



<b>UMBC OFFICE OF ENVIRONMENTAL SAFETY AND HEALTH (ESH) PROCEDURE</b>	<b>TITLE: Confined Space Entry</b>
<b>DATE CREATED: 8/2023</b>	<b>REVISION: 1.0</b>

## **I. PURPOSE**

The purpose of this procedure is to establish minimum requirements to control entry into confined spaces on University of Maryland, Baltimore County (UMBC) campus and to prevent employee exposure to hazards present in confined spaces.

The procedure is also designed to ensure that any work that requires entry into confined spaces at UMBC satisfies the requirements of OSHA 1910.146 – Permit Required Confined Spaces standard.

## **II. SCOPE**

Applies to all employees, student employees, contractors, and other persons who may perform work around or inside of confined spaces on UMBC Campus.

## **III. PROCEDURE**

### **Definition of a Confined Space**

A Confined Space is defined by OSHA as any space that meets all three of the following characteristics:

- The space is large enough to bodily enter to perform work.
- The space has limited or restricted means of entry and exit.
- The space is not designed for continuous human occupancy.

Common examples of confined spaces:

- Vaults
- Tanks
- Boilers
- Pits
- Sewers

- Manholes
- Shafts or chases
- Crawlspace

### Inventory of Confined Spaces

Environmental Safety and Health (ESH) maintains a list of identified confined spaces at UMBC. The list indicates the location of the space, the type of space, its classification, and what hazards may be present. This list is available on the ESH website and should be reviewed with any employee or contractor who intends to enter a confined space.

If a space that has the potential to be a confined space is identified, ESH should be notified so that an assessment can be conducted. If it is determined to meet the criteria of a confined space, it will be added to the list.

### Types of Confined Spaces

A ***Non-Permit Required Confined Space*** does not pose a health or safety hazard to an occupant under normal conditions.

A ***Permit-Required Confined Space*** is a confined space which has an actual or potential hazard that can cause serious or fatal harm to an occupant.

If any of the following hazards are present, or have the potential to be present in a space, then the space would be considered Permit-Required:

- Atmospheric
- Engulfment
- Thermal
- Mechanical
- Electrical
- Biological
- Entrapment
- Asphyxiation
- Slip/Trip/Fall
- Any other serious recognized health and safety hazard

## Reclassification of a Confined Space

Confined spaces can be reclassified under certain conditions.

- Non-Permit Required to Permit-Required
  - A non-permit required confined space has the potential to become permit-required confined space if conditions arise during entry that pose a hazard to entrants. A common example is when hot work is conducted inside of a confined space that introduces hazardous fumes/vapors, heat, or sparks inside the space.
- Permit-Required to Non-Permit Required
  - A permit-required confined space may be reclassified to non-permit required if any actual or potential hazards in the space are able to be isolated or removed prior to entering the space. Examples include performing lockout/tagout or performing isolation or closing/isolating/blocking of lines or pipes.
  - Permit-required confined spaces may not be reclassified to non-permit required if there is an actual or potential hazardous atmosphere.

All other applicable procedures (such as lockout tagout, electrical safety, etc.) shall apply when performing steps to reclassify a confined space to non-permit required.

## Alternate Entry

If the only hazard in a permit-required confined space is an atmospheric hazard which can be eliminated through continuous forced air ventilation of the space, the space can be entered through alternate entry.

Forced air ventilation and continuous atmospheric monitoring of the space are required to satisfy alternate entry requirements.

## Requirements for Entry

### Non-Permit Required

Entry into a non-permit required confined space generally does not require special preparation or permission to enter the space, as the space would not pose a hazard to occupants. Follow reclassification procedures if conditions change that render the space hazardous.

### Permit-Required

- Employee Entry
  - UMBC employees may not enter a permit-required confined space unless the space is able to be reclassified to non-permit required through hazard elimination or isolation, prior to entering the space.

- Contractor Entry
  - Contractors may only enter permit-required confined spaces under the acknowledgement and approval of the department with authority over the space. Environmental Safety and Health must also be notified of the intent of a contractor to conduct entry operations in a permit-required confined space.
  - Contractors shall ensure their employees have received appropriate training and are responsible for supplying all necessary equipment, personnel, and resources to complete safe entry.
  - Contractors shall complete their employer's entry permit and post at the entry to the confined space.
- Entry Team
  - Entry into a permit-required confined space requires a suitable entry team consisting of the following:
    - Entry Supervisor – The entry supervisor is responsible for determining if acceptable entry conditions exist, for authorizing entry, overseeing entry operations, and for terminating entry.
    - Authorized Entrant(s) - An employee(s) who is authorized by their employer to enter a permit space.
    - Attendant – An individual who is stationed outside a permit space whose duties are to monitor the entrants and performs other assigned duties, such as access and traffic control, communication with the entrants and entry supervisor, perform non-entry rescue, and summons rescue or off-site emergency services as needed. The entry supervisor may simultaneously serve as the attendant.

