Confined Space Entry Procedures Toolbox Talk

WHAT'S AT STAKE?

Many workplaces contain areas that are considered "confined spaces" because while they are not necessarily designed for people, they are large enough for workers to enter and perform certain jobs. A confined space also has limited or restricted means for entry or exit and is not designed for continuous occupancy. Confined spaces include, but are not limited to, tanks, vessels, silos, storage bins, hoppers, vaults, pits, manholes, tunnels, equipment housings, ductwork, pipelines, etc.

Context is important to understand the danger of entering a confined space. One must be, careful to follow the very special precautions and procedures before entering. Even if you just are able to put your head through the opening of a confined space, you are entering. Confined spaces are not designed for someone to work in regularly, but workers may need to enter the confined space for tasks such as inspection, cleaning, maintenance, and repair.

WHAT'S THE DANGER?

THE HAZARDS ASSOCIATED WITH CONFINED SPACES INCLUDE:

- Toxic Atmosphere
- Oxygen Deficiency
- Chemical exposures
- Process-related hazards
- Physical hazards
- Safety hazards
- Trapped, Crushed, Or Buried
- Oxygen Enrichment
- Flammable or Explosive Atmospheres
- Flowing Liquid or Free Flowing Solids

- Excessive Heat

HOW TO PROTECT YOURSELF

1. PERMIT–TO–WORK PROCEDURE

Before anything else is done, the entry procedures must acquire a **permit-to-work form.**

The essential contents of a **permit-to-work system** include:

- **A written procedure,** which sets out how the system is to operate and clearly defines who may authorise particular jobs and who is responsible for specifying and implementing the necessary precautions
- A form, known as the **"permit-to-work form"**, which becomes a written and signed statement ensuring both the establishment of safe conditions for the work to commence and the maintenance of safe conditions for the duration of the work, including the provision of emergency arrangements
- A method of informing the persons carrying out the work of the exact identity, location, nature and extent of the job, the hazards involved and the precautions to be taken, and
- A system for ensuring the safe hand-back of the workplace after the job is completed and, in the case of confined space entry, after the space is vacated

2. SAFE SYSTEM OF WORK

The foundation of safe **System of Work** is driving up the necessary constituent elements

- Competence, training, supervision and suitability
- Permit-to-work procedure
- Gas purging and ventilation
- Dangerous residues
- Testing and monitoring of the atmosphere
- Mechanical, electrical and process isolation
- Respiratory protective equipment
- Other personal protective equipment

- Safe use of work equipment
- Communications
- Access and egress
- Flammable or explosive atmospheres
- Combustible materials

3. RISK ASSESSMENT

The next step in the process is conducting a risk assessment. Crucial to ensure all risks **all risk** are evaluated and controlled.

- What could be inside the space that would pose a risk?
    - Contents?
    - Oxygen Deficiency?
    - Previous Contents?
    - Oxygen Enrichment?
    - Residues?
    - Structure and Layout?
    - Contamination?
- What will be created due to the work carried out in the space?
    - Sources of Ignition?
    - Flammable Substances?
- What‘s outside the space that might pose a risk during the proposed work?
    - Inadequate Isolation?
    - Inadvertent Operation of Plant?
    - Nearby Work Activities?

4. SAFE ENTRY PROCEDURE

One of the core elements that a **confined spaces entry program** must include is a safe entry procedure. And one of the things required for entry into a confined space is an **entry permit.**

The **entry procedure** sets out the measures, procedures and practices taken to ensure the entry is carried out safely and in accordance with regulatory requirements. At a minimum, the **entry procedure** must do 8 things:

1. Require identification and evaluation of permit space

hazards before entry.
2. Specify acceptable conditions of entry, including but not limited to atmospheric conditions.
3. Allow for authorized entrants, i.e., workers authorized to enter the space, and/or workers' representatives to observe atmospheric monitoring and testing.
4. Require isolation of the permit space.
5. Specify the method that must be used to eliminate or control atmospheric hazards purging, inerting, flushing and/or ventilation.
6. Require that barriers to confined spaces be provided to protect entrants from hazards created by pedestrians, vehicles or other external factors.
7. Stipulate acceptable conditions must be verified throughout the duration of the entry.
8. Require cancellation of the entry permit and isolation of the permit space after the authorized entry ends or entry operation is completed.
9. **ENTRY PERMIT**

Specific examples of when an **entry permit** is required include any time the hazard and risk assessment determine the measures to control the risk involve the following:

- Atmospheric monitoring
- Isolation
- Lockout
- Ventilation
- Safeguarding devices
- Respiratory protection

FINAL WORD

A confined space can be more hazardous than regular workspaces for many reasons. To effectively control the risks associated with working in a confined space, a confined space hazard assessment and control program should be implemented for your workplace. Before putting together this program, make sure to review the specific regulations that apply to your workplace.