



# Confined Space, What is It?

## What is a Confined Space?

A confined space is any enclosed or partially enclosed space, with restricted entry or exit, that is not designed or intended for continuous human occupancy. The word 'confined' may suggest 'small,' but not all confined spaces are small.

Examples of confined spaces include tanks, access shafts, utility vaults, sewers, pipes, truck or rail tank cars, boilers, manholes, silos and storage bins. Ditches and trenches may also be a confined space when access or egress is limited. 1910.146 (c)(1)

The dangers and risks associated with confined spaces are not always obvious.

### Which area is a "Confined Space"?

1. **Identify all confined spaces in your work facility.**
2. **Determine which confined spaces require a permit and which ones do not require a permit.**
  - Employers must evaluate all confined spaces regardless of whether or not employees will enter them
  - Evaluation documentation is not required
  - Evaluate all confined spaces

**Confined spaces are characterized by three criteria and must meet all three.**

1. **Space large enough and so configured that an employee can bodily enter and perform assigned work**

- Entire body can fit inside the space
  - The standard is only intended to apply to spaces large enough and configured so that the entire body of an employee can enter the space
2. **The space has limited or restricted means for entry or exit**
    - Does not mean "only one way in or out"
    - Does mean that "an entrant's ability to escape in an emergency would be hindered"
    - Space where an occupant must crawl, climb, twist, be constrained in a narrow opening, following a lengthy path, or otherwise exert an unusual effort to enter or leave, or where an entrance can be locked and not be able to open from the inside.
    - The space has limited or restricted means for entry or exit, such as:
      - Portals
      - Hatches
      - Manholes
      - Ladders
      - Spiral stairways
      - Steep stairways
      - Crawl spaces
      - Long distance to reach exit

Doors that can be walked through are not considered a limited access unless the entrant's ability to escape in an emergency is hindered.

3. **The space is not designed for continuous employee occupancy**

**A confined space is designated when all three criteria are met.** *(It is not relevant whether or not a hazard is present within the space you are identifying as a confined space.)*

Some Hazards: mechanical, physical, atmospheric hazards, inward sloping walls, or material that could engulf an entrant.

### What are the Risks

After identifying all of the confined spaces, each space must be examined to see if it is safe for entry or if it needs a confined space permit. If so, necessary precautions must be taken.

Conduct a risk assessment and know the practices and procedures necessary to ensure the safety of the entrant.

Many confined spaces contain hazardous substances or dangerous conditions. Hazards and threats could include:

- **Poor Air Quality** - Atmospheres with an oxygen content less than 19.5% (deficient) or more than 23% (enriched) are not safe. Atmospheric testing must be done.
- **Toxic Gasses** - Hydrogen sulphide, carbon dioxide, carbon monoxide, smoke, ammonia, chlorine, etc., are all potentially deadly.



Use monitoring meters (indicators) into the space to evaluate for the atmosphere.

- Levels must be checked in all areas, and at all levels of the space due to some gases are heavier and remain at the bottom, or lighter and remain at the top of the space.
  - Oxygen levels
  - Combustible gases and vapors
  - Toxic gases and vapors
- Flammable Atmospheres - A highly explosive atmosphere can be created when finely ground combustible materials such as grain, carbon, cellulose, fibers, plastics or flammable liquids are present.
- Mechanical, Electrical or Physical Hazards - Examples include moving parts, structural hazards, noise, temperature and visibility.
- Loose Materials that may Engulf or Smother - Shifting or collapse of bulk material, barrier failures, etc.

The dangers and risks associated with confined spaces are not always obvious.

Hazards must be identified and controlled before anyone enters the space. There are engineering controls that can eliminate the hazard prior to entry. All precautions must be taken for the safety of the person entering the confined space.

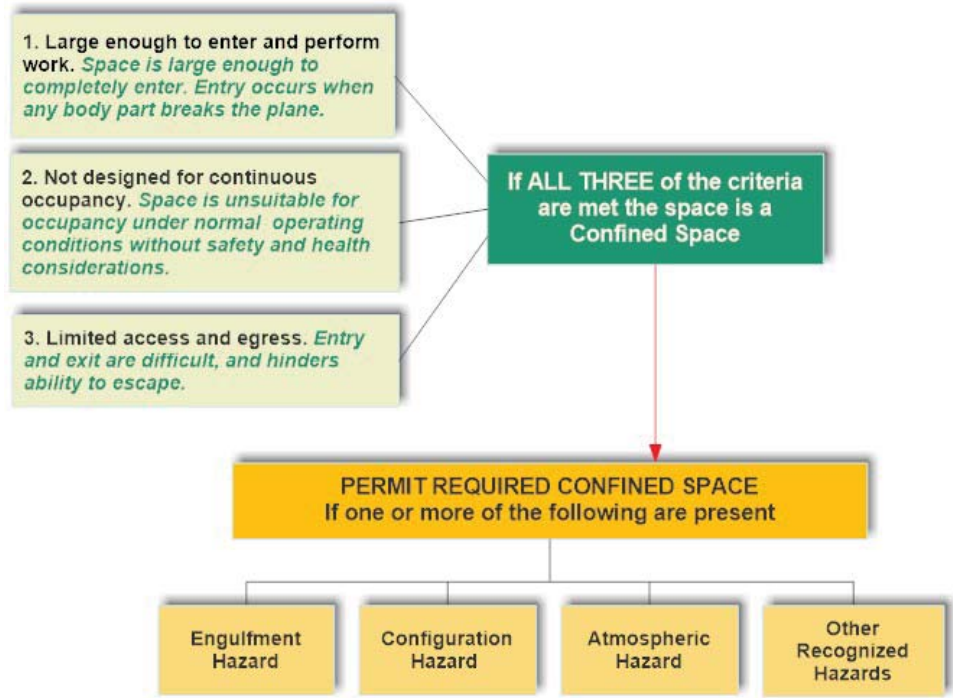
These must be done by the company prior to any entrance into the space.

Often the employees who enter the space may need specific personal protective equipment (PPE). This is likely different for each confined space: entrants may need to wear an air supply while others may only need a respirator, or special clothing, etc.

### Other Factors to Consider

- Each entrant must be trained for the specific job and review the hazards each time they will be entering a confined space.
- Ensure that adequate atmospheric testing and monitoring is being conducted with an approved air quality monitor.
- Determine the proper Personal

## Identifying Criteria for Confined Space



Protective Equipment required.

- Ensure a competent watch person is present with an effective emergency response plan.
- The watch person must always be in communication with the emergency

response team & the person in the confined space.

- Confined space supervisor must have a valid CPR/First-Aid card.
- Anyone entering a confined space must have confined space training.

## SAFETY TRAINING SIGN-IN SHEET

Company Name: \_\_\_\_\_ Date: \_\_\_\_\_

Subject: Confined Space, What is It?

The following employees participated in this training:

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