

US OSHA Regulatory Update

Confined Space in General Industry and Construction

Description

Confined spaces may present hazardous physical and atmospheric working conditions. It is the responsibility of the employer to ensure these hazards are recognized and mitigated prior to work being conducted within the confined space, and in compliance with the relevant regulations for General Industry 29 CFR 1910.256 or Construction 29 CFR 1926 Subpart AA.

i IMPORTANT NOTE

This document is only a summary of these regulations. The regulations are detailed and the reader is strongly encouraged to review and understand the regulations available at the U.S. OSHA website (www.osha.gov) prior to attempting any confined space entry. The regulations preamble and U.S. OSHA web page are additional sources of information that should be consulted to help ensure a complete understanding of these regulations.

It is important to note that though there are many similarities between the Confined Space regulations for General Industry and Construction, there are several key differences between 29CFR1910.146 and 29CFR1926 Subpart AA. In its FAQ document, (<https://www.osha.gov/confinedspaces/faq.html>), U.S. OSHA states there are five key differences:

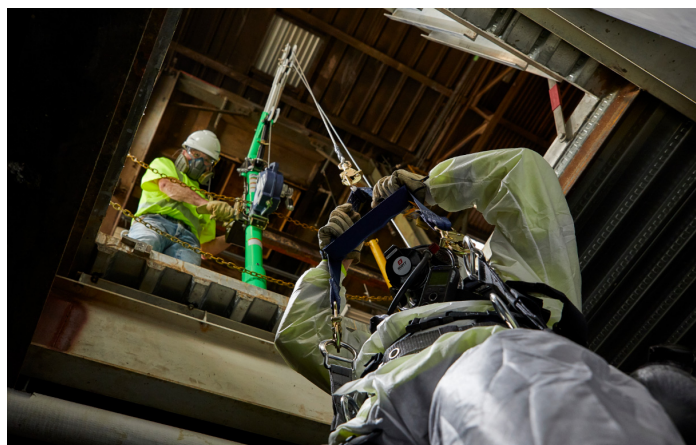
1. The Construction regulation requires more detailed provisions with regards to coordinated activities when there are multiple employers at the worksite to ensure hazards are not introduced into a confined space by workers performing tasks outside the space.
2. Requiring a competent person to evaluate the work site and identify confined spaces, including permit spaces.
3. Requiring continuous atmospheric monitoring, whenever possible.
4. Requiring continuous monitoring of engulfment hazards.
5. Allowing for the suspension of a permit, instead of cancellation, in the event of changes from the entry conditions listed on the permit or an unexpected event requiring evacuation of the space. The space must be returned to the entry conditions listed on the permit before re-entry.

Throughout both 29 CFR 1910.146 and CFR 1926 Subpart AA, U.S. OSHA specifically states that workers or their designated representative must have access to information required by the regulation (e.g., air monitoring procedures and results, identified hazards, required certifications).

Scope

The scope of 29CFR1910.146 includes all general industry. It does not apply to construction, agriculture or shipyard. The scope of 29CFR1926 applies to all of construction, with the exception of:

- Excavations under Subpart P
- Underground construction, caissons, cofferdams and compressed air under Subpart S
- Diving under Subpart Y



Definitions

U.S. OSHA regulations surrounding confined space are often consistent between the general industry and construction regulations.

- **Competent and qualified persons** – identical definitions used in other construction regulations (e.g., CFR 1926.32).
- **Controlling contractor** – the employer that has overall responsibility for construction on the worksite.
- **Entry** – the action by which a person passes through an opening into a permit-required confined space. Entry is considered to have happened as soon as any part of the body breaks the plane of the opening.
- **Hazardous atmosphere** – anything that could “expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness” from the causes listed in the regulation.
- **Permit required confined space program** – definition is similar to the general industry regulations.

General Requirements

General Industry 29 CFR 1910.146 and Construction 29 CFR 1926 Subpart AA. require that each employer must identify all confined spaces - as defined in the standard - which workers may enter and then determine if that space is a permit required space. Employers who identify a permit space or are notified of the existence of a permit space must notify their workers of the hazards of the space - such as posting of warning signs.

Even if the employer will not allow their own employees to enter a permit space, they must still be notified and trained not to enter that space. Employers must also notify the controlling contractor of any permit spaces and the hazards of those spaces.

If the employer’s workers will enter and perform work within the permit confined space, a written permit program per the standard must be developed.

There are specific procedures for reclassifying permit required confined spaces into non-permit spaces by eliminating or isolating all potential hazards. As detailed in this section, U.S. OSHA does not consider forced air ventilation as eliminating an atmospheric hazard - only controlling it.

Required information exchanges between the entry employer, the controlling contractor and the host employer. This includes, but not limited to:

- location of permit spaces to be entered,
- hazards that exist or may exist in the spaces,
- past experiences with entry into the spaces,
- precautions taken during past entries
- and precautions to be utilized during the current entry and a post-entry debrief and information exchange.

