

Ohio Environmental Protection Agency

Safety Office

Safety Standard Safety Operating Procedure Number: SP 14-4

DATE: April 29, 2014

STATUS: FINAL

Title: Confined Space Entry

Purpose:

The purpose of this Safety Standard Operating Procedure (SSOP) is to outline the Agency policy on entering confined spaces during field activities.

Reference: 29 CFR 1910.146, Permit-Required Confined Spaces

Definitions:

1. **Confined Space** - A confined space is a space which meets all of the following criteria:
 - a. Is large enough and so configured that an employee can bodily enter the space and perform assigned work.
 - b. Has limited or restricted entry and exit (doorways and other portals thru which a person can walk through are not considered to be limited means of entry or exit).
 - c. Is not designed for continuous employee occupancy.

Examples: storm water or sanitary sewers, septic tanks, sewage digester, storage tanks, silos, vats, utility vaults, sump pits.

Note: Confined spaces are not always marked or may not be readily identified. Agency employees must access each situation to determine if the area fits the definition of a confined space. Facility management should be consulted to determine if any confined spaces have been identified within their facility.

2. **Confined Space Entry Permit (CSEP)** – The written or printed document that is issued to allow entry into a permit required confined space. These permits are approved by the Agency Safety Manager, or the Agency Confined Space Entry Supervisor outside of normal working hours. A copy of all issued permits must be provided to the Agency Safety Manager once the entry and subsequent work has been completed.
3. **Non-Permit Confined Spaces** – A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Examples: vented vaults, dropped ceilings.

Although these spaces are considered confined spaces, these spaces have either natural or permanently engineered ventilation to prevent the accumulation of a hazardous atmosphere, and they do not present engulfment or other serious hazards.

Note: All confined spaces should be considered permit-required until the space has been evaluated and a determination is made that the space does not meet the requirements for a permit-required space.

4. **Permit-Required Confined Spaces** – A confined space (as defined above) which has one or more of the following characteristics:
 - a. Contains or has the known potential to contain a hazardous atmosphere;
 - b. Contains material with the potential for engulfment of the entrant;
 - c. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls, or a floor which slopes downward and tapers to a smaller cross-section;
 - d. Contains any other recognized serious safety and/or health hazard. Examples: radiation, high pressure or steam, environmental extremes such as noise, electricity, or moving parts of machinery.
5. **Confined Space Entry** – The action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of the opening into the space.
6. **Hazardous Atmosphere** – An atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue, injury, or cause acute illness from one or more of the following causes:
 - a. Flammable gas, vapor, or mist in excess of 10 percent of its lower explosive limit (LEL).
 - b. Airborne combustible dust that meets or exceeds its LEL. Note: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet or less.
 - c. Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent.
 - d. Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart G, Occupational Health and Environmental Control, or in Subpart Z, Toxic and Hazardous Substances, which could result in employee exposure in excess of the allowable exposure limits
 - e. Any other atmospheric condition that is immediately dangerous to life or health (IDLH)

Non-Permit Confined Space Entry Procedures

Ohio EPA employees are authorized to enter non-permit required spaces on an as-needed basis to perform essential field tasks. Prior to entry, employees should ensure that the space meets the definition of a non-permit required confined space.

In the event that an entry will be made into a non-permit required space, the following procedures must be followed:

1. Ohio EPA employees who need to enter a non-permit required confined space to perform work must check with the facility operator to ensure that adequate ventilation is available in the space. The facility operator should also be asked if there are any other safety and/or health hazards near the space that should be considered prior to entry.
2. Ohio EPA employees should discuss the work that needs to be performed in the space with the facility operator to determine if an alternative to entry may be available.
3. Entry into a non-permit required confined space should not be conducted until the availability of adequate ventilation is available. If the facility operator cannot provide this information, the entry should not be made, and the Agency Confined Space Entry Team should be consulted.
4. Employees should also ensure that the nature of their planned work will not introduce any new hazards into the space.

Permit Required Confined Space Entry

Ohio EPA employees ARE NOT permitted to enter permit required confined spaces. Entry into permit-required confined spaces requires specialized training and equipment which is not routinely available to all field staff. Entry into these spaces also requires an “entry permit” which are only issued to the Agency Confined Space Entry Team.

1. If it is determined that entry into a permit required confined space is necessary to perform essential field activities the Agency Confined Space Entry Team must be contacted to see if they can perform the entry and subsequent work.
2. The Agency Confined Space Entry Team is made up of confined space entry trained staff from the Ohio EPA Office of Special Investigations (OSI). The team may be augmented with additional staff from other programs. (Contact: Scott Shane).
3. An evaluation of the proposed entry must be conducted prior to contacting the Confined Space Entry Team. This evaluation should include:
 - a. A description of the actual work that needs to be conducted (i.e. sample collection, monitoring)
 - b. A determination if there are any alternatives to actually entering the space to perform the work (i.e. remote samplers, perform work from outside the space)
 - c. A discussion with the facility to determine if the facility has a trained confined space entry team that may be able to assist.

Agency Confined Space Entry Team

The Agency Confined Space entry Team is made up of staff from the Ohio EPA, OSI. The team may be augmented with additional team members from other programs as needed.

The following actions are required:

1. The Confined Space Entry Team supervisor must provide a list of team members to the Agency Safety Manager so their participation can be entered into the Safety Management System (SMS).
2. A Standard Operating Procedure (SOP) must be developed by the Confined Space Entry Team which outlines the procedures that will be taken in order to enter a permit-required confined space.
3. A written Confined Space Entry Permit system must be established and included in the Confined Space entry SOP.
4. Training must be provided to all team members on an annual basis. The team supervisor must provide written documentation to the Agency Safety Manager whenever annual training has been completed. This training will be tracked on the SMS. The documentation should indicate the level of training received by all team members (i.e. entrant, supervisor, attendant).
5. A copy of all confined space entry permits must be sent to the Agency Safety Manager once the entry has been completed.
6. An annual review of all entry procedures must be conducted. This review should also include a review of all permits issued within the past 12 months.

Confined Space Awareness Training for Employees not on the Agency Confined Space Entry Team

1. Confined Space Awareness training is included in the Field Safety Orientation that all Agency employees who conduct any field activities are required to attend upon their initial hire, or transfer into a field position.
2. Additional awareness training may be provided by the Agency Safety Manager upon request from supervisors and managers of field activities.
3. Supervisors who oversee field activities where confined spaces may be encountered are encouraged to routinely review the contents of this SSOP with their employees during staff meetings, or other forums.