

Document Name: Confined Space Entry Program  
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## CONFINED SPACE PROGRAM



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## 1.0 POLICY

### 1.1 POLICY STATEMENT

The purpose of the Texas Woman's University (TWU) Confined Space Program is to protect employees from the hazards associated with entering and conducting operations in confined spaces such as sewers, storage tanks and utility tunnels. This program applies to employees and contractors working on TWU property as described below.

This document is developed to comply with the regulations outlined in the Occupational Safety and Health Administration (OSHA) Permit-Required Confined Spaces standard (29 CFR 1910.146).

### 1.2 RESPONSIBILITIES

TWU personnel are responsible for the implementation and maintenance of the provisions outlined in this program as specified below:

- The **Office of Environmental Health & Safety** is responsible for:
  - Identifying confined spaces on TWU campuses, determining the potential hazards present, designating confined spaces as permit-required, and updating this information as necessary.
  - Establishing agreements with outside rescue and emergency medical providers.
  - Developing training materials for TWU employees, and maintaining training records.
  - Conducting the required annual review of this program, and consult with affected employees on the development, implementation and revision of this program.
- **Supervisors** are responsible for:
  - Ensuring that only properly trained employees are assigned to enter confined spaces, and that assigned work in confined spaces is in accordance with this program.
  - Performing the duties of the Entry Supervisor (in most cases). The **Entry Supervisor** role will be carried out by the supervisor of the employees performing the permit-required entry (the Authorized Entrants). If more than one supervisors' employees are to be Authorized Entrants, then one of the relevant supervisors will act as the Entry Supervisor with the approval of the other relevant supervisors. If none of the Authorized Entrants are available, one of the following may act as the Entry Supervisor:

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- Office of Environmental Health & Safety staff
- Director of Physical Plant (may act as Entry Supervisor for Denton)
- Manager of Facility Operations in Dallas or Houston (may act as Entry Supervisor for their assigned campus)

Entry Supervisors will be responsible for issuing Confined Space Entry Permits, and will be permitted to fulfill the Attendant role, but will **not** be permitted to be an Authorized Entrant under any permit they have issued.

- **Employees responsible for contractors** conducting work on site will comply with the entry coordination requirements of this program described in Section 2.7, including communicating TWU confined space requirements and information regarding the hazards of spaces the contractors may be working in or near.
- **TWU employees** are required to comply with all aspects of this program, and to report violations of the requirements of this program.

**Employees who do not comply with the requirements of this program will be subject to disciplinary action.**

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## 2.0 PRE-ENTRY PROCEDURES

### 2.1 PREVENTION OF UNAUTHORIZED ENTRY

Confined spaces will be evaluated and measures taken to prevent unauthorized entry into these spaces. Permit-required confined spaces will be identified with a “**Danger - Confined Space - Enter By Permit Only**” or similar label. Where practical, confined spaces will be locked or secured.

### 2.2 CONFINED SPACE IDENTIFICATION AND EVALUATION

The OSHA defines a confined space as a space that:

- 1) Is large enough and so configured that an employee can bodily enter and perform assigned work,
- 2) Has limited or restricted means for entry or exit, AND
- 3) Is not designed for continuous employee occupancy.

Examples of confined spaces include, but are not limited to; boilers, ventilation or exhaust ducts, storm drain, pipe chases, electrical vaults, steam tunnels, underground utility vaults, sump pits or other similar types of spaces.

A **Permit-Required Confined Space** is a confined space that has one or more of the following characteristics and therefore requires a permit prior to entry:

- 1) Contains, or has the potential to contain, a hazardous atmosphere,
- 2) Contains a material that has the potential for engulfing an entrant,
- 3) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor, which slopes downward and tapers to a smaller cross-section, OR
- 4) Contains any other recognized serious safety or health hazard.

A **Non-Permit Confined Space** is a confined space that does not contain or have the potential to contain any hazard capable of causing death or serious physical harm.

