

Confined Space Entry Program

**Parks Canada Citadel Hill
Halifax NS**

Confined Space Entry Program

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1. Confined Space Entry

No entry into a confined space is to be undertaken unless the following conditions are met:

- A confined space entry permit is completed. This must be done prior to entry.
- All workers have current confined space awareness training.
- All required ventilation equipment has audible alarms or is adequately monitored to ensure warning is given to entrants upon its failure to work.
- There is effective delegation of authority; every supervisor and worker affected by this program knows his / her responsibility.
- There is ongoing monitoring for compliance with the program, and there is a sign-in sheet for use for each access and egress.
- There is clear and positive identification and assessment of all confined spaces.
- All hazardous energy sources and/or hazardous substances are isolated and locked / tagged out before a worker may enter a confined space.
- All workers are informed, supplied with, and trained in the use of all the required personal protective equipment (PPE).
- All workers are aware of the relevant regulations concerning the confined space.
- There is standardized and recognized means of testing of all equipment to ensure that it is in safe working condition.
- Pre-entry atmospheric testing is always completed prior to entering the confined space by an appointed designated competent person.
- Atmospheric monitoring is required while persons are within the confined space by means of personal monitors worn by entrants when ventilation equipment is used.
- There is in effect a contingency / rescue plan to enable the extraction of workers in the case of emergency. Citadel
- Each worker follows exactly, all the written conditions in the confined space entry program.

2. Roles and Responsibilities

All personnel working in confined spaces must be fully knowledgeable and trained in dealing with the hazards common to the type of work they are to perform.

Supervisors

Supervisors are responsible for the following:

- Assess the spaces in the workplace to determine if they are confined spaces and record the assessments.
- Ensure confined space entry permit is complete prior to entry into the space.
- Before work begins, the confined space is free of undue hazards.
- Ensure a complete safety watch kit is available onsite.
- Atmospheric testing is done before entering the space, and periodically while workers are inside.
- Atmospheric testing is completed by a competent person.
- Ventilation equipment has audible and or visible alarms or is adequately monitored to ensure warning is given to entrants upon its failure to work
- All hazardous energy and/or hazardous substances are locked / tagged out before a worker enters the space.
- Undue hazards will not arise while the work is being performed because each crewmember follows the approved confined space entry work procedure.
- Each crew member on the worksite is properly equipped for the job to be done safely and efficiently.
- Personnel assigned to specific tasks are competent to safely complete the task (including the Supervisor).
- Work is suspended if conditions become hazardous or the Confined Space Entry Program is not being maintained.
- In the event of a time delay in commencing the work, the worksite will be re-inspected and tested as necessary.

Workers

Workers are responsible for the following:

- Follow the program as required.
- Wear all PPE required for the type of work being performed.
- Exit the confined space when alarms indicate ventilation equipment has failed or they are told to leave the space by the assigned attendant
- Report all conditions or practices, which may prevent them from fulfilling the requirements of the job or the Confined Space Entry Program.

- Report immediately any situation that gives them reason to believe a hazardous / dangerous situation has developed.
- Use and keep tools, equipment, and PPE in good condition.

Attendants

The Attendant is responsible for the following:

- Initiate the emergency response plan (section 6 of this program).
- Ensure Ventilation monitoring takes place.

3. Definitions

Confined Space

means an enclosed or partially enclosed space that

- (a) is not designed or intended for human occupancy except for the purpose of performing work,
- (b) has restricted means of access and egress, and
- (c) may become hazardous to any person entering it owing to
 - (i) its design, construction, location or atmosphere,
 - (ii) the materials or substances in it, or
 - (iii) any other conditions relating to it;

Be alert to recognize not only the common type of confined spaces, but also the unusual types of confined spaces on their job sites. Some confined spaces are: Tanks, tunnels, sewers, shafts, hoppers, pits, underground utility vaults, cisterns, vats, boilers, ducts, manholes, trenches and excavations, bunkers, pumping or lift stations, and equipment housings.

4. Personal Protective Equipment

Appropriate protection shall be worn to meet the job requirements. Proper respiratory protection may range from simple chemical cartridge respirators to self-contained breathing apparatus (SCBA). Workers will follow the CSA code of practice for respiratory protective equipment provided it conforms to Canadian Occupational Safety & Health Regulations. A full-body harness (class E) will be worn by all workers, an attached independent lifeline may be required under some circumstances. Lifelines must be anchored on the outside of the space, and should be used only if they do not pose more of a hazard to the entrants.

