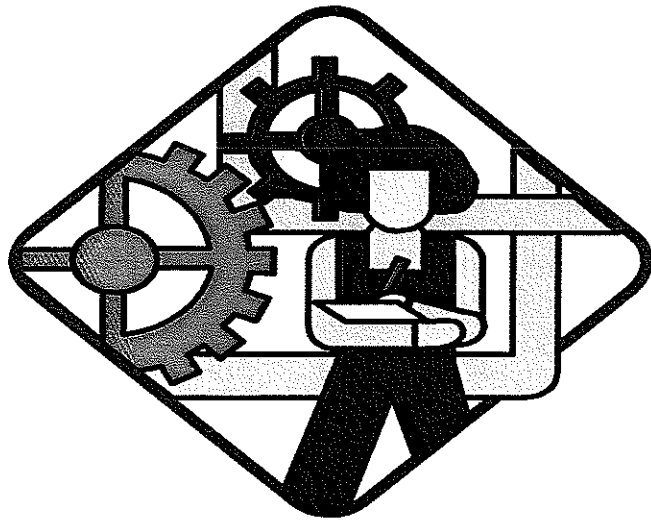


VILLAGE OF TARRYTOWN

CONFINED SPACE PROGRAM

29 CFR 1910.146



June 21, 2011

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I. PURPOSE

The purpose of this written program is to protect the health and safety of all employees who have duties regarding confined spaces. This program is also intended to insure compliance with 29 CFR 1910.146.

II. AUTHORITY & REFERENCE

NYSDOL/PESH and Occupational Safety and Health Administration (OSHA) Permit Required Confined Spaces 29 CFR 1910.146.

III. APPLICATION

This program applies to anyone having any confined space duties or responsibilities.

IV. DEFINITIONS

- A. ACCEPTABLE ENTRY CONDITIONS - conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit-required confined space can safely enter and perform work.
- B. ATTENDANT - an individual stationed outside the permit-required confined space who had specific training and monitors the authorized entrants inside the space.
- C. AUTHORIZED ENTRANT - employee who is authorized to enter a permit-required space.
- D. BLANKING OR BLINDING - absolute closure of a pipe, line, or duct by fastening across its bore a solid plate that completely covers the bore and can withstand the maximum upstream pressure.

- E. **CONFINED SPACE** - a space that meets all the following criteria:
1. Is large enough and so configured that an employee can bodily enter and perform assigned work;
 2. Has limited means of entry and egress;
 3. is not designed for continuous employee occupancy; and
- Examples may include tanks, silos, boilers, pits, bins, manholes, electrical vaults, degreasers, and hoppers.
- F. **ENGULFMENT** - surrounding and effective capture of a person by a liquid (i.e., water) or finely divided solid substance (i.e. sand, grain, etc).
- G. **ENTRY** - a person's intentional passing through an opening into a permit-required confined space.
- H. **ENTRY PERMITS** - a written or printed document that allows and controls entry into a permit space.
- I. **ENTRY SUPERVISOR** - person responsible for:
1. Determining if acceptable conditions are present before entering a permit space;
 2. For authorizing entry;
 3. Coordinating and supervising all entry operations; and
 4. Terminating entry.
- J. **HAZARDOUS ATMOSPHERE** - an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue, injury, or acute illness from one or more of the following causes:
1. Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent
 2. Flammable gas, vapor or mist in excess of 10 percent of its Lower Explosive Limit (LEL).

- 3. Atmosphere concentration of any substance for which a dose or a permissible exposure limit is published in Subpart G, Occupational Health and Environment Control, or in Subpart Z, Toxic and Hazardous Substances, of 29 CFR 1910 and which could result in employee exposure in excess of its dose or PEL
 - 4. Any other atmospheric condition that is immediately dangerous to life or health.
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- K. HOT WORK PERMIT – employer’s written authorization to perform operations (for riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.
 - L. IMMEDIATELY DANGEROUS TO LIFE OR HEALTH (IDLH) - any condition that poses an immediate threat to life or a delayed threat to life, or that would cause irreversible adverse health effects, or interfere with an individual's ability to escape unaided from a permit space.
 - M. ISOLATION - process by which a permit space is removed from service and completely protects against the release of hazardous energy or material into the space.
 - N. LOWER EXPLOSIVE LIMIT (LEL) - the lowest concentration of gas or vapor, expressed in percent by volume in air, that burns or explodes if an ignition source is present at room temperature.
 - O. LINE BREAKING - intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas or any fluid at a volume, pressure, or temperature capable of causing death or serious physical harm.
 - P. NON PERMIT CONFINED SPACE- A confined space that does not contain or have the potential to contain an atmospheric hazard or any other serious safety or health hazard.
 - Q. OXYGEN DEFICIENT ATMOSPHERE - an atmosphere containing less than 19.5% oxygen.
 - R. OXYGEN ENRICHED ATMOSPHERE - an atmosphere containing more than 23.5% oxygen.
 - S. PERMISSIBLE EXPOSURE LIMIT (PEL) - the airborne concentration of a hazardous material that must not be exceeded over a specified time or instantaneously. This value is established by the Occupational Safety and Health Administration (OSHA).