**Hazardous atmosphere** means an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a Permit-Required Confined Space), injury, or acute illness from one or more of the following causes:

- 1) Flammable gas, vapor, or mist in excess of 10 percent of its lower explosive limit (LEL);
- 2) Airborne combustible dust at a concentration that meets or exceeds its LEL;

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NOTE: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (1.52 m) or less. The explosivity of dust is **not** measured by confined space entry monitoring equipment measuring vapors for LEL.

- 3) Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;
- 4) Atmospheric concentration of any substance which could result in employee exposure in excess of published exposure limits (PELs or TLVs) for that substance; or
- 5) Any other atmospheric condition that is immediately dangerous to life or health (IDLH atmospheres).

**TWU employees and students are PROHIBITED from ever entering confined spaces containing a hazardous atmosphere as defined above.** This does not prohibit employees from working in spaces where forced ventilation has eliminated the hazardous atmosphere in accordance with a properly completed Confined Space Entry Permit (see below).

A confined space classified as a Permit-Required Confined Space may be re-classified as non-permit confined space under the following conditions:

- If the confined space poses **no actual or potential atmospheric hazards**, and if all hazards within the space can be eliminated without entry into the space. The confined space may be reclassified as non-permit required for as long as the non-atmospheric conditions remain eliminated. Potential atmospheric hazardous include hazards created from the work conducted in the space; such as welding.

For example: a confined space designated as a Permit-Required Confined Space due to a mechanical or electrical hazard may be reclassified as a non-permit required confined space after the hazards are eliminated through lockout of the energy source (see TWU's Hazardous Energy Control Program) without entering the space.

- If it is necessary to enter the space to eliminate hazards, such entry shall be conducted under the requirements for entry into a Permit-Required Space. Remember, **TWU employees and students are PROHIBITED from ever entering confined spaces containing a hazardous atmosphere as defined above.**
- If hazards arise within a Permit-Required Confined Space that has been re-classified to a Non-Permit Confined Space, **all entrants shall exit the space immediately.** The space will be re-evaluated to determine whether it shall be reclassified to a Permit-Required Space.

A list of the identified Permit-Required Confined Spaces at TWU campuses is provided in **Table 1**. The confined space inventory will be re-evaluated whenever the use, configuration, or expected hazardous of a space change.

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## 2.3 REQUIRED EQUIPMENT

The following sections describe required equipment for all confined space entries at TWU.

### 2.3.1 REQUIRED RETRIEVAL/FALL PROTECTION EQUIPMENT

Entrant retrieval and fall protection equipment **must be in place at the point of entry** for all confined space entrants as follows:

1. Each Authorized Entrant shall wear a full-body harness with a “D”-Ring at the center of the employee’s back near shoulder level, above the employee’s head, or at another point which presents a body profile small enough for the successful rescue of the Authorized Entrant.
2. Authorized Entrants must use retrieval lines as follows:
  - a. Retrieval lines must be attached to the “D”-Ring of Authorized Entrants’ harnesses whenever possible. Authorized Entrants should only disconnect the retrieval lines from their harness when leaving the retrieval line attached would cause a greater hazard to the Authorized Entrant(s).
  - b. Authorized Entrants shall be aware of the route of their retrieval line in the confined space, noting obstacles it could become entangled with, and routing it in such a way to allow for non-entry retrieval whenever possible.
  - c. Authorized Entrants shall be aware of other Authorized Entrants’ retrieval lines and avoid stepping on or becoming entangling in them.
  - d. Retrieval lines **must** be attached to a mechanical device or fixed point outside the Permit-Required Confined Space in such a manner that rescue can begin as soon as the Attendant becomes aware that rescue is necessary.
3. For vertical entries greater than 5 feet deep, a mechanical retrieval device (e.g. a manual or powered hoist) must be available and ready for the Attendant’s use at the point of entry.
  - a. Whenever possible, the Authorized Entrant’s retrieval line must remain connected to the mechanical retrieval device. This is generally not possible when the Authorized Entrant is working at a distance from the entry point, and when multiple Authorized Entrants are in the space.
  - b. In situations where Authorized Entrants are not connected to the mechanical retrieval device, Authorized Entrants will use another retrieval line in accordance with the rules for retrieval lines listed in [item 2](#) above. In addition, additional rescue equipment **will be required** to be available to the Attendant (i.e. a “remote hook” and specialized extendible pole that will allow the Attendant to reattach the mechanical retrieval device to the Authorized Entrant’s harness during a non-entry rescue).

