



## CONFINED SPACE ENTRY

### Toolbox Talk: Confined Space Entry Safety

**Introduction:** Today, we're discussing the critical topic of confined space entry. Confined spaces can be incredibly dangerous, and it's vital that everyone understands the risks and requirements involved. Statistics show that an estimated 60% of fatalities in confined spaces occur among would-be rescuers. This underscores the importance of proper training and strict adherence to safety protocols.

**What is a Confined Space?** A confined space is any enclosed or partially enclosed area that you can enter, but it's not designed for continuous human occupancy. Entry or exit is typically restricted. Examples of confined spaces include tanks, access shafts, utility vaults, sewers, pipes, truck or rail tank cars, boilers, manholes, silos, and storage bins.

**Permit-Required Confined Space:** According to OSHA, there are five features that define a Permit-Required Confined Space:

1. **Physical Entry:** If a person can physically enter the space, even partially.
2. **Designed for Work, Not Occupancy:** The space is not intended for human occupancy except for work-related tasks.
3. **Restricted Entry/Exit:** The space has limited means of entry or exit, which could impede escape in an emergency. This can be due to location, size, or access, and may include trip hazards, poor illumination, slippery floors, inclining surfaces, and ladders.
4. **Poor Natural Ventilation or Hazardous Atmosphere:** The space has inadequate ventilation or contains a hazardous atmosphere.
5. **Potential Hazards:** The space may become hazardous due to its design, the materials or substances inside, or the work activities carried out within.

**Risks Associated with Confined Spaces:** Understanding the risks associated with confined spaces is critical:

- **Poor Air Quality:** Atmospheres with oxygen levels below 19.5% (deficient) or above 23% (enriched) are unsafe.
- **Toxic Gases:** Gases like hydrogen sulfide, carbon dioxide, carbon monoxide, ammonia, and chlorine can be deadly.
- **Flammable Atmospheres:** The presence of finely ground combustible materials, such as grain, plastics, or flammable liquids or gases, can create an explosive atmosphere.
- **Mechanical, Electrical, or Physical Hazards:** Moving parts, structural issues, noise, temperature extremes, and visibility problems pose serious risks.
- **Loose Materials:** Shifting or collapsing bulk materials can engulf or smother workers.

**Non-Permit Required Confined Space:** Not all confined spaces require a permit for entry. A space can be classified as Non-Permit Required if it does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm. For a confined space to be classified as Non-Permit Required, it must meet the following conditions:

- **No Hazardous Atmosphere:** The space has been tested and confirmed to contain no hazardous atmosphere (e.g., no toxic gases, sufficient oxygen levels).
- **No Potential for Hazardous Atmosphere:** There is no risk of the atmosphere becoming hazardous during the time the space is occupied.

- **No Other Serious Hazards:** The space does not contain any serious physical, chemical, or biological hazards (e.g., no risk of engulfment, no unguarded machinery).
- **Continuous Safe Conditions:** The space must remain safe throughout the duration of occupancy. If conditions change and hazards arise, the space would require reclassification to Permit-Required.

Even though these spaces may not require a permit, they still require the completion of a permit in order to deem them as a non-permit required space.

**Prevention and Safety Measures** The dangers in confined spaces are not always apparent, so it's crucial to identify and eliminate all hazards before entry. Here are the steps to ensure safety:

- **Training:** All workers must be trained in confined space entry procedures.
- **Confined Space Permit:** A permit must be completed before entry. There are two types: Permit-Required and Non-Permit Required. The permit must be fully completed and approved by the site supervisor prior to entry.
- **Attendant and Monitoring:** An attendant must be present, and the breathing atmosphere must be monitored continuously.
- **Rescue Preparedness:** For Non-Permit Required entries, rescue means must be in place. For Permit-Required entries, standby rescue must be available.

**Support and Resources** If you have any doubts or need assistance, reach out to the safety department. A safety support ticket will be initiated to guide your team through the process, ensuring you are fully prepared for the confined space entry.

**Conclusion** Never underestimate the dangers of confined spaces. Proper training, preparation, and strict adherence to OSHA regulations are not just recommendations—they are lifesaving measures. Remember, unless you are trained and equipped to handle confined space hazards, never enter a confined space. Your safety is our priority.

