

Confined Space Inventory **Dufferin Transfer Station**

35 Vanley Crescent

Note : All spaces, regardless of category, must undergo a Hazard Assessment prior to entry. Confined Space Procedures apply automatically to spaces classified as **"Definite"**. Confined Space Procedures will apply to spaces classified as **"Possible"** if the Hazard Assessment indicates that a hazardous atmosphere exists or may develop there.

Last updated:
October 2015

Assessment for "Category of confined space"							
"Definite" (all 3 conditions) "Possible"	Yes	Yes	Yes				
	Yes	Yes	Only certain operations/conditions might create an atmospheric hazard				
Description	Not built for human occupancy	Restricted entry	Atmospheric hazard (e.g. methane)	Category of confined space	Detailed Location	Number of similar structures	Sign posted
Sanitary/Storm Sewers (maintenance holes)	YES	YES	YES	DEFINITE	Various	e.g. 100	NO
Excavations/Trenches	YES	Y/N	Y/N	POSSIBLE	N/A		
Scale Pits	YES	YES	YES	DEFINITE	Scale House	2	NO
Water Main Chamber	YES	YES	YES	DEFINITE	North side	1	No
250 Building East gas monitoring chamber	YES	YES	YES	DEFINITE	East of 250 Building	2	NO
250 Building West gas monitoring chamber	YES	YES	YES	DEFINITE	West of 250 Building	2	NO

Confined Space Inventory **Dufferin Maintenance Yard** 75 Vanley Crescent

Note : All spaces, regardless of category, must undergo a Hazard Assessment prior to entry. Confined Space Procedures apply automatically to spaces classified as **"Definite"**. Confined Space Procedures will apply to spaces classified as **"Possible"** if the Hazard Assessment indicates that a hazardous atmosphere exists or may develop there.

Last updated:
December 2014

Assessment for "Category of confined space"							
"Definite" (all 3 conditions) "Possible"	Yes	Yes	Yes	Only certain operations/conditions might create an atmospheric hazard			
	Yes	Yes					
Description	Not built for human occupancy	Restricted entry	Atmospheric hazard (e.g. methane)	Category of confined space	Detailed Location	Number of similar structures	Sign posted
Sanitary/Storm Sewers (maintenance holes)	YES	YES	YES	DEFINITE	Various	e.g. 100	NO
Excavations/Trenches	YES	Y/N	Y/N	POSSIBLE	N/A	N/A	N/A

Note: This form provides a method for recognizing if a space fits the definition of confined space under the regulations (O. Reg. 628/05, s.3), and potential hazard sources.

If you have a space that is fully or partially enclosed, the two conditions – (a) and (b) below **must both apply** before the space can be considered a "confined 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.

Date (dd/mm/yy): Sept22, 2022 **Type of space** (Tank, Sewer, etc.): Methane Sensor Chamber (2)
Location: Disco Transfer Station, 250 Building, East and West Sides

Hazards	Notes (Source / Description)	Hazards	Notes (Source / Description)
<input checked="" type="checkbox"/> Oxygen Deficiency/Enrichment	20.9%	<input checked="" type="checkbox"/> Flammables	CH4, LEL= 0%
<input checked="" type="checkbox"/> Toxic Atmosphere	H2S=0%, CO=0%	<input checked="" type="checkbox"/> Combustibles	CH4, LEL= 0%
<input checked="" type="checkbox"/> Constricted Space	Rectangular prism shaped, V=5.6-5.7m ³	<input checked="" type="checkbox"/> Moving Machinery	Machines used for a job (e.g. submersible pump, crane, forklift, vacuum truck, truck etc.)
<input checked="" type="checkbox"/> Access/Egress	One access hatch Opening size 610X610mm	<input checked="" type="checkbox"/> Substance	Methane, possible presence of ground and/or rain water
<input checked="" type="checkbox"/> Fall in/from Height	1.71-1.72m	<input checked="" type="checkbox"/> Drown/Engulf	If fall in the chamber when full. Avoid performing work during heavy rain fall
<input checked="" type="checkbox"/> Lighting	Intrinsically safe artificial lighting is required	<input checked="" type="checkbox"/> Falling Objects	From the edge or hoist if used
<input checked="" type="checkbox"/> Electrical	120V	<input checked="" type="checkbox"/> Slip/Trip	Protruding covers, vent pipes, trees, wet, dirty surfaces, chamber is on a hill and raised 500mm above ground.
<input type="checkbox"/> Pneumatic		<input type="checkbox"/> Supply/Discharge	
<input type="checkbox"/> Steam		<input checked="" type="checkbox"/> Temp / Weather	Outside
<input type="checkbox"/> Hydraulic		<input checked="" type="checkbox"/> Biological	Mould, fungal spores, animals, insects, pollen
<input checked="" type="checkbox"/> Traffic/Pedestrian	Transfer station work related traffic	<input checked="" type="checkbox"/> Violence/Harassment	Workplace violence/harassment possible
<input checked="" type="checkbox"/> Communication	Worker might wear respirator, a proper method of communication should be established	<input checked="" type="checkbox"/> Ergonomics	Tight, confined space, sharp corners, bending crawling, chamber is on a hill and raised 500mm above ground
<input checked="" type="checkbox"/> Other	Please see notes on the 2 nd page	<input type="checkbox"/> Other:	