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4. If the Authorized Entrant will be exposed to fall hazards greater than 4 feet, the retrieval line must be connected to appropriate fall protection equipment. This can take the form of a shock absorbing lanyard (if the attachment point is greater than 18.5 feet from objects below), or a self retracting lanyard. Ladders are not considered to be fall hazards for the purpose of this requirement.

### 2.3.2 OTHER REQUIRED EQUIPMENT

- A method of communication, such as two-way radio or mobile phone, must be available to allow the Attendant to summon assistance without leaving his/her post at the confined space.
- Properly calibrated atmospheric sampling equipment required by the Confined Space Entry Permit must be available. For entry into Permit-Required Confined Spaces with potential atmospheric hazards, this will include equipment that can measure oxygen, carbon monoxide, hydrogen sulfide, and lower explosive limit (LEL) **at a minimum**. Additional sampling equipment will be required if other atmospheric hazards are known or expected to be present in the space.
- Any personnel protective equipment (PPE) indicated as required by the Confined Space Entry Permit; which may include various types of gloves, safety glasses, respirators, hard hats, footwear, welding gear, etc. Required PPE must be determined by assessing the hazards of the confined space to be entered and the work to be conducted within the space.

### 2.4 PERSONNEL ROLES AND RESPONSIBILITIES

Personnel who are involved with routine Permit-Required Confined Space entry will perform one of the three roles. These roles are:

- Authorized Entrant(s)
- Attendant
- Entry Supervisor

**Authorized Entrants** are personnel who enter Permit-Required Confined Spaces to perform work. In addition to safely performing the assigned task within the Permit-Required Confined Space, their responsibilities are to:

- Know the hazards associated with the Permit-Required Confined Space and their effects,
- Properly use the equipment required for entry,
- Maintain a continuous means of communication with the Attendant,
- Alert the Attendant whenever:
  - The Authorized Entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or
  - The Authorized Entrant detects a condition prohibited by the permit.
- Exit the space as quickly as possible whenever:

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- Ordered to by the Attendant or Entry Supervisor,
- The Authorized Entrant recognizes any warning sign or symptom of exposure to a dangerous situation,
- The Authorized Entrant detects a condition prohibited by the permit, or
- An evacuation alarm (including on monitoring equipment) is activated.

Authorized Entrants will be allowed the opportunity to observe any pre-entry monitoring and the final results of the monitoring. The results must also be recorded on the confined space entry permit.

**Attendants** are personnel stationed outside the Permit-Required Confined Space to monitor the conditions in and around the space, as well as to monitor the Authorized Entrants. They additionally coordinate rescue efforts in the event of an emergency. An Authorized Entrant may never act as the Attendant while in the confined space. An Attendant's specific responsibilities are to:

- Know the hazards associated with the Permit-Required Confined Space and their effects (including possible behavioral effects),
- Verify that the safeguards required by the permit have been implemented,
- Maintain an accurate account of the Authorized Entrants (i.e. who is in the space),
- Remain at their assigned station until relieved by another Attendant or until the Permit-Required Confined Space entry is complete and all entrants have exited the space,
- Monitor conditions in and around the Permit-Required Confined Space and to order Authorized Entrants to exit the space if:
  - Attendant detects the behavioral effects of hazard exposure in an Authorized Entrant,
  - Attendant detects a situation outside the space that could endanger the Authorized Entrants, or
  - Attendant cannot effectively and safely perform all required duties
- Summon rescue and applicable medical services in the event of an emergency,
- Perform non-entry rescue procedures,
- Perform appropriate actions to prevent unauthorized personnel from entering the Permit-Required Confined Space, and
- Inform Authorized Entrants and the Entry Supervisor of any unauthorized entrants.

