

OSHA 1926.1200 Confined Spaces in Construction: What to Expect from the New Standard



In 1993, OSHA issued 29 CFR 1910.146 as a means to protect general industry confined space workers. This standard did not apply to construction work due to the unique nature of construction worksites. Amid continuing construction industry injuries and fatalities, in the mid-1990s, OSHA began discussions with the Advisory Committee for Construction Safety and Health (ACCSH) to develop proposals specifically designed to protect construction workers in confined spaces including atmospheric and physical hazards.

Standard **29 CFR 1900.1200**, released May 1, 2015, has much in common with the general industry confined space standard and intends to address the particular safety concerns of the construction industry. The new standard becomes effective on August 3, 2015.

The changing, fluid nature of construction sites contrasts with that of the static nature of general industry facilities, necessitating a different set of safety rules concerning confined space entry and rescue. With some exceptions, the standard *“applies to employers engaged in construction work and who have confined spaces at their job site.”*

This standard provides definitions and division of responsibilities on construction sites to ensure that confined space evaluations are properly performed and recorded, and that workers are provided with appropriate training and personal protective equipment (PPE) when necessary to help prevent illness, injury and death.

Confined space is defined as a space large enough for worker entry, has limited means for entry and exit and is not designed for continuous worker occupancy. Precautions must be taken when workers are in or near confined space that is subject to a hazard.

Permit-required confined space (or permit space) refers to confined space that has one or more of the following characteristics:

- Has potential to contain a hazardous atmosphere.
- Has material with potential for engulfing entrants.
- Has internal configuration that could result in entrants becoming trapped or asphyxiated by inwardly converging walls or by a downward-sloping floor that narrows to a smaller area.
- Has other recognized serious safety or health hazards

Permit-required confined space program (or a permit space program) refers to an employer’s overall safety program intended to control and protect employees from permit space hazards, in order to regulate employee entry into permit spaces.

Other definitions of note:

- **Hazard** refers to physical or atmospheric hazards. Atmospheric hazards include flammable gas, vapors or mists, airborne combustible dust, oxygen-deficient or -enriched conditions, and conditions presenting immediate danger to life or health.

The **Host Employer** owns or manages the property where construction work takes place. The **contractor** is responsible for determining if confined spaces exist on a jobsite. If so, physical and atmospheric hazards must be identified via testing and monitoring requirements. Other requirements include training workers in use of PPE. Rescue must include retrieval using mechanical retrieval systems in some cases, and medical assistance that must record atmospheric exposure.

The **Controlling Contractor** is the employer bearing overall responsibility for worksite construction. If the Controlling Contractor owns or manages the property, then that individual is both controlling contractor and host employer.

The **Entry Employer** is any employer who decides that an employee it directs will enter permit space.

Protocols for permit space entry emphasize communication and coordination among the Host Employer, Controlling Contractor and Entry Employer. A general guide to these protocols is discussed here.

Before entry, the Host Employer must provide the Controlling Contractor with known information within its possession, including known permit space location, space hazards/potential hazards or the reason for the permit. Additionally, protective precautions for employees must be taken by the Controlling Contractor or Entry Employer.

The Controlling Contractor must provide permit space entrants with information received from the Host Employer. Each Entry Employer must obtain all information from the Controlling Contractor as to permit space hazards and entry operations, as well as inform the Controlling Contractor of plans necessary to confront any hazards within each permit space. The Controlling Contractor and Entry Employers must coordinate entry when more than one permit space entry occurs simultaneously.



Post entry, the Controlling Contractor must debrief all who have entered permit space; the Entry Employer must inform the Controlling Contractor as to the program followed and hazards encountered or created within the permit space during entry. The Controlling Contractor must inform the Host Employer of information exchanged. This process forms a complete loop in communication, ensuring that all are aware of hazards present. This **mandated communication is significant**; such obligation was not previously required, and resulted in ambiguity as to division of responsibility. The new standard intends not only to define managerial designations, but also to clarify corresponding responsibilities within often rapidly changing work environments.

Confined Space Atmospheric Testing/Monitoring

29 CFR 1900.1200 heavily emphasizes confined space atmospheric testing and monitoring, a critical aspect of planned conditions, allowing authorized, protected workers to enter confined space. The standard requires employers to test or monitor for oxygen, combustible gases and vapors, toxic gases and vapors (in specific order), and other OSHA-specified atmospheric hazards using properly calibrated, direct-reading instruments. The competent person requirement recognizes that a degree of expertise is necessary to initially identify permit space hazards through atmospheric testing, as well as ensuring proper protection for authorized entrants.

