

Attachment 4 - SCU Confined Space Entry Requirements for Contractors

Pre-Entry Meeting

Prior to starting any on-site work involving confined spaces, the contractor's representative shall meet with the SCU Supervisor or Project Manager to review the SCU requirements for confined space entry and ensure the following procedures are followed.

Non-Permit Confined Space Entry

Contractor personnel that enter non-permit required confined spaces such as air handlers with limited access shall prior to entry:

- Perform hazardous energy control procedures (LOTO) prior to entry following either equipment specific hazardous energy control procedures for the equipment to be entered or SCU's general LOTO program for equipment with a single hazardous energy source.
- Verify equipment has been properly isolated and locked/tagged out.

Reclassification of Permit Required Confined Spaces

Those permit required confined spaces identified on the confined space inventory with a "Y*" under the "PRCS?" column, may be reclassified as a non-permit required space as long as all of the hazards of the space can be eliminated. The reclassification of a permit required space must be documented and the following procedures implemented:

- The qualified contractor shall complete and sign the PRCS Reclassification form provided in Attachment 4.
- All hazards identified are to be controlled as shown on the reclassification form prior to entry.
- If a hazard arises during an entry of a reclassified space:
 - All personnel must immediately leave the space.
 - The space must be re-evaluated and all hazards eliminated before re-entry.

Permit Required Confined Space Entry

The contractor's on-site supervisor/foreman is responsible for ensuring that, at a minimum, the following confined space entry procedures are implemented:

- The contractor's confined space entry team shall:
 - Implement measures necessary to prevent unauthorized entry.
 - Identify and evaluate hazards of permit spaces before employees enter them.
 - Develop and implement the means, procedures and practices necessary for safe permit space entry operations, including, but not limited to, the following:
 - Specifying acceptable entry conditions.
 - Isolating the permit space.

- Purging, inerting, flushing, or ventilating the permit space, as necessary, to eliminate or control atmospheric hazards.
- Providing pedestrian, vehicle, or other barriers, as necessary, to protect entrants from external hazards.
- Verifying that conditions in the permit space are acceptable for entry throughout the duration of the authorized entry.
- Provide and maintain the following equipment, and ensure employees properly use the equipment:
 - Testing and monitoring equipment needed to ensure employee safety.
 - Ventilating equipment needed to obtain acceptable entry conditions.
 - Any necessary communication equipment to ensure proper safety measures.
 - Personal protective equipment when engineering and work practices do not adequately protect employees.
 - Lighting equipment needed to enable employees to see well enough to work safely and to exit the space quickly in an emergency.
 - Barriers and shields, as required, to protect entrants from external hazards.
 - Equipment, such as ladders, needed for safe ingress and egress by authorized entrants.
 - Rescue and emergency equipment needed for summoning emergency services and for non-entry rescue.
 - Any other equipment necessary for safe entry into permit spaces.
- Evaluate permit space conditions prior to entry:
 - Test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin. Pre-entry testing will be performed to the extent of feasibility before entry is authorized.
 - Air and Oxygen Monitoring is required before entering any Permit Required Confined Space. Oxygen levels in a Confined Space must be between 19.5 and 23.5 percent. Levels above or below will require the use of an SCBA (Self-Contained Breathing Apparatus) or other approved air supplied respirators.
 - Additional ventilation and Oxygen Level Monitoring is required when welding is performed. The monitoring will check Oxygen Levels, Explosive Gas Levels and Carbon Monoxide Levels.
 - Entry will not be permitted if explosive gas is detected above 10% of the Lower Explosive Limit (LEL).
 - Test or monitor the permit space continuously to determine if acceptable conditions are being maintained during the course of entry operations.
 - When testing for atmospheric hazards, test first for oxygen, then for combustible gases and vapors, and then for toxic gases and vapors.
 - Provide at least one Attendant outside the permit space into which entry is authorized for the duration of entry operations.
- Confined Space Rescue.

