

TOWN OF ROCKY HILL:
2021 Confined Space-Competent Person Program

Confined Space:

- 1) Is large enough and so configured that an employee can bodily enter
- 2) Has limited or restricted means for entry and exit
- 3) Is not designed for continuous employee occupancy

All confined spaces are considered permit required spaces unless the following criteria can be met per Safety and Health Regulations 1926:

1926.1203(g)(1)

If the permit space poses no actual or potential atmospheric hazards and if all hazards within the space are eliminated or isolated without entry into the space (unless employer can demonstrate that doing so without entry is feasible), the permit space may be reclassified as a non-permit confined space for as long as the non-atmospheric hazards remain eliminated or isolated;

1926.1203(g)(2)

The entry employer must eliminate or isolate the hazards without entering the space, unless it can demonstrate that this is infeasible. If it is necessary to enter the permit space to eliminate or isolate hazards, such entry must be performed under Section 1926.1204 through 1926.1211. If testing and inspection during that entry demonstrate that the hazards within the permit space have been eliminated or isolated, the permit space may be reclassified as a non-permit confined space for as long as the hazards remain eliminated or isolated;

Note to paragraph (g)(2): Control of atmospheric hazards through forced air ventilation does not constitute elimination or isolation of the hazards. Paragraph (e) of this section covers permit space entry where the employer can demonstrate that forced air ventilation alone will control all hazards in the space.

1926.1203(g)(3)

The entry employer must document the basis for determining that all hazards in a permit space have been eliminated or isolated, through a certification that contains the date, the location of the space, and the signature of the person making the determination. The certification must be made available to each employee entering the space or to that employee's authorized representative;

1926.1203(g)(4)

If hazards arise within a permit space that has been reclassified as a non-permit space under paragraph (g) of this section, each employee in the space must exit the space. The entry employer must reevaluate the space and reclassify it as a permit space as appropriate in accordance with all other applicable provisions of this standard.

All confined space will be treated as follows:

Town of Rocky Hill Confined Space – Competent Person Program

(Rev. 05/18/2021)

- 1) Structure or confined space will be metered with a 4 gas meter. Any connecting structure will also be metered. All readings and applicable times will be documented on provided form as:
 - a. Carbon Monoxide CO – less than or = to 35 PPM
 - b. Hydrogen Sulfide – less than or = to 10 PPM
 - c. Oxygen – 19.5% to 23.5%
 - d. Combustible/Flammable LEL – less than or = to 10%
- 2) If readings are present, area will be ventilated, re-metered and documented.
- 3) If no readings are present, employees will inspect and determine if the space is considered permit required or non-permit required space as determined by regulation standards.
- 4) Once the type is determined to be a non-permit required space, entry can be made with constant metering and egress provided.

**Town of Rocky Hill
Highway Department**

Confined Space Checklist

Note: If all of the following questions are answered “YES,” then entry is permitted. If any of the following questions are answered “NO,” contact your supervisor.

	YES	NO	N/A
1) Has the entry team met and does each person know their assigned area of responsibility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Have you checked surrounding area and found it to be free of hazards such as drifting vapors from adjacent tanks, piping or sewers and free of any other hazards that might affect the safety of this confined space entry?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Is the surrounding area likely to remain free of hazards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) Is all required safety equipment and personnel protective equipment on hand and in safe working condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) Has the confined space been isolated from connected hazardous spaces, piping or manholes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Has electrical equipment or circuitry been locked out?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Are you trained in the operation of gas monitor being used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8) Is the gas monitor in current calibration according to manufacturer recommendation and is battery fully charged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Job Location _____

Job # _____

Superintendent Phone # _____

CONFINED SPACE ENTRY PERMIT

1. Permit Space to be Entered _____

2. Purpose of Entry _____

3. Date of Entry _____ Authorized Duration of Entry Permit _____

4. Authorized Entrants _____

5. Attendants(s) _____

6. Name of Current Entry Supervisor(s) 1. _____ Time _____
2. _____ Time _____
Entry Supervisor who Originally Authorized Entry _____

