

**Occupational Health and Safety Act
ONTARIO REGULATION 632/05**

CONFINED SPACES

CONTENTS

1.	Definitions
2.	Application
3.	Exceptions
4.	Confined spaces with multi-employer involvement
5.	Program
6.	Assessment
7.	Plan
8.	Hazard recognition and other general training
9.	Plan-specific training
10.	Entry permits
11.	On-site rescue procedures
12.	Rescue equipment and methods of communication
13.	Personal protective equipment, clothing and devices
14.	Isolation of energy and control of materials movement
15.	Attendant
16.	Means for entering and exiting
17.	Preventing unauthorized entry
18.	Atmospheric testing
19.	Explosive and flammable substances
20.	Ventilation and purging
21.	Records

Definitions

1. In this Regulation,

“acceptable atmospheric levels” means that,

- (a) the atmospheric concentration of any explosive or flammable gas or vapour is less than,
 - (i) 25 per cent of its lower explosive limit, if paragraph 1 of subsection 19 (4) applies,
 - (ii) 10 per cent of its lower explosive limit, if paragraph 2 of subsection 19 (4) applies,
 - (iii) 5 per cent of its lower explosive limit, if paragraph 3 of subsection 19 (4) applies,
- (b) the oxygen content of the atmosphere is at least 19.5 per cent but not more than 23 per cent by volume, and
- (c) the exposure to atmospheric contaminants does not exceed any applicable level set out in a regulation made under the Act and listed in Table 1;

“adequate”, when used in relation to a procedure, plan, material, device, object or thing, means that it is,

- (a) sufficient for both its intended and its actual use, and
- (b) sufficient to protect a worker from occupational illness or occupational injury;

“adequately” has a meaning that corresponds to the meaning of “adequate”;

“assessment” means an assessment of hazards with respect to one or more confined spaces in a workplace, as described in

“atmospheric hazards” means,

- (a) the accumulation of flammable, combustible or explosive agents,
- (b) an oxygen content in the atmosphere that is less than 19.5 per cent or more than 23 per cent by volume, or
- (c) the accumulation of atmospheric contaminants, including gases, vapours, fumes, dusts or mists, that could,
 - (i) result in acute health effects that pose an immediate threat to life, or
 - (ii) interfere with a person’s ability to escape unaided from a confined space;

“cold work” means work that is not capable of producing a source of ignition;

“confined space” means a fully or partially enclosed space,

- (a) that is not both designed and constructed for continuous human occupancy, and
- (b) in which atmospheric hazards may occur because of its construction, location or contents or because of work that is done in it;

“emergency work” means work performed in connection with an unforeseen event that involves an imminent danger to the life, health or safety of any person;

“hot work” means work that is capable of producing a source of ignition;

“lead employer” means an employer who contracts for the services of one or more other employers or independent contractors in relation to one or more confined spaces that are located,

(a) in the lead employer’s own workplace, or

(b) in another employer’s workplace;

“plan” means a plan for one or more confined spaces in a workplace, as described in section 7;

“program” means a program for one or more confined spaces in a workplace, as described in section 5;

“purging” means displacing contaminants from a confined space;

“related work” means work that is performed near a confined space in direct support of work inside the confined space. O. Reg. 632/05, s. 1.

Application

2. Subject to section 3, this Regulation applies to all workplaces to which the *Occupational Health and Safety Act* applies. O. Reg. 632/05, s. 2.

Exceptions

3. (1) This Regulation does not apply to,

(a) work performed underwater by a diver during a diving operation as defined in Ontario Regulation 629/94 (Diving Operations) made under the Act;

(b) work or workplaces governed by,

(i) Regulation 851 of the Revised Regulations of Ontario, 1990 (Industrial Establishments) made under the Act,

(ii) Regulation 854 of the Revised Regulations of Ontario, 1990 (Mines and Mining Plants) made under the Act,

(iii) Ontario Regulation 213/91 (Construction Projects) made under the Act, or

(iv) Ontario Regulation 67/93 (Health Care and Residential Facilities) made under the Act; or

(c) farming operations. O. Reg. 632/05, s. 3 (1).

