

Tools for Life – Weekly Health & Safety Meeting



Home Healthy - Home Safe

August 2021

Confined Space

A Confined Space has limited means of entry and exit, may be subject to accumulations of toxic or flammable contaminants, and/or oxygen deficient/oxygen enriched atmosphere. Examples include, but are not limited to: Storage tanks, process vessels, ventilation or exhaust ducts, sewers, vaults, tunnels, open top spaces (more than 4 feet in depth) such as pits, tubs, excavations, and trenches. There are two categories of confined space classifications, permit required and non-permit.

About 2.1 million workers enter permit required confined spaces annually. According to the National Institute for Occupational Safety and Health (NIOSH), approximately 60 percent of confined space fatalities are rescuers. NIOSH Investigations of confined space incidents reveal the following statistics:

- 85% of the time SUPERVISION was present and 29% of the dead were SUPERVISORS
- 31% had WRITTEN Confined Space Entry PROCEDURES and 0% used their PROCEDURES
- 15% had Confined Space TRAINING yet 0% had a RESCUE PLAN
- 0% of the spaces were TESTED prior to entry and 0% were VENTILATED

One type of hazard resulting in confined space death is related to atmospheric hazards. Two of the most common types of gases found in the atmosphere of a confined space are hydrogen sulfide and carbon monoxide.

- Hydrogen sulfide is a colorless gas with the characteristic foul odor of rotten eggs at low levels. At high levels it is odorless due to olfactory fatigue. It is poisonous, corrosive, and flammable. It occurs naturally in crude petroleum, natural gas, and hot springs. In addition, hydrogen sulfide is produced by bacterial breakdown of organic materials and human and animal wastes (e.g., sewage).
- Carbon monoxide (CO) is a poisonous, colorless, odorless and tasteless gas. Although it has no detectable odor, CO is often mixed with other gases that do have an odor. So, you can inhale carbon monoxide right along with gases that you can smell and not even know that CO is present. CO is a common industrial hazard resulting from the incomplete burning of material containing carbon such as natural gas, gasoline, kerosene, oil, propane, coal, or wood. Forges, blast furnaces and coke ovens produce CO, but one of the most common sources of exposure in the workplace is the internal combustion engine.

Not sure what to do? Contact Apollo Safety prior to performing any work and treat ALL confined spaces as permit-required confined space until the space has been determined to be free of hazards.

HEALTH OR SAFETY REMINDER: Entrants must maintain communication with the trained attendant. The monitoring system must enable the attendant and or entry supervisor to order you to evacuate and to alert rescue personnel to rescue entrants if/when needed. Attendant can not have any other duties.

Discussion Points / Question:

1. What 3 characteristics define a confined space?
2. Can your work create new hazards
- 3.