

“When Walls Close In”



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Confined Space

Why We Need Training



According to OSHA 1910.146©(2), any workplace that contains permit spaces must train exposed employees to the hazards and the requirements they must meet and follow.

"Confined space"

(1) Is large enough and so configured that an employee can bodily enter and perform assigned work

(2) Has limited or restricted means for entry or exit. (Examples: tanks, vessels, silos, storage bins, hoppers, vaults, and pits)

(3) Is not designed for continuous employee occupancy



Permit-Required Confined Space

Permit-required confined space (permit space) means a 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
- (4) Contains any other recognized serious safety or health hazard.



Employer's Responsibilities

- Implement measures to prevent unauthorized entry
- Identify and evaluate hazards before employees can enter
- Implement procedures for safe entry
- Provide and maintain equipment at no cost to employees



Employer's Responsibilities (Con't.)

- Evaluate space conditions when entry operations are conducted
- Provide at least one attendant outside for the duration of entry operations
- Provide means and procedures for single attendant to respond to emergency if watching multiple sites



Employer's Responsibilities (Con't.)

- Designate persons who are to have active roles, identify duties of each and provide required training
- Develop and implement procedures for summoning emergency services and for preventing unauthorized personnel from attempting
- Develop and implement system to prepare, issue and cancel entry



Employer's Responsibilities (Con't.)

- Develop and implement procedures for closing off permit space after completion
- Review operations if there is reason to believe inadequate protection
- Review program using cancelled permits within one year, and revise if necessary



"Permit-required confined space program"

"Permit-required confined space program (permit space program)" means the employer's overall program for controlling, and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.

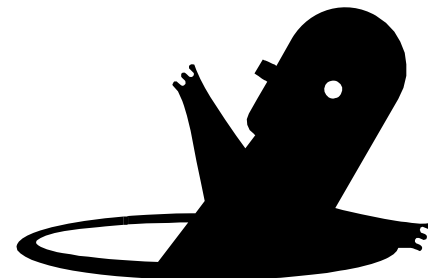
Entry



"Entry" means the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

Entry permit

“Entry permit” means the written or printed document that is provided by the employer to allow and control entry into a permit space and that contains the information specified in paragraph (f) of this section.



Required Personnel



“Entry supervisor” means the person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

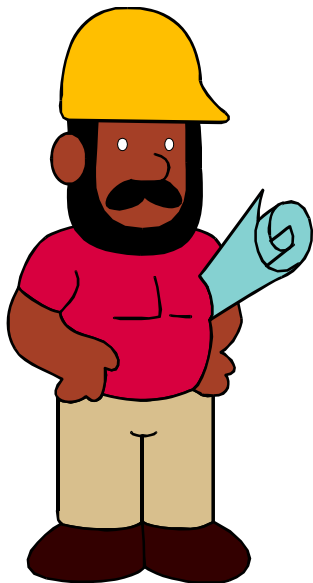
Required Personnel (Con't.)

"Attendant" means an individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendant's duties assigned in the employer's permit space program.



Required Personnel (Con't.)

"Authorized entrant" means an employee who is authorized by the employer to enter a permit space.



Hazardous Atmospheres

“Hazardous atmosphere” means an atmosphere that may 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 one or more of the following causes:

- Oxygen
- Flammable gases and vapors
- Potential toxic and air contaminants



Hazardous Atmospheres

1910.146(c)(5)(ii)(C)(1)

Atmospheric oxygen concentration below
19.5 percent or above 23.5 percent



Hazardous Atmospheres

1910.146(c)(5)(ii)(C)(2)

Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL)



Hazardous Atmospheres

1910.146(c)(5)(ii)(C)(3)

Potential toxic air contaminants



Testing

- Provide each authorized entrant or that employee's authorized representative an opportunity to observe the pre-entry and any subsequent testing or monitoring of permit spaces.
- Immediately provide each authorized entrant or that employee's authorized representative with the results of any testing conducted in accordance with paragraph (d) of this section.

Personal Protective Equipment (PPE)



Respirators



Personal Protective Equipment (PPE)

Head and Hand Protection



Personal Protective Equipment (PPE)

Full Body Protection



Personal Protective Equipment (PPE)

Foot Protection



Questions?