(2) Sections 4 to 7 and 9 to 21 of this Regulation do not apply to emergency work performed by,

(a) a firefighter as defined in the *Fire Protection and Prevention Act, 1997*; or

(b) a person who,

(i) holds a certificate under the *Technical Standards and Safety Act, 2000* designating him or her as a gas technician, and

(ii) is working under the direction of a fire department, as defined in the *Fire Protection and Prevention Act, 1997*. O. Reg. 632/05, s. 3 (2).

(3) A worker described in subsection (2) who performs emergency work shall be adequately protected by,

(a) personal protective equipment, clothing and devices provided by the worker’s employer;

(b) training under section 8 provided by that employer; and

(c) written procedures and other measures developed by that employer. O. Reg. 632/05, s. 3 (3).

Confined spaces with multi-employer involvement

4. (1) This section applies if the workers of more than one employer perform work in the same confined space or related work with respect to the same confined space. O. Reg. 632/05, s. 4 (1).

(2) Before any worker enters the confined space or begins related work with respect to the confined space, the lead employer shall prepare a co-ordination document to ensure that the duties imposed on employers by sections 5 to 7, 9 to 12 and 14 to 20 are performed in a way that protects the health and safety of all workers who perform work in the confined space or related work with respect to the confined space. O. Reg. 632/05, s. 4 (2).

(3) Without restricting the generality of subsection (2), the co-ordination document may provide for the performance of a duty or duties referred to in that subsection by one or more employers on behalf of one or more other employers, with respect to some or all of the workers. O. Reg. 632/05, s. 4 (3).

(4) A copy of the co-ordination document shall be provided to,

(a) each employer of workers who perform work in the same confined space or related work with respect to the same confined space; and

(b) the joint health and safety committee or health and safety representative, if any, for each employer of workers who perform work in the same confined space or related work with respect to the same confined space. O. Reg. 632/05, s. 4 (4).

Program

5. (1) If an employer's workplace includes a confined space that workers may enter to perform work, the employer shall ensure that a written program for the confined space is developed and maintained in accordance with this Regulation before a worker enters the confined space. O. Reg. 632/05, s. 5 (1).

(2) The program may apply to one or more confined spaces. O. Reg. 632/05, s. 5 (2).

(3) The program shall be developed and maintained in consultation with the joint health and safety committee or the health and safety representative, if any. O. Reg. 632/05, s. 5 (3).

(4) The program shall be adequate and shall provide for,

(a) a method for recognizing each confined space to which the program applies;

(b) a method for assessing the hazards to which workers may be exposed, in accordance with section 6;

(c) a method for the development of one or more plans, in accordance with section 7;

(d) a method for general training of workers, in accordance with section 8; and

(e) an entry permit system that sets out the measures and procedures to be followed when work is to be performed in a confined space to which the program applies. O. Reg. 632/05, s. 5 (4).

(5) The employer shall provide a copy of the program to the joint health and safety committee or the health and safety representative, if any. O. Reg. 632/05, s. 5 (5).

(6) The employer shall ensure that a copy of the program is available to,

(a) any other employer of workers who perform work to which the program relates; and

(b) every worker who performs work to which the program relates, if the workplace has no joint health and safety committee or health and safety representative. O. Reg. 632/05, s. 5 (6).

Assessment

6. (1) Before any worker enters a confined space, the employer shall ensure that an adequate assessment of the hazards related to the confined space has been carried out. O. Reg. 632/05, s. 6 (1).

(2) The assessment shall be recorded in writing and shall consider, with respect to each confined space,

(a) the hazards that may exist due to the design, construction, location, use or contents of the confined space; and

(b) the hazards that may develop while work is done inside the confined space. O. Reg. 632/05, s. 6 (2).

(3) The record of the assessment may be incorporated into an entry permit under section 10. O. Reg. 632/05, s. 6 (3).