- T. PERMIT-REQUIRED CONFINED SPACE - a confined space that has one or more of the following characteristics:
1. Contains or has a reasonable potential for hazardous atmospheres.
 2. Contains a material that has the potential for engulfment.
 3. Is internally configured so an employee could become trapped or asphyxiated by inwardly converging walls or a floor that slopes downward into a smaller cross-section.
 4. Contains any other recognized serious safety or health hazard.
- U. PROHIBITED CONDITION - any condition in a permit space that is not allowed by the permit during the period when entry is authorized.
- V. RESCUE SERVICE - personnel designated to rescue employees from permit spaces.
- W. RETRIEVAL SYSTEM - equipment used for a non-entry rescue of persons from permit spaces (i.e., tripod).
- X. TESTING - process by which hazards that may affect entrants of a permit space are identified and evaluated.
- Y. THRESHOLD LIMIT VALUE (TLV) - the airborne concentration of a hazardous material that should not be exceeded over a specified time or instantaneously. This value is established by the American Conference of Governmental Industrial Hygienists (ACGIH).
- Z. WELDING/CUTTING PERMIT - written authorization to perform operations that can provide a source of ignition (e.g., welding, cutting, burning, or heating) or a hazardous atmosphere.

V. RESPONSIBILITIES FOR COMPLIANCE

- A. The CONFINED SPACE ENTRY (CSE) PROGRAM ADMINISTRATOR for the Village of Tarrytown is the Village Engineer or his/her designee.

The responsibilities of this individual shall include:

1. Conducting/coordinating hazard assessments.

2. Determining the classification (permit required/non permit space and location of each confined space.
3. Coordinating the posting of appropriate danger/caution signs by each confined space. Manhole covers are not identified with confined space decals, all employees will be instructed in training sessions and notices will be posted categorizing all manholes as Permit Required Confined Spaces.
4. Conducting/coordinating supervisory and employee training (including attendants) and maintaining all training records.
5. Conducting an annual evaluation of the overall program to determine its continued effectiveness.
6. Consulting employees and their authorized union representatives on the development and implementation of the CSE Program.

B. SUPERVISORS are responsible for:

1. Actively supporting the CSE Program and providing equipment when needed.
2. Ensure all assigned personnel are knowledgeable of all aspects of the CSE Program.
3. Ensure their employees comply with all elements of CSE Program.
4. Ensure appropriate PPE and equipment is properly utilized and maintained.

C. CONFINED SPACE ENTRY (CSE) SUPERVISOR

The Confined Space Entry (CSE) Supervisor for the Village of Tarrytown is the General Foreman or other trained designee on all of confined space entry assigned by the Village Engineer.

The Confined Space Entry (CSE) Supervisor is responsible for:

1. Providing confined space entry personnel with a copy of the most current CSE Program and any future changes.
2. Knowing the hazards that may be encountered during entry and informing the entrants about the hazards, including information on the mode, signs, or symptoms and consequences of exposure.
3. Verifying that the proper atmospheric tests have been conducted and that all procedures and equipment, mentioned in the permit, are in place before signing the CSE Permit.
4. Assuring that the CSE Permit is completed prior to each entry.
5. Terminating the entry and canceling the permit when needed.
6. Verifying that rescue or other emergency personnel are available and that the means for summoning them are operable in the event that an emergency occurs.
7. Removing unauthorized individuals who have entered or who attempt to enter the confined space.
8. Determining whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, and that entry operations remain consistent with terms of the entry permit.
9. Maintaining completed entry permits, and equipment calibration records.
10. Providing employees and their authorized union representative(s) an opportunity to observe the atmospheric testing of the CS.

