

Confined Space Entry

**Millersville University - Office Of Environmental Health & Safety
Scope & Application**

Permit Required Confined Space: A confined space that has one or more of the following characteristics:

- contains, or has the potential to contain, a hazardous atmosphere
- contains a material that has the potential for engulfing an entrant
- has an internal layout such that someone entering could be trapped or asphyxiated by inwardly converging walls or a floor that slopes downward and tapers to a smaller cross section
- contains any other recognized serious safety or health hazard.

Testing: The process by which the hazards that may confront entrants into confined spaces are identified and evaluated.

General Procedures

Only authorized employees shall perform confined space entry procedures

Permit-required Confined Space Entry Procedure

All entries into permit-required confined spaces on campus must follow this procedure.

Duties of Authorized Entrants

Stay focused on the Attendant duties and tasks, do not become distracted.

Pre-Entry Procedures

Complete the pre-entry checklist and permit form

The Entry Supervisor must authorize the permit (the entry) and sign off on the permit form.

Cancel the permit after the CSE operations are complete

Provide the necessary safety equipment to perform permit-required confined space entry. This equipment shall include, but not be limited to the following:

The permit and checklist form

Calibrated testing and monitoring equipment (the MSA Passport)

Ventilation equipment (fan, motor, blower, tubing, electrical extension cords)

Communication equipment (walkie talkie)

Personal protective equipment as necessary (gloves, hardhat, eye protection, hearing protection respiratory protection)

Lighting equipment (explosion proof and intrinsically safe)

Barriers, warning signs to protect opening

Manhole cover lifting device

Ladders

Rescue equipment (tripod, winch, lanyards, fall arrestor, etc.)

Isolate and Secure the Confined Space and the Environment

De-power all electrical equipment, lock out and tag out, release any stored energy.

Close all valves, lock and tag

Place appropriate barricades and warning signs around the entrance to the space (to prevent pedestrians from falling in)

Isolate and secure any other known hazard inside or feeding to the confined space, prior to entry

Perform Initial Atmospheric Monitoring

Safely remove the cover (manhole) to the confined space.

Make sure the MSA` Passport testing device is calibrated and operating properly. Put the instrument through it's start up and internal calibration procedures. If the instrument is not working properly do not enter the confined space. Contact the EHS office for assistance.

Test the atmosphere using the instrument and the extension probe. Move the probe around inside the space so that it reaches all levels (i.e., face of the opening, one foot down, two feet down, three feet down, etc.). Hold the probe at each level for a minimum of one minute to obtain an accurate reading.

If the confined space entry meter should alarm do not enter the space. Allow the meter to clear itself in clean air then re-test. If the instrument alarms again, call EHS.

Designate Confined Space Entry Roles

Designate who will be the Authorized Supervisor, Authorized Entrant, Attendant, and any other persons assisting in the entry. Make sure everyone understands their responsibilities and roles.

Develop and Implement Emergency and Rescue Procedures

Emergency rescue (retrieval) systems are required for any permit-required confined space entry.

Authorized Entrants shall wear appropriate harnesses/lanyards connected to a fall arresting device and mechanical winch, attached to a tripod placed over the manhole (entrance to the space).

Make sure the retrieval line (cable) is attached to the harness above the Entrant's head at the upper part of the back, shoulder level.

Attendants must make sure the cable is properly connected to the Entrants harness, check the fall arresting device and winch to make sure it is operating properly, check to make sure the tripod is sturdy and well positioned above the space, and all other measures necessary to ensure retrieval of the Entrant in an emergency.

The Attendant must wear a harness with the lanyard attached to the tripod as a secondary means of protection (to prevent the Attendant from falling into the space during rescue operations).

The Attendant must ensure warning signs and barricades are posted around the confined space and only authorized individuals are near the entrance.

The Attendant must monitor the mechanical ventilation system (if it is operating and ventilating atmosphere in the space).

The Entrant carries the MSA Passport on their body to continuously monitor the air while they are in the confined space. If at any time while inside the confined space, the MSA Passport instrument alarms, the Attendant must leave the space immediately. Contact the EHS office and determine how a hazardous atmosphere developed (or returned to) in the space.

The Attendant remains in visual and voice contact with the Entrant at all times.

Entry Rescue

If at any point an Entry Rescue becomes necessary, follow these procedures:

Immediately remove the Attendant from the space using the winch, harness, and tripod assembly.