The **Entry Supervisor** is the individual who approves entry into a Permit-Required Confined Space, contingent on necessary precautions being taken. [As noted above](#), the Entry Supervisor can only be the supervisor of the employees entering the space, or a few specific alternate TWU employees. The Entry Supervisor may also act as the Attendant if they meet the requirements for both positions. The Entry Supervisor is responsible for:

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- Knowing the hazards associated with the Permit-Required Confined Space and their effects,
- Verifying that the safeguards required by the permit have been implemented,
- Terminating entry and canceling the permit when the entry operations have been completed or a condition arises that is not allowed under the entry permit,
- Verifying that rescue services are available and that the means for summoning them are in place and operable,
- Removing personnel who are not authorized to enter the Permit-Required Confined Space during entry operations, and
- Determining, when appropriate, that the entry operation is performed consistent with the requirements of the Permit-Required Confined Space entry procedures and that acceptable entry conditions are maintained.

## 2.5 TRAINING

All Authorized Entrants, Attendants, and Entry Supervisors must be trained concerning their responsibilities. The training must ensure that they have acquired the understanding, knowledge, and skills necessary to perform their assigned duties.

Training must be provided:

- Before personnel are assigned duties outlined in this plan,
- When their assigned duties change,
- When there is a change in confined spaces on campus that may create hazards of which affected personnel have not been informed, and/or
- Whenever there is reason to believe either that there are deviations from the Permit-Required Confined Space entry procedures required by this program, or that there are inadequacies in employee's knowledge or use of these procedures.

Additional training may be required for employees conducting confined space work. Such required training may include, but is not limited to:

- Personal Protective Equipment (PPE)
- Respiratory Protection
- Fall Protection
- Electrical Safety
- Hazardous Energy Control (Lockout/Tagout)

All training must be documented, and documentation maintained by the Office of Environmental Health & Safety.

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## **2.6 RESCUE AND EMERGENCY MEDICAL SERVICES**

Rescue and emergency medical services must be available during a Permit-Required Confined Space entry. TWU must assure that such services are available at all times that entry into Permit-Required Confined Spaces is occurring.

### **2.6.1 METHOD OF RESPONSE**

Confined space rescue and emergency medical services at TWU will primarily be provided by the applicable municipal fire departments and emergency responders serving each campus. TWU personnel may only conduct rescue and emergency medical activities that do not require entry into confined spaces, such as entrant retrieval using the entrant's lanyard and harness. If multiple confined space entries are performed, sufficient emergency personnel and equipment must be available to perform simultaneous rescues at each entry location.

### **2.6.2 COORDINATION WITH OUTSIDE EMERGENCY SERVICES**

TWU will coordinate with the fire departments/emergency responders at each campus to ensure that they are familiar with the confined spaces they would be called on to provide rescue services for. This will include inviting the responders to inspect and/or conduct rescue drills in the Permit-Required Confined Spaces.

### **2.6.3 SUMMONING OUTSIDE EMERGENCY SERVICES**

A method of communication, such as two-way radio or mobile phone, must be in place between the Attendant and the designated fire departments/emergency responders. Use of the communication method must not require the Attendant to leave the area.

Generally the emergency responders will be summoned by dialing **911** or contacting TWU DPS, unless a non-municipal emergency response service is used.

