

Environmental Compliance and Occupational Safety (ECOS)

Safety Procedure: Confined Space

This program is for members of Northeastern University's Facilities Department.

General awareness Confined Space training will be made available through the new online training platform, Safety Skills. Course CFS-1.2 confined space awareness will be a required course for all Planning, Real Estate, and Facilities (PREF) employees involved in the confined space work process.

Purpose

Select employees from the Facilities Department may have to enter confined space as part of their job description. A confined space is defined as a space that is large enough and so configured that an employee can bodily enter, but has limited entry and exit, and is not designed for continuous occupancy. Confined space entry may involve several additional hazards including, but not limited to, engulfment, entrapment, and hazardous atmospheres. Confined spaces, which pose one or more of these additional hazards, are "permit-required confined spaces (PRCS)."

When it is discovered that a Facilities employee will have to enter a confined space, the employee's supervisor and the ECOS department will team up and determine if the task can be completed by Facilities or if a third-party contractor will be used to complete the task.

Pre-entry work.

Pre-task Safety Meeting:

Prior to entering the space, a supervisor, entrant, and attendant will meet and discuss the scope of work and each person's role. When elevated temperature work is expected an administration plan of job rotation will be put into place. For permitted required confined space work a confined space entry permit will be completed and reviewed with the crew.

Controlled Access Zone-(CAZ):

A CAZ around the space will be established to keep unauthorized personnel at a safe distance from the work area and hazards. The barricade(s) used may include cones, safety railings, poles, and or fences. Safety signage describing hazards must also be put in place.

NOTE proper fall protection may be needed for any person working inside the CAZ.

Clean / Purge / Drain:

When possible, the confined space should be cleaned, purged and or drained of all debris, gases, and standing water prior to work being conducted. If needed, Lock Out Tag Out Try Out (LOTOTO) procedures will take place.

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**Rescue Plan / System:**

A rescue system and plan must be put in place.

NOTE A 3rd party rescue team will mostly be used by Northeastern. If the 3rd party rescue team is not available, an in-house rescue plan must be submitted to the Environmental Compliance Occupational Safety (ECOS) department.

Notifications:

Prior to entry of any confined space Northeastern Facilities Work Control and Northeastern PD will be notified that confined space work is being conducted.

Air Quality:

To avoid working in a hazardous air quality atmosphere a four-gas monitor is required to test the air quality before entry into a confined space. The monitor will be always kept on the entrant while in the space and the air is to be retested whenever re-entering the space. If the gas monitor alarm goes off the entrant must evacuate the space immediately, work cannot be resumed until the air has been retested and determined safe for entry. If a gas hazard is anticipated other than what is detected by the four-gas monitor the crew must reach out to ECOS for additional guidance.

NOTE when needed a fan and blower will be used to circulate air flow in the space.

Entry work.**PPE:**

The entrant will be required to wear a hard hat, safety glasses, gloves, and proper footwear. If required as part of the rescue plan / system, they may be required to wear a full body harness as well.

Material Handling:

The crew should observe all precautions when lifting equipment / materials. If space is below ground and entrance is via ladder, then equipment and material should be lowered into the space by using ropes or chain falls. It is important for the entrant to stay clear of equipment and material being lowered to avoid having items fall on them. Proper ladder use of three-point contact should be maintained when entering and exiting the space. If the space is above ground proper lifting techniques should be followed to get equipment and material into place.

Tools / Drilling:

Cordless tools should be used to avoid hazards provided by cords, including tripping and shock. To avoid silica dust, drills should be equipped with proper dust extraction system.

Completion of Work.**House Keeping:**

At the completion of the task all tools and extra material will be cleaned and put away.

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Secure confined space:

The entrance to the confined space will be secured and barriers can be removed.

Notifications:

Northeastern Facilities Work Control and Northeastern PD will be notified that confined space work is completed and that entrance has been secured.

A copy of the confined space entry permit must be forwarded to the Environmental Compliance Occupational Safety (ECOS) department within seven days to be filed.

For more information refer to the Northeastern University Confined Space Program

N Northeastern University Planning, Real Estate, and Facilities

Work Order #: _____ Emergency Number: Northeastern Police Department (617) 373-3333

Date / Time of Entry: _____ Permit Expires: _____
 Location of Confined Space: _____ Tank: ☐ Pipe: ☐ Manhole: ☐ Tunnel: ☐ Vault: ☐ Other: ☐
 Work Description / Purpose of Entry: _____

Entry Supervisor(s): _____

Entrant(s): _____

Attendant(s): _____

Hazards of Confined Space	Y	N	Special Requirements and Equipment	Y	N	N/A	Details (must complete if a no is indicated here)
Oxygen Deficiency			NUPD Notified				
Combustible Gas / Vapor			Work Control Notified				
Combustible Dust			Adequate Access				
Carbon Monoxide			Lighting Adequate (low voltage)				
Hydrogen Sulfide			Controlled Access Zone (CAZ) established				
Toxic Gas / Vapor			Warning Signs Posted at Access				
Toxic Fumes			Rescue Services and Equipment on Site				
Skin-chemical Hazards			Ways to Keep Constant Communication with Entrant available- verbal, radio, phone etc....				
Electrical Hazard			Police Detail Present				
Mechanical Hazard			Purged, Cleaned and / or Drained				
Engulfment Hazard			Ventilation Required				
Entrapment Hazard			Respirator Required				
Thermal Hazard			Lock Out Tag Out Try Out Required				
Slip or Fall Hazard			Hot Work Required				
			Fire Extinguishers				

Atmosphere Check for Oxygen, Combustible & Gas Vapor

Instrument Type: _____

	Pre-Entry Reading	Re-Entry Reading	Re-Entry Reading	Re-Entry Reading	Re-Entry Reading	Re-Entry Reading	Re-Entry Reading	Re-Entry Reading	End Reading	Permissible Exposure Levels
Oxygen										19.5% to 23.5%
Combustible Gas										10% or less
Toxic Gas										CO: 35ppm, SO: 5ppm, H2S: 10ppm

Signature of Supervisor authorizing all above conditions satisfied and all involved employees were briefed on safety procedures and hazardous assessments of space: _____

Date: _____

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Summary-

Who, What, When, Where, Why





ATTENDANT/ENTRANT TRACKING FORM FOR CONFINED SPACE ENTRY

Work Order# _____

Date: _____

Employees assigned to confined spaces are to sign this form when they enter and exit.

The following have been briefed on the hazard assessment of this confined space and have the knowledge and skills necessary for their safe performance and duties.

A = Attendant

E = Entrant

Date	Name	A/E	Time IN	Time OUT	IN	OUT	IN	OUT	IN	OUT	Initials