VILLAGE
OF
PLEASANTVILLE

CONFINED SPACE

ENTRY

PROGRAM

AND TRAINING

1. **PROCEDURE (SOP)**

2. **LIST OF CONFINED SPACES**

3. **LIST OF TRAINED PERSONNEL**

4. **BLANK PERMITS**

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VILLAGE OF PLEASANTVILLE
STANDARD OPERATING PROCEDURE

SUBJECT:	**Procedure#: S-002**
CONFINED SPACE ENTRY	**Revision#:0**
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	Effective Date: November 5, 2006

APPROVALS

Department Head:_____Date:_____

I. PURPOSE:

1. Identify confined spaces – permitted and non-permitted (annually permitted).
2. Protect those workers entering confined spaces.
3. Ensure that only qualified trained personnel participate in confined space entry.
4. Ensure Rescue Team is notified and available.

The purpose of this procedure is to define the proper tests, equipment, personnel and approvals necessary whenever work is to be performed in a confined space by Village of Pleasantville's personnel or contractor employees. This procedure establishes the minimum requirements for safe entry into:

Wet Wells, Dry Wells, Manholes, Underground Well Pits, Valve Pits, Test Pits, Catch Basins Culverts and Storage Tanks.

This program is designed to prevent injuries to the Village of Pleasantville's employees, contractors and other persons from hazards associated with entering a confined space.

The Village of Pleasantville manages the hazards presented by confined spaces by: careful task planning; development of specific written procedures; providing the proper confined space entry safety equipment; retraining employees in proper procedures; and ensuring the implementation of the written program.

NOTE: All contractors must submit and use their own Confined Space Entry Procedure. The contractors program must meet or exceed the program requirements established by the Village of Pleasantville.

II. POLICY:

The Village of Pleasantville is committed to maintaining CONFINED SPACE ENTRY Program. All personnel are REQUIRED to follow all applicable Federal, State and Local guidelines and regulations as they pertain to Confined Space Entry OSHA Standard 1910.146, CFR 29.

III. SCOPE: No one may enter a confined space until:

1. They have had proper training. (A list of trained employees may be found in the Departmental CSE Book).

2. The area has been properly prepared for safe entrance.

3. Authorized in writing by the Entry Supervisor on the confined entry permit.
   B. Police Dispatcher is notified of entry location, passive retrieval equipment available and ready if appropriate.
   C. Confined Space Entry Permits are required for the following confined spaces:
   Refer to your department's list of Confined Spaces – found in Departmental CSE Book.
   D. All confined spaces meeting the permitted confined space criteria require specific daily permits. Use checklist for determination found in CSE Book.
   E. Entry into a confined space will only be authorized after the person in-charge/supervisor has verified and certified that the confined space permit is complete and the area is safe for entry.

SPECIAL NOTE: ANY SPACE THAT REQUIRES BREATHING APPARATUS, HAS AN LEL OF 10% OR HAS AN IDLH ATMOSPHERE, WILL NOT BE ENTERED UNLESS ALL APPROPRIATE PPE IS WORN AND A RESCUE TEAM IS ON STANDBY OUTSIDE THE CONFINED SPACE.

NOTE: Non-Permitted Confined Spaces (NPCS) will be issued annual permits. Only continuously ventilated confined spaces meeting NPCS criteria will be considered Non-Permit required confined spaces. Annual permits are issued for daily maintenance and/or inspections ONLY. All NPCS must be evaluated using checklist or permit criteria prior to entry.

V. DEFINITIONS:

See Appendix A.

IV. HAZARD IDENTIFICATION AND EVALUATION:

A. Hazard Identification:

Hazard shall be identified for each confined space. The hazard identification process shall include, *but not be limited to,* a review of the following:

1. The **past and current uses** of the confined space which may adversely affect the atmosphere of the confined space.

2. The physical characteristics, configuration, and location of the confined space.

3. Hazards or potential hazardous conditions **in the area surrounding** the confined space.
   A. Existing or potential hazards in the confined spaces, such as:

      a. **Hazardous atmosphere:** Hazardous atmospheres may be created in numerous ways, thereby exposing the entrant to the risk of death, incapacitation, impairing the ability to self-rescue. A hazardous atmosphere could be constituted by one or more of the following conditions:

         *Oxygen deficient or enriched atmosphere: Concentrations below 19.5% or above 23.5%. Any atmosphere with less than 19.5% oxygen **should not** be entered without the use of an approved air system.*

NOTE: The oxygen level in a confined space can decrease because of the work in progress, such as welding, cutting, or brazing; or by certain chemical reactions (rusting) or through bacterial action (fermentation). The oxygen level also may be low if another gas, such as carbon dioxide or nitrogen, is introduced which displaces the oxygen in the space. An oxygen rich atmosphere (above 23.5%) will cause combustible material to spontaneously ignite and to burn violently and therefore should be avoided.

1. **Flammable/explosive atmosphere** – An area with flammable gas, vapor or mist present in excess of 10% of its lower explosive (flammable) limit (LEL) should not be entered.

2. **Dust** – An area with airborne combustible dust concentrations that meet or exceed the LEL should not be entered.

NOTE: An atmosphere may be flammable because of the oxygen in the air and the presence of a flammable gas, vapor or dust in the proper mixture. Different materials have different flammable ranges. An explosion may result if a source of ignition (a sparking electrical tool) is introduced into a space containing a flammable atmosphere and a spark is produced.

1. **Toxic atmosphere** – Toxic substances (liquids, vapors, gases, mists, solid materials, and dusts) whose atmospheric concentration could result in an employee exposure in excess of the OSHA Permissible Exposure Level (PEL). Substances that cannot cause death, incapacitation, impairment of the ability to perform self-rescue, injury or acute illness due to their health effect are not considered hazardous atmosphere under this OSHA Standard. Some sources of toxic substances are:

   1. Products stored in spaces that can be absorbed into the walls. When the residue of a stored product is removed, gases, vapors or dusts may be released into the space.