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## 2.7 ENTRY COORDINATION

TWU employees responsible for contractors conducting work in or near confined spaces on campus must complete the following, with the assistance of the Office of Environmental Health & Safety:

- Inform the contractor that the workplace contains Permit-Required Confined Spaces and that entry into those spaces is allowed only through a Confined Space Program meeting the requirements of OSHA's Permit-Required Confined Spaces standard (29 CFR 1910.146);
- Instruct the contractor to notify TWU of plans to enter any Permit-Required Confined Space on campus;
- Apprise the contractor of the elements, including the hazards identified and TWU's experience with the space(s), that make the space(s) the contractor will working in or near Permit-Required Confined Spaces;
- Apprise the contractor of any precautions or procedures that TWU has implemented for the protection of employees in or near Permit-Required Confined Space where contractor personnel will be working (in other words: let the contractor know what TWU employees are required to do for the confined spaces in question); and
- Debrief the contractor at the conclusion of all entry operations regarding the Confined Space Program and regarding any hazards confronted or created in Permit-Required Confined Spaces during entry operations.

If a task involves entry into a Permit-Required Confined Space by both TWU and contractor personnel, a TWU Entry Supervisor will be responsible for coordinating entry into the space. The Entry Supervisor will understand the hazards of the work to be performed by all Authorized Entrants, and ensure that the activities of contractors or TWU employees do not endanger Authorized Entrants.

## 2.8 ANNUAL REVIEW

Annually, the Office of Environmental Health & Safety will review this program to ensure that employees participating in entry operations are protected from Permit-Required Confined Space hazards. The program will be reviewed in light of the canceled Confined Space Entry Permits for the previous year.

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### 3.0 ENTRY PROCEDURE

The following are the steps required to be followed for each confined space entry:

**1. Determine if Work Tasks Involve Confined Space Work**

Supervisors should always be aware of the potential for confined spaces in work they assign. Similarly, employees should be aware of any work they are assigned that may involve confined spaces. If supervisors or employees determine that a confined space is involved in an assigned task, the requirements of this program must be followed. Confined spaces may not always be labeled, so vigilance is critical.

**2. Determine if Identified Confined Spaces are Permit-Required Confined Spaces**

Review **Table 1** to determine if the confined space was previously identified as Permit-Required. Even if the confined space was not previously determined to require a permit for entry, supervisors and employees should consider the specific conditions and work to be conducted to determine if a permit is required (see [Section 2.2](#)). Contact the Office of Environmental Health & Safety for assistance.

A confined space entry permit is not required for Confined Spaces where no hazards have been identified (i.e. Non-Permit Required Confined Spaces).

Note: For Permit-Required Confined Spaces that do not have atmospheric hazards; if all hazards can be eliminated from outside the confined space, a permit is not required.

**3. Complete a Confined Space Entry Permit**

The acting Entry Supervisor will review **Table 2**, the current conditions, and planned work to be conducted in the space to determine which items on the Confined Space Entry Permit (**Figure 1**) will be required. The permit will only be valid for the time required to complete the current task. Contact the Office of Environmental Health & Safety for assistance.

If contractors are involved in the work, coordinate the permit review with the contractor's representatives to ensure that all work processes are accounted for.

**4. Complete All Items Required by the Confined Space Entry Permit**

The Entry Supervisor will provide a copy of the permit to the necessary personnel (e.g. Authorized Entrants and Attendants). All Authorized Entrants and Attendants shall review the permit, noting the required items (checked "REQ" boxes on the permit). All required preparations must be carried out, and all required equipment brought to the entry point. The completed items must be noted on the permit (by checking the "COM" boxes on the permit) to indicate that it has been completed.

**5. Sign Confined Space Entry Permit**

The Entry Supervisor may only sign the permit after he/she has verified that all required items noted on the permit are completed.

***Entry may not proceed until the permit is signed by the Entry Supervisor!***

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## 6. Conduct Entry

All Authorized Entrants and Attendants must review the permit, and be given the opportunity to review the atmospheric monitoring prior to entry. If atmospheric monitoring indicates that there is a hazardous atmosphere, as defined above, the entry may not proceed and the permit must be cancelled.

