CONFINED SPACE ENTRY POLICY

UNIVERSITY RISK MANAGEMENT
Occupational Safety and Health Programs
19 Hagood Avenue, Suite 908
Charleston SC 29425
843-792-3604

Revised: June 2015
# TABLE OF CONTENTS

**INTRODUCTION** ............................................................................................................. 3  
**POLICY OBJECTIVES** ................................................................................................. 3  
**DEFINITIONS** ................................................................................................................ 4  
  - CONFINED SPACES ......................................................................................................... 4  
  - HAZARDOUS AREAS ........................................................................................................ 4  
  - PERMITTED CONFINED SPACES .................................................................................... 5  
  - HAZARDOUS ATMOSPHERE ............................................................................................ 5  
  - CONTINUOUS WORKER OCCUPANCY ....................................................................... 5  
  - ENTRY AND EXIT OPENING ....................................................................................... 6  
**TRAINING** .................................................................................................................... 6  
**DUTY REQUIREMENTS** .............................................................................................. 6  
  - AUTHORIZED ATTENDANTS ....................................................................................... 6  
  - AUTHORIZED ENTRANTS .......................................................................................... 6  
  - INDIVIDUAL AUTHORIZING ENTRY ......................................................................... 7  
  - RESCUE TEAM ........................................................................................................... 7  
**WRITTEN PERMIT SYSTEM** ......................................................................................... 8  
**APPENDIX I: MUSC LIST OF HAZARDOUS AREAS** ............................................... 9  
  - CHILDREN’S HOSPITAL ............................................................................................... 9  
  - EYE INSTITUTE ............................................................................................................ 9  
  - PSYCHIATRIC HOSPITAL ............................................................................................ 9  
  - TEACHING HOSPITAL .................................................................................................. 9  
  - CLINICAL SCIENCE BUILDING ............................................................................... 9  
  - BASIC SCIENCE BUILDING ...................................................................................... 9  
  - CHRP BUILDING ......................................................................................................... 9  
  - COLBERT EDUCATION CENTER AND LIBRARY BUILDING ................................ 9  
  - HAZARDOUS WASTE BUILDING ............................................................................. 9  
  - ASHLEY RIVER TOWER ............................................................................................... 10  
  - ALL OTHER BUILDINGS ON CAMPUS ..................................................................... 10  
  - ALL BOILERS ON CAMPUS ....................................................................................... 10  
  - TANKS ....................................................................................................................... 10
INTRODUCTION
The Medical University of South Carolina Confined Space Entry Policy is designed to ensure that our employees are protected from confined space entry hazards and comply with OSHA Standard 29 CFR 1910.146. Injuries and fatalities occur when workers enter confined spaces without realizing that the normal oxygen content have been depleted or that other toxic gases may be present. The Occupational Safety and Health Programs Section (OSHP) at the Medical University of South Carolina (MUSC) has the responsibility of implementing the confined space program. The Director of University Risk Management, or his/her designee, will annually review all confined spaces and update any information pertaining to the policy.

POLICY OBJECTIVES
Listed below are policy objectives for MUSC’s Confined Space Entry Program. These objectives are to ensure a safe working environment for all personnel entering a confined space, to adhere to established safety practices, and to utilize required confined space entry equipment.

(a) Hazard Identification: Confined space hazards have been identified and evaluated, including a determination of the severity of the hazard.

(b) Hazard Control: Procedures and practices have been established in order to allow for safe entry.

(c) Permit System: A written permit system, which details proper preparations, issuance and implementation of entry permits, has been established.

(d) Employee Information: Signs have been posted near permit spaces to notify employees what hazards may be present and that only authorized entrants may enter the permit space.

(e) Prevention of Unauthorized Entry: Prevention of unauthorized entry is achieved by training employees and posting of warning signs.

(f) Employee Training: Affected MUSC employees that will be confined space attendants, authorized entrants, and personnel authorizing or in charge of entries receive adequate training to enable them to work safely in and around permit spaces.

(g) Equipment: MUSC will provide, maintain and ensure that proper use of the equipment necessary for safe entry, including testing, monitoring, communication, and personal protective equipment.

(h) Rescue: MUSC will ensure that the procedures and equipment necessary to rescue entrants from permit spaces are implemented and provided.
(i) Protection from External Hazards: MUSC staff will ensure that all pedestrians, vehicles or other barriers necessary to protect entrants from external hazards are provided.