Required Controls			PPE & Special Tools	
<input checked="" type="checkbox"/> Gas monitoring	<input type="checkbox"/> Barricades	<input checked="" type="checkbox"/> Draining space	<input checked="" type="checkbox"/> Respirators	<input type="checkbox"/> Ear Plug/Muff
<input checked="" type="checkbox"/> Natural Ventilation	<input checked="" type="checkbox"/> Grounding/GFCI	<input checked="" type="checkbox"/> De-energization	<input checked="" type="checkbox"/> Gloves	<input checked="" type="checkbox"/> Hard Hat
<input checked="" type="checkbox"/> Mech. Ventilation	<input checked="" type="checkbox"/> Traffic Control	<input type="checkbox"/> Blanking/Blocking	<input checked="" type="checkbox"/> Steel Toe	<input checked="" type="checkbox"/> Fall Protection
<input type="checkbox"/> Inerting	<input checked="" type="checkbox"/> Clean up area	<input checked="" type="checkbox"/> Radios	<input checked="" type="checkbox"/> Eye Protection	<input type="checkbox"/> SCBA
<input type="checkbox"/> Purging	<input checked="" type="checkbox"/> Artificial lighting	<input checked="" type="checkbox"/> Fall Protection	<input type="checkbox"/> Goggles	<input checked="" type="checkbox"/> Splash Guard
<input type="checkbox"/> Use of ladders	<input checked="" type="checkbox"/> Tripod/Winch	<input checked="" type="checkbox"/> High-Viz clothing	<input checked="" type="checkbox"/> Rain/Cold Gear	<input type="checkbox"/> Voltage Gloves
<input checked="" type="checkbox"/> Other: <u>Please see notes on the 2nd page</u>	<input type="checkbox"/> Other: _____	<input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Other: <u>Please see notes on the 2nd page</u>	

Is this a Confined Space?	NO <input type="checkbox"/> Not a Confined Space	YES <input checked="" type="checkbox"/> Definite Confined Space <input type="checkbox"/> Possible/Probable Confined Space
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Name of Assessor: Aleh Karol

Signature: 

Date (dd/mm/yy): Sept.22, 2022

Notes

There is no data on VOC (volatile organic compounds) and sulfur gases concentration (H₂S =0% on the assessment day) for Disco Transfer Station, Crawling Space, Methane Sensor Chambers, thus it **can't** be assumed to be below Occupational Exposure Limit.

Based on Confined Space Airborne Chemical Characterization Keele Valley Landfill's Condensate Chamber, Dry Well, Wet Well Final report Dec 2020 and on the gas monitor readings at the assessment time following conclusions will be applicable to the Disco Transfer Station, Crawling Space, Methane Sensor Chambers due to the similar nature of those sites:

Air conditions might change overtime.

Air purifying respirator P100 is recommended for inspections. For entry ventilation and supplied air might be necessary.

Note: This form provides a method for recognizing if a space fits the definition of confined space under the regulations (O. Reg. 628/05, s.3), and potential hazard sources.

If you have a space that is fully or partially enclosed, the two conditions – (a) and (b) below **must both apply** before the space can be considered a "confined 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.

Date (dd/mm/yy):	Sept21, 2022	Type of space (Tank, Sewer, etc.):	Scale pit (14)
Location:	Transfer Stations, Inbound and Outbound		

Hazards	Notes (Source / Description)	Hazards	Notes (Source / Description)
<input checked="" type="checkbox"/> Oxygen Deficiency/Enrichment	20.6%–20.8%	<input checked="" type="checkbox"/> Flammables	CH ₄ , LEL= 0% , Possible presence of unknown flammable substance spillage
<input checked="" type="checkbox"/> Toxic Atmosphere	H ₂ S=0%, CO=0%, Possible presence of unknown toxic substance spillage	<input checked="" type="checkbox"/> Combustibles	CH ₄ , LEL= 0%, Possible presence of unknown combustible substance spillage
<input checked="" type="checkbox"/> Constricted Space	Rectangular prism shaped, V=84–125,6m ³	<input checked="" type="checkbox"/> Moving Machinery	Machines used for a job (e.g. submersible pump, crane, forklift, vacuum truck, truck etc.)
<input checked="" type="checkbox"/> Access/Egress	From three to four access hatches without access ladders. Opening sizes: Ø= 590–635mm, 660X530mm–760X610mm	<input checked="" type="checkbox"/> Substance	Waste matter from garbage trucks and public vehicles trapped under the scale, dust, possible presence of ground and/or rain water
<input checked="" type="checkbox"/> Fall in/from Height	1.35–2.2m	<input checked="" type="checkbox"/> Drown/Engulf	If chamber is flooded. Avoid performing work during heavy rain fall
<input checked="" type="checkbox"/> Lighting	Intrinsically safe artificial lighting is required	<input checked="" type="checkbox"/> Falling Objects	From the edge, forklift, hoist or crane if used
<input checked="" type="checkbox"/> Electrical	120V	<input checked="" type="checkbox"/> Slip/Trip	Conduits, wet, dirty surfaces
<input type="checkbox"/> Pneumatic		<input checked="" type="checkbox"/> Supply/Discharge	Pump discharge and supply if used
<input type="checkbox"/> Steam		<input checked="" type="checkbox"/> Temp / Weather	Outside
<input type="checkbox"/> Hydraulic		<input checked="" type="checkbox"/> Biological	Mould, fungal spores, animals, insects, pollen, bacteria, viruses
<input checked="" type="checkbox"/> Traffic/Pedestrian	Transfer station work related traffic	<input checked="" type="checkbox"/> Violence/Harassment	Workplace violence/harassment possible
<input checked="" type="checkbox"/> Communication	Worker can disappear from direct view, a proper method of communication should be established	<input checked="" type="checkbox"/> Ergonomics	Tight, confined space, sharp corners, bending, crawling
<input checked="" type="checkbox"/> Other	Please see notes on the 2 nd page	<input type="checkbox"/> Other:	