   2. Work tasks in a confined space, examples include: welding, cutting, brazing, painting, scarping, sanding, degreasing, etc. Various processes generate toxic substances which may collect in confined spaces.

NOTE: For air contaminants for which OSHA has not determine a dose level or Permissible Exposure Limit, other source information such as Material Safety Data Sheets (MSDS), published information and internal client documents can provide guidance in establishing acceptable atmospheric conditions.

2. Health (biological) hazards associated with the confined space – Maybe found in decaying animals, sewage leaks, animal or insects that may bite the entrant.

B. Mechanical, physical or environmental hazards –

C. Temperature extremes can present heat stress problems or frostbite for employee while in a confined space.

D. Noise within a confined space can be amplified because of the acoustical properties of the space. Excessive noise cannot only damage hearing, but can also affect communication, such as causing shouted warnings to go unheard. Powered communication devices may be used with hearing protectors to reduce high levels of noise and maintain adequate site communications.

E. Slick/Wet Surfaces can cause slips and falls. The entry team should wear footwear providing adequate traction for these conditions.

F. Falling objects, particularly in spaces that have topside openings for entry, can be a potential confined space entry hazard.

G. Traffic/Roadway Hazards, surface hazards are present when working in or near vehicular traffic or roadways. The following traffic control strategies should be used in the event of surface hazards:

1. Park support vehicles at least ten feet from utility access hole and between the utility access hole and approaching traffic with the exhaust pipe away from the entrance.

2. All traffic patterns shall be set-up in accordance with NYSDOT MUTCD

H. Animal and insects – Have been found in confined spaces. Cockroaches, while unpleasant, are not dangerous to the entrant. Fleas, ticks, and spiders may be poisonous or carriers of disease. Full-body disposable garments, gloves and tape should be used in these spaces to protect skin from bites. Rate, mice, and raccoons are normally not dangerous unless the animal is cornered or is rabid. Do not put hands or feet into places that you cannot see. Do not approach a wild animal that appears injured, or does not flee when seen. If bitten by an animal or snake, exit the confined space and immediately seek medical attention.

B. **Hazard Evaluation:**

Hazard identified shall be evaluated by a trained, qualified person. Each hazard shall be examined with respect to:

1. Hazard exposure (physical or health).
2. Magnitude of the hazard.
3. Likelihood of hazard occurrence.
4. Consequences of the hazard occurrence.
5. Potential for changing conditions/activities.
6. Strategies for controlling the hazards.
7. Impact on the need for emergency response.

C. **Hazard Re-Evaluation:**

A qualified person(s) shall determine the need for periodic identification and re-evaluation of the hazards based on possible changes in activities in the space, or other physical or environmental conditions, or both, which could adversely affect the space. When the need is determined, a qualified person (s) shall conduct the identification and re-evaluation process.

V. PROCEDURE

The following regulations must be observed at all times:

A. Confined Area Preparation

1. Identify the confined area to be entered as indicated in accordance with Appendix Hazard Identification and Evaluation. Confined spaces or tanks used for hazardous and flammable materials will require special consideration. The Department Head or Entry Supervisor should specify what protective equipment should be worn under these special considerations, and note them on the permit.

2. Unless confined space or tank can be thoroughly cleaned (determined by testing and signed off by Department Head/Entry Supervisor), any confined space used to store hazardous materials as defined by OSHA 1910.1200, may only be entered wearing proper personal protective equipment as specified by the manufacturer of the hazardous material, including self-contained breathing apparatus.

3. Respirators will only be permitted by determination of the Department Head/Entry Supervisor after measurement of the exposure present.

4. Lockout or make electrically inoperable all agitators, pumps and motor-units as provided by the Safety Procedure on this subject. Blank off, or disconnect and plug all process and hot service lines into the confined area. Exceptions to this must be noted on the permit in writing and authorized by the Department Head.

5. First-test the atmosphere in the confined area for oxygen content, using an oxygen analyzer (oxygen reading must be 19.5-23.5%). Second – An explosivity gas test must also be done (gas test must show no indication of explosivity). Third – test atmosphere for material that the confined space last contained.

> **CAUTION**
>
> Oxygen level must be tested first. Explosivity test is not valid unless oxygen reading is 19.5 – 23.5%.

6. The confined area shall be vented at top and bottom where feasible. Ventilate confined area with blower, which has been OSHA approved for hazardous areas, by inserting air movers which draw air from an uncontaminated area, preferable outside the building. Ensure inlet vent hoses are located at the furthest point from where the air is being discharged from the confined area and in an area free of contaminants. Exceptions to this must be noted on permit in writing and authorized by the Department Head.

7. Make certain that all electrical equipment taken into a confined area is grounded.

8. Work lights to be used inside confined areas should be of low voltage type not to exceed 24 volts, vapor proof and to be adequately guarded.

9. All welding and cutting operations carried on in confined spaces shall be adequately ventilated to prevent the accumulation of toxic materials or possible oxygen deficiency. This applies not only to the welder but also to helpers and other personnel in the immediate vicinity. All air replacing that's withdrawn shall be clean and respirable. (Refer to Occupational Safety and Health Standards Subpart Q, 1910.252 Welding, Cutting and Brazing) for required ventilation rates.

10. All personnel involved in confined space entry must have been properly trained in all aspects of confined space entry. Training, as defined in CFR 29 (OSHA) Confined Space §1910.146(g): "The employer shall provide training so that all employees whose work is regulated by this section acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned…..".

11. Police dispatcher is notified of entry time, approximate time and location.

12. Area must be roped off or signs posted to keep out unauthorized persons during confined space entry.

13. Permit must be cancelled at the end of entry by reviewing job and signing permit.

14. Contractors must be debriefed and permit signed off by both contractor and supervisor of job.

CONFINED AREA ENTRY

Work must not be performed in a confined area until a "Confined Space Entry Permit" has been duly authorized (signed) and issued. The Permit is only valid for the date, shift (standard eight (8) hours) and/or period of time indicated.