The permit must be maintained by the Attendant at the confined space. If at any point during the entry the permit conditions cannot be met, or if conditions change, the Authorized Entrants will exit the space immediately. The Attendant will be stationed adjacent the confined space for the duration of the time Authorized Entrants are in the space. See description of duties of Authorized Entrants, Attendants and Entry Supervisor above.

Atmospheric monitoring will be conducted continuously whenever possible, and will be conducted at a minimum of hourly, or whenever conditions change or there is any reason to believe that the atmosphere has changed.

## 7. Debrief Authorized Entrants

The Entry Supervisor must review the entry with all personnel involved and note comments on the permit. This debrief must include information from contractor personnel if applicable.

## 8. Cancel and File Permit

Once entry is complete and all close-out items listed on the permit are complete, the Entry Supervisor must sign the permit to cancel it, and send it to the Director of Environmental Health & Safety for filing and use in the annual review.

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**TABLE 1**

**Permit-Required Confined Space Inventory**

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DENTON CAMPUS PERMIT-REQUIRED CONFINED SPACE INVENTORY

Building No.	Name	Confined Space Type
Campus Wide	HVAC Equipment/Ductwork	HVAC Equipment/Ductwork
Campus Wide	Tunnels	Tunnels
Campus Wide	Catch Basins	Sump Pit
Campus Wide	Utility Vaults	Utility Vaults
N/A	Large Tunnel Entrance ("Snake Pit")	Tunnel/Sump Pits (3)
01	Admissions and Reg.	Sump Pit
01A	Administrative Conf. Tower	Sump Pit
05	Margo Jones Auditorium/Music Bld.	Sump Pits (5)
06	Visual Arts Bldg	Sump Pits (6)
07	Bralley Annex	Sump Pit
09	Ann Stuart Science Complex	Acid Neutralization Pit
09	Ann Stuart Science Complex	Crawl Space Under Building
09	Ann Stuart Science Complex	Sump Pit
10	Undergraduate Sci. Lab	Sump Pit
11	Human Development Bldg.	Sump Pit (3)
11	Human Development Bldg.	Acid Neutralization Pit
13	Classroom, Faculty Offices Bldg.	Sump Pits (2)
30	Hubbard Hall	Sump Pit
30	Hubbard Hall	Grease Trap
35	MEBH Library	Sump Pits (3)
37	Stoddard Hall	Sump Pits (3)
39	Mary Gibbs Jones Hall	Sump Pits (2)
42	Nelda Stark Hall	Sump Pits (2)
43	John Guinn Hall	Sump Pits (2)
44	Guinn/Stark Commons	Grease Trap
52	Lowry Woods Apartments	Sump Pit
54	University House	Basement
57	Outdoor Swimming Pool	Sump Pit
58	Restrooms	Sump Pit
64	Student Center	Grease Traps (3)
64	Student Center	Sump Pit (2)
64	Student Center	Sewage Ejector Pit
70	Central Plant	Sump Pit
76	South Substation	Sump Pit
77	Facilities Management Auto Shop	Grease Trap/Grit Separator
79	Pioneer Hall	Sump Pits (2)

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DALLAS CAMPUS PERMIT-REQUIRED CONFINED SPACE INVENTORY

Location	Building Name	Confined Space Type
Campus Wide	HVAC Equipment/Ductwork	HVAC Equipment/Ductwork
Campus Wide	Tunnels	Tunnels
Campus Wide	Catch Basins	Sump Pit
Campus Wide	Utility Vaults	Utility Vaults
Campus Wide	Basement	Sewerage Ejector Pit

HOUSTON CAMPUS PERMIT-REQUIRED CONFINED SPACE INVENTORY

Location	Building Name	Confined Space Type
Campus Wide	HVAC Equipment/Ductwork	HVAC Equipment/Ductwork
Campus Wide	Tunnels	Tunnels
Campus Wide	Catch Basins	Sump Pit
Campus Wide	Utility Vaults	Utility Vaults

