



NPCE

National Precast Concrete Association

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Confined Spaces

What is a Confined Space?

According to OSHA, there are three characteristics of confined spaces:

- It is big enough for a person to fit his or her entire body.
- It is restrictive for the person when he or she is entering and exiting.
- The space is not meant for someone to stay in for a long period of time.



29 CFR 1910.146(b)

Evaluating Confined Spaces

Facilities must be inspected for possible confined spaces. These can be determined by using a flowchart that OSHA provides. 29 CFR 1910.146(c)(1)



OSHA flowchart:

<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.146AppA>

When changes in use or equipment occur that might increase risk a reevaluation must be done. 29 CFR 1910.146(c)(6)

Warning Employees

If there are permit required confined spaces in the facility the employer is responsible for warning the employees through signage or other effective measures.

29 CFR 1910.146(c)(2)



Employee Entrance

If a confined space is not to be entered by employees, then the employer must prevent access.

If the confined space is to be entered by employees the employer must create a written confined space program that is compliant with 29 CFR 1910.146.

29 CFR 1910.146(c)(3)

29 CFR 1910.146(c)(4)



Employee Training

There are three types of employees involved in a permit required confined space entry: Authorized Entrants, Attendants, and Entry Supervisors.

Any employee to fill one of these roles is to receive training prior to filling these roles, when there is a change to assigned duties, there is a change in operations that increases hazards.

The employer is responsible for the training, establishing proficiency, and certifying the training has been done.

29 CFR 1910.146(g)

Permit vs. Non-Permit

A permit required confined space is a confined space that also has any of the following characteristics:

1. Contains or has a 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
4. Contains any other serious safety or health hazard

29 CFR 1910.146(b)

Confined Spaces in Your Plant

Possible confined spaces include:

- Silos
- Mixers
- Aggregate Bins
- Admixture Tanks
- Fuel and Oil Tanks
- Etc.



Reclassifying Confined Spaces

If a permit required space can have all actual and potential hazards eliminated including atmospheric hazards, it can be reclassified to a non-permit required confined space. The employer is responsible to document the process.

29 CFR 1910.146(c)(7)



Reclassifying Confined Spaces

Once reclassification has happened employees may enter the space without following the permit space program.

The elimination of the hazards can be accomplished by controls such as emptying the space of materials that pose an engulfment hazard and applying lockout/tagout devices. However, if a hazard becomes present the reclassification is no longer valid. 29 CFR 1910.146(c)(7)



Reclassifying Confined Spaces

If hot work is to be performed in the mixer, the reclassification is not valid, as you now have a potentially hazardous atmosphere

It is now a **permit-required confined space**.



Rescue Requirements

Equipment like tripods with harnesses are great tools for rescue. Even with those in place there needs to be procedures in place for emergency response for rescued employees, summoning rescue services if needed, and preventing unauthorized personnel from attempting rescue.

29 CFR 1910.146(d)(9)



Outside Contractors

Outside contractors must be made aware of confined spaces that are require permit for entry, the hazards identified, what controls are in place, and the experience the employer has with the space. Outside contractors must also be debriefed after completing entry operations.

When both contractors and employees will be working in a confined space the employer must coordinate the work.

29 CFR 1910.146(c)(8)



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