The supervisor of employees or designated safety officer or supervisor for contractors entering a confined area shall personally review the entry permit and personally inspect the area to assure him/herself that the above steps have been taken and that the confined area may be safely entered by their employee. The supervisor(s) of the personnel in the confined area is responsible for the compliance with sections 1 through 6 of this section of the procedure.

1. Employees entering a confined area shall be outfitted with minimum of their standard required clothing and safety equipment and standard equipment for confined area entry. If there is any special safety clothing or equipment required for a specific job it will be written on the Confined Space Entry Permit.
   Standard Safety Equipment: Uniform, hard hat, safety glasses with side shields, safety shoes, confined space PPE – wristlets or body harness.

2. Any confined space used to store hazardous materials that has not been cleaned for entry must be evaluated by the Department Head using the appropriate Material Safety Data Sheet to determine what personal protective equipment must be worn. This may also involve air measurements to determine what type of breathing apparatus is appropriate. Standards for employees' exposures will be OSHA, ACGIH, NIOSH, etc.

3. All operations within the confined area must be closely and continuously observed by a lookout stationed outside the confine area adjacent (right outside) to the entrance. This lookout must be able to see the person in the confined area at all times. The lookout shall be responsible for the air supply system functioning while employee is in the confined area and not leave the area until employee has left the confined area.

4. Entrance into a confined area should be made feet first. Exiting a confined area should be head first, if possible. If cleaning is the purpose for entering a confined area and is a lengthy operation, employee should be relieved every 20 minutes and this should be noted on Special instruction Section of Permit.

5. Continuous monitoring of vapor and oxygen content of the confined area is necessary during operations in the confined area.

6. Passive rescue equipment – tri-pod harness, escape air must be used for entry into permitted confined space and Stand-by emergency rescue equipment for entrance to the confined area shall be available at all times in case of emergency as listed on the "Confined Space Entry Permit".

7. Pre-arrange standby status of emergency rescue team personnel and communication for calling for emergency rescuers. List names of rescue personnel on permit and sign.

8. All persons working in the area must be notified of confined space entry.

9. Permits are to be signed off as each task is completed and **not before**.

10. Post permit on confined space being entered, rope off area or put up signs to keep out unauthorized personnel.

11. Enter the time the entry is complete (job is over), cancel the permit.

12. Debrief all contractors and both contractor and supervisor sign permit.

VI. RESPONSIBILITY

A. It shall be the responsibility of the Entry Supervisor to:

1. Review and evaluate the space to be entered and determined the hazards. Review, if applicable, exact nature of the job to be performed. Point out any possible hazards or hazardous conditions that are present or could develop during the job. Annually Permitted Confined Spaces – Must also be evaluated prior to entry: This requires gas monitoring prior to entry and while working in the confined space. Annuals permits are only issued for daily maintenance and inspections. Refer to the permit for exact details.

2. Determine the proper safety equipment to be used on the job, and ensure that the safety equipment is visually inspected for defects before its use and is on the job.

3. Ensure confined area is clean and ready for entry. Start the Confined Space Entry Permit Application.

4. Ensure that all lines have blanked and bled or any de-energizing is completed if applicable.

5. Check surrounding area for hazardous conditions and other operations in the area that may affect the confined space entry.

6. Determine the area that fresh air is to be taken from and that the blower has been set up for use.

7. Verify that an oxygen and explosivity test has been taken to assure a safe atmosphere to enter the confined area. Then sign permit in appropriate space.

8. Verify that the Police Dispatcher has been notified (to be done for NON-PERMIT REQUIRED CONFINED SPACE ENTRY) and that they are ready to notify emergency personnel to respond if necessary. PERMIT REQUIRED CONFINED SPACE ENTRY- Notify the Fire Dept. so that they are aware of the entry should an emergency rescue be necessary. The Police should be notified as well.

9. Entry Supervisor of entry, may also serve as the attendance if they are present at the job site.

10. Give final authorization to enter the confined area by signing the permit.

11. Cancel permit by signing off that job is complete. Or canceling any permit where conditions change causing an unsafe entry or continued entry.

12. Contractors must have a confined space entry program in order to perform any confined space. Village of Pleasantville personnel will debrief contractors entering confined space after completion of entry. Contractor MUST sign permit that debriefing is complete. Village of Pleasantville will keep a copy of the contractors confined space entry permit.

B. <u>It shall be the responsibility of the EMPLOYEE Entering the confined area to:</u>

1. Understand the Permit Procedure and completed all pre-entry portions of the confined space permit prior to entering the confined space.
2. Know and understand the hazards of the space being entered.
3. Follow job scope as outlined by the person in charge or their supervisors.
4. Wear all protective equipment as determined through evaluation of the space to be entered or specified by supervisors. Ensure that all safety equipment is visually inspected for defects prior to use, i.e. tri-pod, harnesses, escape air pak etc.
5. Know the best escape route as pre-determined. Walk through escape route, if possible, to be sure it is feasible.
6. Report any unusual condition which may affect the safety of the job to your immediate supervisor/entry supervisor. Inspect the area to determine any operations or conditions that could affect the safety or present a hazard during entering a confined space.
7. Ensure that all blocking, bleeding, blanking and de-energizing has taken place if necessary.
8. Know the hand signals for Confined Space Entry in case of an emergency which are found in section "E".
9. Obtain and set up all the necessary safety equipment such as blowers, explosive and oxygen meters, tripod etc. Wear appropriate PPE.

C. <u>It shall be the responsibility of the ATTENDAND/LOOKOUT(S), equipped with cellphone/radio:</u>

1. Not to leave confined area opening until all personnel are out of confined area, (except to call for emergency assistance).
2. Continuously monitor and/or take reading and record every five (5) minutes (on permit) for both oxygen and flammable vapor content in the confined area to ensure that safe levels are kept throughout the confined area entry (19.5% to 23.5% oxygen, no toxic vapor level).
   <u>CAUTION</u>
   Oxygen level must be the <u>FIRST</u> reading to ensure sufficient oxygen. Flammable level reading is done after sufficient oxygen level reading. Flammable limit level reading will not be accurate without sufficient oxygen of 20 to 22%.
3. If confined space is entered with supplied air or self-contained breathing apparatus, monitoring need to be continuous. Measurements must be taken every five (5) minutes and recorded.
4. In case of an emergency dial 911, and report the problem, or call another Village of Pleasantville employee on radio/cell phone for emergency help.