Required Controls			PPE & Special Tools	
<input checked="" type="checkbox"/> Gas monitoring <input checked="" type="checkbox"/> Natural Ventilation <input checked="" type="checkbox"/> Mech. Ventilation <input type="checkbox"/> Inerting <input type="checkbox"/> Purging <input checked="" type="checkbox"/> Use of ladders <input checked="" type="checkbox"/> Other: <u>Please see notes on the 2nd page</u>	<input type="checkbox"/> Barricades <input checked="" type="checkbox"/> Grounding/GFCI <input checked="" type="checkbox"/> Traffic Control <input checked="" type="checkbox"/> Clean up area <input checked="" type="checkbox"/> Artificial lighting <input checked="" type="checkbox"/> Tripod/Winch <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Draining space (if flooded) <input checked="" type="checkbox"/> De-energization <input type="checkbox"/> Blanking/Blocking <input checked="" type="checkbox"/> Radios <input checked="" type="checkbox"/> Fall Protection <input checked="" type="checkbox"/> High-Viz clothing <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Respirators <input checked="" type="checkbox"/> Gloves <input checked="" type="checkbox"/> Steel Toe <input checked="" type="checkbox"/> Eye Protection <input type="checkbox"/> Goggles <input checked="" type="checkbox"/> Rain/Cold Gear <input checked="" type="checkbox"/> Other: <u>Please see notes on the 2nd page</u>	<input type="checkbox"/> Ear Plug/Muff <input checked="" type="checkbox"/> Hard Hat <input checked="" type="checkbox"/> Fall Protection <input type="checkbox"/> SCBA <input checked="" type="checkbox"/> Splash Guard <input type="checkbox"/> Voltage Gloves

Is this a Confined Space?
NO
☐ Not a Confined Space

YES
☒ Definite Confined Space

☐ Possible/Probable Confined Space

Name of Assessor: Aleh Karol
Signature: 
Date (dd/mm/yy): Sept.21, 2022

Notes

Air conditions might change overtime.

Air purifying respirator P100 is recommended for inspections. For entry ventilation and supplied air might be necessary.

1.0 Purpose

The purpose of this procedure is to specify general safety requirements when working in or around confined spaces.

2.0 Application

Visitors are considered to be those who may have knowledge of hazards associated with the work, but do not physically perform the work/job task. When visiting work sites, visitors are required to:

- Be familiar with the hazard control measures outlined in this safety procedure
- At a minimum, wear the personal protective equipment required (safety footwear, hard hat and high visibility vest) while on the work site

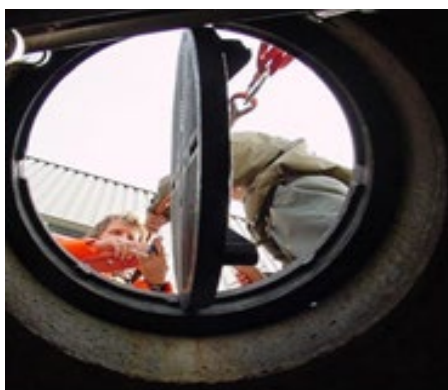
Workers performing the work/job task in this safety procedure are required to follow the control measures stipulated in each step as outlined.

3.0 Hazards

Combustible atmospheres
Oxygen deficiency (less than 19.5%)
Oxygen enrichment (more than 23%)
Toxic atmospheres
Irregular/slippery walking surfaces
Hazardous energy
Engulfment
Falls

Hot Work
Noise
Temperature extremes
High water flow
Traffic
Biological
Drowning

Poor lighting/visibility
Insects/animals
Harmful substances
Poor housekeeping
Psychological factors
Constricted space
Moving machinery



4.0 Confined Space Recognition and Identification

1. Refer to the divisional confined space inventory which identifies areas that may be documented as confined spaces, or those which may become confined spaces
2. Definite confined spaces shall have appropriate signage placed at the entrance(s)
3. Maintenance holes that lead to sewage systems are all to be considered confined spaces but do not require identification signage
4. Workers shall be advised in writing of definite and possible confined spaces relating to their work

5.0 Pre-Entry

5.1 Hazard Assessment

Proof of the completion of a Confined Space Assessment that determined the presence of a definite confined space needs to be available. As such:

1. Before a worker enters a possible confined space, a competent worker must conduct an assessment of the hazards into which the worker may be exposed
2. The competent worker shall complete the Confined Space Hazard Assessment form and shall consider the hazards that may:
 - Exist due to the design, construction, location, use or contents of the space
 - Develop during the work to be done in the space
3. Where the assessment has concluded that it is a definite confined space, the full procedure shall apply
4. If this assessment establishes that the space is not a confined space, workers should take appropriate precautions as necessary