### **Stages of Permit-Required Confined Space Entry**

- Pre Entry
  - Prior to entry, the entry team shall review the scope of work with the department that has authority over the confined space.
  - Equipment Requirements:
    - Gas/Atmospheric monitoring equipment (pre-entry, personal monitoring)
    - Communication equipment (radio, cell phone, etc.)
    - Rescue equipment (such as hoists, winches, retractable devices, pulley systems, fall arrest systems)

- Ventilation equipment as required.
- The entry supervisor will complete an Entry Permit. The entry supervisor shall make final determination as to whether entry conditions are acceptable.
- Completed permits shall be posted on or near the opening of the confined space for the duration of the work.
- During Entry
  - Permits are valid for eight (8) hours at a time. For work exceeding eight hours, a new assessment and entry permit must be completed for each additional eight-hour increment.
  - Work may not be conducted outside the scope of what is written in the Entry Permit.
  - During any confined space entry, if conditions arise that are unforeseen or hazardous, entry operations do not go according to plan, or work falls outside of the scope of the permit, then all entrants must exit the space and notify Facilities Management. Re-assessment and re-permitting of the space will be required prior to allowing reentry.
  - The entry supervisor shall maintain a line of communication (i.e., cell phone or radio) with the department with authority over the space during the course of entry operations.
- Terminating Entry
  - After work is complete and the entry team has exited the space, a debrief/hot wash will be conducted with the entry team and the responsible department.
  - The entry supervisor will cancel the entry permit. Canceled permits will be retained with the responsible department.

### Confined Space Rescue

For permit-required confined space entry, a plan of rescue shall be established during the pre-entry planning stages.

If a medical emergency occurs at any point during a confined space entry, Campus Police shall be notified immediately at extension 5-5555 (410-455-5555 for outside lines).

### Training Requirements

UMBC employees who have the potential to enter or encounter confined spaces during the course of their job duties must have awareness-level training on the following topics:

- What constitutes a confined space
- The difference between a non-permit and permit-required confined space.

- Conditions that prohibit entry into a confined space.
- What hazards may be encountered inside of a confined space and how certain activities inside a confined space can create hazards.

### Recordkeeping

Departments with authority over a confined space, or have employees who require confined space training, shall retain the following records:

- Completed entry permits and confined space reclassification forms.
- Records of employees who have received any confined space awareness training.

## **IV. ROLES AND RESPONSIBILITIES**

### Facilities Management

- Ensure department employees comply with this policy and do not enter permit-required confined spaces unless the hazards can be eliminated or controlled prior to entry (reclassified).
- Notify Environmental Safety and Health when a permit-required confined space entry is scheduled.
- Review this policy and confined space assessment for the space that will be entered with the entry team/contractor.
- Retain all canceled/completed entry permits and reclassification forms.
- Notify Environmental Safety and Health when additional confined spaces are identified on campus.

### Contractors

- Comply with all elements of this policy and the contractor's confined space policy.
- Ensure contracted employees are appropriately trained, equipped, and qualified to enter a permit-required confined space.
- Participate in a coordinated review of work to be completed inside a permit-space with Facilities Management and Environmental Safety and Health.
- Complete all necessary documentation including entry permits and reclassification forms as required.

### Environmental Safety and Health

- Identify, assess, and classify confined spaces on UMBC campus.
- Prepare and maintain a summary of confined spaces on UMBC campus and review with Facilities Management as additional spaces are identified.

- Coordinate with Facilities Management and contractors whenever a permit-required confined space entry is arranged to review scope of work and advise on appropriate safety measures and hazard controls necessary for safe entry.

### Employees

- Adhere to this policy and all other applicable safety procedures when working in or around a confined space.
- Do not enter permit-required confined spaces unless the space can be reclassified to non-permit required.
- Report any safety hazards or concerns regarding a confined space on campus to supervision or Environmental Safety and Health.

### **V. REFERENCES**

- UMBC VI-13.00.01 – Environmental Safety and Health Management and Enforcement
- UMBC ESH Procedure – General Safety Rules for UMBC Employees
- Confined Space Reclassification Form