5. All rescues will be made by a rescue team properly trained with the appropriate equipment.
6. Continuously observe employee in the confined area. Any person who exhibits irrational conduct or signs of sickness shall immediately be removed from the confined area.
7. Must be knowledgeable of the hand signals should communication in any way be difficult. Hand signals are found in section "D".
8. Ensure all safety equipment is visually inspected for defects and in good working order.
9. Ensure that no unauthorized persons enter space or immediate area. **Area must be roped off or signs posted** to notify all personnel that a confined space entry is taking place.
10. Continuously observe and inspect immediate area for any danger or hazard that might prove harmful to employee(s) in confined area. Have employees leave confined space if potential problem/hazard arises.
11. Close out (cancel) the permit and debrief all involved. Fill in appropriate information on permit.

D. SIGNALS

When an employee in a confined area is wearing a mask or communication is in any way difficult, the employee and the lookout should be instructed in the use of the standard hand signals. In the event of any danger, emergency or for exiting a confined area, the hand signal would be a Thumbs-Up movement indicating you want to exit the confined area.

E. It shall be the responsibility of the CONTRACTOR

1. To submit to the Village of Pleasantville their confined space entry procedure and provide documented employees who have been trained to enter confined spaces.
2. Know the scope of the job they are to perform and determine any hazards of the job.
3. Ensure that all safety equipment is on the job.
4. Ensure that all blocking, blanking and de-energizing has taken place.
5. Check to see if the confined area is clean and ready for entry.
6. Check surrounding area for hazardous conditions.
7. Set up blower for fresh air supply to the confined area.

8. Take an oxygen, explosivity and toxicity reading to assure a safe atmosphere prior to entering the confined space. Record all readings.

9. Ensure that oxygen, explosivity and toxicity reading are continuously monitored while employee is in confined space.

10. Notify an emergency personnel/rescue team of entry time, duration and location and ensure they are ready to respond if necessary. Set up passive rescue equipment (provided by the contractor).

11. Sign-off Permit and Post Permit on equipment being entered. Area must be roped off or signs posted to keep out unauthorized persons.

VII. SAFETY

1. Standard minimum safety equipment; uniform, hard hat, safety glasses with side shields, safety shoes and as well as tri-pod, lifeline and body harness, 2-way radio/cell phone, or two lookouts are necessary before entering any confined area.

2. Tools or other articles shall NOT be thrown or dropped into the confined area.

3. Ladders shall be provided as a means of entering and exiting when needed and possible, and shall remain firmly placed and tied off while employee(s) are in the confined area, but not blocking the means of egress.

4. Hot work should not be done unless Cutting, Welding, Drilling and Open Spark Permit is authorized by supervisor.

5. If gas welding is to be done, the torch and hose lines must be kept outside the confined area, except when the welder is actually in the confined area using the torch. This is to prevent a possible build-up of explosive fumes in case of leaks in equipment. Any equipment not in use should be removed from the confined space immediately and stored in a safe manner near confined area until the job is done.

6. Any person, in a confined space who exhibits irrational conduct or signs of sickness, shall be removed from the confined area ***immediately.***

7. Extra safety equipment, in addition to body harness and lifeline, and such as self-contained breathing apparatus, should be on-hand for emergency use as specified in the permit.

8. It shall be the responsibility of the Department Supervisor to ensure that all equipment is thoroughly inspected and kept in a central location available to employees performing confined space entry.

VIII. Equipment Maintenance

1. Lifeline and body harness should be examined for cuts and for worn fibers. Rope which shows wear or abrasion sufficient to reduce its diameter should be taken out of service. Rope should be kept in open coils and never bent sharply.
2. Equipment should be tagged for repair and cleaned when necessary.
3. Monthly inspection and inventory of this equipment shall be completed by Village of Pleasantville personnel.

IX. TRAINING

1. Employees, whose work is regulated by 29 CFR 1910.146, will be trained so that they have the skills necessary for the safe performance entering a confined space. Only employees having been trained to perform all the duties required for entering a confined space will be permitted to enter a confined space, perform the duties of an attendant, or otherwise sign-off on a confined space permit. This includes non-permitted confined spaces.
2. Each employee shall be trained initially and retrained every two years or 24 months. Each employee shall be trained when:
    - **a.** The employee is first assigned to confined space entry task;
    - **b.** Whenever there is a change in the classification of a space, the hazards of a space or any other changes or hazards that the employee has not been previously trained on;
    - **c.** Whenever the employee is assigned a duty that they have not been previously trained on.
    - **d.** Whenever anyone, supervisor, employee, department head determines that significant deviations from the confined space entry permit system have been observed or determined or that there are inadequacies in the employee's knowledge base on these procedures.
3. All employees shall receive both classroom and practical training in confined space entry. All training shall be conducted with the equipment and the highest level of PPE authorized and appropriate for the entry. Training shall be included but not be limited to; all those areas identified in the Confined Space Entry Procedure.
4. All employees shall be issued certificates upon completion of the training. A copy of the certificate will be kept by the Village Clerk's Office.

