



Confined Spaces

Many, or perhaps even most, workplaces have something on the premises that would be correctly termed a “conned space.” OSHA’s definition is a space that is large enough and configured in such a way that a person can enter and perform work inside, but has limited or restricted means of entry/exit, and is not designed for continuous occupancy.

Some examples are storage tanks, pits, silos, vats, degreasers, boilers, ventilation and exhaust ducts, sewers, tunnels, underground utility vaults, wells, shafts, and deep trenches.

Conned spaces can be dangerous places to work in because:

- The ventilation is likely to be poor, and dangerous levels of air contamination or oxygen deficiency can occur. Or the atmosphere may be ammalable.
- Stored products may shift and be unstable.

There may be physical barriers to movement-and it can be difficult to get into or to remove an injured worker from the space because of the size or location of entrances and exits.

Employers whose operations may require having workers enter such potentially dangerous spaces are required by OSHA to have a written program and procedure that provide proper protection including:

- Prohibiting entry without a permit approved by the supervisor and protecting and posting the openings to bar unauthorized entry
- Testing the atmosphere before entry for oxygen content and for any ammalable gases and vapors or toxic air contaminants and then purging the atmosphere of hazardous elements
- Providing appropriate ventilating, lighting, and entrant personal protective equipment for the entrant
- Having at least one attendant on standby outside the space in continuous communication with the worker inside, wearing protective equipment, and equipped with a lifeline or harness in case a rescue is needed.
- Arranging necessary rescue equipment, personnel, and procedures.
- Training all workers that will be involved in any of these activities.

Workers themselves must share the responsibility for their safety when work in a conned space is required. Primarily, this involves never entering such a space without the proper permit and without knowledge that the necessary atmospheric testing has been performed and has indicated that air inside is safe to breathe with respiratory equipment if necessary. In addition, you should never enter a conned space if you are on medication or are feeling ill.

It is also important to realize that conditions inside the space can change, sometimes very suddenly. Be alert to possible changes and be ready to leave the space immediately if you begin to feel any fatigue, dizziness, or nausea. Keep in regular touch with your standby attendant and do not hesitate to call for assistance if you need to leave the space but are having any difficulty doing so.

If you are assigned as a standby, maintain continuing contact with your buddy inside and be ready to provide assistance. This does not mean entering the space yourself unless you have been specifically equipped for such rescue procedure. A large percentage of conned space fatalities have been would-be rescuers who succumbed to the same hazard that overtook the original entrant.



Although there can be many potential risks in coned space work, proper preparation, monitoring, equipment, and training can overcome them and keep workers safe. That is our purpose and with your cooperation it will be accomplished.

A permit-required coned space is a coned space that has one or more of the following characteristics:

- contains or has the potential to contain a hazardous atmosphere;
- contains a material that has the potential for engulfing an entrant;
- has an internal conguration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a oor which slopes downward and tapers to a smaller cross section; or
- contains any other recognized serious safety or health hazard.

The Confined Space Program

Your employer has a permit-required coned space program which is designed to prevent accidents. Each permit-required coned space is marked with signs or other warnings.

What should I do?

Before entering into a permit space, you must obtain an entry permit from the entry supervisor. The entry supervisor will determine if acceptable entry conditions are present.

Before entering into a permit-required coned space:

- you must have been trained by your employer, and informed of the potential hazards that exist in the permit space, and be aware of the mode, signs and symptoms, and consequences of being exposed.
- you should know what personal protective equipment is needed, and how to properly use it.
- you should know how to summon rescue and emergency services.
- you must understand the duties of the attendant and how to communicate with the attendant.

A confined space is any space large enough for a person to enter, has restricted means of entry or exit, and is not designed for continuous occupancy. Work involving permit spaces must be viewed as a process; safe entry is just a start. You want to enter, complete your work, and exit safely.

A permit-required confined space is any space that has:

- potentially hazardous atmospheres (asphyxiating, ammable, or toxic), or
- conditions where engulfment, entrapment, or other serious hazards may exist or develop, or
- an internal conguration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a oor which slopes downward and tapers to a smaller cross section, or
- any other recognized serious safety or health hazard.



What should I do?

Before entering or working in a confined space, you must first obtain an entry permit. An entry permit must include:

- Identification of the space.
- Purpose of the entry.
- Date and duration of the permit.
- List of authorized entrants.
- Names of attendants and supervisor.
- List of hazards in the permit space.
- List of measures to isolate the space and eliminate or control the hazards.
- Acceptable entry conditions.
- Results of tests initiated by the person(s) performing the tests.
- Rescue and emergency services available and the means to summon them.
- Communication procedures for attendants and entrants.
- Required equipment.
- Other necessary information.
- Additional permits (e.g., for hot work).

