Confined Space Safety Talk

What’s at Stake?

A confined space does not necessarily mean a small, enclosed space. It could be rather large, such as a ship’s hold, a fuel tank or a pit.

A confined space has three defining features:

1. A confined space is large enough to enter and perform work.
2. The second defining feature is it has limited means of entry or exit. Entry may be obtained through small or large openings and usually there is only one way in and out.
3. The third defining feature is that confined spaces are not used for continuous or routine work. In other words, you wouldn’t set up your office or the break room in a confined space.

All confined spaces are categorized into two main groups: non-permit and permit-required. Permit-required confined spaces must have signs posted outside stating that entry requires a permit. In general, these spaces contain serious health and safety threats including:

1. Oxygen-deficient atmospheres
2. Flammable atmospheres
3. Toxic atmospheres
4. Mechanical or physical hazards
5. Loose materials that can engulf or smother

What’s the Danger?

Although the danger in a confined space is obvious, the type of danger often is not. For example, a confined space with sufficient oxygen might become an oxygen-deficient space once a worker begins welding or performing other tasks.

Confined spaces are dangerous for many reasons.

- Poor ventilation can cause an accumulation of toxic gases or hazardous airborne substances, or a lack of oxygen.
- Moving equipment, slippery or dangerous surfaces, electric shock hazards, falling objects, water or other liquid contents, chemicals or extreme temperatures.

- Noise, poor visibility or shifting materials such as grain or sand could be present.

How to Protect Yourself

7 easy ways to keep yourself safe

1. Be prepared

- Attend training and pre-job briefings. The minimum is before starting work on the site, the ideal is daily. The briefing should cover:
  - hazards associated with the job;
  - special precautions;
  - energy-source controls;
  - work procedures involved;
  - personal protective equipment requirements.
- Only use tools and equipment suitable for the potential hazards in the space. Non-sparking tools shouldn’t be used in a potentially flammable space.

2. Protect the zone

- Separate and barricade the entry work area.
- Ensure signage is clear, easy to read, and in place.

3. Testing, testing, testing

- Before you go into the space, check it has been tested by a qualified person.
- Atmospheric test monitoring needs to occur near the surface of the opening, midway into the enclosure and near the bottom of the enclosure.
- Make sure there is continuous monitoring in place while you are working.
- Documentation of the tests should be available on the site and available to read.

4. Get out if it changes

- If the attendant or entry supervisor tells you to get out of the space – you must get out as quickly as you can and stay out until you are told it is safe.
- To do this, know where your exit(s) is and how to get out.
- If a retrieval device is available:
  - Wear your safety harness connected to the retrieval device.
  - Check someone is available who can use the retrieval device correctly.
- Remember! Properly trained rescuers with self-contained breathing systems and emergency equipment must be available to perform rescue.

5. Just breathe

- Fresh air ventilation should be available to ensure the proper level of oxygen is present to:
  - Support life;
  - Prevent heat exhaustion; and
  - Prevent worker fatigue.
- Use a respirator if working conditions make it necessary.

6. Do not start a fire

- If the space contains energized cable an arc flash in the space may occur.
- Burning insulation creates toxic fumes; so, does burning many other materials.

7. You are in

- When you enter the space, look around to check for:
    - structural changes due to weather, heavy traffic vibration;
    - low suspended pipe, cable trays and equipment;
    - any pressurized or energized equipment; and
    - water due to rain, sewage seepage, etc.

Final Word

Confined spaces can pose serious hazards. But if you follow simple procedures, these spaces don’t have to be so threatening.