X. Equipment-Personnel Protective and Materials/Hardware

The Village of Pleasantville provides safety equipment to be used during a confined space entry. The following list is some of the equipment provided. Please note there may be other equipment needed for a particular job or department. It is the department supervisor's responsibility for acquiring the equipment that is needed in their department. The department head is also responsible for ensuring the availability, proper use and maintenance of the equipment.

a. Body Harness
b. Safety line with double action snap hooks
c. Tripod and winch with fall protection/retrieval system
d. Explosion proof or low voltage lighting
e. Manhole/entry hole barrier
f. CSE signs
g. Explosion proof electric or gasoline powered blowers
h. Traffic control devices
i. Air monitors (4 gas)
j. Communication equipment-radios/phones
k. First aid kits
l. Safety vests
m. Canvas pails
n. Manhole hooks and crowbars
o. Insect repellent – prevent tick and other bites
p. Insect spray – wasps, bees etc.
q. Safety glasses, gloves, hearing protection, safety shoes-standard safety equipment

XI. Emergency Response Planning and Rescue

The Village of Pleasantville policies and procedures for permit-required space entry recognize that, the Fire Department MAY not be available in a reasonable amount of time for a rescue. Therefore, permit-required entries will not be allowed into any confined spaces that have ***any hazardous atmospheric reading*** on the air monitor unless the confined space rescue team is in on standby at the site of the confined space entry.

The Village of Pleasantville's Fire Department will provide all emergency confined space rescues for Village of Pleasantville employees. The Fire Department will be notified in advanced of a confined space entry so that they have adequate time to set up rescue and standby ***outside the space*** being entered.

Rescue personnel must have prior knowledge training on the space or similar space being entered. Only trained rescue personnel can perform any rescue attempts.

A potential emergency exists anytime a confined space entry is conducted. A SELF-RESCUE must be conducted immediately when;

a. The attendant or the entrant detects a hazardous condition either outside or inside the confined space.

b. When any condition either inside or outside the space could cause a hazardous condition within the space.

c. Whenever the entrant or the attendant begins to notice signs or symptoms of over exposure to air contaminants or low levels of oxygen.

d. Whenever the atmospheric monitor alarms.

e. Whenever external conditions, such as: weather, traffic, industrial processes, discharge rates, or any change that may adversely affect the conditions within the space.

When a confined space has been evacuated due to an on-site emergency, NO ONE SHALL RE-ENTER UNTIL;

1. The conditions requiring evacuation or resulting in the emergency have been corrected.
2. The hazards have been reassessed and eliminated or determined to be safe.
3. A new entry permit has been completed.
4. The entry personnel/team has been briefed on proposed changes in the work practices, personal protection and confined space.

IN THE EVENT THE ENTRANT IS INJURED OR UNCONSCIOUS IN A CONFINED SPACE, THE ATTENDANT SHALL TAKE THE FOLLOWING STEPS:

DO NOT ENTER THE CONFINED SPACE
SEND FOR HELP – RESCUE TEAM

5. Make an assessment of the entrant's injuries. Remote (passive-using tri-pod) retrieval of an entrant with serious head, neck or spinal injuries is not advised.

6. If the insured person is wearing a body harness attached to a retrieval winch, and there are no obvious obstructions to raising the individual, use the winch to raise the individual out of the space. Ladders and ventilation equipment may have to be removed to conduct this type of rescue. When the individual's head and face clear the confined space, summon assistant using the emergency response procedures developed for this entry and the people listed on the emergency response form.

7. If the injured person is wearing a body harness attached to a retrieval winch, and there are obvious obstructions to raising the individual, attempt to redirect the flow of fresh air from the ventilation system toward the entrant and then summon assistance using the emergency response procedures developed for this particular entry.

8. If conditions other than these exist and you are unable to remove the entrant –

WAIT FOR RESCUE PERSONNEL

AND

DO NOT ENTER THE SPACE

NOTE: THESE ARE SUGGESTIONS AND NOT INTENDED TO BE COMPLETE OR ALL INCLUSIVE ONLY PERSONNEL TRAINED IN RESCUE OPERATIONS ARE QUALIFIED TO MAKE A RESCUE.

XII. Auditing Program

Periodic inspections of all confined space entries shall be conducted to ensure that confined space entries are safe and that confined space procedures are adhered to or correctly implemented. Inspections shall include visual inspection of an entry in progress as well as completed confined space permits when they are turned in for filing in the department.

Audits and inspections will be conducted by those persons trained in confined space procedures and safety.

Completed audits will be kept in the department confined space permit file.

An audit form/document is provided as part of this overall procedure Refer to Appendix B.

APPENDIX A – DEFINITIONS

Biological Hazards – Infectious agents presenting a risk or potential risk to the well-being of man, or other animals, either directly through infection or indirectly through disruption of the environment.

Blinding/Blanking – Inserting a solid barrier across the open end of a pipe leading into or out of the confined space, and securing the barrier in such a way to prevent leakage of material into the confined space.

Class A Confined Space – A confined space that presents a situation that is immediately dangerous to life and health (IDLH) due to oxygen deficiency, flammability and toxicity characteristics.

Class B Confined Space – A confined space that has the potential hazard for causing injury and illness if preventive measures are not used (immediately dangerous to life and health).

Class C. Confined Space – A confined space in which the potential hazard would not require any special modification of the work procedure.

Confined Space – A space, which by design, has limited openings for entry and exit, unfavorable natural ventilation which could contain or produce dangerous air contaminants, and which is not intended for continuous employee occupancy. Confined spaces include storage tanks, reactors, vacuum dryers, blenders, basins, pits, silos, boilers, ventilation ducts, sewers, tunnels, underground utility vaults, small rooms with limited access, pipes, dryer columns, sumps, hopper or other similar hazardous locations.

Company Representative – The person who is responsible for hiring and supervising a contractor.

Decontamination – The removal of any contamination acquired during entry.

Double Block and Bleed – A method used to isolate a confined space from a line, duct or pipe by physically closing two in-line valves on a piping system, and opening a "vented-to-atmosphere" valve between them.

Engulfment – The surrounding, capturing, or both, of a person by divided particulate matter or liquid.

Entry – Ingress by persons into a confined space which occurs upon breaking the plane of the confined space portal with his/her face; and all periods of time in which the confined space is occupied.

Hazard Evaluation – A process to assess the severity of known, real, or potential hazards or all three, at or within the confined space.

Hazardous Atmosphere – An atmosphere that may be, or is injurious to occupants by reason of oxygen deficiency or enrichment; flammability or explosivity; or toxicity.

