

## What makes It a Permit-Required Confined Space?

### A Deep Dive on

### Atmospheric Hazards:

Hazardous atmospheres can be classified as:

Flammable gases, vapors, or mists in excess of 10% of its lower flammable limit (LFL)

Airborne combustible dust at a concentration that meets or exceeds its LFL. Because OSHA recognized that getting an accurate LFL measurement on dust can be difficult, it allows you to judge a combustible dust as hazardous when the dust obscures your vision at a distance of 5 feet.

Oxygen levels below 19.5% (oxygen deficient) or above 23.5 percent (oxygen enriched).

Any airborne concentration of a toxic or hazardous substance that would expose the workers in excess of the dose or permissible exposure limits found in Health & Environmental Controls or in Toxic Substances standards. It's important to note that OSHA is talking about substances that can cause death or severe impairment in a short amount of time, not substances that might have long-term health consequences.

Any other condition that is immediately dangerous to life or health.



## *Will You Know It If You See It? Confined Space Identification*

Let's try a riddle: What's big enough to get into, hard to get in and out of, and not designed for you to be there? If you guessed a confined space, well done! If you guessed anything else, I applaud your creativity. These are the three criteria a space must meet when determining if it's a confined space. Even though the General Industry Confined Space standard has been around since 1993 and the Construction Standard since 2015, there's still confusion about what's considered a confined space in the first place, much less a Permit-Required Confined Space.

1. Is it big enough to get into? You (or the average worker, or even the smallest person who is likely to enter the space and work) has to be able to fit their entire body into the space in order for it to be considered a confined space. While any small space can be dangerous (think of the inside of a machine or a small chemical container), the confined space standards aren't meant to cover every type of space that might contain a hazard. What further tends to confuse people is that "entering" a confined space occurs whenever any part of your body crosses the entrance or opening. So, if you just stuck your head into a space that your whole body COULD fit into, you would have "entered" the space, but if the space is ONLY big enough for your head to fit into, it's not considered a confined space in the first place.

2. Is it hard to get in and out of? Both Confined Space Standards talk about "limited or restricted means of entry and exit", but what does that mean in practice? Is just ducking down or stepping over something a limited means of entry and exit? Maybe. When it comes to evaluating a space, you have to consider in light of the hazards that might be present, will the entry/exit hinder the worker's ability to escape from the space or be rescued in an emergency? Thinking about it that way, it becomes easier to see that multiple pipes you must step over or duck under could become a problem during an emergency escape or rescue.

A ladder or temporary stair is almost always going to be considered limited means of entry and exit simply because it would be difficult to carry unconscious person down from them, or climb down yourself if injured or woozy. Also keep in mind, even though the space might have an access door, it could still meet the definition of limited or restricted means of entry depending on what obstacles might be on either side of that door.

3. It's not designed for you to be there. Some consensus standards discuss the "primary purpose" of the space, and say that if people aren't part of this primary purpose, then it meets this third criteria. For example a fuel tanker's primary purpose is to store fuel, and that shouldn't involve the presence of people. Instead of the space's purpose, OSHA discusses whether the space is "designed" for continuous human occupancy. If a space has functional ventilation, walkways, lighting, and chairs, you could easily make the argument that the space is designed for a human to be there, regardless of its primary purpose. In a similar vein, if the space was originally designed for human presence, but something about the design has changed over time (the ventilation system isn't working normally, or the space is damaged in some way), you could argue that it's no longer designed for human occupancy.

Once you've determined that all three requirements have been met, the next step is to determine if the space contains or has the potential to contain:

- A hazardous atmosphere
- A material that has the potential for engulfing an entrant
- Inwardly converging walls or floors that slope downward and tapers to a smaller cross-section and which could trap or asphyxiate the entrant
- Or contains any other recognized serious safety or health hazard

If **any** of these hazards are or could be present, you have a permit-required confined space on your hands, and the requirements of either the construction or