(j) Duty of Other Employees: When an employer such as a contractor plans to send employees into a MUSC permitted confined space, MUSC will provide the contractor with all available information on the permit space hazards, efforts to comply with 29 CFR 1910 and any other workplace hazard, safety rules and emergency procedures of which the contractors is responsible and needs to be aware. When both the host employee and contractor must work in a confined space, both entities must comply with OSHA’s requirement for entering a permitted confined space. Entry will be coordinated prior to entry.

DEFINITIONS

Confined Spaces

- Are large enough and so configured that an employee can bodily enter and perform assigned work. Note: Entry has begun as soon as entrant’s face breaks the plane of the opening of the confined space.

- Have limited or restricted means for entry or exit (some examples are tanks, vessels, silos, storage bins, hoppers, vault, pits, and dike areas).

- Are not designated for continuous employee occupancy.

- Most MUSC confined spaces are not permitted because these spaces do not have a hazardous atmosphere, materials with a potential for engulfment, inward converging walls, or other recognized serious hazards. Spaces that meet the definition of a confined space but do not have these characteristics will be called “hazardous areas.”

Hazardous Areas

- Are not designed for continuous occupancy,

- Are large enough that an employee can bodily enter the space and perform work

- Have a limited or restricted means of entry or exit.

- MUSC Hazardous Areas do not have a known hazardous atmosphere, potential for engulfment, inwardly converging walls, or other recognized serious hazards.

The following are requirements for entering a Hazardous Area:
a) A permit must be completed by Occupational Safety and Health Programs (OSHP) prior to entering the space. Call 2.3604 twenty-four hours before scheduled work in a Hazardous Area. A copy of the permit will be posted at the entrance while working.

b) Pre-entry air sampling will be performed by OSHP before entering the space.

c) A four gas meter will be worn while in the space. If meter alarms, leave the space immediately and contact OSHP.

d) If work involves a steam line or electricity, they must be locked out/tagged out and the energy discharged prior to entry.

e) When entering hazardous areas, ventilation fans must be utilized.

Permitted Confined Spaces
- Contain or has a known potential to contain a hazardous atmosphere.
- Contain a material with the potential for engulfment of an entrant.
- Have an internal configuration such that an entrant could be trapped or asphyxiated by inward converging walls, or a floor that slopes downward and tapers to a smaller cross section.
- Contains any other recognized serious safety or health hazard.
- MUSC employees will not perform work in a permitted confined space.

Hazardous Atmosphere
- An atmosphere which has less the 19.5% available oxygen.
- An atmosphere containing more than 23.5% by volume.
- An atmosphere containing any other hazardous substance above OSHA recommended levels.
- Welding inside a confined space can create an oxygen deficient atmosphere.

Continuous Worker Occupancy
Most confined spaces are not designed for workers to enter and perform work in them on a routine basis. They are designed to store a product, enclose materials and processes, or transport products or substances. Therefore, occasional worker entry for inspection, maintenance, repair, cleanup, or similar tasks is often difficult and dangerous due to chemical or physical hazards within the space.
Entry and Exit Opening
Primarily size or location limits confined space openings. Openings are usually small in size, perhaps as small as 18 inches in diameter and are difficult to move through. Small openings may make it very difficult to get needed equipment in or out of these spaces, especially protective equipment such as respirators needed for entry into spaces with hazardous atmospheres, or life-saving equipment when rescue is needed.

TRAINING
To assure that work can be done safely in and around the permitted space, all attendants, authorized entrants, and personnel authorizing entry shall receive annual training. OSHP will conduct this training. Only employees who have completed this training will be allowed to work inside confined spaces. MUSC’s OSHA briefing for contractors includes apprising the contractor that entry is only allowed through compliance with OSHA’s permit space standard for entering a permitted confined space.

DUTY REQUIREMENTS
Authorized Attendants
The attendant shall be stationed and remain outside the permit space at all times during entry operations. Employees who work as attendants will be trained to perform the following duties:

(a) The attendant shall continuously maintain an accurate count of all persons in the space.

(b) The attendant shall know of and be able to recognize potential permit space hazards and monitor activities inside and outside the permit space to determine if it is safe for entrants to remain in the space.

(c) The attendant shall summon rescue and other emergency services as soon as attendant determines that authorized entrants need to escape from the space.

