

Working in confined spaces

What is a confined space?

Alberta's OHS Code differentiates between confined spaces and restricted spaces. A confined space is a restricted space that may become hazardous due to certain factors.

Definitions:

Restricted space:

- Enclosed or partially enclosed.
- Not designed for continuous human occupancy.
- Limited or restricted entry/exit.

Confined space:

A restricted space that may become hazardous due to:

- Harmful atmosphere (e.g., oxygen deficiency, toxicity).
- Changing conditions presenting injury risks.
- Activities with potential harmful consequences.

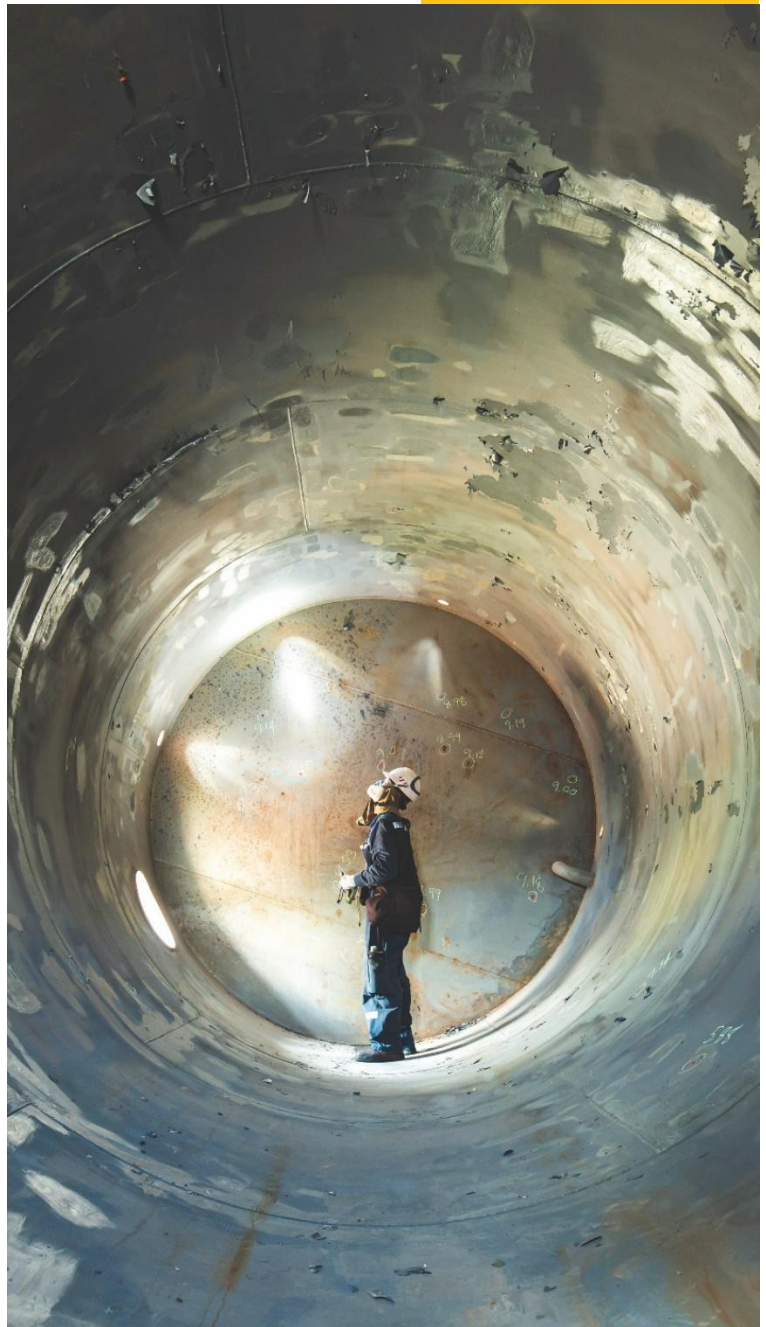
OHS Code requirements:

Employers must follow Part 5 of the OHS Code for confined spaces and develop a **Code of Practice**, including:

- Identifying confined space locations.
- Meeting all confined space and hot work (s.169) requirements.
- Periodically reviewing the code of practice.