(4) If two or more confined spaces are of similar construction and present the same hazards, their assessments may be recorded in a single document, but each confined space shall be clearly identified in the assessment. O. Reg. 632/05, s. 6 (4).

(5) The employer shall appoint a person with adequate knowledge, training and experience to carry out the assessment and shall maintain a record containing details of the person's knowledge, training and experience. O. Reg. 632/05, s. 6 (5).

(6) The assessment shall contain the name of the person who carries out the assessment. O. Reg. 632/05, s. 6 (6).

(7) The person shall sign and date the assessment and provide it to the employer. O. Reg. 632/05, s. 6 (7).

(8) On request, the employer shall provide copies of the assessment and of the record mentioned in subsection (5) to,

(a) the joint health and safety committee or the health and safety representative, if any; or

(b) every worker who performs work to which the assessment relates, if the workplace has no joint health and safety committee or health and safety representative. O. Reg. 632/05, s. 6 (8).

(9) The employer shall ensure that the assessment is reviewed as often as is necessary to ensure that the relevant plan remains adequate. O. Reg. 632/05, s. 6 (9).

Plan

7. (1) Before any worker enters a confined space, the employer shall ensure that an adequate written plan, including procedures for the control of hazards identified in the assessment, has been developed and implemented by a competent person for the confined space. O. Reg. 632/05, s. 7 (1).

(2) The plan may be incorporated into an entry permit under section 10. O. Reg. 632/05, s. 7 (2).

(3) The plan shall contain provisions for,

(a) the duties of workers;

(b) co-ordination in accordance with section 4, if applicable;

(c) on-site rescue procedures, in accordance with section 11;

- (d) rescue equipment and methods of communication, in accordance with section 12;
- (e) personal protective equipment, clothing and devices, in accordance with section 13;
- (f) isolation of energy and control of materials movement, in accordance with section 14;
- (g) attendants, in accordance with section 15;
- (h) adequate means for entering and exiting, in accordance with section 16;
- (i) atmospheric testing, in accordance with section 18;
- (j) adequate procedures for working in the presence of explosive or flammable substances, in accordance with section 19;
and
- (k) ventilation and purging, in accordance with section 20. O. Reg. 632/05, s. 7 (3).

(4) One plan may deal with two or more confined spaces that are of similar construction and present the same hazards as identified by the assessment. O. Reg. 632/05, s. 7 (4).

(5) The employer shall ensure that the plan is reviewed as often as is necessary to ensure that it remains adequate. O. Reg. 632/05, s. 7 (5).

Hazard recognition and other general training

8. (1) Every worker who enters a confined space or who performs related work shall be given adequate training for safe work practices for working in confined spaces and for performing related work, including training in the recognition of hazards associated with confined spaces. O. Reg. 632/05, s. 8 (1).

(2) The employer shall appoint a person with adequate knowledge, training and experience to conduct the training. O. Reg. 632/05, s. 8 (2).

(3) The employer shall ensure that training under this section is developed in consultation with the joint health and safety committee or the health and safety representative, if any. O. Reg. 632/05, s. 8 (3).

(4) The employer shall ensure that training under this section is reviewed, in consultation with the joint health and safety committee or the health and safety representative, if any, whenever there is a change in circumstances that may affect the safety of a worker who enters a confined space in the workplace, and in any case at least once annually. O. Reg. 632/05, s. 8 (4).

(5) The employer shall maintain up-to-date written records showing who provided and who received training under this section, the nature of the training and the date when it was provided. O. Reg. 632/05, s. 8 (5).

(6) The records may be incorporated into an entry permit under section 10. O. Reg. 632/05, s. 8 (6).

(7) Training under this section may be combined with training under section 9. O. Reg. 632/05, s. 8 (7).

Plan-specific training

9. (1) The employer shall ensure that every worker who enters a confined space or who performs related work,

- (a) receives adequate training, in accordance with the relevant plan, to work safely and properly; and
- (b) follows the plan. O. Reg. 632/05, s. 9 (1).