Hot Work – Work within a confined space that produces arcs, sparks, flames, heat, or other sources ignition.

IDLH - Immediately dangerous to life or health due to oxygen deficiency, flammability characteristics, or toxicity.

APPENDIX A – DEFINITIONS CONTINUED

Isolation – A process of physically interrupting or disconnecting or both, pipes, lines and energy sources from the confined space.

Job Supervisor – Any person authorized by the Village of Pleasantville to supervise the job. Person must have confined space training as required by the OSHA regulation.

LEL/LFL and UEL/UFL – Acronyms for "lower explosive limit"/"lower flammable limit" and "upper explosive limit"/"upper flammable limit".

Lower Flammable Limit (LFL) - The minimum concentration of a combustible gas or vapor (expressed in percent by volume) which will ignite if an ignition source is present.

Lockout/Tagout – The placement of a lock/tag on the energy-isolating device in accordance with an established procedure, indicating that the energy-isolating device shall not be operated until removal of the lock/tag in accordance with an established procedure. (The term "lockout/tagout" allows the use of a lockout device, a tag, or a combination of both).

Non-Permit Confined Space (NPCS) – A space which, by configuration, meets the definition of a confined space but which after evaluation is found to have little potential for generation of hazards or has the hazards eliminated by engineering controls.

Observer – A person who is assigned as standby to monitor a confined space process or operation and provide support or react as required.

Oxygen Deficient Atmosphere – An atmosphere containing less than 19.5% oxygen by volume.

Oxygen Enriched Atmosphere – An atmosphere containing more than 23.5 % oxygen by volume.

PEL – An acronym for "Permissible Exposure Limit" which is the allowable air containment level established by the U.S. Department of Labor, Occupational Safety and Health Administration.

Permit Required Confined Space (PRCS) – A confined space which after evaluation has actual or potential hazards which have been determined to require written authorization for entry.

Qualified Person - A person who by reason of training, education and experience is knowledgeable in the operation to be performed and is competent to judge the hazards involved.

Rescue Team – Persons trained and certified to perform rescue operations regarding confined spaces.

Shall – Denotes a mandatory requirement.

Should - A recommendation that is a sound safety and health practice; it does not denote a mandatory requirement.

TLV – An acronym for "A Threshold Limit Valve".

Toxic Atmosphere – An atmosphere containing a concentration of a substance above the published or otherwise known safe levels.

APPENDIX B

CONFINED SPACE PERMIT AUDIT SYSTEM

PURPOSE:

To ensure the proper use and completion of the Confined Space Permit.

1. All completed Permits must be forwarded to the Borough
2. Each Department Head will review completed Permits to ensure they follow the 29 CFR 1910.146 requirements for confined space entry.

PAPER REVIEW:

DATE:_____

_____Have date/time been completed?
_____Does Permit clearly define equipment to be entered?
_____Does the information clearly define purpose of the entry?
_____Was contractor debriefed?
_____Was Permit cancelled?
_____Have all signatures been obtained?
_____Supervisor/Person In-Charge?_____Contractor?_____
_____Employee Entering?_____Attendant?_____
_____Is it clear whether a Village of Pleasantville employee or contractor is making this entry?
_____Has the contractor signed-off in appropriate spaces?
_____Has the rescue team been identified?

THIS SECTION IS FOR CONFINED SPACE INSPECTION ON-SITE

Names of People Present:
_____Is all equipment in place?
_____Has area been roped off; signs in place?
_____Is Attendant at job site?
_____Are entrants wearing proper safety equipment?
_____Is the air monitored continuously?

FINDINGS COMMUNICATED TO APPROPRIATE PERSONNEL:

_____

_____

Signature:_____

Date:_____

PROCEDURE:	**Procedure#: S-002** **Revision#:0 Effective 11-5-06** **Page: 19 of 20**
CONFINED SPACE ENTRY	

Date:_____Shift_____Authorized for_____hours only (not to exceed 8 hours)
Location & Equipment_____Permit for_____Material Last Contained/Store_____
Purpose of Entry_____Time in_____Time job Completed/Cancelled_____
Contractor Debriefed_____/_____
(Contractor's Signature) (Supervisor's Signature)

CHECKLIST	SUPV.	SUPV.	EMPL. ENTG.	LOOKOUT
1. Confined Space Entry Procedure Read, understood, and followed. Permit posted outside of space entered.				
2. Material Safety Data Sheet for material last stored in Confined Space obtained & reviewed. Potential hazards reviewed.				
3. All necessary lockouts performed and tagged.				
4. All connections (lines, etc.) are drained blanked off and tagged.				
5. Confined space is cleaned and cooled.				
6. Confined space is vented for entry.				
7. Fresh air blower safely hooked up & in place. **Circle one (YES NO N/A)**				
8. Area Free of Fumes. **Circle one (YES NO N/A)**				
9. Oxygen level tested & between 20-22%. **Circle one (YES NO N/A)**				
10. Flammable vapor level tested and safe below 10%. **Circle one (YES NO N/A)**				
11. Confined space air tested for OSHA/NIOSH rec. limits and is within acceptable (if no, list PPE below). **Circle one (YES NO N/A)**				
12. Air in confined space to be CONTINUALLY MONITORED AND RECORDED ON BACK OF THIS SHEET EVERY FIVE MINUTES.				
13. Emergency instructions/communication system set up and tested. **Circle one (YES NO N/A)**				
14. Two lookouts or lookout with two-way radio/phones (Circle one).				
15. Employees review prearranged hand signal. **Circle one (YES NO N/A)**				
16. Other hazardous work in area stopped and area inspected to insure safe entry.				
17. Signs posted – UNAUTHORIZED PERSONNEL KEEP OUT CONFINED SPACE-ENTRANCE IN PROGRESS				
18. -Rescue team notified and on stand-by? **Circle one (YES NO N/A)** - Rescue equipment in Place? **Circle one (YES NO N/A)** -Rescue has radio? **Circle one (YES NO N/A)** -Team names(Print) **Circle one (YES NO N/A)**				
19. -Equipment is in place: **Circle one (YES NO N/A)** -Retrieval tripod **Circle one (YES NO N/A)** -2-way radio/alarm horn/phone **Circle one (YES NO N/A)** -Fire Extinguisher **Circle one (YES NO N/A)** - Gas detector **Circle one (YES NO N/A)**				