NOTE: The CSE Supervisor may also serve as an attendant or as an authorized entrant providing that person is properly trained and equipped. The duties of the CSE supervisor may also be passed from one individual to another only if entrants exit the space and a new permit is completed.

D. AUTHORIZED ENTRANTS

All authorized entrants are responsible for:

1. Knowing and recognizing the hazards that may be faced during entry including information on the mode, signs, or symptoms and consequences of exposure.

2. Using and maintaining the proper PPE and other equipment.
3. Communicating with the attendant as necessary.
4. Alerting the attendant when hazardous conditions are detected, identified, or suspected.
5. Exiting the confined space immediately whenever:
 - a. Ordered to do so by other entrants, the attendant or the CSE Supervisor.
 - b. Warning signs/symptoms are identified,
 - c. Prohibited conditions are identified,
 - d. An evacuation alarm is activated.
6. Complying with all other aspects of the CSE program

E. ATTENDANTS (Standby persons)

All authorized attendants are responsible for:

1. Knowing the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
2. Knowing the possible behavioral effects of the hazard exposure in the authorized entrants.
3. Maintaining an accurate count of authorized entrants in the confined space and ensuring that the means used to identify the authorized entrants accurately identifies who is in the space.
4. Remaining outside the confined space during entry operations until relieved by another attendant.
5. Communicating with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the confined space.
6. Monitoring activities inside and outside the confined space to determine if it is safe for authorized entrants to remain in the space and order the

authorized entrants to evacuate the space immediately under any of the following conditions:

- a. If the attendant detects a prohibited condition.
 - b. If the attendant detects a behavioral effect of the hazard exposure in an authorized entrant.
 - c. If the attendant detects a situation outside the confined space that could endanger the authorized entrants; or
 - d. If the attendant cannot effectively and safely perform all the duties required.
7. Summoning rescue and other emergency services as soon as the attendant determines that entrants need assistance to escape from the confined space hazards.
8. Taking the following actions when an unauthorized person(s) approach or enter a confined space while entry is underway:
 - a. Warn the unauthorized person(s) that they must stay away from the confined space.
 - b. Advise the unauthorized person(s) that they must exit immediately if they have entered the confined space.
 - c. Inform the authorized entrants and the entry supervisor if an unauthorized person(s) have entered the confined space.
9. Performing non-entry rescues as specified in Section VII - H.
10. Performing no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants.

VI. PERMIT SYSTEM

A. Permit:

Before entry is authorized, an entry permit shall be prepared in order to document the completion of safety measures required (as discussed in section VII of this program). The completed permit shall be made available to all authorized entrants or their authorized representatives, at the time of entry, by posting it at the entry portal or by any other equally effective means.

1. A fully completed CS Entry Permit shall be signed by the CSE Supervisor to authorize entry into a permit-required confined space (**See Form 3**).
2. The CSE Supervisor shall ensure that the permit specifies the location, type of work, personal protective measures, authorized entrants, monitoring equipment, hazards of the permit space, hazard control measures and any required rescue equipment. The procedure for contacting rescue services will also be included on the permit.
3. The permit shall be dated and carry an expiration time limiting the work to one shift.
4. The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit.
5. The Supervisor shall terminate the permit if a potential hazardous situation occurs which exceeds the conditions authorized on the permit or the entry operations have been completed.
6. Cancelled entry permits shall be retained for at least 5 years.
7. The permit must be available at the work site outside the confined space.
8. All confined space entry permits must be given to the CSE supervisor after the work is completed.
9. Hot work (potential ignition sources) must be authorized on a separate hot work permit and attached and noted on the entry permit.

10. Individuals authorizing entry into a permit required confined space may also serve as entrants or attendants if they received the proper training.
11. Entry permits will be reviewed and revised as necessary by the CSE Supervisor and maintained on file for a period of five years.