(2) The employer shall maintain up-to-date written records showing who provided and who received training under this section, and the date when it was provided. O. Reg. 632/05, s. 9 (2).

(3) The records may be incorporated into an entry permit under section 10. O. Reg. 632/05, s. 9 (3).

(4) Training under this section may be combined with training under section 8. O. Reg. 632/05, s. 9 (4).

Entry permits

10. (1) The employer shall ensure that a separate entry permit is issued each time work is to be performed in a confined space, before any worker enters the confined space. O. Reg. 632/05, s. 10 (1).

(2) An entry permit shall be adequate and shall include at least the following:

1. The location of the confined space.
2. A description of the work to be performed there.
3. A description of the hazards and the corresponding control measures.
4. The time period for which the entry permit applies.
5. The name of the attendant described in section 15.
6. A record of each worker's entries and exits.
7. A list of the equipment required for entry and rescue, and verification that the equipment is in good working order.
8. Results obtained in atmospheric testing under section 18.
9. If the work to be performed in the confined space includes hot work, adequate provisions for the hot work and corresponding control measures. O. Reg. 632/05, s. 10 (2).

(3) Before each shift, a competent person shall verify that the entry permit complies with the relevant plan. O. Reg. 632/05, s. 10 (3).

(4) The employer shall ensure that the entry permit, during the time period for which it applies, is readily available to every person who enters the confined space and to every person who performs related work with respect to the confined space. O. Reg. 632/05, s. 10 (4).

On-site rescue procedures

11. (1) The employer shall ensure that no worker enters or remains in a confined space unless, in accordance with the relevant plan, adequate written on-site rescue procedures that apply to the confined space have been developed and are ready for immediate implementation. O. Reg. 632/05, s. 11 (1).

(2) Before a worker enters a confined space, the employer shall ensure that an adequate number of persons trained in the matters listed in subsection (3) are available for immediate implementation of the on-site rescue procedures mentioned in subsection (1). O. Reg. 632/05, s. 11 (2).

(3) The persons shall be trained in,

(a) the on-site rescue procedures mentioned in subsection (1);

(b) first aid and cardio-pulmonary resuscitation; and

(c) the use of the rescue equipment required in accordance with the relevant plan. O. Reg. 632/05, s. 11 (3).

Rescue equipment and methods of communication

12. (1) The employer shall ensure that the rescue equipment identified in the relevant plan is,

(a) readily available to effect a rescue in the confined space;

(b) appropriate for entry into the confined space; and

(c) inspected as often as is necessary to ensure it is in good working order, by a person with adequate knowledge, training and experience who is appointed by the employer. O. Reg. 632/05, s. 12 (1).

(2) The inspection under clause (1) (c) shall be recorded in writing by the person, and the record of the inspection may be incorporated into the entry permit under section 10. O. Reg. 632/05, s. 12 (2).

(3) The employer shall establish methods of communication that are appropriate for the hazards identified in the relevant assessment, and shall make them readily available for workers to communicate with the attendant described in section 15. O. Reg. 632/05, s. 12 (3).

Personal protective equipment, clothing and devices

13. The employer shall ensure that each worker who enters a confined space is provided with adequate personal protective equipment, clothing and devices, in accordance with the relevant plan. O. Reg. 632/05, s. 13.

Isolation of energy and control of materials movement

14. The employer shall, in accordance with the relevant plan, ensure that each worker entering a confined space is adequately protected,

(a) against the release of hazardous substances into the confined space,

(i) by blanking or disconnecting piping, or

(ii) if compliance with subclause (i) is not practical in the circumstances for technical reasons, by other adequate means;

(b) against contact with electrical energy inside the confined space that could endanger the worker,

(i) by disconnecting, de-energizing, locking out and tagging the source of electrical energy, or

(ii) if compliance with subclause (i) is not practical in the circumstances for technical reasons, by other adequate means;

(c) against contact with moving parts of equipment inside the confined space that could endanger the worker,

(i) by disconnecting the equipment from its power source, de-energizing the equipment, locking it out and tagging it, or

(ii) if compliance with subclause (i) is not practical in the circumstances for technical reasons, immobilizing the equipment by blocking or other adequate means; and

(d) against drowning, engulfment, entrapment, suffocation and other hazards from free-flowing material, by adequate means. O. Reg. 632/05, s. 14.