The controlling contractor is the “hub” for this information exchange. The controlling contractor must also communicate with other employers whose activities outside the permit required space may impact the safety and health of the entrants.

Confined Space Entry Program

The requirements of a permit required confined space entry program include:

- Methods to prevent unauthorized entry.
- Methods to identify potential hazards prior to entry.
- Specific procedures for safe entry (e.g., acceptable entry conditions, methods to isolate hazards or control atmospheric hazards and detect changes in conditions within the space).

- Required equipment for entry, e.g., specific PPE, monitoring equipment, ventilation, lighting per standard specifications (and is safe for the conditions that may be encountered), communications between entrants and the attendant, equipment for entry and exiting and rescue/emergency equipment.
- Procedures to monitor conditions in the space during entry.
- Assignment of an entry attendant to monitor the entrants and conditions inside and outside the space.
- Emergency and rescue procedures.
- Procedures with the controlling contractor when multiple employers have workers in the permit space - or when other employer activities on the worksite may create a hazardous condition in the permit space.
- Conduct post entry permit reviews at least annually to identify any necessary revisions to the permit program to ensure worker protection.

Permitting Process

Prior to entry the employer must document completion of all necessary procedures per both general industry and construction regulatory requirements (i.e., an entry permit). The permit must be:

- signed by the employer's entry supervisor,
- posted in a location appropriate for workers to be able to see it and confirm all precautions have been implemented,
- canceled at the end of the job, or when conditions in or outside the permit space are outside of allowable parameters of the permit.

Entry Permit



Information that must be included on the entry permit including but not limited to:

- Space to be entered and purpose
- Date and duration of entry
- Authorized entrants
- Entry attendants
- Methods to isolate, eliminate or control potential hazards
- Acceptable entry conditions
- Air monitoring results
- Required PPE
- Emergency/rescue procedures and equipment
- Communications methods between entrants and attendants
- Anything else important to know for safe entry

Training

Training must be:

- In both a language and vocabulary that the employee can understand
- Be completed before the employee is first assigned duties under this standard
- Before there is a change in assigned duties
- Whenever there is a change in permit space entry operations that presents a hazard about which an employee has not previously been trained; and
- Whenever there is any evidence of a deviation from the permit space entry procedures required by paragraph §1926.1204 of this regulation or there are inadequacies in the employee's knowledge or use of these procedures

U.S. OSHA specifically states that "This training must result in an understanding of the hazards in the permit space and the methods used to isolate, control or in other ways protect employees from these hazards, and for those employees not authorized to perform entry rescues, the dangers of attempting such rescues."

Duties of the Entrant Attendant and Supervisor

Both U.S. OSHA 29CFR1910.146 and sections 1926.1208, 1209, and 1210 list the required duties of each of the above workers. The full regulation should be reviewed to understand the duties and responsibilities of each person.

Rescue and Emergency Services

Non-entry retrieval is required at all times unless the retrieval equipment would increase the risk to the worker or not contribute to the rescue. If non-entry retrieval is infeasible, a rescue team described previously must be provided.

Non-entry rescue equipment must meet the following requirements:

- Entrant must wear a body harness with retrieval line attached.
- The other end of the retrieval line must be attached to a fixed point outside the space or attached to a mechanical device (e.g., a winch). A mechanical device is required if the space is a vertical entry type over 5 feet deep.
Note: OSHA does not give specifications for retrieval devices, but in the past a 4:1 mechanical advantage was suggested.
- The employer must evaluate any rescue service to determine that it has both the capability and adequate response time. U.S. OSHA states that adequate response time may vary with contaminants and space. However, work in an IDLH atmosphere permit space would require rescuers immediately available with proper respiratory protection (i.e. SCBA).
- The rescue service must be informed in advance of any potential hazards that they may confront during an entry rescue.
- Employers providing their own in-house rescue teams must provide proper PPE and training (including basic first aid and CPR) and conduct practice entry rescues from spaces with similar entry portal, configurations and accessibility as the spaces to be entered. A mannequin or actual person will be removed from the space as part of the practice scenario. Training will be conducted at least annually.
- If the rescued worker has been exposed to a chemical contaminant, the Safety Data Sheet for that chemical must be provided to emergency medical personnel providing assistance.

Employee Participation

- Employers must consult with affected employees and their authorized representatives on the development and implementation of all aspects of the permit space program required by §1926.1203 and/or 1926.146(g)(1) of this regulation.
- Employers must make available to each affected employee and his/her authorized representatives all information required to be developed by this regulation.

The new permit required confined space regulation is complex and must be completely reviewed and understood before attempting an entry. For smaller contractors, the services of an outside safety professional such as a Certified Safety Professional or Certified Industrial Hygienist may need to be consulted.

IMPORTANT NOTE

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