B. Entry Procedure:

Supervisors, attendants and authorized employees must complete the general requirements, discussed in the next section. Entry procedure to permit required CS is as follows:

1. The CSE Supervisor shall be onsite to verify that acceptable conditions are present prior to an entrant entering a permit-required confined space.
2. A CS Entry Permit (Form 3) shall be properly completed and signed by the CSE-Supervisor prior to entry into the permit-required confined space.
3. Only properly trained and authorized individuals will be allowed to enter a permit-required confined space. Authorized entrants will maintain contact with the attendant.
4. Each individual entering a vertical permit-required confined space will, whenever practical, have a safety or retrieval line attached to a body harness. The other end of the line must be secured to an approved lifting device (i.e., tripod) outside the entry portal. A retrieval line is not required if:
 - a. A permit space has obstructions or turns that would prevent the retrieval line from safely extricating the entrant, or
 - b. A permit space from which an employee being rescued with the retrieval system has projections which would injure the employee if forcefully removed.
 - c. If an employee is disconnected from the retrieval device the designated Rescue Team will be contacted and requested to standby the confined space prior to the employee disconnecting from the retrieval system.

5. The atmosphere within the confined shall be tested for oxygen content, flammable gases and potential toxic air contaminants prior and continuously during entry by a properly trained individual. Each entrant shall be required to wear an air-monitoring instrument if the confined space requires moving away from the entry point..
6. During any confined space entry, all safety rules and procedures shall be followed.
7. At least one attendant shall be provided outside the permit space for the duration of entry operations. Whenever feasible there will be an additional employee present to assist in the event of an emergency.
8. Personal protective equipment shall be provided to entrants as necessary for safe entry into the CS and used properly.
 - a. All PPE must be approved by the CSE Supervisor.
8. Electrical equipment used in the confined space shall be appropriate for the hazard and meet the requirements of the National Electric Code if a hazardous atmosphere is present.
Portable Lighting will be provided in confined spaces whenever it is difficult to see (Less than 5 foot candles).
9. Any condition making removal of an entrance cover unsafe (i.e. pressured differential, physical obstacles, etc.) shall be eliminated before the cover is removed.
 - a. When the cover has been removed, the opening(s) shall be promptly guarded to prevent accidental fall into the opening and prevent objects from falling into the opening.
 - b. Appropriate vehicle and pedestrian barriers shall be used to protect workers.
10. Metal ladders shall not be used when working around electrical equipment.
11. Any use of chemicals or welding, soldering, or cutting operations must be approved by the CSE-Supervisor.

VII. GENERAL REQUIREMENTS

A. WORKPLACE EVALUATION

The CS Program Administrator will coordinate/conduct with a safety consultant an evaluation of the workplace to determine if confined spaces are present. A detailed assessment will be made of each space in order to determine type and location of each space, its dimensions and number of exits, the reason(s) for entry, actual or potential health and safety hazards and their control measures, and its classification (permit or non-permit). All confined spaces will be considered Permit Required Confined Spaces until they are reclassified (See Appendix E) by a safety professional. The assessment will also specify the equipment and personal protective equipment (PPE) required for entry and any special precautions that must be followed for safe entry and work in the confined space. The results of the assessment will be recorded on a Confined Space Hazard Assessment Form (**See Form I**). It is required that all affected employees be trained for their respective duties, prior to their entry.

B. IDENTIFICATION OF CONFINED SPACES

Effective means of identifying confined spaces (i.e. training, etc.) may be used to prevent unauthorized entry.

Warning Signs and Posting

a. When using warning signs or placards for the identification of Confined Spaces, all types shall be printed both in English and (if applicable) in the predominant language of any non-English reading employees.

b. Signs shall include, but not necessarily be limited to, the following information:

1. **DANGER: PERMIT REQUIRED CONFINED SPACE - DO NOT ENTER UNLESS AUTHORIZED**

c. Signs are not required at manholes. All manholes are considered permit required confined spaces and employees will be notified through training and posted notices.

C. ATMOSPHERIC REQUIREMENTS PRIOR TO ENTRY:

The atmosphere in the confined space within the entrant's immediate area shall be continuously monitored for oxygen, hydrogen sulfide or carbon monoxide, combustible gas and any other hazardous substance which the employer has reason to believe may be present in the confined space.

