

CONFINED SPACE ENTRY POLICY

1. Purpose

The purpose of this policy is to protect employees and contractors who are required to perform duties in confined spaces from serious injury or death due to hazards inherent in such spaces. This policy includes provisions that meet the requirements of the Occupational Safety and Health Administration's (OSHA) Permit-Required Confined Spaces (PRCS) standard.

2. Scope

The confined space policy applies to authorized employees of the University and contractors required to enter confined spaces to perform their duties. Confined spaces may be categorized as non-permit confined spaces or permit-required confined space (PRCS). PRCS have serious hazards that require safety precautions for entry. Proper identification of confined spaces and adherence to their corresponding entry procedures are key to the success of this program.

An inventory of known confined spaces is maintained by the Facilities Management Department. Most, but not all, of the PRCS's on campus fall into these categories: rooftop gravity tanks, fuel tanks & their vaults, escalator pits, elevator pits and shafts, and sewer pump pits. University employees are prohibited from entering gravity tanks, fuel tanks, escalator pits, elevator pits and shafts, and sewer pump pits. It is the University's policy to employ Contractors for any work that must be performed in such PRCS's.

3. Definitions

- 3.1 Alternate entry: A confined space entry approach that uses an "intermediate" level of precautions between a non-permit confined space entry and full permit-required confined space entry. It may only be used for confined spaces where the only serious hazard is atmospheric and that mechanical ventilation **and** air monitoring can control the hazard.
- 3.2 Attendant: A person stationed outside one or more permit-required confined spaces who monitors the authorized entrants and performs all attendant's duties assigned as required by OSHA's Permit-Required Confined Space Standard.
- 3.3 Authorized employees: employees of the departments of Facilities Management and Design & Construction who have received confined space training and are required to enter confined spaces to perform inspections, preventive maintenance, and repairs.
- 3.4 Confined space: A space that meets **ALL** of the following criteria: is large enough for the body to enter, is not designed for continuous human occupancy, and has limited means of entry/egress (e.g., entry through a hatch, ladder, or similar methods without regard to the number of such entrances or exits).

- 3.5 Control: implementation of precautions to reduce, rather than eliminate, the health and safety risk associated with serious hazards. Examples include personal protective equipment (PPE), ventilation, and fall protection harness and lanyard.
- 3.6 Eliminate: removal of serious hazards in confined spaces using engineering controls (such as lockout/tagout), removal of hazardous materials or substitution with less hazardous materials.
- 3.7 Engulfment: The surrounding and effective capture of a person by a liquid or flowable solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.
- 3.8 Entrant: A person who performs entry into a confined space.
- 3.9 Entry: When any part of the entrant's body breaks the plane or passes through an opening into a confined space.
- 3.10 Hazardous atmosphere: An atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to escape unaided from a permit space, injury, or acute illness due to one or more of the following:
- Flammable gas, vapor, or mist in excess of 10% of its Lower Flammable Limit (LFL)
 - Airborne combustible dust concentration that meets or exceeds its LFL
 - Atmospheric oxygen concentration below 19.5% or above 23.5%
 - Atmospheric concentration of any substance that may exceed an OSHA published dose or permissible exposure limit (PEL)
 - Any other atmospheric condition that is immediately dangerous to life or health (IDLH)
- 3.11 Non-permit confined space: A confined space where all serious hazards have been eliminated.
- 3.12 Permit-required confined space (PRCS): A confined space that has 1 or more of the following properties:
- Contains or has the potential to contain a hazardous atmosphere
 - Contains a material that has the potential for engulfing an entrant
 - Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section
 - Contains any other recognized serious safety or health hazard
- 3.13 Serious hazards: hazards in confined spaces that have the ability to incapacitate entrants and prevent their ability to self-rescue. Examples include oxygen concentrations below 19.5%, toxic exposures that are high enough to incapacitate or disorient entrants, flammable vapors, fall hazards >6 feet, dangerous internal configuration, engulfment, and similar hazards.

4. Responsibilities

4.1 Responsible Individual

The highest-ranking individual serving in a management capacity within each Program, Department, School or Division is the *Responsible Individual*. Responsible Individuals have the following responsibilities:

- Enforcing compliance with the Confined Space Entry program and taking disciplinary actions in accordance with collective bargaining agreement procedures, if any.
- Ensuring all permit-required confined spaces are identified and included in this program.

