

Confined Space Entry Program and Procedures

Purpose:

To insure safety for personnel entering confined space. To comply with the Occupational Safety and Health Administration Standards and New York State Department of Labor laws.

Confined Space:

1. Includes but not limited to:
 - A. Tanks, vaults, pits, tubs, vessels, and boilers.
 - B. Ventilation/ exhaust ducts, sewers, and pipelines.
 - C. In general, Confined spaces include any space that has limited openings for entry or exit, unfavorable natural ventilation, and is not designed for continuous worker occupancy.

Responsibilities:

1. Responsibility for the administration of these procedures is assigned to the Highway Superintendent _____ or their designated representative.
 - A. Highway Superintendent _____ : Responsible for the administration of, and compliance with, these procedures within their respective department. Responsibilities include but are not limited to:
 1. Enforcement of policies and procedures.
 2. Training supervisors and workers.
 3. Insuring that required safety equipment is available and is used.
 4. Maintaining records of training given to supervisors and workers and insuring that these records are available on request for inspection.
 5. Designating a "competent person" for pre-entry testing.

6. Insuring that appropriate medical evaluations have been accomplished. (Employee is in good health and is capable of performing the work; this may require a pulmonary evaluation in cases where the employee will be required to use a respirator or other breathing equipment.
7. Inspect confined space equipment prior to any work to insure its operational readiness.
8. Issue confined space permit.
 - a. In the event of the Highway Superintendent absence, the following persons will act in his place:
 1. Deputy Highway Superintendent
 2. _____
 3. _____

B. Highway Superintendent: Responsibilities include but are not limited to:

1. Planning work in confined space to minimize worker exposure.
2. Identifying hazards that may be encountered.
3. Insuring that workers entering confined space are aware of the hazards and have appropriate safety equipment.
4. Training personnel in confined space entry procedures and safety precautions.
5. Maintaining records of training and exposure.
6. Insuring that all permits and safety equipment are in place prior to starting work.
7. Insuring that communication equipment is available, if needed.

C. Confined Space Entry Committee:

1. Members

a. Steve Dorr _____

b. Raymond Robinson _____

c. _____

d. _____

e. _____

2. The Confined Space Entry Committee, in team concept, shall advise and assist the Hgwy Superintendent with development, monitoring, updating and enforcement in total of the Confined Space Entry Program.

D. Workers: Responsibilities will include but are not limited to:

1. Becoming familiar with confined space entry procedures.
2. Becoming familiar with using safety equipment required while working in confined space.
3. Assisting Highway Superintendent in identifying hazards associated with confined space and the steps necessary to overcome them
4. Complying with policies and procedures associated with working in confined space.

Common Hazards:

- A. Lack of Oxygen
- B. Flammable gases
- C. Personal injury
- D. Slipping or falling
- E. Falling Objects
- F. Toxic gases/ atmosphere

Training: The training required will include but not be limited to:

1. The calibration of test equipment.
2. The proper use of respirators and any breathing equipment that may be required.
3. The use of permit system.
4. Emergency entry and exit procedures appropriate to the space to be worked in.
5. Emergency first aid and C..P.R. Sessions
6. The use of safety equipment appropriate to the conditions that may be encountered.

The range of training should extend from pre-job discussions to formal classroom sessions and actual practice of procedure.

Recordkeeping: The extent of record keeping will include but not be limited to:

1. Training Sessions
2. Practice Sessions
3. Instrument Calibration
4. Permits Issued.

Records shall include the names of personnel receiving training, name of trainer, qualifications of the trainer, dates when training was given, and the type of training was given. Records will be kept on file and readily accessible for review by appropriate personnel.

Inventory:

A written survey of all confined space areas owned and maintained by the municipality has been completed and is on file in the Town Highway (_____) Office. This survey includes but not limited to:

1. Record the confined space in an inventory file. This file should include:
 - a. The location and type of space.
 - b. Known hazards existing in the space.
 - c. Potential hazards.
 - d. Equipment needed for entry.
 - e. Safety equipment and communication equipment needed.
 - f. Lockout/Tagout, if needed.
 - g. General Conditions.