Before entering a CS, the following atmospheric conditions must be met:

- a. The oxygen level is between 19.5% and 23.5%.
- b. The concentrations of flammable gas, vapors, or mists are below 10% of their Lower Flammable Limits (LFL).
- c. The level of airborne hydrogen sulfide (H₂S) is below 10 parts per million (ppm).
- d. Toxic air contaminants are less than the NYS PESH Permissible Exposure Limit (PEL). **Note:** If the substance does not have a PEL, use the Threshold Limit Value (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH).
- e. Atmospheric concentrations of toxic substances are below what is considered as IDLH.
- f. The level of carbon monoxide (CO) is less than 35 ppm.

Entry into a confined space is not allowed if monitoring indicates deficiency in any of these categories. Respirators or a self-contained breathing apparatus (SCBA) shall not to be used to allow entry into deficient atmospheres.

In order to achieve and maintain a safe atmosphere, one or more actions may have to be taken to render the space safe for human occupancy. This could include:

- a. Isolation - precautions taken to prevent release of material and/or energy into the space. This can be achieved through blinding, blanking, disconnecting, lockout/tagout, or removal of incoming pipes or related energy sources.
- b. Ventilation - purging, inserting, flushing, or otherwise ventilating the space with fresh air. The replacement air will displace the contaminated air allowing for safe entry. This can be accomplished by removing ports and openings or by mechanically ventilating the vessel.
- c. Separation - where there is a possibility of external hazards, the space may require barricades to protect the entrants from falling objects or from unauthorized entry.

D. VENTILATION

If a CS being entered is found to contain a hazardous atmosphere, forced ventilation shall be provided for a period of time in order to bring the air quality within the acceptable limits. Once the determined ventilation period expires, employees shall monitor the CS according to subsection entitled "Air Monitoring". If the sampling shows that a hazard still exists, then additional ventilation and sampling shall be required.

Note: Control of atmospheric hazards through forced ventilation does not constitute elimination of hazards.

Note: Forced ventilation shall not be used in lieu of monitoring. Consideration must also be given to the possibility of static discharge that could be a source of ignition.

Forced air ventilation should be so directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees leave.

Whenever ventilation is used, employees shall:

- a. Keep the blower controls at least 10 feet from the CS whenever possible, and out of the wind or downwind from the entrance to the CS.
- b. Ensure that the exhaust systems are designed and placed so that they protect employees in the surrounding area from being contaminated.
- c. Ensure that the ventilation system is fully operational and air is supplied from a clean source.
- d. Ensure that contaminated air is not recirculated into the CS.
- e. Purge the ventilation hose outlet for at least one-minute (at street level if possible) before inserting the hose into the confined space.
- f. Maintain continuous local ventilation when toxic atmospheres are being produced as part of a work procedure (i.e., welding, painting or cleaning operations).

E. LOCKOUT/ISOLATION

Each CS (if applicable) shall have its own specific written lockout/isolation procedures. These procedures will be followed prior to entry and posted with the entry permit.

- a. Electrical Isolation: In order to prevent employees from being exposed to activation of moving parts, or from being exposed to energized objects, authorized entrants shall lockout circuit breakers and/or the disconnect in the open (off) position with a key-type lock. If more than one authorized entrant is to be inside the CS, each employee must place his/her own lock on the circuit breaker or disconnect.
- b. Mechanical Isolation: All equipment with moving mechanical parts that could unexpectedly rotate or move will be blocked in such a way that there can be no accidental rotation or movement. Isolation of mechanical parts can be performed by disconnecting linkages or removing drive belts and/or chains.
- c. Blanking: A solid plate or cap capable of withstanding the maximum pressure of the gas or liquid inside the pipe may be placed across a pipe or duct to prevent unexpected release of the contents.
- d. Isolation Lines: Lines can be isolated by 1) double blocking and bleeding the line or 2) by blocking two closed in-line valves or 3) blocking or bleeding open to the outside atmosphere the drawn or the bleed-in line between the two closed valves.

F. AIR MONITORING

Before any Permit Required CS may be entered by any employee, the authorized entrant must monitor the atmosphere of the CS to determine that the characteristics of the air for all levels and all areas within the CS are safe. The atmosphere within the authorized entrant's immediate area should be continuously monitored for oxygen, hydrogen sulfide or carbon monoxide, combustible gases and any other hazardous substance.

Note: Authorized entrants and/or their authorized representatives shall be provided an opportunity to observe the atmospheric testing of the CS that is conducted prior to entry and subsequent testing. Reevaluation of the permit space shall be done in presence of the authorized entrant or employee's authorized representative who requests the reevaluation.

