

WNC Policies and Procedures Manual

Procedure: **CONFINED SPACE ENTRY PROCEDURE**

Policy No.: 11-12-1

Department: Environmental Health and Safety (EH&S)

Contact: EH&S Coordinator

Policy: To ensure a safe working environment when work is required to be performed in confined spaces, in accordance with 29 CFR 1910.146 and 29 CFR 1926.21 (b)(6).

Air monitoring

Attendant

Confined space

Hazardous atmosphere

Permit-Required Confined Space

Rescue Service

Section 1. General

- A. This procedure is to be followed whenever a worker is required to enter a confined space. The Occupational Safety and Health Administration (OSHA) defines a confined space as a space that:
- Is large enough and so configured that an employee can bodily enter and perform assigned work; and
 - Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that have limited means of entry.); and
 - Is not designed for continuous employee occupancy
- B. All employees required to enter a confined space shall receive training in the nature of the hazards involved, and the precautions that need to be taken. The employee also needs to be instructed in the proper use of protective and emergency equipment. If you are entering a confined space for the first time, contact EH&S to determine all the hazards that may exist and if the space may be a Permit-Required Confined Space.
- C. EH&S and Facilities is responsible for the maintenance and calibration of atmospheric testing instruments.
- D. EH&S shall provide confined space training for all who require it. Training is required for supervisors, attendants, emergency responders, atmospheric monitors as well as personnel entering the space.
- E. All employees must strive for ways to eliminate either the hazards or the need to work in permit-required confined spaces.

Section 2. Identification of Permit-Required Confined Spaces

- A. Every permit-required confined space shall be tested for hazards that may be confronted by the entrant. The entry of a permit-required confined space is required to be labeled by posting a sign reading.

“DANGER-PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER.”
Or “DANGER CONFINED SPACE ENTER BY PERMIT ONLY”

This sign will be permanently posted at potential entry or access points to the space. If the space will not be entered, effective measures should be taken to see that entrances are adequately marked and blocked.

- B. A Permit-Required Confined Space is Defined as:

A Permit-Required Confined Space that has one or more of the following characteristics: (1) Contains or has the potential to contain a hazardous atmosphere; (2) contains a material that has the potential for engulfing an entrant (3) 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; or (4) contains any other recognized serious safety or health hazard.

Section 3. General Requirements

- A. The following requirements apply to entry into Permit-Required Confined Spaces:

1. Any condition making it unsafe to open/remove an entrance cover or tank hatch shall be eliminated before the cover is removed.
2. When entrance covers are opened/removed, the entrance shall be properly guarded to prevent an accidental entrance by a worker and to protect the worker from other hazards space.
3. Before any worker enters the space, the internal atmosphere shall be tested with a calibrated, direct-reading instrument for the following conditions in the order given:
4. Oxygen content (between 19.5 and 23.5%);
5. Flammable gases and vapors (not over 10% of the lower flammable limit);
6. Potential toxic air contaminants (below permissible exposure limit).

NOTE: When testing the atmosphere of a Permit-Required Confined Space, oxygen shall always be performed first. Only if an acceptable oxygen test is obtained will other monitoring tests be performed and recorded.

7. Air borne combustible dust at a concentration below the lower flammable limit.
8. All tests must be accurate and must be completed and documented before entry.
9. The space must be free of any hazardous atmosphere whenever a worker is inside.
10. Continuous air ventilation shall be used as follows:
 - A worker shall not enter the space until ventilation has eliminated the hazard.
 - The ventilation shall be directed as to ventilate the immediate areas when a worker is present and shall continue until the worker leaves that area.
 - The air supply for the forced-air ventilation shall come from a clean source and may not increase the hazard in the space.
11. The confined space atmosphere shall be continually tested to ensure that the air ventilation is preventing the accumulation of a hazardous substance.
12. If a hazardous substance is detected during entry:
 1. Each worker shall leave the space immediately.
 2. The space shall be evaluated to determine how the atmosphere developed.
 3. Measures shall be taken to protect workers during future entry.
13. All necessary equipment used for entry into a confined space shall be provided by the responsible contractor/subcontractor involved, and maintained properly. Workers shall be trained in its proper use. Training shall include, but not be limited to:
 - Testing and monitoring equipment
 - Ventilation equipment
 - Communication equipment
 - Personal Protective Equipment (PPE)
 - Barriers and shields
 - Ladders and scaffolds
 - Rescue and emergency equipment
14. At least one attendant shall be posted outside the permit space into which entry is authorized. Attendant shall be responsible for permit space. The attendant shall be equipped with a cell phone/radio or other communication device to summon assistance in an emergency.

15. A Permit-Required Confined Space assessment form is included in appendix “A” Section to aid in inspection of confined spaces.
16. The Permit-Required Confined Space permit is included appendix “B”.
17. When the permit required confined space entry is completed, all possible entrance points must be sealed to preclude unauthorized access.