Rescue Team:

Appropriate rescue personnel shall be available to provide backup for employees working in confined spaces to the extent that the associated hazards demand. The type and magnitude of the hazard will determine:

1. The number of rescue people
2. The type of rescue equipment; and
3. The response time needed.

Entry Procedures:

- a. Prior to entering, the supervisor will determine existing and potential hazards, the safety precautions to be taken, equipment necessary, and will hold an orientation/training session with workers who will enter the confined space and those designated as attendants (if attendants are required).
- b. The confined space will be thoroughly ventilated and will be checked by a competent person for oxygen level, hazardous gases, and flammable gases.
 - a. An oxygen level of concentration of 19.5% to 23% must be maintained at all times.
 - b. Testing may be required at regular intervals during the work.
3. A permit will be issued by the Highway Superintendent and will be posted at the entrance to the confined space. This permit will indicate known hazards, safety equipment required, and precautions to be taken, as well as the names of the workers involved. It will be valid for one shift only. Steps will be taken to ensure the unauthorized entry does not occur.
4. In cases where there are hazards or potential hazards from electrical or chemical equipment, a Lockout/Tagout procedure must be used to insure that this equipment is rendered safe to work on.

Attendants:

1. Will be utilized when any of the following conditions exist:
 - a. Workers are in hazardous/contaminated atmosphere.
 - b. Workers cannot be clearly seen from confined space entry point
 - c. An employee is working alone and would be unable to leave the confined space in the event of an emergency, or if injured would not be readily noticed by other employees.

2. When an attendant is utilized, he or she must:
 - a. Be aware of conditions and number of workers in the confined space and the work being done.
 - b. Maintain communication with the workers.
 - c. Have emergency equipment available and know how to use it. (Type of equipment will be determined by the nature of the work, known and anticipated conditions, etc..
 - d. Know emergency procedures to follow.
 - e. Be aware of conditions outside the confined space.
 - f. Be trained in first-aid. Attendants must be able to recognize symptoms of oxygen deficiency and have a general knowledge of the effects of potential chemical hazards that may be encountered.

Welding:

1. Welding will not be done until oxygen and combustible gas levels have been tested and found to be within safe limits.
2. Will require frequent oxygen concentration checks during extended welding to insure safe levels of oxygen for workers.
3. Gas cylinders will not be taken into confined spaces.
4. Touches will not be left unattended in confined space.
5. Forced ventilation will be used whenever welding is done in a confined space.

Procedures:

1. When work is being done in a confined space, a permit must be issued by the Highway Superintendent _____ or his designee before work can begin.
2. The permit will contain all the information listed in the attached copy.
3. One copy of the permit will be posted at the job site. The original will remain in the Town Highway Office.
4. The permit shall be valid for one shift only. If the work requires more than one shift, a new permit will be issued for each subsequent shift.
5. When work is completed, it shall be noted on the permit and the permit filed in the Town Highway Office.

CONFINED SPACE INVENTORY

Facility Name Town of Clayton Date of Survey _____

Location Depauville Sewer

Description Various manholes

Known Hazards	Potential Hazards
	<u>unknown</u>

Equipment Needed for Entry	Lockout/Tagout Information
<u>meter-toxic</u>	-
<u>tripod</u>	
<u>ladd</u>	

Safety Equipment Required for Entry	General Conditions
<u>Respirator</u>	

Remarks: _____

Surveyor's /Title Name _____

Signature _____

CONFINED SPACE INVENTORY

Facility Name _____ Date of Survey _____

Location _____

Description _____

Known Hazards	Potential Hazards

Equipment Needed for Entry	Lockout/Tagout Information

Safety Equipment Required for Entry	General Conditions

Remarks: _____

Surveyor's /Title Name _____

Signature _____

Gas Tester - Calibration Log

Model _____

S/N _____

Date Calibrated	Individual Calibrating	Calibrating Gas Used			Reading Observed			Full Span Reading			Maintenance Required				
		Comb.	Toxic 1	O2	Comb.	Toxic 1	O2	Comb.	Toxic 1	O2					

Confined Space Entry Permit

GENERAL INFORMATION

Permit Space Location: _____

Purpose of Entry: _____

Entry Permit Valid For: DATE: _____ to DATE: _____
 TIME: _____ to TIME: _____

PERMIT SPACE HAZARDS

ATMOSPHERIC	YES	NO
Oxygen Deficiency.....	<input type="checkbox"/>	<input type="checkbox"/>
Oxygen Enrichment.....	<input type="checkbox"/>	<input type="checkbox"/>
Explosive (Gas/Vapor).....	<input type="checkbox"/>	<input type="checkbox"/>
Explosive Dust.....	<input type="checkbox"/>	<input type="checkbox"/>
Carbon Monoxide.....	<input type="checkbox"/>	<input type="checkbox"/>
Hydrogen Sulfide.....	<input type="checkbox"/>	<input type="checkbox"/>
Other Toxic Gases/Vapors....	<input type="checkbox"/>	<input type="checkbox"/>
ENGULFMENT.....	<input type="checkbox"/>	<input type="checkbox"/>
CONFIGURATION (ENTRAPMENT)...	<input type="checkbox"/>	<input type="checkbox"/>
MECHANICAL.....	<input type="checkbox"/>	<input type="checkbox"/>
ELECTRICAL.....	<input type="checkbox"/>	<input type="checkbox"/>
SUBSTANCE HAZARDOUS TO		
SKIN OR EYES.....	<input type="checkbox"/>	<input type="checkbox"/>
HEAT STRESS.....	<input type="checkbox"/>	<input type="checkbox"/>
OTHER POTENTIAL HAZARDS		
(E.G. RADIATION, NOISE, ETC.).....	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>