Designate a person in FM and IT who will ha

Measures necessary to prevent unauthorized entry into confined spaces
Measures necessary to identify and evaluate the hazards in a confined space, prior to entry.
Procedures and practices necessary for safe entry into confined spaces
Equipment necessary for confined space entry
Procedures for the preparation, issuance, use, and cancellation of entry permits
Procedures for reclassifying spaces so they may be entered without a permit or an attendant.
Designated responsibilities of personnel involved in confined space entry
Procedures to coordinate entry procedures with contractors where both University and contractor employees must enter a confined space at the same time.
Testing and monitoring procedures
Rescue and emergency operation procedures
Recordkeeping
Training
Periodic program evaluation procedures

Training

All employees required to enter a confined space must first receive training in the proper methods for entering a confined space.. Employees must acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned to them during confined space entry. Training must be performed:

Before the employee is first assigned confined space entry duties
Before there is a chance to the assigned duties
Whenever there is a change to the confined space entry procedures that present a hazard about which the employee has not previously been trained.
Where there is reason to believe there are inadequacies in the employees knowledge or nose of these procedures.

All employees who use the MSA Passport confined space entry testing device must have completed training and demonstrated proficiency in using the instrument to test the air inside confined spaces prior to, and during entry.

Training will be provided by outside vendors and/or the EHS office.

The training program will comply with the minimum training requirements of the OSHA confined space entry standard (29 CFR 1910.146, Permit-required Confined Spaces for General Industry). The training will include hands on demonstrations of the necessary equipment used in confined space entry. The training program will consist of these minimum training elements:

Recognition and awareness of confined spaces that may be found at Millersville University
The Millersville University Confined Space Entry Policy

If more than one contractor, or contractor employees and University employees are working at the same time inside a confined space, procedures to coordinate entry operations must be implemented.

Any deviations from OSHA mandated and industry recognized safe entry procedures for confined spaces must be requested, before entry, through the Facilities Management or Information Technology departments and must be approved by the EHS office.

The contractor must implement their own confined space entry program, policies, and procedures in accordance with the OSHA standards.

Any hazards or problems encountered by c

Confined Space Entry - Pre-entry Checklist

Does the history of the confined space show that it to be free of atmospheric hazards from chemical contaminants or other sources such as vehicle exhaust, piping, tank or gas leaks, or sewer gasses? yes () no ()

Does your knowledge of the confined space indicate the area is likely to remain free of dangerous air contaminants while occupied? yes () no ()

Have you been trained in the operation and calibration of the confined space entry instrument (MSA Passport) to be used to test the atmosphere prior to and during entry?

yes () no ()

Has the MSno () MCID 4 BDC 0.0006 6c -0.0016 Tw -26.165 -2.315 Tdit 6d () no () TjEMC /P MCID 5

Job Location: _____

Authorized Entrant or Supervisor Signature: _____

Date: _____

Permit-required Confined Space Entry - Permit

Entry Information

Entry Date: _____

Termination Date: _____

Location and Description of Confined Space: _____

Description of the Work: _____

Number of Entrants Assigned: _____

Names of Entrants: _____

Isolation Checklist

Lockout/Tagout Performed? yes () no ()

Lines and Pipes Isolated? yes () no ()

Electrical Power Controlled/Dissipated? yes () no ()

Signs and Barricades in Place? yes () no ()

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Contaminant Levels Within Safe Limits? yes () no ()

Name of Air Testing Instrument Used _____

Instrument Recently Calibrated? yes () no ()

Special Equipment Needed

List Any Special Safety Equipment Needed to Perform the Entry or Job

Respirators? yes () no ()

Fire Suppression? yes () no ()

Lighting? yes () no ()

Body Protection? yes () no ()

Hearing Protection? yes () no ()

Eye Protection? yes () no ()

Other: _____

Special Task Specific Hazards

Welding? yes () no ()

Burning/Brazing/Other Hot Work? yes () no ()

Other: _____

Special Precautions Taken To Minimize Hazards

List Any Special Precautions Taken Because of Task Specific Hazards

Rescue/Emergency Procedures

All rescue equipment in place and operational? yes () no ()

Communication equipment operational? yes () no ()

Attendants and Entrants know their responsibilities? yes () no ()

Verification

I verify that actions and conditions necessa