Sampling Devices

- a. A direct readout sampling device which can simultaneously test for oxygen, hydrogen sulfide and/or carbon monoxide and combustible gas shall be used to sample the atmosphere of the confined space.
- b. The sampling device shall be equipped with an audible and visible warning device that warns the entrant and/or attendant of the hazardous atmosphere in the permit space.
- c. A sampling device shall be zeroed in a clean atmosphere before each sampling. Calibration of a sampling device shall be conducted as often as recommended by the manufacturer, but at least once every three months.
- d. Manhole Sampling: When a CSE is by means of a manhole, a probe shall be inserted through the pick hole of the manhole cover, or the manhole cover shall be pried open (using a non-sparking pick) on the downwind side to allow just enough room for insertion of the probe or other sampling device.

G. ASSESSMENT OF ADDITIONAL HAZARDS

Before entering a confined space, the Confined Space Supervisor shall conduct an assessment of any additional hazards which the entrant may encounter during the CSE. This assessment shall include, but is not limited to, a review of the following additional hazards:

- a. Thermal Hazards due to extremes in hot and cold temperatures.
- b. Engulfment Hazards due to loose, granular materials, such as sand, or flow of water or other liquids.
- c. Noise Hazards can affect hearing and emergency communications.
- d. Slick/Wet Surfaces can increase the risk to slips and falls. Wet surfaces also increase the risk and effects of shocks from electrical tools, machinery, and circuitry.
- e. Falling Objects from work being performed above an employee or by objects falling through open CS entrances.
- f. Mechanical equipment that is required to be operating during the entry.
- g. Electrical Hazards from exposed wires, power lines, etc.

- h. Fall Hazards.
- i. Biological Hazards.

H. EMERGENCY RESCUE

1. Emergency Service CS Rescue

- a. The Village has interviewed and evaluated the Town of Greenburgh's Technical Rescue Team and reached an agreement with them to serve as the primary confined space rescue team. The Rescue Team will:
 - Be able to respond in a timely manner,
 - Be notified prior to each entry
 - Follow all the requirements of 1910.146
- b. Inform each rescue team or service of the hazards they may confront when called on to perform rescue at the site; and
- c. Provide the rescue team or service selected with access to all permit spaces from which rescue may be necessary so that the rescue service can develop appropriate rescue plans and practice rescue operations.

2. Duties of Rescuing Attendants - Non-Entry Rescue

In the event that either a non-permit or permit-required CS emergency rescue occurs, rescuing attendants shall follow the following procedures:

- a. Alert the employees in the CS to immediately vacate the space and verify that the employees understood these instructions.
- b. Notify the following personnel via a two-way radio or telephone with detailed information about the emergency.
 - 1) Town of Greenburgh Rescue Service
 - 2) CSE supervisor and/or the area supervisor

Note: The CSE Supervisor or attendant will then request assistance from the **Town of Greenburgh Rescue/ Police Department) (911)** if rescue service or medical attention is needed.

c. Non-Entry Rescue

Begin emergency extraction from outside of the CS:

- 1) Verify that all employees are exiting the confined space. If not, then perform the following:
- 2) Begin winching/hoisting employee(s) from the CS.
- 3) Notify the CSE supervisor that the employee(s) are disabled.
- 4) **Do not enter the confined space.** Only the designated rescue team can enter the space to perform an entry rescue.

3. Entry Rescue. Upon arriving at the confined space, the Town of Greenburg Rescue service shall;
 - a. Assess the potential hazards that rescue personnel could encounter by entering the space.
 - b. Take charge of the scene until the emergency is over situation is over.
4. Substance Information. If an injured entrant is exposed to a substance for which a Material Safety Data Sheet (MSDS) or other written information is required to be kept at the work site, that MSDS or written information shall be made available to the medical facility treating the exposed entrant.

VIII. EMPLOYEE TRAINING

All employees who are required to enter a Confined Space or serve as an attendant shall be trained and properly equipped to recognize, understand, and control hazards that may be encountered in the CS. All training must be documented on a CS Training Record (See Form 2). This training record (certification) shall be available for inspection by employees and their authorized representative.

Training shall be provided to each affected employee:

- a) Before the employee is first assigned duties under this section.
- b) Before there is a change in assigned duties.
- c) When there is a change in the permit space operations that present a hazard about which an affected employee has not previously been trained.
- d) Whenever the employer has reason to believe either that there are deviations from the permit space entry procedures or that there are inadequacies in the employee's knowledge or use of these procedures.