Attendant

15. (1) Whenever a worker is to enter a confined space, the employer shall ensure that an attendant,

(a) is assigned;

(b) is stationed outside and near,

(i) the entrance to the confined space, or

(ii) if there are two or more entrances, the one that will best allow the attendant to perform his or her duties under subsection (2);

- (c) is in constant communication with all workers inside the confined space, using the means of communication described in the relevant plan; and
 - (d) is provided with a device for summoning an adequate rescue response. O. Reg. 632/05, s. 15 (1).
- (2) The attendant shall not enter the confined space at any time and shall, in accordance with the relevant plan,
- (a) monitor the safety of the worker inside;
 - (b) provide assistance to him or her; and
 - (c) summon an adequate rescue response if required. O. Reg. 632/05, s. 15 (2).

Means for entering and exiting

16. An adequate means for entering and exiting shall be provided for all workers who enter a confined space, in accordance with the relevant plan. O. Reg. 632/05, s. 16.

Preventing unauthorized entry

17. If there is a possibility of unauthorized entry into a confined space, the employer shall ensure that each entrance to the confined space,

- (a) is adequately secured against unauthorized entry; or
- (b) has been provided with adequate barricades, adequate warning signs regarding unauthorized entry, or both. O. Reg. 632/05, s. 17.

Atmospheric testing

18. (1) The employer shall appoint a person with adequate knowledge, training and experience to perform adequate tests as often as necessary before and while a worker is in a confined space to ensure that acceptable atmospheric levels are maintained in the confined space in accordance with the relevant plan. O. Reg. 632/05, s. 18 (1).

(2) If the confined space has been both unoccupied and unattended, tests shall be performed before a worker enters or re-enters. O. Reg. 632/05, s. 18 (2).

(3) The person performing the tests shall use calibrated instruments that are in good working order and are appropriate for the hazards identified in the relevant assessment. O. Reg. 632/05, s. 18 (3).

(4) The employer shall ensure that the results of every sample of a test are recorded, subject to subsection (5). O. Reg. 632/05, s. 18 (4).

(5) If the tests are performed using continuous monitoring, the employer shall ensure that test results are recorded at adequate intervals. O. Reg. 632/05, s. 18 (5).

(6) The tests shall be performed in a manner that does not endanger the health or safety of the person performing them. O. Reg. 632/05, s. 18 (6).

(7) In this section,

“sample” means an individual reading of the composition of the atmosphere in the confined space;

“test” means a collection of samples. O. Reg. 632/05, s. 18 (7).

Explosive and flammable substances

19. (1) This section applies only in respect of atmospheric hazards described in clause (a) of the definition of “atmospheric hazards” in section 1. O. Reg. 632/05, s. 19 (1).

(2) The employer shall ensure that this section is complied with, by ventilation, purging, rendering the atmosphere inert or other adequate means, in accordance with the relevant plan. O. Reg. 632/05, s. 19 (2).

(3) The employer shall ensure that no worker enters or remains in a confined space that contains or is likely to contain an airborne combustible dust or mist whose atmospheric concentration may create a hazard of explosion. O. Reg. 632/05, s. 19 (3).