5.2 Entry Control Plan

1. Before a worker enters any confined space a supervisor shall ensure that a *Confined Space Entry Control & Rescue Plan* is developed and implemented for each confined space.
2. The plan shall include methods, procedures and practices for controlling all hazards identified in the *Confined Space Hazard Assessment* form and procedures for rescue
3. The supervisor shall ensure that the emergency procedures, including the use of all rescue equipment, shall be practiced on a regular basis to ensure proficiency. A quarterly basis is considered to be the minimum standard
4. Before a worker enters the confined space, the supervisor shall ensure that the worker has received adequate instruction on the site specific *Entry Control Plan*.
5. A record of the *Rescue Plan* shall be included in the *Confined Space Entry Control & Rescue Plan*

5.3 Emergency Rescue

1. No person shall enter or remain in a confined space unless an effective rescue can be carried out
2. The supervisor shall ensure that a suitable emergency rescue plan is developed prior to assigning work in any confined space, and the workers are trained in the requirements of the plan
3. Rescue plans shall be specific to each space to be entered
4. The supervisor shall document within the *Confined Space Control & Rescue Plan* the procedures to be followed, in the event of an emergency, including a procedure for immediate evacuation
5. A record of the emergency rescue training shall be included in the *Confined Space Permit*
6. Where practicable, a non-entry retrieval system shall be used to remove the affected worker from the confined space
7. An approved full body harness shall be worn at all times, by all entry persons, to facilitate rescue
8. No one may enter a confined space, even for rescue purposes, without an Attendant present
9. Any rescue attempt shall only be made when the rescuer is properly trained
10. Immediately following retrieval:
 - Notify Emergency Services (911)
 - Provide First Aid/CPR as necessary
 - Notify the supervisor



5.4 Equipment Checks

1. All equipment and devices required for the specific job must be inspected and/or tested prior to each entry
2. Any equipment or device which does not meet accepted safe operating standards must be removed from service
3. Entry work shall not proceed unless the required equipment is present and operational
4. Emergency rescue equipment shall be inspected by a competent worker immediately prior to each entry and recorded on the *Confined Space Entry Permit*
5. Equipment that may be required includes, but is not limited to:

Gas detection devices	Forced Ventilation	Traffic control devices
Spark resistant tools	Communication system	Respiratory PPE
Fall arrest systems	Standard PPE	Intrinsic Lighting
Warning signs	Ladders	Emergency Equipment
Barricades	Lockout equipment	

5.5 Confined Space Entry Permits

For each definite confined space, a *Confined Space Entry Permit* shall be completed and signed by the competent worker Attendant.

The permit shall include:

- the location of the confined space
- a description of the work to be performed
- a description of the hazards
- corresponding control measures
- the time period for which the entry permit applies
- the name of the Attendant
- a record of each worker's entry and exit
- a list of the equipment required for entry and rescue
- verification that the equipment is in good working order
- results obtained from atmospheric testing
- When the work to be performed in the confined space includes hot work

5.6 Traffic Control

For confined space operations in roadway allowances follow the Traffic Control safety procedure.

5.7 Preventing Unauthorized Entry

For each confined space:

1. Only authorized workers are allowed entry into the confined space, in accordance with the procedures identified in the plan
2. All measures and procedures shall be in place
3. each entrance into the confined space is to be adequately secured against unauthorized entry or accidental entry
4. Adequate barricades, warning signs or any combination thereof, are installed to protect workers and the public

5.8 Access and Egress

An adequate means for entering and exiting shall be provided for all workers who enter a confined space.

5.9 Isolation

1. Where practicable, isolate the confined space from the release of stored energy or materials (energy sources include electrical, pneumatic, hydraulic, chemical, gravity, thermal, steam, tension, momentum, spring pressure, head and line pressure)
2. All sources of ignition shall be controlled
3. No worker shall enter a confined space unless the worker is adequately protected against drowning, engulfment, entrapment, suffocation and other hazards from free flowing material

5.10 Lockout, Tag and Test

Follow the *Lockout, Tag and Test* safety procedure (SP 12) that requires workers to:

1. Make sure to disengage all energy sources from equipment
2. Safely release stored energy or materials
3. Secure all control devices in the off position with a lock

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4. Tag the lock appropriately and test the system to ensure the disengagement has been successful.

5.11 Blanking Off

Where practicable, all lines and systems, which may permit the entry of hazardous materials, shall be blanked off.

5.12 Confined Space Monitoring

1. Follow the safety procedure, *SP10. Gas Detection Equipment*
2. The Attendant and all workers working in a confined space shall have an appropriate and continuously operating gas monitor within the immediate working area, in addition to the Attendant's gas monitor
3. Gas monitors shall be calibrated by a competent worker, in keeping with manufacturer's specifications
4. A label shall be attached to the gas monitor indicating the time of the last calibration, the next calibration due date and signature of the calibrator
5. Prior to opening a maintenance hole cover and prior to each entry, every confined space, must be tested by a competent worker for:
 - Combustible atmosphere
 - Toxic atmospheres
 - Oxygen deficiency or enrichment
6. Testing shall be done at varying levels from top to bottom within the confined space
7. The results of the atmospheric sampling must be recorded in the *Confined Space Entry Permit* and retained by the supervisor for the longer of the following periods:
 - One year after the document is created or
 - 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
8. Entry shall only be made where tests indicate:
 - a. A safe atmosphere certified as such by a competent worker or
 - b. When additional adequate precautions have been implemented
9. If there is no label on the monitor, or it is past the calibration due date, it shall not be used
10. When in use, all gas monitors shall be bump tested daily