4.2 Supervisors are responsible for:

- Coordinating with the Assistant Director for Environmental Health & Safety (EHS), Facilities Management, to ensure employees attend confined space training.
- Enforcing compliance with safe work procedures or guidelines related to confined space entry.

4.3 Employees are responsible for:

- Complying with the policy: attending training and following required procedures for confined space entry.
- Notifying their Supervisor of safety issues pertaining to confined spaces.

4.4 The Assistant Director for Environmental Health and Safety (EHS), Facilities Management, is responsible for:

- Implementing the Confined Space Entry policy.
- Reviewing the policy annually and updating it as needed.
- Providing training, technical assistance, and clarification of the policy.
- Evaluating confined spaces and maintaining the confined space inventory.

4.5 The Project Manager is a University employee who directs contractor activities. The Project Manager is responsible for:

- Informing the Contractor of the University's Confined Space Entry policy, any PRCS in which entry must be performed, the PRCS's identified hazards, and any precautions that will be taken by the University employees in the area of the PRCS. Appendix A (Contractor Acknowledgement) must be completed by the Contractor and submitted to EHS.
- Coordinating activities for preparation of PRCS entry by the Contractor and to prevent hazards to University employees working near the PRCS from the activities of the contractor, and vice versa.
- Ensuring the Contractor complies with the policy.
- Forwarding the original signed permit to EHS upon completion of the work or expiration of the permit, whichever comes first.

4.6 Contractors are responsible for:

- Developing their own health & safety plans compliant with applicable OSHA standards and ensuring their employees who enter confined spaces complies with this policy, at minimum.

- Arriving at The New School work sites with all necessary confined space entry training, equipment, and a full understanding of their responsibilities as Entrants, Attendants, and/or Entry Supervisors.

4.7 Labor Relations, Human Resources Department is responsible for:

- Reviewing letters from labor unions or healthcare providers, if any, regarding issues involving confined space entry.

5. Confined Space Inventory

5.1 The Facilities Management and Design and Construction Departments must report all known and suspected confined spaces to EHS for evaluation and inclusion in the confined space inventory.

5.2 The inventory includes the following information: location, type of space, if a permit is required, known hazard(s), and if alternate entry can be used.

5.3 Permit-required confined spaces are labeled with the appropriate sign bearing the following language or its equivalent at minimum: **DANGER – CONFINED SPACE – AUTHORIZED PERSONNEL ONLY**. Note: Facilities Management and Design and Construction must notify the University's authorized contractors in writing of PRCs that are not labeled, such as elevator and escalator pits.



6. Reclassification of Confined Spaces

6.1 A confined space may be reclassified if any of the criteria that defines it as a non-permit confined space or PRCs is changed. The Confined Space Decision Flow Chart (Appendix B) can be used to determine if reclassification is possible.

6.2 A PRCs cannot be reclassified as a non-permit confined space if the hazards cannot be eliminated or controlled. In such cases, full PRCs entry procedures must be followed.

6.3 A PRCs can be reclassified as a non-permit confined space if serious hazard(s) can be **eliminated** prior to entry using lockout/tagout, guardrails, installing stairs or a ramp into a pit, or similar precautions. Note: Ventilation and personal protective equipment (PPE) do **not** eliminate hazards.

6.4 Non-permit spaces must be reclassified as permit spaces when a new serious hazard is introduced into the space (e.g., welding, flooding, use of chemical, etc.).

7. Training

7.1 All employees who must enter and/or do work in PRCS must receive training before entering a permit-required confined space or using the alternate entry approach to confined spaces.

7.2 Training must be repeated when confined space duties change, when a change in permit space operations introduce a new hazard about which the employee was not previously trained, and when there are deviations from or inadequacies in knowledge of the required procedures.

7.3 Training includes the following information:

- An overview of the OSHA Permit-Required Confined Space standard
- How to identify, evaluate, and reclassify confined spaces
- Procedures for safe entry of confined spaces
- Location of the confined spaces on campus
- The University's written Confined Space Entry policy

8. Entry Permit

8.1 A confined space entry permit (Appendix C) must be completed to document proper classification and applicable safety procedures for all permit-required confined spaces prior to entry.