PERSONNEL

Entrant(s)	Time In:	Time Out:
_____	_____	_____
_____	_____	_____
_____	_____	_____

Attendants(s) _____

Entry Supervisor(s) _____

COMMUNICATION PROCEDURES USED by ENTRANT(S)/ATTENDANT(S) Check all that apply

- Visual Rope
 Voice Radio
 Other (Specify) _____

CONTROLS/EQUIPMENT Check all that apply

- ISOLATION LOCKOUT/TAGOUT
 BLANKING/BLINDING
 DOUBLE BLOCK AND BLEED
 LINE BREAKING/MISALIGNMENT
 OTHER _____
- INERTING
 PURGE/CLEAN
 METHODS FOR SAFE COVER REMOVAL & SECURING AREA
 ATMOSPHERIC TESTING
 Periodic (Give Intervals) _____
 Continuous
- VENTILATION
 Natural
 Continuous Forced Air
 Local Exhaust
- ENTRY EQUIPMENT
 Ladders
 Other
- PERSONAL PROTECTIVE EQUIPMENT
 Respiratory
 SCBA
 SAR
 Air Purifying
 Protective Clothing(specify) _____
 Eye and Face Protection
 Hearing Protection
- RESCUE AND RETRIEVAL EQUIPMENT
 Full Body Harness
 Lifeline
 Tripod w/ Mechanical Winch
 Explosion Proof Lighting
- NON-SPARKING TOOLS
 INTRINSICALLY SAFE ELECTRICAL EQUIPMENT & GFCI
 COMMUNICATION EQUIPMENT
 Radio
 Phone
 Other _____
- HOT WORK PERMIT FIRE EXTINGUISHERS

RESCUE and EMERGENCY SERVICES

Name _____ Phone's # _____

Summoning Procedures: _____

RESCUE PROCEDURES

Continued on back

RECLASSIFY PERMIT SPACE WORKSHEET

- 1) Permit Space Location _____
- 2) Have employees received permit space training? Yes ___ No ___
- 3) a. Are any hazardous atmospheres present or potentially present? Yes ___ No ___
- b. Is continuous forced air ventilation needed to maintain acceptable levels? Yes ___ No ___
- c. Is air monitoring required? If yes, record test results. Yes ___ No ___

ATMOSPHERIC TESTING RECORD

SUBSTANCE	ACCEPTABLE LEVEL	READINGS					
Oxygen	19.5% - 23.5%						
Explosive (Gas/Vapor)	<10% LFL						
Explosive Dust	<LFL (5 ft. Visibility)						
Carbon Monoxide	50 ppm						
Hydrogen Sulfide	10 ppm						

- d. Is atmospheric testing equipment calibrated? Yes ___ No ___
 Date of calibration _____

Note to the Employer #1: If hazardous atmospheres are present or ventilation is needed to control levels, then reclassifying the space is not possible. It is necessary to eliminate the atmospheric hazard to reclassify (See Note to the Employer #2).

- 4) Is an engulfment hazard present? Yes ___ No ___
 If yes, what control measure is used to eliminate the engulfment hazard? _____

RECLASSIFY PERMIT SPACE WORKSHEET

- 7) Have all employees who will enter the declassified space been instructed to immediately evacuate the space if a hazard is detected?
If no, instruct employees of this safety precaution measure. Yes ___ No ___
- 8) Has a procedure been instituted to re-evaluate the space and reclassify it back to a permit space if the need arises?
If no, then institute steps to properly re-evaluate the space, prohibit entry, and if necessary, reclassify it back to a permit space.
If yes, describe procedure. _____ Yes ___ No ___
- 9) Have all employees participating in the entry operation, or their authorized representatives had an opportunity to review this safe entry certification form? Yes ___ No ___

Signature of Certifying Individual _____

Date _____

Alternate Entry Procedure Checklist

In order to enter a Permit-Required Confined Space using Alternate Entry Procedures, all hazards must be controlled or removed and any actual or potential hazardous atmosphere must be monitored by using a calibrated direct-read instrument for oxygen, flammability and toxicity. Continuous forced air ventilation alone must be sufficient to maintain the space safe for entry.