Signature or Initials

7. Record hazards of the permit space to be entered.				8. Check or list the measures used to isolate the permit space and to eliminate or control permit space hazards before entry.
Hazard	Yes	No	N/A	
A. Lack of Oxygen				<input type="checkbox"/> A. Purge-Flush and Vent
B. Combustible Gases				
C. Combustible Vapors				<input type="checkbox"/> B. Ventilation
D. Combustible Dusts				
E. Toxic Gases				<input type="checkbox"/> C. Lockout/Tag Out
F. Toxic Vapors				
G. Chemical Contact				<input type="checkbox"/> D. Inerting
H. Electrical Hazards				
I. Mechanical Exposure				<input type="checkbox"/> E. Blanking, Blocking, Bleeding
J. Temperature				
K. Engulfment				<input type="checkbox"/> F. External Barricades
L. Entrapment				
M. Others				<input type="checkbox"/> G. Confined Space Identification/Signs
				<input type="checkbox"/> H. Other

**DO NOT DESTROY THIS PERMIT
AFTER CANCELLATION THIS ENTRY PERMIT MUST BE RETAINED
BY EMPLOYER FOR AT LEAST ONE YEAR.**

CONFINED SPACE ENTRY PERMIT

9. Acceptable Entry Conditions

10. Test(s) to be Taken	Permissible Entry Levels	Test 1	Test 2	Test 3	Test 4
A. Percent of Oxygen	19.5% to 23.5%				
B. LEL FLAMMABLE	10% ≤				
C. H ₂ S HYDROGEN SULFIDE	10 PPM ≤				
D. CO CARBON MONOXIDE	35 PPM ≤				
E. VOC STYRENE	100 PPM ≤				
F.					
G.					
H.					
I.					
Name or Initials of Tester					
Test Times					

11. Rescue and Emergency Services/Non-entry rescue will be utilized

Call 911 in case of emergency

12. Communication procedures to be used by authorized entrants and attendants.

13. Equipment supplied to the employee.

Yes	No	N/A	Equipment	Description
			(i) Atmospheric Test and Monitoring	Name _____ Model/Type _____ Serial/Unit No. _____
			(ii) Ventilating	
			(iii) Communications	
			(iv) Personal Protective Equipment	<input type="checkbox"/> Safety Harness with Life Lines <input type="checkbox"/> Hard Hats <input type="checkbox"/> Eye <input type="checkbox"/> Ear <input type="checkbox"/> Face <input type="checkbox"/> Hand <input type="checkbox"/> Foot <input type="checkbox"/> Clothing <input type="checkbox"/> Respiratory
			(v) Lighting	
			(vi) Barriers/Shields	<input type="checkbox"/> Pedestrian <input type="checkbox"/> Vehicle <input type="checkbox"/> Other
			(vii) Safe Ingress/Egress	<input type="checkbox"/> Ladders
			(viii) Rescue and Emergency	<input type="checkbox"/> Lifelines <input type="checkbox"/> Hoists <input type="checkbox"/> Medical/First-aid
			(ix) Other Safety Equipment	

14. Other information for this particular confined space to ensure employee safety.

15. Additional Permits Required. Hot Work Other

THIS CONFINED SPACE ENTRY PERMIT HAS BEEN CANCELLED:

BY _____ : _____ ^{AM}/_{PM} _____
Entry Permit Supervisor Time Date



1-800-UR-RENTS

CONFINED SPACE POCKET GUIDE

DEFINITIONS

Confined Space means a space that:

- 1) Is large enough and so configured that an employee can bodily enter and perform assigned work; and
- 2) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, crawl spaces, hoppers, vaults, manholes, pipelines and pits are spaces that may have limited means of entry.); and

3) Is not designed for continuous employee occupancy.

NOTE: A space to be considered a *confined space*, must meet *all three* of these criteria.

Entry Supervisor means the person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry.

NOTE: An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required.

Attendant means an individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendant's duties assigned in the employer's permit space program.

Authorized Entrant means an employee who is authorized by the employer to enter a permit space.

Entry means the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

DISCLAIMER: For use by the trained and knowledgeable "competent person" only. Refer to appropriate specific requirements of your local city, county, state, federal, host and/or manufacturer.