Before you enter

Once the entry permits have been prepared check for:

- Atmospheric hazards.
- Energy hazards.
- Other physical hazards.

If hazards are in the atmosphere, you must:

- Test the air.
- Ventilate the space.
- Use an air-supplied respirator under certain conditions.
- Lock out sources of hazardous energy (mechanical, electrical, etc.).

The entry supervisor will verify that entry conditions are acceptable by signing the permit. The permit, and test results, must be available to the entrants. Continue to monitor air quality during entry operations. Work being done may change the air quality while you work. Affected employees can observe all air monitoring tests. Use locks and tags to prevent accidental startup of equipment while you are working in the permit space. Use only safe, grounded, approved equipment.

Safety requirements for permit spaces

When workers enter a permit space, at least one person must remain outside to summon help or provide assistance.

The entrants need to wear chest or full body harnesses with retrieval lines to make non-entry rescue attempts easier.



The attendant needs to communicate with the entrants to monitor their conditions. If a situation arises that requires emergency rescue, the attendant should summon the rescue service and stay outside of the permit space entrance. An attendant can be a trained member of the rescue service, but cannot enter the permit space until the rest of the team has arrived to start proper rescue procedures.

Confined Space – Entry/Exit Preparations

It takes knowledge, practice, and being familiar with the necessary PPE in order to properly perform an entry/exit procedure in a permit space.

All of this practice and PPE information is being provided to keep you and your co-workers safe.

What should I do?

OSHA regulations say that before you are required to enter into permit-required confined spaces you must be instructed on:

- The nature of the hazards you might run into, and the symptoms which you will notice if you are exposed to any hazards;
- How to use protective equipment to protect yourself from those hazards;
- How to communicate with the attendant in case you need to summon help or the attendant needs to warn you of hazards.

You are required to leave the permit space:

- If you recognize any warning sign or symptoms of exposure to a dangerous situation;
- If you recognize a prohibited condition;
- If an order is given by the attendant or the entry supervisor; or
- If an evacuation alarm is activated.

The employer must also provide a means of communication between the entrant and the attendant.

Entry Attendant

If you are acting as the attendant, part of your job is to monitor the entrants for symptoms of exposure to hazards. If entrants act as if they are being exposed to hazards, do not attempt a rescue unless you have:

- Been trained as an authorized entrant; and
- You have the proper protective equipment available and understand its use; and
- Someone has relieved you of your attendant duties prior to your entry.

Entry Attendant

Air monitoring is a critical part of any confined space work environment. A permit-required confined space is a confined space that presents or has the potential for hazards related to atmospheric conditions, engulfment, configuration, or any other recognized serious hazard.



When do you monitor the air?

Air monitoring is necessary whenever employees are to enter a confined space, and periodically while employees are in the confined space.

Who monitors the air?

The person in charge must know the proper use and calibration of the monitoring equipment, and supervise its use. Also, authorized entrants, those who will go into the confined space and do the work, must know how to use the testing and monitoring equipment.

Either the person in charge or another designated employee is responsible for initial testing and periodic testing as necessary.

Testing the air

Air should be tested:

- to evaluate the permit space before entry is authorized, and
- as necessary to ensure that the atmosphere remains acceptable during the work.

Test and monitor the air using the following guidelines:

- Test for oxygen first because most gas meters are oxygen dependent and will not provide reliable readings in oxygen deficient atmospheres.
- Test for flammable gases and vapors second because the threat of fire or explosion is both more immediate and life threatening (in most cases).

Finally, test for toxic air contaminants.

Any employee who enters the space, or that employee's authorized representative, shall be provided with an opportunity to observe the periodic testing required by the rule.

Disclaimer: This website and the information contained in the Injury & Illness Prevention Program (IIPP) are intended and authorized for the use of employees of this Company only; they are not intended for, nor should they be used by, the general public or any third parties. If you have not been expressly directed to this site by the Warner Bros. Studio Operations Department of Safety & Environmental Affairs, you are not authorized to use this website and you must exit now. The IIPP is a general outline of safe work practices to be used as a guideline for our productions to provide a safe work environment for our employees. Because each particular work situation is different, these IIPP guidelines are intended to be used in conjunction with consulting the appropriate production supervisors and seeking the assistance of our Production Safety personnel. The information contained in this IIPP is not a legal interpretation of any federal, state or local regulations, laws or standards. No warranty is made about any of the contents of this website.