



# MIOSHA Fact Sheet

## General Industry Safety & Health Division

### 1910.146 Permit-Required Confined Spaces (PRCS)

#### What is 1910.146 (PRCS)?

This is the federal OSHA standard that applies to permit-required confined spaces. [MIOSHA Parts 90, Confined Space Entry and 490, Permit-Required Confined Spaces](#) (PRCS), both adopt this federal OSHA standard. This standard applies to general industry; it does not apply to agriculture, construction, or shipyard employment.

In part, the standard includes:

- Permit space evaluation,
- Entry procedures,
- PRCS program,
- Permit system and entry permits,
- Employee training,
- Rescue and emergency services, and
- Employee participation.

The PRCS standard is complex; it requires a thorough understanding of occupational safety and health to implement properly. More importantly, death and serious injury occur all too frequently in permit spaces. Therefore, it is strongly recommended that a PRCS program be developed or reviewed by an occupational safety or health professional.

#### What is a Confined Space?

A space cannot be a PRCS unless it is a confined space. Therefore, the first step in identifying a PRCS is to define a confined space. A confined space must have **all three** of the following characteristics:

- Is large enough and so configured that an employee can bodily enter and perform assigned work; **and**
- Has a limited or restricted means for entry or exit; **and**
- Is not designed for continuous employee occupancy.

To bodily enter means that it is possible for an employee's entire body to enter the space. If the space itself is too small, or the opening into the space is not large enough for the entire body to enter, then bodily entry cannot take place. This space cannot be a confined space.

Vertical ladders, small openings, and obstructions such as ductwork or pipes are all examples of conditions that limit or restrict employee entry or exit. The important concept behind this element is that the route or method of entry or exit does not create an impediment to self-rescue. Unobstructed standard stairs or stairwells are not generally considered an impediment to self-rescue.

“Continuous employee occupancy” means that the space could be occupied during normal operations, not that it is continually occupied. An important consideration for this condition is answering the question, “was this space designed for human occupancy?”

Common examples of spaces that are often confined spaces are tanks, vessels, silos, storage bins, hoppers, mixing tanks, vaults, bag houses, and pits.

#### What is a PRCS?

A “confined space” is a “permit-required confined space” when it has **one or more** of the following serious hazards:

- Contains or has a potential to contain a hazardous atmosphere; **or**
- Contains a material that has the potential for engulfing an entrant; **or**
- 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.

It is not possible to adequately discuss each of the serious hazards represented by the elements above, in this fact sheet. However, employers must evaluate the workplace (1910.146 (c)(1)) to determine if any confined spaces are PRCS. This evaluation must be done when the space is in operation, not after steps have been taken to make the permit space safe for entry.

### **Does 1910.146 allow more than one means for PRCS entry to take place?**

Yes, 1910.146 describes three, very different means of employee entry into a PRCS. The three methods are:

- Entry under (c)(4) of the standard which requires a written program, entry permits, attendant, entry supervisor, rescue services, etc. This is the most involved method of entering a PRCS.
- Paragraph (c)(5) describes the requirements for entry using the “alternate entry procedure.” The important concept of this entry procedure is, the employer can demonstrate:
  - That the only hazard posed by the permit space is an actual or potential hazardous atmosphere and,
  - Continuous forced air ventilation is sufficient to maintain a safe atmosphere.
- The final means of entry is known as “reclassification” (c)(7). For reclassification, all hazards must be eliminated from the PRCS before any type of entry takes place.

### **Are there any alternatives to these three methods of entry?**

The only alternative is not to enter the permit space by using work practices or engineering controls, for example:

- Use a tool with an extended handle so that an employee can perform a task without any part of their body entering the permit space.

- Relocate a meter or valve outside of the permit space.
- Use pumps and other equipment that can be retrieved from the permit space without employee entry into the space.

### **Where do employers appear to have problems in complying with 1910.146?**

The most common violation is that the employer has not evaluated the workplace to determine the presence of PRCS (1910.146 (c)(1)). It is best to document all confined and permit spaces. When a permit-space is identified, any hazard(s) associated with the space should be described.

In general, there is confusion regarding the three, different means of entry and their requirements. For example, a permit space cannot be entered using the alternate entry procedure (c)(5), if any other serious non-atmospheric hazard is present. This could be unguarded equipment, high temperature, an engulfment hazard, etc.

For a permit space entry, rescue services are often not adequately provided. The employer must evaluate a rescue service ability to respond in a timely manner and their proficiency in performing the rescue. It is not permissible to merely dial 911 and have this as the extent of your rescue service. Any rescue service must meet the requirements of (k)(1) Rescue and Emergency Services.

Incomplete or inadequate training, written permits, written permit-space program, equipment (air monitoring and ventilation) are other areas where violations of the standard are often found.

### **How can I get more information?**

More information is available from the MIOSHA Consultation Education and Training Division at (517) 322-1809 or on-line at [www.michigan.gov/cet](http://www.michigan.gov/cet).

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