GENERAL REQUIREMENTS

An employer may use the following procedures for entering a permit space, provided that:

- 1) The employer can demonstrate that the only hazard posed by the permit space is an actual or potential hazardous atmosphere;
- 2) The employer can demonstrate that *continuous forced air ventilation* alone is sufficient to maintain that permit space safe for entry;
- 3) The employer can verify that before an employee enters the space, the internal atmosphere has been tested, with a *calibrated direct-reading instrument*, for the following conditions in the order given: OXYGEN CONTENT

FLAMMABLE GASES/VAPORS POTENTIAL TOXIC AIR

- 4) The atmosphere within the space shall be continuously tested to ensure that the forced air ventilation is preventing the accumulation of a hazardous atmosphere.

5) The employer shall document the basis for determining that all hazards in a permit space have been eliminated through a certification that contains the date, the location of the space, and the signature of the person making the determination. The certification shall be made available to each employee entering the space and be retained for at least one year.

- 6) You may not enter the permit space to obtain data, isolate and/or control. **PERIOD!**

7) If a hazardous atmosphere is detected during entry each employee shall leave the space immediately.

8) Host will inform, apprise, coordinate and debrief the Contractor before, during and after permit space entry.

9) Contractor will inform Host of the permit space program to be used.

10) The employer shall provide training so that all employees acquire the understanding, knowledge, and skills necessary for the safe performance of their duties.

11) Non-entry rescue means a retrieval system or method shall be used whenever an authorized entrant enter a permit space.

NO ACTUAL HAZARD

NO POTENTIAL HAZARD

YOU MAY REFERENCE THIS POCKET GUIDE

ACTUAL HAZARD CAN BE CONTROLLED

YES POTENTIAL HAZARD

YOU MAY REFERENCE THIS POCKET GUIDE

YES ACTUAL HAZARD

YES POTENTIAL HAZARD

DO NOT ENTER!!! DO NOT ENTER!!!

"WHEN IN DOUBT, GET THEM OUT!"

Training available for Confined Space, Excavation, Competent Person Safety

1-800-UR-RENTS

CONFINED SPACE CHECKLIST

Company Name _____

NOTE: If all of the following questions are answered "YES", then entry is authorized. If any of the following questions are answered "NO", contact your supervisor.

YES NO N/A
() () ()

1. Has the entry team met and does each person involved with this entry know their assigned area of responsibility? () () ()
2. Have you checked the surrounding area and found it to be free of hazards such as drifting vapors from adjacent tanks, piping, or sewers and free of any other hazards that might affect the safety of this confined space entry? () () ()
3. Is the surrounding area likely to remain free of hazards? () () ()
4. Is all required safety equipment and personal protective equipment on hand and in safe working condition? () () ()
5. Has the confined space been isolated from connected hazardous spaces, piping or manholes? () () ()
6. Has electrical equipment or circuitry been locked out? () () ()
7. Are you trained in the operation of the gas monitor being used? () () ()
8. Is the gas monitor in current calibration according to manufacturer recommendation and is battery fully charged? () () ()
9. Did you test the atmosphere of the confined space prior to entry? () () ()
10. Did the atmosphere check as acceptable (no alarms)? () () ()

OXYGEN % _____ LEL % _____ TOXIC % _____

11. If alarm sounded, did you use continuous forced air ventilation for the proper amount of time and retreat prior to entry? () () ()

OXYGEN % _____ LEL % _____ TOXIC % _____

12. Will the atmosphere be continuously monitored and forced air ventilated while the space is occupied? () () ()

Job Name/Job Number _____

Confined Space Location _____

Date _____ Time _____

Work to be done _____

Entry Supervisor _____

ATMOSPHERIC TESTING

Evaluation testing. Analyze, identify, interpret and evaluate.

Verification testing. Results of evaluation must be written.

Duration of testing. As recommended by the manufacturer.

Testing stratified atmospheres. A distance of approximate four feet (4') in the direction of travel and to each side.

Order of testing: 1) OXYGEN, 2) FLAMMABLE, 3) TOXIC

1) OXYGEN —

Oxygen Deficient Atmospheres: GET OUT

Less than 19.5% oxygen.

(Loss of muscular coordination, rapid breathing, impaired judgment, vomiting, fainting, blue lips, coma and death!)

