

# Confined Space

## I PURPOSE

To provide a process to minimize workers exposure to inherent hazards when working in confined spaces.

## 2 SCOPE

This procedure applies to all functional areas, operations, offices, including employees, vendors, visitors and contractors within the scope of the Integrated Management System (IMS).

## 3 DEFINITIONS AND ACRONYMS

### Definitions

**Attendant** is any assigned person trained in confined space entry that remains outside a confined space to keep permanent eye contact, or contact by any other effective communication means, with people entering a confined space.

**Authorization Permit for Confined Space** is a Confined Space Entry Permit with a checklist that identifies the confined space, the nature of the work to be conducted and the controls in place for hazards. The permit is only good for a maximum of 12 hours and never to exceed 1 shift.

**Confined Space** is a space that:

- Is not designed for continuous worker occupancy.
- Can be subject to build-up of toxic and flammable gases.
- Can have an oxygen enriched or oxygen deficient atmosphere.
- Has limited openings for entry and exit, such tanks, ducts, silos, vessel, hopper etc.
- Can have hazardous conditions and areas as a result of the type of work done inside it.

**Entering personnel** is any person entering a confined space.

**Gas detection Equipment Operator** is the person trained in use of equipment to monitor air quality in a confined space.

**Hazardous Atmosphere** is an atmosphere that may expose employees to the risk of death, incapacitation, impairment of the ability to self-rescue, or injury or acute illness. For example:

- Flammability greater than 10% of its Lower Explosive Limit (LEL).
- Combustible particulate at a concentration greater than 10% of its LEL.
- A toxic, corrosive or asphyxiate condition.

**Non-Atmospheric Hazards** are conditions such as mechanized or hydraulic equipment, loose materials, excessive noise, extreme temperatures, Slippery surfaces, falling objects, low light and difficult access.

**Oxygen Deficient Atmosphere** is an atmosphere containing less than 19.5% oxygen by volume. The normal contents of oxygen are 20.8%.

**Oxygen Enriched Atmosphere** is an atmosphere containing more than 23.5% oxygen by volume.

#### **Acronyms**

<b>HMR</b>	HSLP Management Representative
<b>HSLP</b>	Health Safety and Loss Prevention
<b>IDLH</b>	Immediately Dangerous to Life or Health
<b>LEL</b>	Lower Explosive Limit
<b>LFL</b>	Lower Flammable Limit

## **4 ROLES AND RESPONSIBILITIES**

### **Document Owner**

HMR

### **Responsible Roles and Position-Holders**

**Contractors/Vendors** are businesses performing a service for the COMPANY. They are responsible for ensuring their employees working on COMPANY sites have completed the required permit as specified in this procedure and that their employees understand and comply with the requirements as outlined in this procedure.

**All employees** in any position whether COMPANY or contracted employees working on any COMPANY site. They shall know, understand and are responsible for complying with the requirements as outlined in this procedure each time Confined Space Work is to be executed.

**Attendant** — Any trained individual whether COMPANY or contracted, stationed outside the confined space as an observer, who monitors authorized entrants/entering personnel, and who performs all the attendant duties.

**Authorized Entrant/Entering Personnel** — Any trained individual who is authorized by the COMPANY to enter a confined space.

**HSLP** is any COMPANY employee working under and including the Regional Director of HSLP. They are responsible for periodically auditing for compliance to this procedure including correct completion of permits, and for maintaining the original Confined Space Work Permits per the Corporate Records Retention Schedule.

**A Supervisor/Foreman or Designee** can be a COMPANY employee or a contractor/vendor working or traveling on any COMPANY site. They are responsible for ensuring the permit is completed correctly, enforcement of all confined space requirements, rules, and established guidelines as outlined in this procedure. They ensure personnel are provided with the needed resources to properly carry out the requirements of this procedure, are adequately trained, and understand the provisions outlined in the confined space procedure. They inspect the location of the confined space and review information on the permit ensuring it is complete before signing it.

## 5 DIRECTION

### General

Only authorized and trained personnel will enter a confined space.

Complete, sign, and deliver the Authorization Permit for Work in Confined Spaces to HSLP.

Cylinders containing oxygen, acetylene and other gases will not be allowed inside the confined space.

Oxygen must never be used to ventilate a confined space.

Adequate lighting will be provided according to the activity to be performed.

The electrical equipment must be properly grounded.

Any work in confined spaces will be stopped if conditions under which the authorization was given have changed. (E.g. gas leakage, fuel spill, landslides, presence of cables, etc.)

The work will be restarted once the safety conditions have been reinstated.

### Supervisor

The supervisor or his authorized (trained and competent) designee determines if the work to be done requires entering any space identified as confined space which requires an Authorization for Work in Confined Spaces.

The supervisor or his authorized (trained and competent) designee plans the entrance answering the following questions:

- In which part of the process is the confined space involved?
- What Lock-out/Tag-out will be required?
- Which hazardous atmosphere requires attention?
- Are there materials not firmly fixed or jumpered?
- How is the space going to be ventilated and illuminated?
- What is necessary to provide a safe access?
- Who will enter?

- Who will be the attendant?
- What personal protective equipment will be required?
- Would other work be involved, e.g. hot work, work at height, etc.?
- Precautions?
- What emergency equipment is necessary?
- When will work start?
- When will it be completed?
- Is additional air quality monitoring required?
- Which further hazards and risks may be present?

The assessment and preparation of the workplace is made by the supervisor or his authorized (trained and competent) designee, including air quality monitoring to ensure the work atmosphere is not hazardous.

When all the questions of the authorization have been answered and the preparation has been completed, the supervisor or his authorized (trained and competent) designee will inspect the area and make the Authorization for Work in Confined Spaces official, and inform all involved personnel.

A copy of the Authorization for Work in Confined Spaces will be signed by the supervisor or his authorized (trained and competent) designee and posted at the entrance of the space.

If an Authorization expires before the work in the confined space is completed, the supervisor or his authorized (trained and competent) designee must renew and formalize the Authorization before continuing with the work.

Ensure that the Lock-out/Tag-out procedure is followed before entering.

### **Attendant**

Remain outside the confined space as an observer and never enters the confined space.

Know the confined space hazards, to include the symptoms and consequences of exposure.

Maintain permanent communication with people entering the confined space.

Know how many entrants are in the confined space.

Keep non-authorized persons outside of the area of the confined space.

Order the evacuation of the confined space if conditions become hazardous.

Has a means of communication for any emergency to initiate rescue procedures.

**Entering personnel shall:**

Be trained in confined space entry.

Know the confined space hazards, to include the symptoms and consequences of exposure.

Follow the Energy Isolation Procedure (LOTO-Lock-out, Tag-out).

Enter only if the permit authorizing entry has been completed and signed by the supervisor or his designee.

Follow the requirements on the permit authorizing entry.

Maintain continuous communication with the attendant.

Monitor work conditions in the confined space and notify the attendant immediately of hazardous conditions.

Evacuate or leave the space immediately when monitoring indicates a hazardous condition or when the attendant orders an evacuation.