A course of action similar to that of OSHA 1910.146 directs Entry Employers to continuously monitor permit space atmospheres. Testing within the confined space must be done without mechanical ventilation; periodic monitoring must be performed after initial testing. Periodic rather than continuous monitoring is allowed if employers can prove that equipment for continuous monitoring equipment is not commercially available, or that periodic monitoring can reliably monitor for changes in PRCS conditions. Additional comparisons to general industry requirements are discussed later in this paper.

Changes in conditions may arise during work within confined spaces, such as accumulation of carbon monoxide due to use of internal combustion engines for air compressors, pressure washers and generators. As carbon monoxide is colorless and odorless, host employers, controlling contractors or subsequent entry employers would require carbon monoxide monitoring to determine that confined space conditions have changed, unless they have communicated with the employer who operated the engine in the space.

Solvents that present potential for combustion may also be present within confined spaces, and can be monitored when photoionization detectors are used. It is the employer's responsibility to ensure that instrumentation for detection of toxic and combustible gases and oxygen is available in spaces where required by the final rule.

If an entrant is injured and is exposed to a potential hazard requiring that a Safety Data Sheet (SDS) be kept on site, that written information must be made available to the medical facility treating that individual.

PRCS Rescue/Retrieval

The standard also lists detailed rescue requirements concerning workers in Permit-Required Confined Space, and includes providing medical assistance to those workers when necessary. This detailed rescue information is another new element in OSHA's regulations.

Rescue service refers to employer-designated personnel who perform both non-entry and/or entry rescue of workers from a PRCS. These workers may be on-site or off-site personnel. **Retrieval system** refers to equipment such as mechanical retrieval devices used for non-entry worker rescue from a PRCS.

Section 1926.1211 provides detailed rescue requirements, including but not limited to the following:

- Non-entry rescue is required unless retrieval equipment would increase overall risk of entry.
- Retrieval systems and related equipment should include chest or full body harness with attached retrieval line; wristlets or anklets are allowed instead if full body harnesses are infeasible or create a greater hazard.
- The retrieval line must be attached to a mechanical device or fixed point outside the permit space; a mechanical device must be on hand to retrieve workers from permit spaces that are more than 5 feet deep.
- The employer must provide all affected employees with personal protective equipment and training, including rescue duties, at no cost.
- Each affected employee must be trained in basic first aid and cardiopulmonary resuscitation (CPR), and ensure that at least one member of the rescue team is certified in basic first aid and CPR.
- Affected employees must practice permit space rescues in advance, and perform simulated rescue operations at least once every 12 months.
- Provide the rescue team or service selected with access to all permit spaces from which rescue may be necessary, so that the rescue team or service can develop appropriate rescue plans and practice rescue operations.
- The employer must designate an entry rescue service whenever non-entry rescue is not selected.

Confined space entry poses a complex set of challenges for workers, managers and safety professionals. OSHA CFR 1926.1200 is intended as a means of defining and managing confined space hazards on construction sites to help prevent illness, injury and death.



Construction Industry Final Rule Requirements Compared to General Industry

It is generally agreed that this new standard was written to mirror many facets of its general industry counterpart. However, several distinctions are discussed here.

Controlling Contractor. Both the general industry and new construction standards require that employers provide certain identification, assessment and information-exchange/coordination, including pre-entry information, to anyone physically entering a permit space. The construction standard final rule requires that the Controlling Contractor (often called the **GC**) lead this information exchange, adding a layer to prevent untrained or unqualified persons from entering the space. In addition to coordinating multiple entities when appropriate, the Controlling Contractor, upon completion of confined space work, will debrief entry personnel and apprise the Host Employer of any findings.



Competent Person. With regard to multi-employer worksites, the new construction standard requires **each employer** to ensure that a competent person identify all confined spaces in which its employees may work via a two-step evaluation, necessitating a certain degree of expertise. Those two steps a) determine if a space meets the definition of confined space, and b) if so, the competent person must identify through testing any confined spaces that are PRCs. A competent person must be capable of and have authority to identify permit space hazards, so as to prevent both unauthorized entry and to ensure adequate protection for authorized entrants. The general industry standard requires the **employer** to bear this responsibility.

Early warning system for engulfment hazards. Engulfment is defined by OSHA as *the surrounding and effective capture of a person by a liquid or finely divided (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. An early warning system to allow for adequate escape time addresses migrating engulfment hazards, such as a flash flood through a storm sewer, that are present in a non-isolated PRCs. No corresponding provision currently exists within the general industry standard.

Suspension of confined space permit. At times, a confined space permit must be canceled due to completion of work or changed conditions within the space. The new construction standard provides one exception that is not currently found within the general industry standard. When certain criteria are met, a permit may be suspended rather than canceled, *when a condition outside or inside the permit space requires an evacuation, but the permit space returns soon after to the same acceptable conditions specified under the permit.* Employers must record on the permit the event that required evacuation followed by full reassessment indicating restoration of acceptable permit conditions prior to reentry.

Note: This bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



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