Normal Atmospheric Air at Sea Level: OKAY

Approximately 20.9% oxygen.

Oxygen Enriched Atmosphere: GET OUT

More than 23.5% oxygen.

2) EXPLOSIVE/FLAMMABLE/COMBUSTIBLE —

Greater than 10% of LEL (Lower Explosive Limit).

Greater than 10% of LFL (Lower Flammable Limit).

Combustible Dust of such a concentration that it reduces visibility to five feet or less and/or alarm sounds.

3) TOXIC ATMOSPHERE —

Hydrogen Sulfide (sewer gas) at or above 10ppm eye and respiratory irritation, paralysis of breathing response, unconsciousness. Eventual Death.

Carbon Monoxide at or above 35ppm headache, confusion, nausea, tendency to stagger, hearth palpitations, unconsciousness. Eventual Death.

CAUSES OF FATALITIES IN CONFINED SPACES...

65% Hazardous Atmospheres (oxygen, flammable, toxic)

13% Engulfment (burial, submersion, fluids)

7% Struck by falling objects

6% Heat stress/exposure

5% Electrocution

4% Others

VENTILATION

Ventilate a **minimum** of five minutes before any entry.

To determine **VOLUME** of...

Rectangle = Length X Width X Height

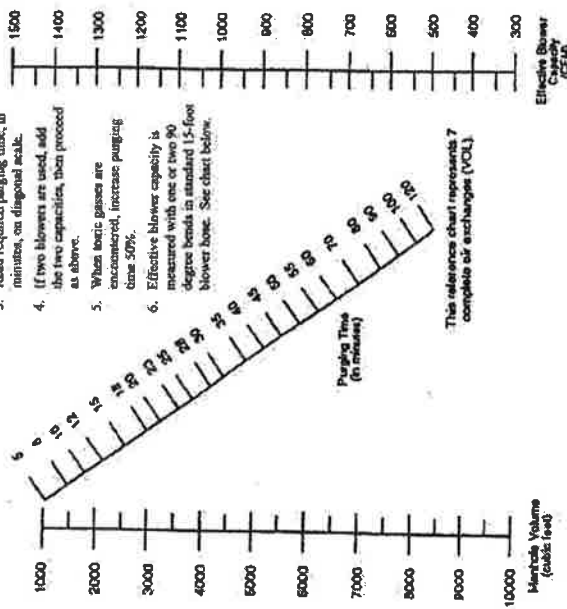
Cylinder = $3.14 \times \frac{1}{2} \text{ Diameter} \times \frac{1}{2} \text{ Diameter} \times \text{Length}$
example: sixty inch round manhole, thirty feet deep.

$3.14 \times 2.5' \times 2.5' \times 30' = 600 \text{ cubic feet (volume) of air.}$

For the initial purge of the confined space, set the ventilator at least five feet away and upwind of the entry, with the inlet of the ventilator facing into the wind.

Use of Alignment chart:

1. Place straightedge on manhole volume (left scale).
2. Place other end of straightedge on blower capacity (right scale).
3. Read required purging time, in minutes, on diagonal scale.
4. (If two blowers are used, add the two capacities, then proceed as above).
5. When toxic gases are encountered, increase purging time 50%.
6. Effective blower capacity is measured with one or two 90 degree bends in standard 15-foot blower hose. See chart below.



REMEMBER: Before entering any confined space, TEST the atmosphere, VENTILATE, then TEST again!

**Town of Rocky Hill
Highway Department**

Alternate Entry of Catch Basin

- 1) Location of Space: _____
 2) Entry Date: _____
 3) Duration of Entry: _____

List Physical Hazards:	List Atmospheric Hazards:
1)	1)
2)	2)
3)	3)
4)	4)
5)	5)

List each action taken to eliminate all hazards in space:
1)
2)
3)
4)
5)

Is ventilation required? YES NO

If yes, what type? _____

Amount (cfm-AChr): _____

<u>Air Monitoring Results:</u>					
Substance Monitored	Unit	Permissible Levels	Initial Test	Peak Reading During Entry	

Instruments Used: _____

Calibration Date: _____

Responsible Person: _____

Title & Date: _____