Section 4. Outside Contractor Requirements

- A. All WNC outside contractors must comply with the OSHA requirements for confined space entry.
- B. WNC outside contractors will comply with confined space requirements by utilizing their own approved procedures and entry permits. Outside contractors must contact EH&S prior to the turnover of facilities that contain permit required confined spaces to allow the spaces to be properly identified and to assure we have the necessary confined space rescue equipment.
- C. Contractor entering WNC’s existing confined spaces shall contact EH&S to familiarize themselves with the restrictions and hazards in each confined space.

Section 5. Permit System

- A. First the facilities/contractor entry supervisor must see that the Permit-Required Confined Space entry permit is properly completed. Particular attention must be paid to air monitoring, PPE, ventilation, barriers, and Rescue and Emergency equipment. When the permit is complete, the entry supervisor must sign. The entry supervisor will also print the names of the authorized entrants.
- B. The entry supervisor shall confirm that the duties as defined in the OSHA regulation 29 CFR Part 1910.146 shall be clearly known by all entrants, attendants, rescue and emergency personnel, and supervisors.
- C. Before any entry, all facilities or contractor personnel involved in the entry shall review the completed Permit-Required Confined Space Entry Permit and sign-in sheet see APPENDIX “B”, and shall confirm that all rescue equipment, PPE, and all other confined space requirements are in place.
 1. Before any entry, all the facilities or contractor authorized and trained personnel involved in the entry must sign the permit to authorize the entry. By signing they are verifying that the requirements of the permit are met.
 2. The completed permit and sign-in sheet shall be posted at the entrance of the space before any entry. All authorized entrants shall confirm that pre-entry preparations have been completed.

3. The duration of the permit shall not exceed the time required to complete the assigned task or job identified on the permit.
4. The Contractor or Facilities supervisor shall terminate entry and cancel the entry permit when the task is completed, or when a condition that is not allowed on the permit arises.

Section 6. Confined Space Entry Permit

A. The following points are areas that shall be completed on the Confined Space Entry Permit:

- Location of the permit space to be entered
- Work to be performed
- The schedule start and required finish
- Authorized entrants, with method of determining which authorized entrants are inside the permit space (sign-in on the permit)
- Personnel currently serving as attendants
- Individual currently serving as entry supervisor
- Prohibited conditions EG. NO SMOKING
- Hazards of the permit space
- The measures taken to isolate the permit space and eliminate or control hazards before entry
- Acceptable entry conditions including atmospheric monitoring results
- Results of initial and periodic tests, with tester's signature and time performed
- Rescue and emergency contacts, including equipment and phone numbers
- Communicating procedures for entrants and attendants to maintain contact during entry
- Equipment to be provided for compliance, such as personal protective equipment, communications equipment, alarm systems, and rescue equipment
- Any other information necessary
- Any additional permits issued to authorize work in the permit space; such as hot work permits

NOTE:

- 1) *The contractor or facilities entry supervisor shall verify that all safety precautions have been taken prior to signing the permit.*
- 2) *The attendant shall reverify the proper PPE as each entrant enters the space.*
- 3) *All complete permits shall be forwarded to EH&S for filing and review/auditing of the confined space program.*

Section 7. Procedure Update

- A. Confined Space entry permits shall be retained for approximately one year and used to provide feedback for the update of this procedure in this program.

Section 8. Alternate Compliance

- A. The alternate compliance procedures as defined in OSHA regulations may be demonstrated to be an acceptable alternative to the Permit-Required Confined space. This alternate procedure will only be utilized if both the Division/Department Manager and the EH&S Officer agree that compliance can be maintained without a permit.

Confined Space Assessment Form

Building: _____ **Location:** _____

Space Description: _____

Date: _____

Confined Space Criteria

If the answer is yes to *all* three of the following questions, the space is a confined space.

Is the space large enough to enter and perform work?	Yes	No
Would a person have difficulty getting out of the space in the event of an emergency?	Yes	No
Is the space not designed to be occupied for extended periods of time?	Yes	No

Permit Required Confined Space Criteria

If the answer is yes to *any* of the following questions, the confined space is Permit Required. Permit required confined spaces require posting and permit procedures must be followed.

Is there, or could there be, a flammable/combustible gas present?	Yes	No
Will chemicals be used inside the space or are chemicals present?	Yes	No
Is the space designed to contain, or has ever contained, a liquid or a flowable solid (sludge)?	Yes	No
Is the space part of a combustion process?	Yes	No
Could off gas from a combustion process enter the space?	Yes	No
Will "Hot Work" be conducted in the space?	Yes	No
Is there poor air circulation or ventilation in the space?	Yes	No
Is the space connected to a sewer system?	Yes	No
Will painting or coating be done in the space?	Yes	No
Is there a potential for engulfment (can the space be flooded or involved in a landslide or filled with other material)?	Yes	No
Is the bottom of the space steeply sloped?	Yes	No
Is there machinery in the space that, if activated, while the space is occupied, would result in injury (examples: auger, conveyor belt, or agitator)?	Yes	No
Does the space pose a potential electrical shock hazard?	Yes	No

Name: _____ **Signature:** _____
(print)