- Procedures for summoning rescue and emergency services for rescuing entrants from permit spaces shall be documented on the Confined Space Entry Permit. For high hazard entries, such as vertical tank entries and/or entries requiring air supplied respirators, the contractor must arrange for a standby rescue team to be located at the space to be entered.
- **Under no circumstances shall unauthorized personnel be allowed to attempt an entry rescue.** Non-entry rescue and rescue preparations may be performed as long as doing so does not endanger the rescuers' health and safety.
- To facilitate non-entry rescue, retrieval systems or methods must be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant. Retrieval systems will meet the following requirements:
 - When required, each authorized entrant will use a chest or full body harness, with a retrieval line attached at the center of the entrant's back, near shoulder level, or above the entrants head. Wristlets may be required in lieu of the chest or full body harness if the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative.
 - The other end of the retrieval line will be attached to a mechanical device or fixed point outside their permit space in such a manner that rescue can begin as soon as the attendant becomes aware that rescue is necessary. A mechanical device will be available to retrieve personnel from vertical type permit spaces more than five feet deep.
- If an injured entrant is exposed to a hazardous substance, a copy of the Material Safety Data Sheet MSDS shall be made available to the medical facility treating the exposed entrant.
- **Confined Space Entry Permit** – The Contractor's Entry Supervisor shall ensure a Confined Space Entry Permit (Attachment 5) or an approved equivalent is completed prior to entry.
 - The permit will identify:
 - The permit space to be entered.
 - The purpose of the entry.
 - The date and the authorized duration of the entry permit.
 - The authorized Entrants, by name, within the permit space.
 - The personnel, by name, currently serving as Attendant(s).
 - The individual, by name, currently serving as Entry Supervisor, with a space for the signature of the Entry Supervisor who originally authorized entry.
 - The hazards of the permit space to be entered.
 - The measures used to isolate the permit space and to eliminate or control permit space hazards before entry. NOTE: Those measures can include lockout or tagging of equipment and procedures for purging, inerting, ventilating, and flushing permit spaces.
 - The acceptable entry conditions.
 - The results of initial and periodic tests performed, e.g., atmospheric testing conditions, accompanied by the names or initials of the testers and by an indication of when the

tests were performed. Atmospheric test results shall be recorded a minimum of every 30 minutes.

- The rescue and emergency services that can be summoned and means for summoning those services.
- The communication procedures used by authorized Entrants and Attendants to maintain contact during the entry.
- Equipment, such as personal protective equipment, testing equipment, communications equipment, alarms systems, and rescue equipment to be provided for compliance.
- Any other information whose inclusion is necessary, given the circumstances of the particular confined space in order to ensure employee safety.
- Any additional permits, such as for hot work, that have been issued to authorize work in the permit space.
- Before entry begins, the Entry Supervisor, identified on the permit, will sign the entry permit to authorize entry and the permit will be reviewed by the EHS Department.
- The completed permit will be made available at the time of entry to all authorized Entrants, by posting it at the entry portal or by any other equally effective means, so that the Entrants can confirm that pre entry preparations have been completed.
- The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit. Once the confined space entry has been completed, a copy of the cancelled permit is to be provided to the EHS Department.
- **Confined Space Entry Team** - The Confined Space Entry Team shall be established on the Confined Space Entry Permit, described below, for each permit required confined space entry, and shall consist of the following positions: Confined Space Entrant(s), Confined Space Entry Attendant, and Confined Space Entry Supervisor. The roles and responsibilities for each member of the team are summarized below:
 - Confined Space Entrant:
 - Maintains communications with the Confined Space Entry Attendant.
 - Alerts the Attendant whenever the Entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or the Entrant detects a prohibited condition.
 - Exits from the confined space as quickly as possible whenever:
 - An order to evacuate is given by the Attendant or by the Entry Supervisor
 - The Entrant recognizes any warning sign or symptom of exposure to a dangerous situation
 - An air-monitoring instrument alarm is activated
 - An evacuation alarm is activated
 - Confined Space Entry Attendant:
 - Maintains communications with the Entrants to monitor their status and to alert them of the need to evacuate the space, if required.
 - Maintains a list of Entrants inside the confined space.
 - Remains outside the confined space during entry operations.

- Performs non-entry rescue and rescue preparations, as long as doing so does not endanger the Attendant's health and safety.
- Monitors activities inside and outside the space to determine if it is safe for Entrants to remain in the space. Orders the Entrants to evacuate the confined space immediately under any of the following conditions:
 - The Attendant detects a prohibited condition.
 - The Attendant detects behavioral effects in the Entrant from a hazardous exposure.
 - The Attendant detects a situation outside the space that could endanger the Entrant.
 - The Attendant cannot effectively and safely perform the required duties.
- Summons rescue and other emergency services as soon as the Attendant determines that Entrant(s) may need assistance to escape from the confined space.
- Performs no duties that might interfere with the primary duty of monitoring and protecting the Entrant(s).
- Takes the following actions when unauthorized persons approach or enter a confined space while entry is underway:
 - Warns the unauthorized persons to stay away from the confined space.
 - Advises the unauthorized persons to exit immediately if they have entered the confined space.
 - Informs the Entrant(s) and the Entry Supervisor that unauthorized persons have entered the confined space.
- Confined Space Entry Supervisor
 - Signs the Confined Space Entry Permit once it is complete. The signature officially allows entry into the confined space and verifies that all actions and conditions necessary for safe entry are provided and will be maintained.
 - Ensures that the Confined Space Entry Permit is posted at the entry point of the confined space.
 - Ensures that rescue services are available and that the means for summoning them are operable.
 - Informs employees and contractors working in the confined space that if any use or configuration is changed within the confined space, then a re-evaluation of the space for new hazards is conducted before re-entry.
 - Cancels authorization of the Confined Space Entry Permit, or terminates the entry, whenever unacceptable conditions exist or upon completing permitted activities.
 - Upon completion of confined space entry operation, ensures that the terminated Confined Space Entry Permit is retained as per Section 9.