5.13 Communication

1. Supervisors shall ensure a communication system (cell phone, two-way radio) is available at the work site for the purpose of calling on outside help
2. Additionally, the Attendant shall maintain effective and continuous communication with the entrants while they are in the confined space
3. Where direct communication with outside workers is not possible, workers entering a confined space shall use intrinsically safe (explosion proof) communication devices

5.14 Attendant

1. The Attendant shall be trained in First Aid and Cardio-Pulmonary Resuscitation (CPR) and shall carry proof of training
2. Attendant(s) shall be stationed immediately outside and near the confined space entrance(s) and shall be assigned no other duties.
3. The Attendant is responsible for ensuring that the protective equipment required for entry and rescue is on hand, in use, or being worn by those entering the confined space, as required by the *Confined*

5.15 Space Control & Rescue Plan

1. Complete the *Confined Space Entry Permit* prior to entry
2. Constantly communicate with all workers in the confined space for the duration of the work
3. Make provision for communication devices necessary for summoning an adequate rescue response are present
4. Ensure assistance is given to workers in the confined space, as they require it
5. Provide for guarded or secured access point(s) at all times
6. If it becomes necessary for the Attendant to leave, even for a few minutes, all workers must leave the confined space for the duration of the Attendant's absence, or another competent worker must be assigned to act as a temporary Attendant (note - this will require a revision to the *Confined Space Entry Permit* form)
7. Account for all entry workers prior to closing up the confined space - record proof of this on the *Confined Space Entry Permit* form
8. Ensure the emergency plan is present at the worksite, reviewed and understood by all workers involved with the confined space entry
9. In a timely manner, initiate the plan, summon assistance, and carry out emergency removal from the confined space



5.16 Entry Worker

Supervisors shall ensure that all entry workers are trained in the requirements of the site specific *Confined Space Control & Rescue Plan*. Entry workers shall:

1. Ensure all safety equipment is in good working order and have portable lighting that is intrinsically safe
2. Wear all safety equipment required for safe confined space entry
3. Wear a full body harness to facilitate potential rescue
4. Continuously monitor the atmosphere while in a confined space
5. Be aware of the potential hazards that may be encountered during entry and the limitations of equipment for control of these hazards
6. Know how to respond to emergencies including methods of self-rescue
7. Recognize and take appropriate action upon seeing the symptoms and warning signs of exposure to potential hazards
8. Notify the Attendant of any emergency or unacceptable condition present in the confined space



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9. Exit the confined space immediately if symptoms, warning signs, or unacceptable conditions occur, or if directed by the Attendant

6.0 Entry

1. The confined space shall only be entered after it has been assessed and evaluated by a competent worker who notes the hazard(s) on the *Hazard Assessment* form.
2. A written *Confined Space Control & Rescue Plan* must be developed by a competent person who identifies the required precautions or protective equipment to be used
3. The *Confined Space Permit* must be completed by the confined space Attendant
4. Immediately before entry and every half hour (1/2) thereafter, the gas detection monitor readings shall be logged on the Entry Permit
5. Immediately before every re-entry the space shall be re-tested
6. A copy of the Permit shall be kept on site at all times
7. The supervisor or designate shall be informed before any entry takes place
8. The confined space shall be entered only after the required additional precautions or protective equipment is in place or being used
9. Where practicable, if a hazardous atmosphere has been detected, the atmosphere shall be rendered safe by purging or ventilating
10. If the gas monitor indicates a toxic or oxygen deficient hazard, the space shall be ventilated until safe
11. If the hazard is an explosive gas, the space shall be made inert using an appropriate inert gas, where practicable (e.g. nitrogen) until the lower explosive limit (LEL) reading is at 0% - the space shall then be ventilated with fresh air until the oxygen content is at a safe level
12. If after testing it is found that the above activity has not reduced the explosive gas level below regulated limits, re-purge and retest
13. If it is found that there is a continuous source of flammable gas, do not enter and contact your supervisor
14. Workers shall immediately leave the confined space when the gas monitors alarms or when directed to do so by the Attendant
15. If mechanical ventilation is required, a failure warning system shall be provided that gives adequate warning to workers to ensure adequate time for their safe egress

6.1 Entry into Toxic or Anoxic Atmospheres

1. Where purging and ventilating fail to provide safe breathing conditions, a suitable portable respirator, a self contained breathing apparatus (SCBA) or a supplied airline respirator with an escape pack shall be used
2. Continue to monitor for the Lower Explosive Limit (LEL) in the confined space even while wearing a self contained breathing apparatus in a toxic or anoxic atmosphere
3. Exit immediately if the LEL sensor alarms

6.2 Fall Protection

In the following circumstances and where there is a risk of falling, confined space workers and attendants shall wear and use fall arrest equipment in accordance with manufacturer's specifications:

- Three metres
- Into operating machinery
- Into water or another liquid
- Onto a hazardous substance or object, or
- Through an opening on a work surface

6.3 Hot Work

1. Hot work includes any activity or the use of any tool or equipment that may be a source of spark or ignition. This, for example, includes the use of electrical tools, lighting, communication devices, etc. that are not certified intrinsically safe
2. Where the potential for flammable, combustible or explosive agents exists, no work shall be performed in a confined space unless a *Hot Work Permit*, identified in the safety procedure, *SP-13 Hot Work Permit Systems* is issued by the supervisor in charge and continuous testing is performed.
3. Work shall continue only while the reading remains below 5% LEL.