8.2 The entry team's supervisor/leader, all entrants, and the University's authorized representative must sign the permit. A copy of the completed permit must be sent to EHS.

8.3 The permit must be posted conspicuously near the entrance to the confined space.

8.4 The permit is valid for only 1 work shift of the individual(s) entering the PRCS, or until completion of the work, whichever comes first.

8.5 The permit is rendered invalid if the space is reclassified or new hazards (not previously documented in the original permit) are introduced into or adjacent to the confined space. All work in the confined space must immediately stop and all entrants evacuated from the space. Work may resume only upon completion of a new permit.

9. Atmospheric Testing

9.1 Before an employee enters a permit required confined space, the internal atmosphere will be tested, with a calibrated, direct-reading instrument to determine if acceptable entry conditions exist. Testing will be for the following conditions, in the order given:

- Oxygen content - 19.5% - 23.0%;
- Flammable gases and vapors - <10% LEL
- Toxic air contaminants:
 - Carbon monoxide (CO) – 35 ppm
 - Hydrogen Sulfide (H₂S) – 10 ppm
- Volatile Organic Compounds (VOCs) – Action or response level to be identified on the permit depending on the type of VOCs present. Consult with EHS when determining an acceptable action level.
- Other toxic hazards will be specified on the *Confined Space Entry Permit*

10. Confined Space Entry Procedures

10.1 Non-permit confined spaces:

- Non-permit confined space procedures may be used when the presence of a confined space is confirmed and there is a possibility that it may be designated as a non-permit confined space because serious hazards are not present or have been eliminated.
- Only persons with confined space entry training may designate a confined space as a non-permit space in consultation with EHS.
- If entry is required to determine if hazards are present, the space must be treated as PRCS until it can be determined that it meets the definition of a non-permit space.
- The attendant and rescue team are not required when using non-permit entry procedures.
- New School employees may enter non-permit confined spaces to perform inspections, preventive maintenance, and repairs. Where feasible, the entrances to these spaces may also be labeled with a confined space sign to serve as a reminder to the entrant of the need to verify the absence of hazards prior to entry.
- If hazards arise in a non-permit space, entrants must evacuate the space immediately and EHS notified. The space must then be re-evaluated to determine if the space must be reclassified as a PRCS.
- Once the confined space is successfully designated as a non-permit space, persons who subsequently enter the confined space do not require confined space training.
- Any changes to the scope of work or work methods that may increase hazards will void the prior Non-Permit Confined Space designation.

10.2 Permit-Required Confined Spaces (PRCS):

- PRCS entry procedures are required for entry in a confined space where a serious hazard cannot be eliminated and alternate entry is not an option (i.e., a physical hazard remains).
- If entry in a PRCS is required to eliminate the hazard(s), PRCS entry procedures must be followed.
- New School employees are **prohibited** from entering a PRCS in which alternate entry procedures cannot be used. Such spaces generally fall into the following categories: roof gravity tank, fuel oil tank, elevator shafts/pits, escalator pits, and sewer ejector pits.