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**TABLE 2**

**Potential Hazards by Confined Space Type**

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**Potential Hazards by Confined Space Type**

**Potential Hazards**

Space Type	Oxygen Deficiency	Hydrogen Sulfide Gas	Carbon Monoxide	Explosive Atmosphere/ Oxygen Enrichment	Other Toxic or IDLH Atmosphere	Hazardous Energy/ Equipment	Internal Configuration	Engulfment	Products of Work Activities
HVAC Equipment/ Ductwork						X	X		X
Tunnels	X	X	X	X		X	X		X
Sump Pit	X	X	X	X	X	X	X	X	X
Sewerage Ejector Pit	X	X	X	X	X	X	X	X	X
Utility Vault	X	X	X			X			X
Acid Neutralization Pit	X	X	X		X			X	X
Grease Trap/Grit Separator	X	X	X	X				X	X
Crawl Space/ Basement	X	X	X	X		X	X		X

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Document Name: Confined Space Entry Program  
Document Number: 5460.2 v.3  
FMC Division: Environmental Health & Safety

Approval Date: 1/5/2016  
Review Date: 1/5/2017  
Approved By: AVP, FMC

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## FIGURES

Document Name: Confined Space Entry Permit  
Document Number: 5460.2.F1 v.2  
FMC Division: Environmental Health & Safety

Approval Date: 1/5/2016  
Review Date: 1/5/17  
Approved By: AVP, FMC

Location \_\_\_\_\_

Description of Space \_\_\_\_\_

Department Responsible \_\_\_\_\_

Description of Work to be Performed \_\_\_\_\_

Authorized Duration of Permit From: \_\_\_\_\_ To: \_\_\_\_\_  
(Date/Time) (Date/Time)

If entry into a permit space is not made during time specified, a new permit must be completed prior to entry.

### ACTUAL OR POTENTIAL HAZARDS IN CONFINED SPACE

N/A	A/P	N/A=Not Applicable	A/P=Actual/Potential
<input type="checkbox"/>	<input type="checkbox"/>	Oxygen deficiency	
<input type="checkbox"/>	<input type="checkbox"/>	Flammable gases or vapors	
<input type="checkbox"/>	<input type="checkbox"/>	Toxic gases or vapors exceeding Permissible Exposure Limit (PEL)	
		(Note: In addition to gases or vapors already present, use of solvents, paints, caulks or similar materials can have an adverse effect on the atmosphere inside the confined space.)	
<input type="checkbox"/>	<input type="checkbox"/>	Mechanical	
<input type="checkbox"/>	<input type="checkbox"/>	Electrical	
<input type="checkbox"/>	<input type="checkbox"/>	Engulfment	
<input type="checkbox"/>	<input type="checkbox"/>	Materials harmful to skin	
<input type="checkbox"/>	<input type="checkbox"/>	Configuration of space could trap entrant	
<input type="checkbox"/>	<input type="checkbox"/>	Heavy/awkward/pressurized entry covers	
<input type="checkbox"/>	<input type="checkbox"/>	Slick or obstructed working surfaces/trip hazards	
<input type="checkbox"/>	<input type="checkbox"/>	Dust	
<input type="checkbox"/>	<input type="checkbox"/>	Noise	
<input type="checkbox"/>	<input type="checkbox"/>	Heat/cold	
<input type="checkbox"/>	<input type="checkbox"/>	Falling	
<input type="checkbox"/>	<input type="checkbox"/>	Asbestos	
<input type="checkbox"/>	<input type="checkbox"/>	Lead	
<input type="checkbox"/>	<input type="checkbox"/>	Radioactive residues/gasses	
<input type="checkbox"/>	<input type="checkbox"/>	Others: Specify _____	