5. Testing

Atmospheric testing must be done prior to each entry. Atmospheric testing must also be done periodically while persons are within the confined spaces. Atmospheric testing must be done by a competent person and in all cases, regardless if ventilation is available.

If the confined space does not have very obvious natural or mechanical ventilation, testing must be done. All testing must be done from outside the confined space unless a self-contained breathing apparatus (SCBA) is worn by the tester.

For entry purposes the following values **MUST** be used:

Oxygen	O ₂	More than 18% and less than 23%
Carbon Monoxide	CP	20 ppm
Lower Explosive Limit	LEL	0% up to 10%
Hydrogen Sulfide	H ₂ S	1 ppm

Employees must not enter or remain in a confined space if more than 50% of the lower explosive limited (LEL) of an explosive substance is present in the atmosphere.

Any person who tests the confined space must be trained in the use of the tester and the interpretation of the test results.

6. Emergency Response Plan

Whenever a person is to work in a confined space, procedures must be established to ensure that person is always in communication with another worker outside of that confined space. The means of communication could be voice, sight, lifeline, or radio.

A Safety Watch must be appointed and be dedicated to this task. They must have no other tasks. The Safety Watch will be responsible for the following:

- He/she must remain in position at the entrance to the confined space, until relieved by a qualified attendant who is briefed on the confined space entry permit.
- He/she should have a list of duties and responsibilities to carry out in the event of an emergency or injury.
- He/she must be knowledgeable and trained in these duties.
- He/she must monitor the ventilation equipment in use and warn entrants when ventilation equipment fails to function.
- He/she must not, under any circumstances, enter the confined space without protective equipment and until support help arrives (unless they are trained in rescue)
- Examples of other duties and responsibilities:
 - Familiarity with the type of work to be done.
 - Familiarity with the configuration of the confined space.
 - Know the number of personnel in the confined space.
 - Wear a distinctive colour vest, some companies use blue.
 - Be equipped with the same PPE as the person in the confined space.

- Remove the "no entry sign" wired across the man way upon authorization and replace it when last worker is out.
- Be capable and equipped to summon the rescue team if required.

7. Rescue

- Rescue procedures must be established prior to any worker entering the confined space to ensure the worker/s can be quickly and effectively rescued should the necessity arise.
- The rescue procedures should include detailed planning in the following activities:
 - Communication and alert.
 - A suitable emergency alarm device.
 - Two designated rescue personnel in the immediate vicinity of the confined space.
 - Designated rescue procedures.
 - Designated rescue equipment.
- The type and nature of rescue procedures and rescue equipment will vary, depending on the location and type of confined space.
- Rescue personnel trained in emergency first aid & CPR
- It is important to have sufficient equipment and trained personnel on hand to affect a quick rescue because speed is often critical in rescue situations.
- As the expected time to evacuate the confined space increases, there must be an equivalent increase in the precautions taken to prevent a hazardous situation from arising. This is especially important with respect to flammables in situations such as tank lining and coating.
- Rescue problems can be compounded by the number of workers in the confined space so always plan for rescue of all entrants.
- Rescue workers must not only be knowledgeable and trained in the rescue procedures, they must also have practiced the required rescue procedures so that they can be carried out quickly and effectively.

8. Rescue Equipment

- The rescue equipment must be capable of affecting a rescue and must be immediately available at the site. The exact type and nature of rescue equipment would vary, depending on the location.
- In all cases, a communication or alarm system is required to summon aid.
- Vertical rescues from a sewer, tank or vessel when the worker has entered from the top require:

- Full body harness (Group E) that keeps the worker upright.
- Spreader bar attachment
- Tripod - winch.
- Rescues from towers or elevated structures require:
 - Basket stretcher
 - Rigging lines and system to lower injured.
 - Class A, E, D Full body harness
 - Lifelines
 - Resuscitation AED and appropriate first aid equipment.
 - Sufficient appropriate respiratory equipment to protect rescue personnel.
 - Vehicle to transport victim to medical facility.

9. Worker Compliance

This Confined Space Entry Program is ONLY effective if each worker complies with the written information. If you have any questions, ASK!

10. Supplemental Documents

Confined Space Hazard Assessment

Confined Space Permit

Confined Space Rescue Plan

Confined Space Entry / Exit Log