Cork Scaffolding CSC Ltd	SOP.06	SAFECERT

SOP.06
Confined Space Work Procedure

Cork Scaffolding CSC Ltd	SOP.06	SAFECERT

1.0 Purpose

1.1 This document describes the Confined Space Entry Program for all sites.

This program is designed to protect employees who must perform work in confined spaces and to comply with statutory regulations.

A confined space is defined as a space that:

- Is large enough and so configured that an employee can bodily enter and perform assigned work.
- Has limited or restricted means for entry or exit.
- Is not designed for continuous employee occupancy.
- Contains hazardous substances; flammable or explosive atmospheres Contains the potential for the ingress of harmful gas, fumes or vapours.
- Contains the potential for the ingress of liquids into the space.
- Contains a free flowing solid or an increasing level of liquid or contains excess of oxygen.
- Has a lack or reasonably foreseeable lack of oxygen.
- Has an excessively high temperature.

1.2 Working inside confined spaces is dangerous.

1.3 Employees who work in confined spaces face increased risk of exposure to serious hazards in some cases, confinement itself poses entrapment hazards. In other cases, confined space work potentially exposes workers to hazards they would otherwise not be exposed to, such as asphyxiating atmospheres or the moving parts of machinery.

2.0 Requirements

2.1 All entries into confined spaces must comply with the requirements outlined in this document.

3.0 EHS department

It is the responsibility of the EHS department to:

- Oversee the Confined Space program, including ownership of this document. Maintains copies of Entry Permits.
- Reviews pre-operational activities. This review includes specifying required PPE, air monitoring strategy, air monitoring, and the parameters to be considered on the entry permit. In some cases, a method statement may be requested.
- Assists in determining whether an area meets the definition of a confined space.
- Reviews pre-operational contractor activities and signs contractor's Confined Space Permit.
- Conduct regular inspections and evaluations to determine the continued effectiveness of this program.

3.1 Management/Supervisors

Oversee entries into confined spaces

Prepare a documented risk assessments and control methods/requirements for entry into Confined Space areas.

Provide information of any known hazards in Confined Space areas.

3.2 Crew Supervisor

The Crew Supervisor is responsible for all personnel who enter or work in confined spaces.

The Crew Supervisor:

- Completes the Confined Space Permit.
- Ensures that all Authorized Entrants have received required training
- Is knowledgeable of the hazards to be encountered upon entering a confined space

- Checks that the necessary procedures, practices, and equipment used for safe entry are in good working order and are in effect before authorizing entry
- Ensures that operations comply with the terms and conditions of the Permit Ensure that all necessary tests have been performed
- Signs the Entry Permit after verifying that all conditions are met, and all other required signatures have been obtained
- Cancels the permit authorization whenever unacceptable conditions exist or upon completing permitted activities.

3.3 Attendant

An Attendant shall be present whenever anyone enters a permit required confined space. Attendant shall remain outside the entrance, be in communication with the person(s) entering the area and be ready to summon help in case of emergency.
An effective means of communication between the attendant and the person(s) inside the space must be provided whenever the Authorized Entrant is out of sight.

- Knows and understands the hazards associated with the confined space being entered. Is always on alert.
- Try to anticipate and prevent any conditions that could develop and become hazardous. This includes conditions both inside and outside the space.
- Maintains an accurate count of all persons working in confined spaces. Maintains the conditions and requirements listed on the Entry Permit.
- Notifies Entrants to evacuate the space upon observation of a hazardous condition. Maintains effective and continuous contact with Entrants.
- Remains on assignment while entrants are inside the confined space. If the Attendant must leave the area, then all Entrants must evacuate the confined space.
- Keeps unauthorized persons away from the site.
- Ensure that no vehicles or other combustion-driven equipment are allowed near the site where exhaust could contaminate the space. Do not allow vehicles or other combustion- driven equipment to park in any area that would restrict access by emergency personnel or vehicles.
- Inform any unauthorized persons that they must leave the area and inform the Authorized Entrants if unauthorized persons enter the space.
- Accomplishes a rescue of an Authorized Entrant via a retrieval line/lanyard only when it does not require the Attendant to enter the space.
- Activates the emergency process as needed.

