exit.

Implementation Strategy: Each province has a slightly different definition. Click here to find the definition of confined space in your jurisdiction. If you're federally regulated or in MB, SK, NT or NU, you must also differentiate between 'confined spaces' and 'hazardous confined spaces,' which require more stringent safety measures. Note: Alberta follows the same approach but calls regular confined spaces 'restricted spaces,' and hazardous ones 'confined spaces.'

Step 2: Notify Workers of Confined Spaces

Notify workers of the existence, location and dangers posed by any confined spaces or hazardous confined spaces at your workplace.

Implementation: Post signs or other notices at the entry of each space warning of the dangers or communicating the information by another equally effective means.

Step 3: Bar or Limit Entry

You must seal off or restrict access to each confined space to ensure workers don't enter without authorization.

Implementation Strategy: The most effective way to prevent entry is to permanently seal off the space. But if it's necessary to carry out work inside the space, you'll have to implement the measures laid out below to control the hazards and ensure that entry and work inside is performed safely.

Step 4: Perform a Hazard Assessment

Do a hazard assessment before allowing anyone to enter a space that:

- FED/MB/SK/NT/NU: Meets the definition of 'hazardous confined space';
- AB: Is a 'restricted space' that meets the definition of 'confined space'; or
- BC/NB/NL/NS/ON/PEI/QC/YK: Has a potentially hazardous atmosphere, design or configuration, contains materials that could engulf an entrant or includes any other recognized health or safety hazard.

Implementation Strategy: Appoint a competent person to create a written hazard assessment report that identifies:

- The actual and potential hazards to entrants;
- The necessary atmospheric and other testing to be done before and during entry;
- The required protective and emergency equipment to be furnished; and
- The other steps necessary to control the hazards, such as use of an entry permit system.

Have the competent person sign the report and keep it at the site and make it available to the JHSC or workers. Review the assessment at least once every 3 years and in response to incidents, new hazards and significant changes to operations, the space's configuration or equipment used that may affect the risk dynamic and render the previous assessment obsolete.

Step 5: Create a Safe Entry Policy

Establish an entry policy or procedure that sets out the measures, procedures and practices to be used to ensure that entry into the space is carried out safely and in accordance with OHS requirements.

Implementation Strategy: At a minimum, the entry policy
should:

Require identification and evaluation of confined space hazards before entry;

- Specify acceptable atmospheric and other conditions of entry;
- Describe the atmospheric testing procedures and equipment required;
- Require isolation of the space;
- Specify the method that must be used to eliminate or control atmospheric hazards'purging, inerting, flushing and/or ventilation;
- Require that barriers to confined spaces be provided to protect entrants from hazards created by pedestrians, vehicles or other external factors;
- Stipulate that acceptable conditions must be verified throughout the duration of the entry; and
- Describe the attendant and emergency rescue provisions that must be in place.

Download a Policy Template below.

Step 6: Implement Engineering Controls

Consider and, if reasonably practicable, adopt engineering controls to eliminate or minimize confined space hazards.

Implementation Strategy: Engineering controls for confined
space entry may include use of:

- Ladders, guardrails, lighting, traffic barriers and other systems and equipment to ensure safe entry, exit and movement inside the space;
- Atmospheric testing methods and equipment to determine the safe atmospheric conditions for entry;

- Systems to <u>ensure safe atmospheric conditions</u> are maintained, which may include:
 - <u>Ventilation</u>, or mechanical systems that force fresh air into the confined space and/or exhaust contaminated air while workers are inside;
 - Purging, or introducing substances such as an inert gas, steam or water into a confined space to displace or flush out contaminants before workers enter the space;
 - Inerting, or introducing an inert (un-reactive) gas such as nitrogen or carbon dioxide into a confined space to completely displace all oxygen; and/or
 - **Isolation**, or disconnecting, blanking or blinding or using an equivalent engineered system to prevent a hazardous substance contained in adjacent pipelines from seeping or leaking into the space.

Step 7: Implement Work and Administrative Controls

Consider and, if reasonably practicable, adopt controls that manage confined space hazards by affecting how the work inside is carried out.

Implementation Strategy: One work control to consider (and which you must use if you're in AB, BC, MB, NL, ON and YK) (federally regulated employers must consider a permit system and Nova Scotia follows a hybrid rule) is a permit system that requires the entry supervisor to issue a permit authorizing the entry. The permit serves as a checklist for the supervisor to verify that entry conditions are acceptable and all required measures, equipment, etc. are in place. Other key administrative/work controls for confined space entry include:

• Safe work procedures for the different personnel

involved in entry, including entry supervisors and attendants who remain outside the space in contact with the people inside;

- <u>Emergency evacuation procedures</u>, including evacuation type and exit route assignments;
- Procedures for managing the specific operational hazards inside the space, such as lockout for energized equipment; and
- Communication, evacuation and rescue procedures.

Step 8: Furnish PPE and Rescue Equipment

You must have an <u>emergency rescue plan</u> to ensure workers have the necessary PPE, safety and rescue and retrieval equipment to carry out the confined space work safely and get out fast if they need to evacuate.

Implementation Strategy: PPE for confined space work typically
includes:

- Foot and leg protection;
- Protective footwear;
- Body protection;
- Gloves or glove systems;
- Head, eye and face protection; and
- Respiratory protective equipment where the atmospheric conditions are or may become hazardous.

Other safety and equipment that may be required:

- Atmospheric testing and monitoring equipment;
- Ventilating equipment necessary to achieve acceptable entry conditions;
- Communications equipment enabling attendants to keep in contact with entrants and alert them of the need to evacuate; and

• Flashlights and other lighting equipment.

You also must furnish equipment to ensure you can get entrants out of the space safely in an emergency, preferably retrieval systems that don't require rescuers to enter, such as use of chest or full body harnesses attached to a retrieval line that's anchored to a fixed point or mechanical device outside of the space.

9. Ensure Workers Get Necessary Confined Spaces Safety Training

It's your responsibility to ensure that each worker involved in confined space entry and work receives the <u>training</u> <u>necessary</u> to make them proficient to carry out their responsibilities safely.

Implementation Strategy: Training must be provided to the workers authorized to enter and work inside the confined space who must be trained to:

- Know the hazards they may face during entry, including the mode, signs or symptoms and consequences of exposure;
- Carry out the safe entry procedure;
- Properly use the equipment they're required to use in or near the space;
- Communicate with the attendant;
- Alert the attendant of dangerous conditions; and
- Exit from the space if a signal sounds or dangers arise.

Attendants must also be trained to:

- Know the hazards workers may face during entry;
- Recognize the warning properties of harmful air contaminants:
- Recognize the signs and symptoms indicating that workers in the confined space may be experiencing problems,

- e.g., the symptoms of oxygen deprivation;
- Communicate with the workers inside;
- Use the retrieval systems or perform any non-entry rescues required of attendants under the rescue procedure; and
- Call for help when necessary.

Many jurisdictions also require attendants to have first aid training.