

PROCEDURES

CONFINED SPACE ENTRY

4.0 PURPOSE

Certain work locations may present potential hazards due to the confined nature of the location. In such locations where there exists the potential for oxygen deficiency, potential hazardous chemicals or fumes, or the presence of a gaseous condition, the following safety procedures shall be adhered to.

4.1 SCOPE

- A. Confined Space entry
- B. Rescue Harness

4.2 GENERAL

In general, employees should not, under normal circumstances, enter or work in confined spaces unless necessary for the completion of the work assignment. Should such job specific work assignment require confined space entry, each individual shall be properly trained and qualified before starting work and follow the following guidelines:

1. When working in locations where oxygen deficiency or gaseous conditions can exist, the atmosphere shall be tested.
2. When flammable or hazardous gases are present, adequate ventilation shall be provided, and sources of ignition shall be eliminated. Every effort shall be made to control the gas flow and eliminate the gaseous atmosphere before proceeding.
3. Before the start of work, secure the area and post appropriate safety and warning signs.
4. Emergency rescue equipment, such as breathing apparatus, a safety harness and line, fire suit and fire extinguisher, etc., shall be readily available where adverse atmospheric conditions exist or could be expected to exist.
5. A written record of the pre-entry and post-entry test results must be made and kept at the jobsite for the duration of the work activity. Records shall be kept for a min. 1 year.

4.3 ENTERING CONFINED SPACES

Confined spaces include, throat-type vaults; vaults where all covers have not been removed, and tunneled and bored excavations in which other substructures restrict the opening.

- A. Do not enter confined spaces unless necessary for the completion of the work

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assignment.

- B. Before entering a confined space, a qualified individual shall check for the presence of explosive gas or oxygen deficiency.
 - 1. Natural Gas: 20% LEL represents a hazard
 - 2. Oxygen: Less than 19.5% is not sufficient
- C. No employee shall enter any vault or substructure with a restricted opening, or any other vault, manhole structure, or excavation that is surrounded by confining surfaces that will permit the accumulation of gas, without another employee above ground.
- D. If pre-entry testing detects the combustible gas at or above 20% LEL, oxygen less than 19.5% or any other hazardous condition the space must be purged by mechanical ventilation and then re-tested. If upon re-testing, with the ventilator operating, any hazardous condition remains, do not enter the confined space until the hazardous condition is corrected, or person entering and the standby person are wearing all PPE including a rescue harness for the hazardous condition. If the condition has been corrected by mechanical ventilation, entry is allowed while mechanical ventilator is continuously operating.
- E. Before entering, clear floor, steps, and ladder of any slippery substance, debris, or moisture to avoid slipping.
- F. Confined spaces shall be ventilated before and during any of the following procedures:
 - 1. Painting.
 - 2. Cleaning with any solvent other than water.
 - 3. When it is necessary to open any piping, or other device, which might result in the release of gas.

NOTE: All fittings and pipe to be separated or removed shall be grounded.

- 4. When pre-entry test detects gas at or above 20% LEL, or gas is likely to accumulate at or above the lower explosive limit during work activity.
- 5. When welding, flame cutting or doing any job that requires fire.
- 6. When doing any work where ventilation would reduce the hazards of the job.
- 7. When using any chemical product that could result in an unsafe level of harmful gas or vapor.

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4.4 RESCUE HARNESS

When entering a vault or excavation where hazardous atmosphere exists; Fire resistant coveralls and insulated suit, breathing-air and mask, rescue harness and leather gloves shall be worn by the person entering the confined space and the standby person. (See Section B-2)

- A. Approved rescue harness shall be equipped with a rope long enough to extend a safe distance from the excavation, but not less than 25' in total length.
- B. The rope should be knotted approximately every 2 linear feet beginning at the loose end for approximately 15', and shall be made of cotton or a flame retardant material.
- C. Use of a mechanical lifting device is recommended where it can be place directly over the confined space opening.
- D. Should a mechanical lifting device be utilized, the rope shall not be knotted and conform to the manufactures specifications.