3.4 Authorized Entrants

Individuals who enter a confined space must:

- Complete the required training and become certified in Confined Space entry.
- Participate in any lockout of hazardous energies required to enter the confined space.
- Know potential hazards and hazard controls of the space to be entered and have knowledge of all operations to be performed in a particular space.
- Be alert for signs and symptoms of exposure to hazardous atmospheric conditions.
- Wear required PPE and know how to inspect PPE for damage.
- Read the Permit and agree to accept and abide by its conditions.
- Maintain contact with the Attendant. Notify the Attendant of a self-initiated evacuation of a confined space

Exit a confined space if:

- instructed by an attendant
- an alarm is activated
- danger is perceived

Clean up the area upon completing work.

4.0 Air Monitoring

Air monitoring is required prior to any entry. An individual who has been trained and certified in the Confined Space Entry may conduct air monitoring. This monitoring can be carried out by a trained EHS person or Supervisor who:

- Completes required training.
- Calibrates monitoring equipment according to manufacturer's recommendations prior to each use.
- Performs tests indicated on the Permit and recording the results on the permit.
- Is thorough during monitoring to ensure that monitoring results are representative of all areas of the confined space.
- Promptly reports any results outside the acceptable parameters, so that the Entry Supervisor can take appropriate actions to eliminate the hazard.

5.0 Emergency Rescue

5.1 Emergency Rescue Procedures

If an emergency arises in the need to perform entry rescue, the following procedures will be implemented:

THE ATTENDANT WILL NOT ENTER THE SPACE TO PERFORM THE RESCUE.

- The Attendant will contact the Site Emergency Response Team and or the Fire Brigade
- Using retrieval devices (body harness with extraction device, etc.), the Attendant will attempt to perform non-entry rescue of the Entrant.
- First Aid/CPR will be administered by a trained individual, as required, after the Entrant is removed from the space.
- No unauthorized personnel will be allowed to attempt a confined space entry rescue.

6.0 Contractors

6.1 Contractors performing confined space entry on-site require special considerations.
Responsibilities for the company and the contractor are summarized below.
The company will:

- Ensure that all contractors who must make a confined space entry on any site shall meet the minimum requirements and are fully apprised of the requirements for confined space entry before being allowed to enter.
- Verify that entry into any confined space will be performed by using the Confined Space Permit.
- Inform the contractor of the hazardous aspects of the confined space and any the contractor of any precautions or procedures that have been implemented to protect employees.
- Coordinate entry operations with the contractor.
- Consult with the contractor at the conclusion of the operation regarding any hazards confronted or created during the entry.
- The company requires all contractors working in any Confined Space to:
- Obtain any available information regarding the confined space to be entered.
- Coordinate the entry operation with the company and or client operations.
- Provide their own trained and Authorized Entrants.
- Provide their own rescue and emergency services for entries.

7.0 Securing Space for Entry

The area surrounding a confined space during an entry must be secured to prevent unauthorized personnel from approaching or entering (e.g., barriers, safety tape, and signage). A sign- in sheet shall be available for all entrants to a confined space to sign in and sign out when leaving the CS.

8.0 Controlling Ignition Sources

All ignition sources are prohibited in confined spaces. If sources such as welding or cutting equipment are required, a Hot Work permit must be obtained. When open flame must be used in confined spaces; extra precautions must be put in place to ensure adequate ventilation.

9.0 Isolating the Area

9.1 Isolation is the process whereby a confined space is removed from service and protected from the release of energy and material into that space.