(d) The attendant shall inform the authorized entrants and OSHP if unauthorized persons have entered the space.

Authorized Entrants
The entrants are workers who are authorized to enter the space and perform work. Employees who work as entrants will be trained in the following duties:

(a) The entrant shall know the hazards that may be faced during entry.

(b) The entrant shall recognize the signs and symptoms of exposure to a hazard.

(c) The entrants shall maintain contact with the attendant.

(d) The entrants shall notify the attendant when evacuating the space.
(e) Entrants should be aware of the personal protective equipment, such as retrieval lines, respirators or clothing needed for safe work and exit.

**Individual Authorizing Entry**

The individual authorizing entry or the entry supervisor is responsible for the overall safety of all activities in and around the confined space. Only members of OSHP are able to permit spaces and sign entry permits. Their duties include the following:

(a) Determine that the entry permit contains the requisite information before authorizing or allowing entry.

(b) Determine that the necessary procedures, practices and equipment for safe entry are in effect before allowing entry.

(c) Determine, at appropriate intervals, that entry operations remain consistent with the terms of the entry permit and that acceptable entry conditions are present.

(d) Cancel the entry authorization and terminate entry whenever acceptable entry conditions are not present.

(e) Take necessary measures for concluding an entry operation.

**Rescue Team**

(a) MUSC’s rescue team will be compromised of employees from OSHP.

(b) All members of the rescue team will have extensive training in hazard recognition, personal protective equipment, use of retrieval equipment, rescue techniques, and communications.

(c) MUSC’s rescue team will participate in simulated rescues in which dummies, mannequins or personnel are pulled through portals with configurations and accessibility closely represent those of permit spaces at MUSC. Simulated training will be performed at least annually.

(d) At least one member of the rescue team will be certified in first aid and cardiopulmonary resuscitation.

(e) All rescue team members will be provided with communication equipment that will allow for quick response to an emergency.

(f) No permit space entry will be authorized unless the rescue team is on campus.
WRITTEN PERMIT SYSTEM

A standardized permit has been developed identifying all conditions that must be evaluated to ensure safe entry into a permit space. Permits must be applied for through OSHP and at least 48 hours before entry of a permitted space. Permits for emergency work will be evaluated on a case by case basis. The following permit information is required before entry:

(a) Location of the permit
(b) Purpose of the permit
(c) Hazards of the permit space
(d) Date of entry and duration of work
(e) List of authorized entrants
(f) List of authorized attendants
(g) List of any equipment or materials to be used in the space
(h) Description of work to be performed inside the space.
APPENDIX I: MUSC LIST OF HAZARDOUS AREAS

Designated Confined Spaces (Hazardous Areas)

Children’s Hospital
  o All crawl spaces under building.
  o All chillers in the HVAC room.
  o Sump pit in boiler room.
  o All elevator shafts.

Eye Institute
  o All crawl spaces under building.
  o All elevator shafts.

Psychiatric Hospital
  o All crawl spaces under building.
  o All elevators shafts.

Teaching Hospital
  o All crawl spaces under building.
  o Water tank main penthouse.
  o Crawl space between hospital floors 4 and 5.
  o All elevator shafts.

Clinical Science Building
  o All crawl spaces under building.
  o All elevator shafts.
  o All chillers on 7th floor.

Basic Science Building
  o All crawl spaces under building.
  o All elevator shafts.

CHRP Building
  o All crawl spaces under building.
  o All elevator shafts.

Colbert Education Center and Library Building
  o All crawl spaces under building.
  o Manhole next to building and tunnel*.
  o All elevator shafts.

Hazardous Waste Building
  o Crawl space under building.
Ashley River Tower
- Crawl spaces under buildings
- Elevator shafts.
- Utility tunnel*.

All other buildings on campus
- All crawl spaces under buildings.

All boilers on campus
- Both ends must be open and forced air used.

**Permitted Confined Space Locations**

**Tanks**
- MUSC employees should not enter tanks.

*These spaces may be considered hazardous areas and not permitted confined spaces if:

(a) There is no known hazardous such as a gas leak or a steam leak;
(b) The entrant will only be performing visual inspections or other work that could not cause a hazard to be created;
(c) The entrant is working on an energy system that has been properly locked and tagged out;
(d) Forced air is initiated 10 minutes prior to the entry and used continuously during the entry;
(e) There is no standing water in the space.