- As a rule, any work activity to be conducted in a PRCS must be contracted to a qualified firm and in compliance with OSHA's PRCS requirements.
- Contractors are responsible for developing permit-required confined space procedures for their employees and providing all necessary equipment for entry. PRCS entry procedures must include the following elements as required by OSHA:
 - Written permit entry system
 - Training of entrant, attendant, and entry supervisor
 - Air monitoring by an entrant outside of the PRCS prior to entry
 - Provisions for rescue in the event of an emergency
 - Facilitation of rescue with a non-entry retrieval system (e.g., harness and cable attached to a mechanical hoist), where feasible
- A confined space entry permit must be completed by the Contractor and co-signed by an authorized University representative:
 - The Contractor's Entry Supervisor will complete the University's permit.
 - Entry must be coordinated by the University's Project Manager supervising the Contractor's activities.
 - Obtain available information regarding the scope of work and potential hazards that may be introduced into the confined space. Complete the "General Information & Hazard Review" section of the permit.
 - Complete the "Safety Checklist" section.
 - Complete the "Safety Equipment" section. Identify all safety equipment necessary; include any equipment not listed on the form.
 - Complete the "Air Monitoring" section. The Entry Supervisor will specify what equipment is to be used, the particular tests to be conducted, and the frequency of monitoring. The Entrant, Attendant, or Entry Supervisor will then write the pre-entry air monitoring results in the "Results" column. Additional air monitoring results will be recorded on the permit for any alarm condition or significant changes in air concentrations from the pre-entry air monitoring results.
 - Complete the "Entrant & Attendant Review and Pre-Entry Briefing" section of the permit. All Entrants and Attendants will print and sign this section ONLY if they have reviewed the permit and verified that all safety equipment and procedures required by the permit are in place and they have had a Pre-Entry Briefing by the Entry Supervisor;
 - Complete the "Entry Supervisor/Permit Authorization" section of the permit. The University's authorized representative will sign the permit after all previous sections have been completed and a Pre-Entry Briefing has been conducted. Authorized representatives are as follows based on priority: EHS, the Fire/Life Safety Director, and the Director of Facilities Management or his designee.
 - Complete the "Permit Duration" section of the permit. Permits must be retained on site for the duration of the project. When the project is complete, the permit must be sent to EHS for record keeping and auditing purposes.
 - Permits may be issued for 1 shift only, after which they expire. A new permit is required for work in the PRCS to resume.
 - Permits are cancelled if any of the following occurs: a new hazard is encountered that was not previously identified in the "Potential Hazards"

section of the permit OR any Entrant, Attendant, or Entry Supervisor initiates an evacuation. The reason for the evacuation must be investigated and a new permit issued that includes the changes (if any) to safety controls or procedures.

10.3 Alternate entry procedure

- This procedure may only be used for confined spaces where all serious physical hazards have been eliminated and the only potential serious hazards are atmospheric. Both mechanical ventilation and air monitoring equipment (i.e., gas meters) must then be used to effectively control atmospheric hazards.
- The attendant and rescue team are not required if the alternate entry approach can be used. However, all entrants must still have confined space entry training.
- New School employees may enter PRCS's where the only serious hazard is atmospheric and forced mechanical ventilation and air monitoring can control the hazard.
- Forced ventilation is required during entry. Note: Natural ventilation may not be substituted for mechanical ventilation.
- Air monitoring must be conducted continuously throughout the entry.
- A confined space entry permit must be completed to document and authorize use of the alternate entry procedure:
 - Mark the box for "Alternate Entry Approach" in the "General Information & Hazard Review" section at the top of the *Confined Space Entry Permit*;
 - If no serious physical hazards are identified or they have been eliminated, then mark the box for "Physical Hazards Eliminated" in the "Potential Hazards" section of the permit;
 - Perform a careful hazard review of confined space entry activities by reviewing the list of "Potential Hazards" on the permit. Mark all hazards that cannot be eliminated. For alternate entry, physical hazards must be eliminated while atmospheric hazards must be adequately controlled using mechanical ventilation and air monitoring. If any physical hazards cannot be eliminated, then alternate entry may **not** be used.
 - Complete the remainder of the "General Information & Hazard Review" section on the permit;
 - Complete the "Safety Checklist" section on the permit. Several questions in this permit deal with the elimination (or control) of physical hazards.
 - Complete the "Safety Equipment" section of the permit. At a minimum for Alternate Entry, require mechanical ventilation by checking "Ventilation Equip. -blower & duct."
 - Complete the "Air Monitoring" section of the permit. Record pre-entry air monitoring results on the permit in the "Results" column and check off the "continuous" box;
 - The person that is evaluating the confined space and authorizing the use of Alternate Entry must have confined space training and print, sign, and date in the "Entry Supervisor/Permit Authorization" section of the permit.
- If hazards arise (e.g., gas meter alarm goes off), entrants must evacuate the space immediately and notify EHS. The space must then be re-evaluated and hazards controlled (if atmospheric) or eliminated (if physical) before re-entry.

11. Recordkeeping

11.1 Expired and cancelled permits will be kept for 1 year by EHS.

11.2 Employee training records will be kept by EHS.

12. Program Evaluation

12.1 EHS will evaluate the Confined Space Entry policy annually and make changes as necessary.

Appendices

Appendix A - Contractor Acknowledgement

Appendix B - Confined Space Decision Flow Chart

Appendix C - Confined Space Entry Permit

References

OSHA Permit-Required Confined Spaces Standard (29 CFR 1910.146)

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