6.4 Confined Spaces with Multi-Employer Involvement

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.

1. Before any worker enters the confined space or begins related work with respect to the confined space one employer shall be designated as the lead employer.
2. The lead employer shall prepare a co-ordination document, in accordance with **section 4 of Ontario Regulation 632/05**, to protect the health and safety of the workers who perform work in the confined space or related work with respect to the confined space.
3. 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.

7.0 Training Requirements

The Act requires a rescue worker to be trained in First Aid/CPR.

All workers who are required to enter confined spaces shall be trained in confined space entry which will include:

1. Legislative, corporate and divisional requirements
2. Confined space recognition
3. Hazard recognition, assessment and control

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4. Record keeping requirements
 5. Proper use of tools, machinery and safety equipment
 6. Confined space entry assessment, plan and on-site rescue procedures
 7. Lockout, tag and test
 8. Hot work requirements
 9. Practical training in the use of safety equipment such as:
 - Fall arrest systems
 - Retrieval systems
 - Body harnesses
 - Gas detection devices
 - Respiratory equipment
 - Communication systems

7.0 Legislative Requirements

O. Reg. 632/05: Confined Spaces

8.0 Related Safety Procedures

SP 10	Portable Gas Detection Equipment
SP 10a	Atmospheric Test Record
SP 12	Lockout, Tag & Test
SP 13	Hot Work Permit
SP 09	Confined Space Entry Procedure
SP 09a	Confined Space Entry Permit
SP 09b	Confined Space Entry Control & Rescue Plan
SP 09c	Confined Space Multi-Employer Coordination Form
SP 09d	Supplementary Crew & Atmospheric Record Sheet
SP 09e	Confined Space Hazard Assessment
SP 09f	Confined Space Glossary

City of Toronto Respiratory Protection Policy
City of Toronto Confined Space Policy

Section 1. Permit Basics	Person Issuing Permit			Permit Duration							
				From ____/____/____ Time: To ____/____/____ Time:							
	Multi-Shift Work	Y <input type="checkbox"/>	N <input type="checkbox"/>	Multi-Employer Entry? If "Y" attach coordination document SP09c			Y <input type="checkbox"/>	N <input type="checkbox"/>	City is Lead Employer?	Y <input type="checkbox"/>	N <input type="checkbox"/>
	Specific Confined Space Entry Location			Type of space (Tank, Sewer etc)		Summary Work Description					

Section 2. General Pre-Entry Preparations	I. Hazard Assessment & Control Plan		Completed By:		Date:	
	Hazards	Notes (Source / Description)	Hazards	Notes (Source / Description)		
	<input type="checkbox"/> Oxygen Deficiency		<input type="checkbox"/> Flammables			
	<input type="checkbox"/> Toxic Air		<input type="checkbox"/> Combustibles			
	<input type="checkbox"/> Access/Egress		<input type="checkbox"/> Substance			
	<input type="checkbox"/> Fall in/from Height		<input type="checkbox"/> Drown/Engulf			
	<input type="checkbox"/> Lighting		<input type="checkbox"/> Falling Objects			
	<input type="checkbox"/> Electrical		<input type="checkbox"/> Slip/Trip			
	<input type="checkbox"/> Pneumatic		<input type="checkbox"/> Supply/Discharge			
	<input type="checkbox"/> Steam		<input type="checkbox"/> Temp / Weather			
	<input type="checkbox"/> Hydraulic		<input type="checkbox"/> Biological			
	<input type="checkbox"/> Traffic/Pedestrian		<input type="checkbox"/> Violence/Harassment			
	<input type="checkbox"/> Communication		<input type="checkbox"/> Ergonomics			
	<input type="checkbox"/> Other		<input type="checkbox"/> Other:			
	<input type="checkbox"/> All hazards identified & assessed to meet pre-entry conditions			Updated By:		
Required Controls				PPE & Special Tools		
<input type="checkbox"/> Gas monitoring <input type="checkbox"/> Barricades <input type="checkbox"/> Draining space <input type="checkbox"/> Natural Ventilation <input type="checkbox"/> Grounding/GFCI <input type="checkbox"/> De-energization <input type="checkbox"/> Mech. Ventilation <input type="checkbox"/> Traffic Control <input type="checkbox"/> Blanking/Blocking <input type="checkbox"/> Inerting <input type="checkbox"/> Clean up area <input type="checkbox"/> Radios <input type="checkbox"/> Purging <input type="checkbox"/> Artificial lighting <input type="checkbox"/> Fall Protection <input type="checkbox"/> Use of ladders <input type="checkbox"/> Tripod/Winch <input type="checkbox"/> High-Viz clothing <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____				<input type="checkbox"/> Respirators <input type="checkbox"/> Ear Plug/Muff <input type="checkbox"/> Gloves <input type="checkbox"/> Hard Hat <input type="checkbox"/> Steel Toe <input type="checkbox"/> Fall Protection <input type="checkbox"/> Eye Protection <input type="checkbox"/> SCBA <input type="checkbox"/> Goggles <input type="checkbox"/> Splash Guard <input type="checkbox"/> Rain/Cold Gear <input type="checkbox"/> Voltage Gloves <input type="checkbox"/> Other: _____		
II. Additional Preparations					Y	N/A
<input type="checkbox"/> Traffic Control in place and attached as per Book 7					<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> HOT WORK is being performed and a Hot Work Permit is completed and attached					<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> All HAZARDOUS ENERGY present has been de-energized and lockout/tagged (LOTO) completed					<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> All PPE and tools has been inspected and in good working condition					<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Atmospheric test interval recorded changed to <30min per record. Interval Time: _____					<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Additional Control Measures/Notes:						<input type="checkbox"/>