### PREPARATIONS

N/A	REQ	COM	N/A=Not Applicable	REQ=Required	COM=Completed
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Obtain & review appropriate Safety Data Sheets (Attach copies of SDSs to this permit)		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Respirator users have been trained, cleared and fit tested for the make/model/size of respirator to be used		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Notify all contractors involved/affected; Specify: _____		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Staging area for materials/equipment determined		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cordon off area around confined space/protect area from materials falling into vertical opening		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Transportation routes unobstructed for emergencies		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Isolate pipes by blanking, double-valve & bleeding, or lock-out/tag-out*		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lock-out/Tag-out energy sources entrants are exposed to*		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Eliminate conditions making it unsafe to remove/open entrance before opening		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drain, clean, wash and/or purge space (If purging is required, specify minimum time: _____)		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ventilation of space as required to provide fresh air; Specify: _____		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hot work checklist completed and attached if required		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other: Specify: _____		

\*(Attach separate lockout/tagout checklist if required)

**Mandatory Preparations**

- X  Copy of completed permit posted near confined space entry points
- X  Arrange for qualified Attendant(s) and Entrants(s)
- X  Employees involved informed of specific confined space hazards
- X  Employees involved have reviewed procedures outlined on this checklist/permit
- X  Communication devices checked for proper operation immediately prior to entry

*REquired items checked must also be checked COMpleted to ensure acceptable entry conditions are met before allowing entry. The space must be evacuated IMMEDIATELY if acceptable entry conditions cannot be maintained.*



## AUTHORIZED PERSONNEL

(Note: Attendants, Entrants, and Entry Supervisors must be trained in their duties as described in the TWU Confined Space Program)

ATTENDANT(S) Name \_\_\_\_\_

AUTHORIZED ENTRANT(S) Name (Attendant must keep current tally of entrants in space) 1) \_\_\_\_\_

2) \_\_\_\_\_ 3) \_\_\_\_\_ 4) \_\_\_\_\_

5) \_\_\_\_\_ 6) \_\_\_\_\_ 7) \_\_\_\_\_

## AUTHORIZATION TO PROCEED

I certify that all required precautions identified on this checklist/permit have been taken and authorize work to proceed as described. Attendants and Entrants have been instructed to evacuate this space and to notify me (the undersigned) immediately if any of these precautions cannot be maintained.

ENTRY SUPERVISOR NAME \_\_\_\_\_ DATE \_\_\_\_\_  
(Please Print)

ENTRY SUPERVISOR SIGNATURE \_\_\_\_\_ TIME \_\_\_\_\_

*The Entry Supervisor must be a supervisor of the Entrant(s) who has received current confined space entry training, and may also act as the Attendant, but may not also be an Authorized Entrant listed under this or any other active confined space entry permit. One of the specific alternates listed in the Confined Space Entry Program may also act as the Entry Supervisor (see Section 1.2).*

TIME ENTRY BEGAN \_\_\_\_\_ TIME ENTRY ENDED \_\_\_\_\_

### POST PERMIT NEAR ENTRY POINT DURING ENTRY

## PERMIT CLOSE-OUT PROCEDURES

N/A    REQ    COM            N/A=Not Applicable    REQ=Required    COM=Completed

( )    ( )    ( )    Reverse isolation/lock-out procedures (refer to lockout/tagout checklist if required)  
( )    ( )    ( )    Secure entrance to confined space

**Mandatory Procedures**

X    ( )    Debrief personnel involved in entry operations and note comments  
X    ( )    Cancel and file permit for future reference (send to Office of EH&S)

ENTRY SUPERVISOR SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

*The Entry Supervisor terminates the permit by signing above when all work and close-out procedures are completed, or if conditions in the Permit-Required Confined Space change, invalidating the permit.*

COMMENTS \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**[SEND COMPLETED PERMIT TO OFFICE OF ENVIRONMENTAL, SAFETY & HEALTH]**

*REQuired items checked must also be checked COMPLETED to ensure acceptable entry conditions are met before allowing entry. The space must be evacuated IMMEDIATELY if acceptable entry conditions cannot be maintained.*