



**TEAMSTERS**

# **Safety & Health FACTS**

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## **PERMIT-REQUIRED CONFINED SPACES**

29 CFR 1910.147

According to OSHA, a permit-required confined space (permit space) "means a confined space that has one or more of the following characteristics:

- ♦ Contains or has a potential to contain a hazardous atmosphere;
- ♦ Contains a material that has the potential for engulfing an entrant;
- ♦ 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; or
- ♦ Contains any other recognized serious safety or health hazard."

Examples of confined spaces include: manholes, stacks, pipes, storage tanks, trailers, tank cars, pits, sumps, hoppers, and bins.

### **The Hazards**

Entry into confined spaces without the proper precautions could result in injury and/or impairment or death due to:

- ♦ Engulfment
- ♦ An atmosphere that is flammable or explosive,

- Lack of sufficient oxygen to support life,
- Contact with or inhalation of toxic materials, or
- General safety or work area hazards such as steam or high pressure materials.

## **Training**

All employees who will enter permit-required confined spaces must be trained in entry procedures. Personnel responsible for supervising, planning, entering or participating in confined space entry and rescue should be adequately trained in their functional duties prior to any confined space entry.

Training should include:

- Explanation of the general hazards associated with confined spaces;
- Discussion of specific confined space hazards associated with the facility, location or operation;
- Reason for, proper use, and limitations of PPE and other safety equipment required for entry into confined spaces;
- Explanation of permits and other procedural requirements for conducting a confined space entry;
- A clear understanding of what conditions would prohibit entry;
- How to respond to emergencies;
- Duties and responsibilities as a member of the confined space entry team; and
- Description of how to recognize symptoms of overexposure to probable air contaminants in themselves and co-workers, and method(s) for alerting attendants.

## **Confined Space Entry Permit**

The Confined Space Entry Permit is the major tool in assuring safety during entry in confined spaces with known hazards or with unknown or potentially hazardous atmospheres. The entry permit process guides the supervisor and workers through a systematic evaluation of the space to be entered. The permit should be used to establish appropriate conditions. Before each entry into a confined space, a qualified person will complete an entry permit and the contents communicated to all employees involved in the operation and conspicuously posted near the work location. A standard entry permit must be used for all entries into permit-required confined spaces.

A permit is only valid for one shift. For a permit to be renewed, several conditions should be met before each re-entry into the confined space:

- ♦ Atmospheric testing should be conducted and the results should be within acceptable limits. If atmospheric test results are not within acceptable limits, precautions to protect entrants against the hazards should be addressed on the permit and should be in place.
- ♦ A qualified person should verify that all precautions and other measures called for on the permit are still in effect.
- ♦ Only operations or work originally approved on the permit should be conducted in the confined space.

A new permit should be issued or the original permit reissued whenever changing work conditions or work activities introduce new hazards into the confined space. The employer should retain each cancelled entry permit for at least one year to facilitate the review of the confined space entry program. Any problems encountered during an entry operation should be noted on the pertinent permit so that appropriate revisions to the confined space permit program can be made.

### **Atmospheric Testing**

Atmospheric test data is needed prior to entry into any permit-required confined space. Atmospheric testing is required for two distinct purposes: evaluation of the hazards of the permit space and verification that acceptable conditions exist for entry into that space. If a person must go into the space to obtain the needed data, then Standard Confined Space Entry Procedures should be followed (i.e., rescue team, attendant, entry supervisor). Before entry into a permit-required confined space, a qualified person should conduct testing for hazardous atmospheres. The internal atmosphere should be tested with a calibrated, direct-reading instrument for the following, in the order given:

- ♦ Oxygen content,
- ♦ Flammable gases and vapors, and
- ♦ Potential toxic air contaminants.

### **Lock-Out/Tag-Out**

All energy sources that are potentially hazardous to permit-required confined space entrants should be secured, relieved, disconnected and/or restrained before personnel are permitted to enter the confined space. Equipment systems or processes should be locked out or tagged out. The current lockout/tagout program being used at the site should be used as guidance. In permit-required confined spaces where complete isolation is not possible, provisions should be made for as rigorous an isolation as practical. Special precautions should be taken when entering double walled, jacketed, or internally insulated confined spaces that may discharge hazardous material through the vessel's internal wall.

## **Entry and Egress**

Means for safe entry and exit should be provided for permit-required confined spaces. Each entry and exit point should be evaluated to determine the most effective methods and equipment to be utilized to enable employees to safely enter and exit the confined space.

Appropriate retrieval equipment or methods should be used whenever a person enters a confined space. Use of retrieval equipment may be waived by the designated qualified persons if use of the equipment increases the overall risks of entry or does not contribute to the rescue. A mechanical device should be available to retrieve personnel from vertical type confined spaces greater than five feet in depth.

## **Warning Signs**

All confined spaces that could be inadvertently entered should have signs identifying them as confined spaces. Signs should be maintained in a legible condition. The signs should contain a warning that a permit is required before entry. Accesses to all confined spaces should be prominently marked.

**For more information, please contact the Safety and Health Department at (202) 624-6960.**