

TOOLBOX TALKS

Topic: CONFINED SPACES – DEFINITIONS

IDENTIFY

A “hazardous confined space” means a confined space that is or may become hazardous to a worker who enters or is in the space due to:

- The design, construction, or atmosphere of the space.
- The materials or substances in the space.
- The work activities or processes in the space.
- Any other conditions within or related to the space.

“**Confined space**” is an enclosed or partially enclosed space that:

- a) Except for the purpose of performing work, is not primarily designed or intended for human occupancy.
- b) Has restricted means of access or egress.

Confined spaces are **fully or partially enclosed**, so air does not move in and out of this type of space in sufficient quantities. This means there is potential for a hazardous atmosphere to be generated inside.

It must not be designed or constructed for continuous human occupancy, meaning that the space is not for people to work in on a regular basis. It is usually meant to store material, transport products, or enclose a process. But occasionally, some work must be done inside these spaces.

The hazards of working in confined spaces are often not recognized until it's too late. For example:

- Four workers died from hydrogen sulfide poisoning in a sewage holding tank.
- A worker was killed by carbon monoxide gas from a gasoline-powered pump used to drain a pit.
- A worker was caught in a mixing tank which was inadvertently started while he was inside.

COMMUNICATE AND CONTROL

Atmospheric hazards may occur in it, which means that one of the following conditions apply:

- An accumulation of flammable, combustible, or explosive agents.
- Less than 19.5 per cent or more than 23 per cent oxygen
- An accumulation of contaminants that could result in short-term health effects that pose an immediate threat to life or interfere with a person's ability to escape unaided.

Typical locations include the following:

- In chemical and petrochemical plants, confined spaces include tanks, vessels, pipes, sumps, and pits.
- Confined spaces in heavy industrial plants can be roasters, digesters, mixers, bins, and conveyors.
- Sewage-handling and water-treatment plants include various kinds of confined spaces, from settling and holding tanks to maintenance holes and wells below floor level.
- For utility workers, confined spaces include cable chambers, hydro vaults, sewer systems, water towers, excavations, trenches, and storage tanks.
- In general construction, confined spaces include vaults, maintenance holes, tanks, and other spaces that meet the definition.

Physical hazards such as energized electrical conductors, operating equipment, stored energy, pressurized pipes, noise, and heat sources must be controlled in confined spaces through a lockout/tagout procedure.

The information presented herein has been compiled from various sources believed to be reliable; however, it cannot be assumed that all acceptable safety measures are contained in this publication or that other additional measures may not be required under particular or exceptional circumstances. While every effort is made to ensure that information and recommendations contained within this publication are the best current opinions on the subject, no guarantee or warranty is made by Health Safety and You as to the absolute correctness or sufficiency of any representation contained in this publication herewith.

TOOLBOX TALKS

You must also control other hazards, including those you may introduce into the space by the work being performed. Such hazards include hazardous dusts, chemical vapours, engine exhaust, and welding fumes.

Other spaces that don't fall under the definition of confined space but need to be assessed and controlled include:

- Trenches and excavations
- Basements
- Halls
- Small rooms

These spaces must be adequately ventilated to ensure hazardous materials and atmospheres are not present and do not accumulate from the work being performed. Workers have been overcome and killed by solvent and adhesive vapours in small, poorly ventilated rooms.

THE QUIZ

1. What is the definition of a confined space?

2. What is the definition of a hazardous confined space?

3. List the three conditions of a confined space:

a) _____ b) _____ c) _____

4. Confined spaces must be adequately ventilated:

TRUE _____ FALSE _____

5. List three physical hazards of a confined space:

a) _____ b) _____ c) _____

6. List two typical locations of a confined space in chemical and petrochemical plants:

a) _____ b) _____

7. List two typical locations of a confined space in heavy industrial plants:

a) _____ b) _____

8. List two typical locations of a confined space for utility workers:

a) _____ b) _____

9. List two typical locations of a confined space in general construction:

a) _____ b) _____

TOOLBOX TALKS

ANSWERS:

1. An enclosed or partially enclosed space that (a) except for the purpose of performing work, is not primarily designed, or intended for human occupancy and (b) has restricted means of access or egress
2. A confined space that is or may become hazardous to a worker who enters or is in the space due to:
 - (a) the design, construction, or atmosphere of the space
 - (b) materials or substances in the space
 - (c) the work activities or processes in the space
 - (d) any other conditions within or related to the space
3. Wholly or partially covered, restricted access and egress, not designed for normal human occupancy;
4. TRUE; 5. Electrical energy, noise, heat, fumes, and/or pressurized pipes; 6. Tanks, pipes, and/or sump pits;
7. Roasters, digesters, mixers, bins, and conveyors;
8. Cable chambers, hydro vaults, sewer systems, water towers, excavations, trenches, and storage tanks;
9. Vaults, maintenance holes, tanks, and other spaces that meet the definition