Section 3. Pre-Entry Atmospheric Monitoring	I. Gas Monitors		Type of Gas Monitoring: <input type="checkbox"/> Continuous <input type="checkbox"/> Personal Monitors <input type="checkbox"/> Periodic				
	#	Make & Model	Serial Number / ID	Working Condition	Bump Tested	Valid Calibration	
	1			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	II. Pre-Entry Atmospheric Test Record			Completed By:			
	Time	Location of air sampled	Toxic 1	Toxic 2	Toxic 3	% LEL	%O2
	<input type="checkbox"/> Space is safe to enter Type of work allowed: <input type="checkbox"/> No Restriction <input type="checkbox"/> No Hot Work <input type="checkbox"/> Inspection Only						

* % LEL - <5% no restriction, <10% no hot work, <25% inspection only, %O2 - must be 19.5%-23% at all times

Section 4. Rescue Preparation	Rescue Plan Summary		<input type="checkbox"/> A Rescue Plan is completed meeting current conditions - Must attach SP 09b			
	Type of Rescue:	<input type="checkbox"/> Entry <input type="checkbox"/> Non-Entry	Completed by:	<input type="checkbox"/> City Personnel <input type="checkbox"/> Non-City Personnel		
	Equipment: <input type="checkbox"/> Winch <input type="checkbox"/> Respirator <input type="checkbox"/> Ladder <input type="checkbox"/> Tripod <input type="checkbox"/> Harness <input type="checkbox"/> Lanyard <input type="checkbox"/> Davit Arm <input type="checkbox"/> First Aid Kit					
	Other: _____ Other: _____ Other: _____ Other: _____					
	<input type="checkbox"/> Required rescue equipment available and in good working order <input type="checkbox"/> Rescue personnel ready and aware of the rescue plan					
	Signature of rescue team-lead to confirm the above:					
Additional Notes:						

Section 5. Work-crew and Entry/Formal Exit Records						"A" – Attendant, "E" – Entrant, "R" – Rescue, "O" - Other					
A record is required for every entry and re-entry following a formal-exit. A formal-exit is when an entrant comes out of the space unless it's a minor momentary exit related to the work, <15-minutes & within <30' of the space, and an Attendant is engaged in Attendant duties											
Name - Initial to confirm you have been made aware of entry specific procedures, hazards, controls, & rescue plan.						Record Of Entry and Formal Exit					
	A	E	R	O	Initial	✓ Entry	"x" Formal Exit	Time ____:____	Final Exit		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____	<input type="checkbox"/> ____:____

Section 6. Final Pre-Entry Checks & Start-Work Authorization

- ☐ Hazard Assessment, Control Plan, and Rescue Plan completed and relevant to current conditions
- ☐ Atmospheric testing confirms space is *safe* to enter
- ☐ Communication method in place between Attendant and Entrant(s)
- ☐ All pre-entry preparations in place
- ☐ Pre-Entry debriefing completed with work-crew and workers have initialed Section 5

Date: ____/____/____ **Time:** _____ **Permit Issuer Signature:** _____

Section 7. Job-In-Progress Atmospheric Monitoring

- Monitoring and recordkeeping must match Control Plan requirements
- At minimum record results just prior to the first entry and every 30-minutes thereafter
- Additional Pre-entry testing must be done anytime the space is unoccupied and unattended

Time	Location of sampled air within the space	Toxic 1	Toxic 2	Toxic 3	% LEL	% O2	Re-Entry	Notes
							<input type="checkbox"/>	
							<input type="checkbox"/>	
							<input type="checkbox"/>	
							<input type="checkbox"/>	
							<input type="checkbox"/>	
							<input type="checkbox"/>	
							<input type="checkbox"/>	
							<input type="checkbox"/>	
							<input type="checkbox"/>	
							<input type="checkbox"/>	
							<input type="checkbox"/>	

Section 8. Temporary Break Re-Entry *Complete after Formal Exits and the absence of an Attendant*

1st Initial **2nd Initial** **3rd Initial**

• Section 2 hazards, controls, and rescue plan updated to meet re-entry conditions			
• Pre-Entry Atmospheric testing completed, recorded on Sec 7, space is safe to enter			
• Updated Re-Entry debriefing with work-crew completed			
• Confined Space is ready to be re-entered			

Section 9. Permit Close

- ☐ All Entrants out of the space
 - ☐ All work-tools and equipment collected from area
 - ☐ Workplace left in good orderly condition
 - ☐ All exposed openings and hazards rendered safe before leaving
 - ☐ All permit documentation and attachments in one place
 - ☐ Process/machinery placed in safe a state
 - ☐ All worker entry/exit records completed
 - ☐ Gas monitoring records completed
 - ☐ Affected personnel informed of job status
 - ☐ Supervisor in charge informed of job status