9.2 Open chemical or gas lines within the confined space must be isolated by blanking or blinding; by misaligning or removing sections of lines, pipes, or ducts; or by using a double-block and bleed system. Before beginning work in these spaces, disconnect the lines that may allow hazardous materials to enter, or take other precautions to prevent such materials from entering these areas. For example, take the lines apart, cap the ends, and insert a blank between the flanged connections. Be sure that the blank is strong enough to handle the pressure build-up if a pump is accidentally turned on.

9.3 Associated pumps and other auxiliary equipment must be locked out prior to entry.

9.4 Isolate and lock out or tag any other hazardous energy sources (e.g., electrical and mechanical hazards, water lines or pipes, and compressed air to prevent engulfment or injury from impact) to prevent possible injury to Entrants.

10.0 Ventilating and Purging Confined Spaces

10.1 Mechanical (positive forced air) ventilation may be required during some confined space entry.

10.2 The inlet to the mechanical ventilation system should be placed such that clean air is forced into the space.

10.3 If a confined space contains sludge or other residue it should be purged and flushed prior to entry.

10.4 Remove any residue using proper flushing techniques. Starting at the top, flush the space to ensure proper cleaning. If entry is required into the space, all personnel must wear suitable PPE.

10.5 Atmospheric tests must be performed continuously at regular intervals. Despite a purge, hazardous substances may remain and may accumulate and recreate a dangerous atmosphere.

11.0 Testing and Monitoring the Work Environment

11.1 Testing for oxygen content, flammability, and toxicity must be conducted by a qualified individual. Because work in confined spaces can create hazardous atmospheres, these tests shall be performed before entry, continuously during entry, or at intervals frequent enough to ensure a safe atmosphere. The required tests and the testing frequency will be listed on the Confined Space Entry Permit.

Atmospheric tests must be performed in the following order:

1. Oxygen (O2) content 19.5% - 23.5%
2. Flammability < 10% LEL
3. Toxicity
4. Carbon Monoxide (CO2) < 12.5 ppm
5. Hydrogen Sulfide (H2S) < 5.0 ppm

11.2 Oxygen content must always be tested first because some flammability test instruments require adequate amounts of oxygen to work properly. Use of sampling lines is required to avoid exposure to individuals performing the monitoring. It is also important to ensure that sampling is representative of the total atmosphere in the space. Sampling lines should be in several areas of the space and at several levels.

11.3 Monitoring equipment must be field checked before each use, calibrated, and sent back to the manufacturer or supplier for factory calibration every six months. A label indicating the dates of the factory calibration must be affixed to the equipment.

12.0 Completing Permits

12.1 A Confined Space Permit is required before entering a confined space. The entry permit may be obtained from the PSCS or the Client, in absence of any other permit system the company may issue its own permit.

12.2 After all required testing is completed and signatures are obtained, the permit must be posted at the work site in an easily visible location. The signatures on the permit are verification that the space is safe to enter. Therefore, all co-signers shall ensure that:

All appropriate entries are made on the permit Tests specified on the

permit are conducted.

All procedures and equipment specified on the permit are in place to permit safe entry Rescue services and the

means for summoning them are available.

12.2 Each permit will be valid for the duration of only one work shift unless otherwise noted. Completed permits will be retained for one year.

13.0 Equipment

13.1 To ensure safe entry conditions and to ensure that potential rescue operations are successful, all the necessary entry and rescue equipment must be present and in place prior to any entry into the confined space.

14.0 Confined Space Operations

14.1 Permit-Required Confined Space

The most dangerous confined spaces are those that not only meet the definition of “confined space” but which also contain other hazards. The HSA requires special precautions for these spaces and refers to them as Permit-Required Confined Spaces. A permit-required confined space is a confined space that has one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere from the ingress of any chemical, gas or any other substance that poses a risk to an entrant.
- Contains a material that has the potential for engulfing an entrant.
- By its design does not present easy access or egress or contains physical properties that restrict easy movement within the confined space.
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross-section.
- Contains any other recognized serious safety or health hazard.