(4) The employer shall ensure that no worker enters or remains in a confined space that contains or is likely to contain an explosive or flammable gas or vapour, unless one of the following applies:

1. The worker is performing only inspection work that does not produce a source of ignition. In the case of an explosive or flammable gas or vapour, the atmospheric concentration is less than 25 per cent of its lower explosive limit, as determined by a combustible gas instrument.
2. The worker is performing only cold work. In the case of an explosive or flammable gas or vapour, the atmospheric concentration is less than 10 per cent of its lower explosive limit, as determined by a combustible gas instrument.
3. The worker is performing hot work. All the following conditions are satisfied:
 - i. In the case of an explosive or flammable gas or vapour, the atmospheric concentration is less than 5 per cent of its lower explosive limit, as determined by a combustible gas instrument.
 - ii. The atmosphere in the confined space does not contain, and is not likely to contain while a worker is inside, an oxygen content greater than 23 per cent.

- iii. The atmosphere in the confined space is monitored continuously.
- iv. The entry permit includes adequate provisions for hot work and corresponding control measures.
- v. An adequate alarm system and exit procedure are provided to ensure that workers have adequate warning and are able to exit the confined space safely if either or both of the following occur:
 - A. In the case of an explosive or flammable gas or vapour, the atmospheric concentration exceeds 5 per cent of its lower explosive limit.
 - B. The oxygen content of the atmosphere exceeds 23 per cent by volume. O. Reg. 632/05, s. 19 (4).

(5) Subsections (3) and (4) do not apply if,

- (a) the atmosphere in the confined space,
 - (i) has been rendered inert by adding an inert gas, and
 - (ii) is monitored continuously to ensure that it remains inert; and
- (b) a worker entering the confined space uses,
 - (i) adequate respiratory protective equipment,
 - (ii) adequate equipment to allow persons outside the confined space to locate and rescue the worker if necessary, and
 - (iii) such other equipment as is necessary to ensure the worker's safety. O. Reg. 632/05, s. 19 (5).

(6) The equipment mentioned in subclauses (5) (b) (i), (ii) and (iii) shall be inspected by a person with adequate knowledge, training and experience, appointed by the employer, and shall be in good working order before the worker enters the confined space. O. Reg. 632/05, s. 19 (6).

Ventilation and purging

20. (1) This section applies only in respect of atmospheric hazards described in clause (b) or (c) of the definition of "atmospheric hazards" in section 1. O. Reg. 632/05, s. 20 (1).

(2) If atmospheric hazards exist or are likely to exist in a confined space, the confined space shall be purged, ventilated or both, before any worker enters it, to ensure that acceptable atmospheric levels are maintained in the confined space while any worker is inside. O. Reg. 632/05, s. 20 (2).

(3) If mechanical ventilation is required to maintain acceptable atmospheric levels, an adequate warning system and exit procedure shall also be provided to ensure that workers have adequate warning of ventilation failure and are able to exit the confined space safely. O. Reg. 632/05, s. 20 (3).

(4) If compliance with subsection (2) is not practical in the circumstances for technical reasons,

- (a) compliance with subsection (3) is not required; and
- (b) a worker entering the confined space shall use,
 - (i) adequate respiratory protective equipment,
 - (ii) adequate equipment to allow persons outside the confined space to locate and rescue the worker if necessary, and
 - (iii) such other equipment as is necessary to ensure the worker's safety. O. Reg. 632/05, s. 20 (4).

(5) The equipment mentioned in subclauses (4) (b) (i), (ii) and (iii) shall be inspected by a person with adequate knowledge, training and experience, appointed by the employer, and shall be in good working order before the worker enters the confined space. O. Reg. 632/05, s. 20 (5).

Records

21. (1) The employer shall retain every assessment, plan, co-ordination document under section 4, record of training under subsection 8 (5) or 9 (2), entry permit under section 10, record of an inspection under subsection 12 (2) and record of a test under section 18, including records of each sample, for the longer of the following periods:

1. One year after the document is created.
2. The period that is necessary to ensure that at least the two most recent records of each kind that relate to a particular confined space are retained. O. Reg. 632/05, s. 21 (1).

(2) If section 4 applies, the documents described in subsection (1) shall be retained by the employer responsible for creating them. O. Reg. 632/05, s. 21 (2).

22. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION). O. Reg. 632/05, s. 22.