If a hazard is detected during the Alternate Entry, the entry shall be terminated and the space re-evaluated.

Before entry, the following checklist must be completed. If you answer "yes" to all the questions, and have completed the remainder of this form, you may enter the confined space. Answering "no" to any of the questions means you may not enter unless you use Permit-Required Confined Space Entry Procedures.

Space to be entered: _____

Purpose of entry: _____

Location: _____ Date: _____

Pre-Entry Checklist:

Question	Yes	No
1. Does a survey of the surrounding area show that it appears to be free of atmospheric hazards?		
2. Have you evaluated and eliminated any hazard to ensure that the cover to a confined space can be removed safely?		
3. Have electrical energy sources that could pose a hazard been de-energized and locked out?		
4. Is piping that could pose a hazard, drained and are all valves locked out and tagged?		
5. Are other sources of energy such as steam, hydraulic, air, or mechanical systems that could pose a hazard locked and tagged out?		
6. To the best of your knowledge will the area remain free of all other known hazards for the duration of the entry.		
7. Have you been trained on the hazards, equipment and safe work practices necessary to make the entry and all work performed during the entry safe?		
8. Are you trained to operate the air monitoring equipment?		
9. Are you trained and authorized to enter confined spaces?		
10. If continuous forced ventilation is indicated, is it in place, operating, and directed to the work area?		
11. Was the air monitoring equipment calibrated within 30 days?		
12. Did you test the atmosphere before entry and record the readings below?		
13. Is it true that the air monitoring equipment did not go into alarm during initial testing?		
14. Will the confined space atmosphere be monitored continuously during your entry?		
15. Is the opening guarded to prevent persons or objects from falling into the space?		

CONFINED SPACE Hazard Analysis Form

Location and Description of Space _____ Date _____

Dept. _____ ID# _____ Bay/Column _____ Name _____ (person completing the form)

Directions: Determine if the area is a confined space. Mark all the boxes that apply.

The area being reviewed is a confined space because it: has limited or restricted means of entry or exit
 is large enough for a worker to enter and perform the task assigned
 is not designed for continuous employee occupancy

The area being reviewed is a confined space because it meets the conditions above and: is an open-top tank or pit.

Directions: If the area is a confined space, determine if it is permit-required. Mark all the boxes that apply.

This is a permit-required confined space because it an atmospheric hazard a configuration hazard
 an engulfment hazard a recognized serious safety or health hazard

Directions: For each hazard or potential hazard identified, mark the appropriate boxes and describe the conditions where indicated.

Hazard Type	Identified	Configuration Hazard	Other Serious Hazards
1. Atmospheric Hazard <input type="checkbox"/> oxygen concentration below 19.5% or above 23.5% <input type="checkbox"/> flammable substances at or above 10% LEL <input type="checkbox"/> dust concentration at or above its LEL <input type="checkbox"/> toxic substances exposure in excess of permissible limits <input type="checkbox"/> other atmospheric conditions that may be IDLH Describe: _____	<input type="checkbox"/> floors slope downward, and/or taper to small cross-section <input type="checkbox"/> inwardly converging walls <input type="checkbox"/> other configuration hazard Describe: _____	<input type="checkbox"/> high pressure steam lines <input type="checkbox"/> natural gas lines <input type="checkbox"/> chemical/hazardous material lines <input type="checkbox"/> mechanical hazards <input type="checkbox"/> other serious hazards Describe: _____	
2. Engulfment Hazard <input type="checkbox"/> engulfment by liquids <input type="checkbox"/> engulfment by flowable solid substances <input type="checkbox"/> other engulfment hazard Describe: _____	<input type="checkbox"/> poor lighting <input type="checkbox"/> organic materials <input type="checkbox"/> electrical hazards <input type="checkbox"/> animals, insects, etc.		

Directions: Note any other conditions that may make working in the confined space hazardous. Mark all boxes that apply and describe the conditions where indicated.

insecure footing minimum room to work excessive noise
 obstructions asbestos electrical hazards
 wet/slippery conditions other (describe) _____

CONFINED SPACE INVENTORY

Facility Name Town of Clayton Date of Survey _____

Location Deeroville Sewer

Description Various manholes

Known Hazards	Potential Hazards
<u>gases</u>	<u>unknown</u>

Equipment Needed for Entry	Lockout/Tagout Information
<u>meter-toxic</u>	-
<u>teipod</u>	
<u>lodo</u>	

Safety Equipment Required for Entry	General Conditions
<u>Respirator</u>	
<u>Harness</u>	
<u>Extra Person</u>	

Remarks: _____

Surveyor's /Title Name _____

Signature _____