SPECIAL PPE TO BE WORN BY PERSON ENTERING CVONFINED SPACE: (WRITE Y, N OR N/A IN BOX)

- ☐ Self-Contained Breathing Air
- ☐ Respirator – Type
- ☐ Rain Suite with Pants
- ☐ Other
- ☐ Non-Permeable paper Suit
- ☐ Boots (Not Leather)
- ☐ Gloves PVC (No Rubber)
- ☐ Wristlet
- ☐ Body Harness
- ☐ Ladder Tied in Place

DATE	PRINT NAME	SIGNATURE	TITLE	DEPARTMENT
			Supervisor	
			Entrant	
			Lookout	

PROCEDURE: **CONFINED SPACE ENTRY**	**Procedure#: S-002** **Revision#:0 Effective 11-5-06** **Page: 20 of 20**

OXYGEN AND VAPOR LEVEL READINGS

Time Started:_____ **RECORD EVERY FIVE (5) MINUTES**

Min	1st 02	Hr. Vap.
5		
10		
15		
20		
25		
30		
35		
40		
45		
50		
55		
60		

2nd 0_2	Hr. Vap.

3rd 0_2	Hr. Vap.

4th 0_2	Hr. Vap.

5th 0_2	Hr. Vap.

6th 0_2	Hr. Vap.

7th 0_2	Hr. Vap.

8th 0_2	Hr. Vap.

Person Monitoring: Print Name:	
Signature:	

VILLAGE OF PLEASANTVILLE- CONFINED SPACES DEPT: WATER/SEWER

No.	Description of Space	Location	Purpose	Possible Hazard(S)	Type Of Confined Space		Work Done
					Permit	Non-Permit	

All space entered for NON-ROUTINE TASKS will require TWO PEOPLE BE PRESENT
NOTE: ANNUAL PERMIT CHECKLIST MUST BE USED AS MINIMUM REQUIREMENT BEFORE ENTERING SPACE
FRESH AIR BLOWER AND MONITOR AIR BEFORE ENTERING ANY CONFINED SPACE.
NON-ROUTINE TASK ARE DEFINED AS: Welding, pipe fitting, working with chemicals, electrical work, mechanical repair work or work not normally performed in a confined space that may endanger the entrant.

HAZARDS: Atmospheric – Toxic, Oxygen Deficient, Flammable/Explosive –- Electrical, Mechanical, Engulfment, Environmental – hot, cold, noise.

VILLAGE OF PLEASANTVILLE- CONFINED SPACES DEPT: HIGHWAY

No.	Description of Space	Location	Purpose	Hazard(S)	Type of Confined Space		Work Done
					Permit	Non-Permit	
1	Catch Basins						
2	Sewer Manholes						
3	Garbage Truck Hopper						
4	Vactor Box-on Truck (vacuum						

NOTE: BEFORE ENTERING ANY SPACE BLOWER AND AIR MONITORING MUST BE COMPLETED TO DETERMINE IF SPACE IS SAFE FOR ENTRY AND DETERMINE WHAT TYPE SPACE YOU ARE ENTERING

HAZARDS: Atmospheric – Toxic, Oxygen Deficient, Flammable/Explosive –- Electrical, Mechanical, Engulfment, Environmental – hot, cold, noise.

VILLAGE OF PLEASANTVILLE- CONFINED SPACES DEPT: RECREATION

No.	Description of Space	Location	Purpose	Hazard(S)	Type of Confined Space		Work Done
					Permit	Non-Permit	
1	Pool Backwash Tank						
2	Pool Pump Vault (hatch w/ladder)						
3	Ball field Pump Vault 3 pits (sump pump)						
4	Sewer Pit						

HAZARDS: Atmospheric – Toxic, Oxygen Deficient, Flammable/Explosive –- Electrical, Mechanical, Engulfment, Environmental – hot, cold, noise.

VILLAGE OF PLEASANTVILLE
CONFINED SPACE ENTRY TRAINING LIST

NAME	DEPARTMENT	CONFINED SPACE ENTRY

VILLAGE OF PLEASANTVILLE
PLEASANTVILLE, NEW YORK

ANNUAL CONFINED SPACE ENTRY PERMIT

LOCATION:	DESCRIPTION OF SPACE:
EQUIPMENT:	TYPE OF SPACE:
IS SPACE ENTERED? SPACE WILL ONLY BE ENTERED BY CONTRACT PERSONNEL FOR MAINTENANCE AND INSPECTION.	
WORK TO BE DONE:	
ADDITIONAL COMMENTS ABOUT THE SPACVE/WORK: Tank maintenance done by contractors and entry will be considered Permit Required Confined Space CONFINED SPACE PERMITS LOCATED IN DEPT.	
This confined space was initially evaluated and met the requirements of a non-permitted confined space. NOTE: Any work, other than the normal routine inspection or maintenance, may change the designation from: A NON-PERMIT TO A PERMIT REQUIRED CONFINED! YOU MUST USE THE CHECKLIST BEFORE ENTERING ANY SPACE REGARDLESS OF THE INITIAL DESIGNATION.	

The person entering will notify DPW by radio/phone that they are entering and exiting the space. If the DPW does not hear from the entrant every 30 minutes, a Police Patrol car or other DPW personnel will be dispatched to check on the person.
NOTE: If an emergency exists, the Police will dispatch a rescue team, only qualified personnel will attempt a rescue.