A. Confined Space Entry

All employees who are required to either enter a confined space or serve, as attendants shall receive training in the following areas:

- 1. Associated safety and health hazards of the CSE
- 2. Duties of entrants and attendants
- 3. Air monitoring and attendants
- 4. Respiratory protection
- 5. Non-entry Emergency rescue procedures
- 6. Lockout isolation procedures

Training shall be provided to each affected employee:

- 1. Before the employee is first assigned CSE duties.
- 2. Before there is a change in assigned duties.
- 3. Whenever there is change in confined space operations that presents a hazard about which the employee has been previously trained.

C. Personal Protective Equipment (PPE)

All employees who are required to either enter a CS and/or serve as attendants, shall receive training on the proper use of any PPE needed to perform the job safely, such as, protective clothing and suits, gloves, respiratory protection; confined space rescue equipment, body harnesses, hearing protection, and eye/face, hand, foot and head protection.

D. Attendants should be trained in basic First Aid and CPR. All DPW employees will be trained in the Village's Confined Space.

IX. WORK INVOLVING CONTRACTORS OR MULTIPLE EMPLOYERS

When Village of Tarrytown arranges to have employees of another employer (contractor) perform work that involves confined space entry, the CSE Program Administrator or the CSE Supervisor shall:

1. Inform the contractor that the workplace contains permit spaces and the permit space entry is allowed only through compliance with a permit space program that complies with CFR 1910.146.
2. Inform the contractor of the hazards identified and the employer's experience with the CS that make the space in question a confined space
3. Coordinate entry operations with the contractor when personnel from both employers will be working in or near the confined space.
4. Verify that the contractor has an appropriate CS Entry program.
5. Debrief the contractor at the conclusion of the CS entry operation(s) regarding the permit space entry procedures that were followed (if applicable) and the hazards that were confronted or created during entry operations.

X. NON-PERMIT REQUIRED CONFINED SPACE ENTRY:

No employee shall enter or work in a non-permit CS unless the following steps have been performed:

- a. Obtains permission to enter the confined space from the CSE supervisor, or in his/her absence, the area supervisor.
- b. Obtains and uses the proper PPE, tools and other equipment.

- c. Complies with all other applicable CSE procedures

Note: Atmospheric testing of a non-permit CS is not required by the OSHA Confined Space standard. However, testing the atmosphere for toxic gases and oxygen deficiency prior to entering the CS is recommended if a suitable, and properly calibrated, sampling device is available. The OSHA Standard also does not require an attendant for entry into a non-permit required CS, however having an attendant present (if practical) is again strongly recommended.

XI. RECLASSIFICATION OF A PERMIT-REQUIRED CONFINED SPACE TO NON-PERMIT CS

Reclassification of a permit-required confined space to a non-permit space can be accomplished by completing the Confined Space Reclassification Certification Form (Appendix E):

A permit required CS may be entered as a non-permit confined space if the permit space contains no actual or potential atmospheric hazard, and all other hazards within the space can be eliminated without entry into the space. Hazards may be eliminated, for example, by:

- a. Following all designated lockout/tagout procedures for the space in question;
- b. Emptying a vessel to remove an engulfment or other content hazard;
- c. Draining chemical tanks of their contents, purging any residual chemicals with water, and ventilating the space after purging is complete;
- d. Shutting boilers down, opening all access ports to allow for temperature reduction and natural ventilation, and by taking all appropriate safety measures (i.e. locking out machines, etc.) to render the space safe for entry.

If the hazard arise within a permit space that has been declassified to a non-permit space, each employee in the space shall exit the space as soon as possible. The employer shall then reevaluate the space and determine whether it must be reclassified as a permit space, in accordance with other applicable provisions.

XII. RECLASSIFICATION OF A NON-PERMIT CONFINED SPACE TO A PERMIT-REQUIRED CS

- A. When there are changes in the use of a non-permit confined space that may increase the hazards, the space shall be reevaluated and classified as a permit-required space if necessary. Reclassification would be required, for

situations such as:

1. During application of solvents, paints chemicals or other materials that could potentially create a hazardous atmosphere in a confined space.
 2. During welding, cutting, brazing, or soldering in some confined spaces with limited ventilation.
- B. The CSE-Supervisor shall reevaluate and reclassify confined spaces as necessary depending upon the work activities to be performed in these spaces.