14.2 Confined Space Entry Process

No personnel will enter a confined space unless:

- It is absolutely necessary, and all other alternatives have been exhausted.
- Confined space entries are to be by permit only.
- Only persons who are certified in Confined Space Entry may serve as Authorized Entrants, Attendants, or Supervisors.

14.3 Notification of Need to Enter confined Space

Notify EHS at least two days prior to the onset of work. It is the responsibility of the Entry Supervisor or the Project Manager to submit this notification.

The purpose of this notification is to ensure that:

- Site Safety Advisor identifies all potential hazards.
- The proper PPE, air monitoring requirements, and other activity precautions are
- identified and prepared for entry.
- Site Security is aware of the time and location of the project.
- Site Engineer, EHS and the Supervisor will review and identify requirements needed for entry on the Confined Space Entry Permit.
- The Confined Space Entry Permit is available.

14.4 Day of Work

Isolate the hazards according to the procedures specified on the Confined Space Entry Permit.

Set up the mechanical ventilation system if required. Set up the Entrant

Retrieval System (tripod).

The Supervisor completes air monitoring and records the results on the Permit.

Authorized Entrants dons PPE, including body harnesses and rescue lifelines, check radios (if required), and don personal continuous air monitoring equipment (if required).

Prior to the beginning of work, the Supervisor will hold a Pre-Entry meeting at the work location. This meeting will be attended by the Supervisor, Authorized Entrants and Safety personnel. The work plan will be discussed; responsibilities reviewed, and specified individuals will sign off the Permit.

The Permit is posted at the entrance to the confined space.

14.5 During Work

Authorized Entrants will remain in constant contact with the Attendant. If the Authorized Entrants are out of sight and sound of the Attendant, then radio communication must be used.

The Crew Supervisor will re-monitor the work environment, after each break time.

14.6 Upon Completion of Work

Clean up work area.

Secure the confined space to prevent unauthorized entry.

15.0 Risk Assessment

15.1 The EHS department conduct risk assessments on all processes and operations to identify the hazards involved. Risk Assessments are task based.

15.2 All risk assessments are documented and stored on a server where all Project Managers has access.

16.0 Training

16.1 Training is required to ensure adherence to this program. The intent is to ensure that all persons working in confined space areas are aware of and understand the risks and arrangements for their safety. Training is provided by an external training provider (Competent/Qualified Person) and documented by the HR Dept.

16.2 All employees should be trained on the hazards associated with each operation that they work on or with. These hazards should be documented within the standard operating procedure for each operation or task the employee is expected to perform. As well as making the employee aware of the hazards they should be fully aware and understand the controls that are in place to safeguard them against harm.

17.0 Confined Space Monitoring and Inspection

17.1 Inspection and Maintenance of equipment

Supervisors are responsible for operation of all confined space equipment and will ensure that such are maintained in a safe condition for use. Entrants are responsible for carrying out daily safety checks and reporting any defects found with such equipment.

17.2 Auditing

Audits and inspections are carried out on a regular basis both on a local management level in each area concerned and by EHS or equivalent on each site.

17.3 Non-conformance and Corrective Action

Failure to follow the procedure on Confined Space will result in disciplinary action being taken against the individuals involved.

17.4 Records

Risk assessment documentation should be reviewed and updated annually.
Repair, maintenance, statutory certificates, and training records should be maintained for at least seven (7) years.

18.0 Alterations to this document

18.1 This procedure is owned by the EHS Department.

Any changes to this procedure cannot be affected without the permission of the Safety Manager.

References:

- Company Safety Statement.
- Safety, Health and Welfare at Work Act 2005
- Safety, Health and Welfare at Work (Construction) Regulations 2013.
- Safety, Health and Welfare at Work (General Applications) Regulations. SI 299 of 2007
- H.S.A. Code of Practice – Confined Space