THIS IS NOT A CONFINED SPACE PERMIT – THIS IS A CHECKLIST FOR NON-PERMITTED CONFINED SPACE

	CHECK LIST	YES	NO
1	Traffic cones/barriers in place IF NEEDED		
2	Confined Space and area around the space have been evaluated for hazards		
3	Confined Space Continuously Vented-if not **DO NOT ENTER** until properly vented		
4	Atmosphere tested for: (record readings on back)		
5	- Oxygen 20-22% - Flammable Vapor less than 10% -Toxic Gases – within OSHA limits		
6	Wear Gas Detector		
7	Emergency Instructions/communications set up – review emergency escape route		
8	Inspected surrounding area for other hazards		
9	You have notified your dept. supervisor/head/designate that you are entering a Non-Permit Confined Space (NPCS)		
10	You will make contact with this person every 30 minutes		
21	You have a radio/cell phone for communication		
12	Two people will respond if entering down stairs on weekends		

Your SIGNATURE indicates that all proper safety checks have been performed and the confined space **IS SAFE FOR ENTRY**.
ENTRANT SIGNATURE_____TIME:_____DATE:_____

FOR A LIST OF NON-PERMITTED CONFINED SPACES PLEASE REFER TO YOUR DEPARTMENT LIST

VILLAGE OF PLEASANTVILLE
TRAINING SIGN-IN SHEET

TRAINING: CONFINED PACE ENTRY	DATE:
FACILATATOR:	

NAME	SIGNATURE	TITLE	LOCATION

Village of Pleasantville

Confined Space Entry Review Course

GRADE:_____

Name:_____ Dept:_____Date:_____

Signature:_____ Job Title_____

****

1. A space is large enough and so configured that it has limited entry and exit capabilities is considered a confined space? True False

2. Oxygen deficiency flammables and combustibles, toxic materials, environmental conditions, and mechanical hazards are all examples of potential hazards that could affect the confined space.
   True False

3. The ATTENDANT is the person who leaves the area to call for help during an emergency.

   True False

4. A NON_PERMITTED CONFINED SPACE is a space that does not contain any hazards capable of causing death or serious physical harm to the entrant.
   True False
5. Give Two (2) examples of confined spaces:_____ _____

6. If a hazard is detected while working in a confined space what should you do? Circle the correct answer.
   a. Eliminate the hazard while you are working.
   b. Evacuate the confined space immediately.
   c. Check with your supervisor and see what they want you to do.

7. What is the acceptable oxygen level before entering a confined space? Give the range between _____and_____%.

8. List (3) pieces of safety equipment that are required for confined space entry.
   _____ _____ _____

9. What is the first gas to be checked in a confined space in order to get a true flammability reading?
   _____

10. Describe a few of the steps you would take to prepare a confined space for entry. What is the first thing you would do?_____

SIGNATURE:_____

QUIZ

CONFINED SPACE

Name:	Dept:	Date:

1. Before entering a confined space you must:
    a. put on a respirator
    b. carry oxygen
    c. put on a work uniform
    d. test the atmosphere

2. The attendant MUST:
    a. remain outside the confined space
    b. maintain continuous communication with entrant
    c. summon help in an emergency
    d. all of the above

3. The employee may enter a confined space without an attendant:
    a. the employee determines it is safe to do so
    b. no welding is being performed
    c. positive ventilation will maintain a safe atmosphere

4. People need a _____environment to survive.
    a. 16% oxygen
    b. 19.5% carbon monoxide
    c. 16% carbon dioxide
    d. 19.5% oxygen

5. If employees are required to enter a permitted confined space, the employees shall:
    a. label the space
    b. develop and implement a written confined space program
    c. leave the decision to the Supervisor
    d. none of the above

6. If rescue is required, who will make such a rescue?
    a. attendant
    b. fire department
    c. supervisor
    d. none of the above

7. Which of the following are confined spaces?
    a. wet/dry well
    b. manhole
    c. catch basin
    d. all of the above

The following are true or false questions (please circle the correct answer).

8. Confined space atmosphere should always be tested before making an entry….true or false?

9. The attend should only enter the confined space in the event of an emergency….true or false?

10. Pure oxygen may be used to ventilate a confined space ….true or false?

VILLAGE OF PLEASANTVILLE

AWARD FOR EXCELLENCE

PRESENTED TO:_____

Successful completion of Confined Space Awareness Training

Date:_____

VILLAGE OF PLEASANTVILLE- CONFINED SPACES DEPT: WATER/SEWER

No.	Description of Space	Location	Purpose	Possible Hazard(S)	Type Of Confined Space		Work Done
					Permit	Non-Permit	

All space entered for **NON-ROUTINE** TASKS will require **TWO PEOPLE BE PRESENT**

NOTE: **ANNUAL PERMIT CHECKLIST MUST BE USED AS MINIMUM REQUIREMENT BEFORE ENTERING SPACE**

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HAZARDS: Atmospheric – Toxic, Oxygen Deficient, Flammable/Explosive –- Electrical, Mechanical, Engulfment, Environmental – hot, cold, noise.

VILLAGE OF PLEASANTVILLE- CONFINED SPACES

DEPT: HIGHWAY

No.	Description of Space	Location	Purpose	Possible Hazard(S)	Type Of Confined Space		Work Done
					Permit	Non-Permit	

NOTE: BEFORE ENTERING ANY SPACE BLOWER AND AIR MONITORING MUST BE COMPLETED TO DETERMINE IF SPACE IS SAFE FOR ENTRY AND DETERMINE WHAT TYPE SPACE YOU ARE ENTERING

HAZARDS: Atmospheric – Toxic, Oxygen Deficient, Flammable/Explosive –- Electrical, Mechanical, Engulfment, Environmental – hot, cold, noise.

VILLAGE OF PLEASANTVILLE- CONFINED SPACES

DEPT: RECREATION

No.	Description of Space	Location	Purpose	Possible Hazard(S)	Type Of Confined Space		Work Done
					Permit	Non-Permit	

HAZARDS: Atmospheric – Toxic, Oxygen Deficient, Flammable/Explosive –- Electrical, Mechanical, Engulfment, Environmental – hot, cold, noise.