XII. OTHER SAFETY RULES AND WORK PRACTICES

In order to protect the safety and health of all employees associated with the CSE, employees (and supervisors) shall comply with the following safety rules and work practices:

A. General Safety Rules

- a) All employees within the CS shall be in constant two-way communication with attendants.
- b) Smoking is not permitted within the CS or within a 10 feet radius of the entrance of a confined space.
- c) All employees shall comply with the requirements and limitations on the CS entry permit, including the maximum number of employees permitted to work in the CS.
- d) All confined space equipment and tools will be inspected prior to use and any unsafe conditions will be reported to their supervisor immediately. Any equipment that is not working properly will be taken out of service immediately.

B. Traffic Safety

Entrances to confined spaces that are located in streets shall be guarded in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) the following requirements:

- a. A temporary traffic control plan will be developed by a trained individual.
- b. Employees shall park the vehicle used to transport their CS equipment in such a way that the vehicle does not obstruct the normal traffic flow.
- c. Employees shall park the vehicle in such a manner that the vehicles

exhaust fumes cannot accumulate in the CS. If this is not possible, the vehicle's exhaust pipe shall be extended away from the confined space.

- d. Employees shall properly place traffic safety cones and traffic control devices around the workzone in accordance with state and federal MUTCD to adequately warn oncoming traffic.
- e. Traffic safety cones shall be visible to traffic in all directions and in such a manner as to protect the employees from the traffic flow. Traffic cones and signs shall be placed far enough from the CS to give drivers adequate notice.
- f. When working on the street or an easement surface, all personnel and flag person employees shall at all times wear an ANSI Type 2 reflective traffic safety vest or the equivalent.

C. Cleaning purposes*

When a CSE is required for cleaning purposes, the CSE supervisor or in his/her absence, the area supervisor, shall review and authorize the procedures and processes to be used while cleaning the CS before entry can take place.

The following specific cleaning methods shall be used depending upon the product or products in the space:

- a, Cleaning Process Hazards: When additional hazards are created by the cleaning process, the CSE Supervisor shall develop additional safety procedures to address the newly created hazards. These special procedures shall be developed before a CS cleaning process takes place.

D. Use of equipment and tools inside the confined space

- a) When the CSE requires the use of equipment and tools inside the space, this equipment shall be inspected and must meet the following requirements:
 - Hand tools must be in good repair and be kept clean.
 - Ground Fault Protectors should be used to protect employees from electrical shock when working in damp/wet locations or with temporary wiring.

- All electrical cords, tools, and equipment must be constructed of a heavy-duty, double-insulated cord and equipped with a 3-prong plug. Note: double insulated tools with a 2-prong plug may be appropriate in some cases.
- All electrical cords, tools, and equipment must be visually inspected for defects before being used in a CS. If found defective, they will be replaced, repaired, or destroyed before any employee enters the CS.
- Cylinders of compressed gases must never be taken into a CS and will be turned off at the cylinder valve when not in use. Exempt from this rule are cylinders that are part of SCBA or resuscitation equipment.
- Ladders must be adequately secured or of a permanent type which provides the same degree of safety. Note: Permanent ladders must be inspected for rust or corrosion and repaired or replaced if necessary.

XIII. RECORDKEEPING

The following records will be maintained on file for at least **five** years

- A. Employee Training Records - including dates and the names of attendees.
- B. CSE Equipment Inspections - including dates, results, and corrective action.
- C. Monitoring Equipment Calibration/Servicing Reports - indicating calibration dates and any service conducted by the manufacturer.
- D. Confined Space Permits - for all Permit Required confined space entries for at least 5 years.

XIV. ANNUAL REVIEW

The Confined Space Entry Program Administrator shall review the CS Program at least annually using cancelled CS Permits and other available information and records in order to determine if:

- A. Changes should be made to improve the program's overall effectiveness
- B. Additional hazards have been identified within a given space;

- C. Additional measures should be taken to protect the entrants;
- D. Additional confined spaces should be included within the program; and
- E. Some locations can be removed from the program.

Note: When an asterisk* is placed in front of a guideline, this procedure is not required by the standard.