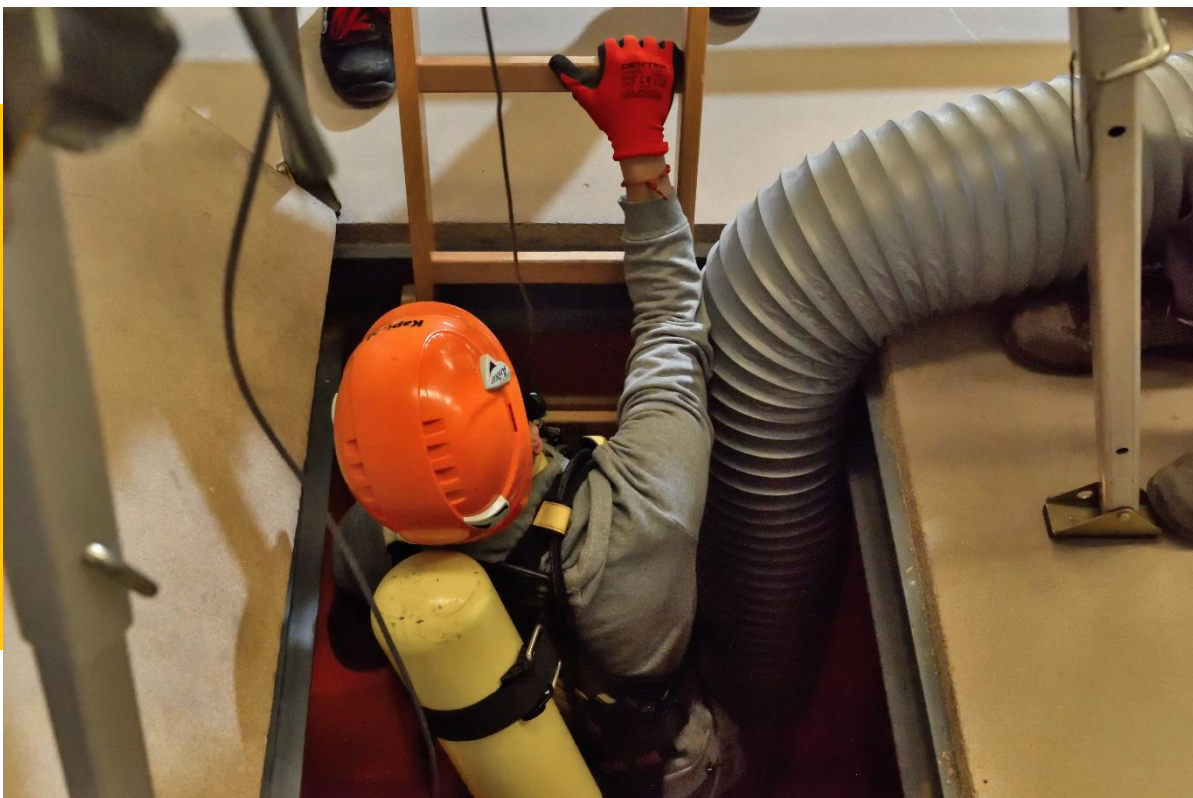
Maintenance and review:

Review the Code of Practice at least every three years or sooner if incidents or changes occur.



Key requirements:

1. **Hazard assessment:** Conducted by a competent person before entry.
2. **Training:** Workers must be trained on hazards and safe practices.
3. **Entry permit system:** Confined space entry requires a signed permit.
4. **General safety:** Ensure safety equipment, PPE, and emergency measures are in place.
5. **Atmospheric testing:** Test for hazardous substances and ensure oxygen levels are safe. Continuous monitoring may be required.
6. **Ventilation & purging:** Ventilate or purge spaces to eliminate hazardous atmospheres. Use PPE if ventilation is not sufficient.
7. **Emergency response:** Prepare evacuation procedures and designate a “tending worker” for monitoring and communication.
8. **Entry/exit:** Provide safe access for workers and rescue personnel.
9. **Record keeping:** Retain records for at least one year (or two years if incidents occur).
10. **Hot work:** Follow strict guidelines for work involving flames or sparks in confined spaces.



Principles

In Alberta, workers can get injured or killed while working in confined or restricted spaces.

These incidents can happen for many reasons, such as:

- Not recognizing the space as confined
- Not following proper procedures
- Not testing the air in the space
- Not wearing the right safety equipment
- Not having a rescue plan

There are many ways a fatal incident can happen in a confined space. Hazards like energized equipment, static electricity, or loose materials can lead to dangerous situations. The three main causes of fatalities in confined spaces are:

1. Atmospheric hazards (like dangerous gases or lack of oxygen)
2. Fire or explosion
3. Engulfment (being buried or trapped by materials)



There are generally four (4) types of hazards in confined spaces. Here are the categories with some examples:

Atmospheric hazards <ul style="list-style-type: none">• Welding fumes• Silica• Oxygen enrichment• Gases	Biological hazards <ul style="list-style-type: none">• Mould• Sewage• Infectious agents• Fungi
Configuration hazards <ul style="list-style-type: none">• Vertical drops/raises• Slopes• Small openings• Slippery surfaces	Physical hazards <ul style="list-style-type: none">• Drowning• Engulfment• Radiation• Electricity

Due to the potentially hazardous nature of confined and restricted spaces, workers should not enter to perform work unless there is no alternative and the proper procedures from the Code of Practice are being followed.



Conclusion:

Confined spaces can be worked in safely by creating and adhering to a Code of Practice. Elements such as proper training, protective equipment, and an emergency plan must be in place prior to entering any restricted or confined space in Alberta. By ensuring these requirements are understood and followed, workers can complete their work in these spaces safely.

Working in confined spaces

In Alberta construction, most confined space incidents are preventable when crews work together to control hazards like lack of oxygen, toxic gases or engulfment. Prevent these injuries by testing the air, following safe entry and exit procedures and having a smart rescue plan in place.

What are examples of confined spaces in our industry?
What incidents have happened where someone in our crew or industry was injured in a confined space?

What immediate actions should we take to address safety in confined spaces? What actions should be taken to address it in the long-term?

What other teams might share our concern? How could we work together to address it? Do we have a solution (process, procedure, etc.) to offer them?

What questions or comments do you have about working in a confined space?

Attendance

Name	Initials	Name	Initials

Action items

Name	Person responsible	Due date	Done

If you have questions or comments, speak with your health and safety representative.