Date: ____/____/____ **Time:** _____ **Permit Closer Signature:** _____

Section 1. Basics	Rescue Team Lead			Permit Duration								
				From ____/____/____ Time: To ____/____/____ Time:								
	Multi-Shift Work	Y <input type="checkbox"/>	N <input type="checkbox"/>	Multi-Employer Entry? <i>If "Y" attach coordination document SP09c</i>			Y <input type="checkbox"/>	N <input type="checkbox"/>	City is Lead Employer?		Y <input type="checkbox"/>	N <input type="checkbox"/>
	Specific Confined Space Entry Location			Type of space <i>(Tank, Sewer etc)</i>			Summary Work Description					

Section 2. Rescue Preparation	Type of Rescue:	<input type="checkbox"/> Entry <input type="checkbox"/> Non-Entry		Completed by:	<input type="checkbox"/> City Personnel <input type="checkbox"/> Non-City Personnel	
	Equipment: <input type="checkbox"/> Winch <input type="checkbox"/> Respirator <input type="checkbox"/> Ladder <input type="checkbox"/> Tripod <input type="checkbox"/> Harness <input type="checkbox"/> Lanyard <input type="checkbox"/> Davit Arm <input type="checkbox"/> First Aid Kit					
	Other: _____ Other: _____ Other: _____ Other: _____					
	<input type="checkbox"/> Required rescue equipment available and in good working order <input type="checkbox"/> Rescue personnel ready and aware of the rescue plan					
	Additional Particulars or Notes: _____ _____ _____ _____					

Section 3. Rescue Personnel			
Name - <i>Initial to confirm you have been trained appropriate to the type and level of rescue response required of you, have been made aware of entry specific procedures, hazards, controls, & the rescue plan.</i>	Rescue training completed	Capable to complete all assigned and expected duties	Initial

Section 6. Final Rescue Preparations

- ☐ Hazard Assessment, Control Plan, and Rescue Plan completed and relevant to current conditions

☐ All necessary rescue personnel available

☐ All rescue equipment available and in good working condition

☐ All Communication method in place

☐ Pre-Entry debriefing completed with rescue-crew

Date: ____/____/____ Time: ____:____:____ Rescue Lead Signature: _____

Note: This form provides a method for recognizing if a space fits the definition of confined space under the regulations (O. Reg. 628/05, s.3), and potential hazard sources.

If you have a space that is fully or partially enclosed, the two conditions – **(a)** and **(b)** below **must both apply** before the space can be considered a "confined 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.

Date (dd/mm/yy):		Type of space (Tank, Sewer, etc.):	
Location:			

Hazards	Notes (Source / Description)	Hazards	Notes (Source / Description)
<input type="checkbox"/> Oxygen Deficiency/Enrichment		<input type="checkbox"/> Flammables	
<input type="checkbox"/> Toxic Atmosphere		<input type="checkbox"/> Combustibles	
<input type="checkbox"/> Constricted Space		<input type="checkbox"/> Moving Machinery	
<input type="checkbox"/> Access/Egress		<input type="checkbox"/> Substance	
<input type="checkbox"/> Fall in/from Height		<input type="checkbox"/> Drown/Engulf	
<input type="checkbox"/> Lighting		<input type="checkbox"/> Falling Objects	
<input type="checkbox"/> Electrical		<input type="checkbox"/> Slip/Trip	
<input type="checkbox"/> Pneumatic		<input type="checkbox"/> Supply/Discharge	
<input type="checkbox"/> Steam		<input type="checkbox"/> Temp / Weather	
<input type="checkbox"/> Hydraulic		<input type="checkbox"/> Biological	
<input type="checkbox"/> Traffic/Pedestrian		<input type="checkbox"/> Violence/Harassment	
<input type="checkbox"/> Communication		<input type="checkbox"/> Ergonomics	
<input type="checkbox"/> Other		<input type="checkbox"/> Other:	

Required Controls			PPE & Special Tools	
<input type="checkbox"/> Gas monitoring	<input type="checkbox"/> Barricades	<input type="checkbox"/> Draining space	<input type="checkbox"/> Respirators	<input type="checkbox"/> Ear Plug/Muff
<input type="checkbox"/> Natural Ventilation	<input type="checkbox"/> Grounding/GFCI	<input type="checkbox"/> De-energization	<input type="checkbox"/> Gloves	<input type="checkbox"/> Hard Hat
<input type="checkbox"/> Mech. Ventilation	<input type="checkbox"/> Traffic Control	<input type="checkbox"/> Blanking/Blocking	<input type="checkbox"/> Steel Toe	<input type="checkbox"/> Fall Protection
<input type="checkbox"/> Inerting	<input type="checkbox"/> Clean up area	<input type="checkbox"/> Radios	<input type="checkbox"/> Eye Protection	<input type="checkbox"/> SCBA
<input type="checkbox"/> Purging	<input type="checkbox"/> Artificial lighting	<input type="checkbox"/> Fall Protection	<input type="checkbox"/> Goggles	<input type="checkbox"/> Splash Guard
<input type="checkbox"/> Use of ladders	<input type="checkbox"/> Tripod/Winch	<input type="checkbox"/> High-Viz clothing	<input type="checkbox"/> Rain/Cold Gear	<input type="checkbox"/> Voltage Gloves
<input type="checkbox"/> Other: _____	<input type="checkbox"/> Other: _____	<input type="checkbox"/> Other: _____	<input type="checkbox"/> Other: _____	

Is this a Confined Space?	NO	YES
	<input type="checkbox"/> Not a Confined Space	<input type="checkbox"/> Definite Confined Space <input type="checkbox"/> Possible/Probable Confined Space

Name of Assessor: _____

Signature: _____

Date (dd/mm/yy): _____