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# PURPOSE

To establish the minimum acceptable requirements necessary to ensure the safety of personnel during permit required confined space entry at all TI sites worldwide.

# SCOPE

This standard is intended to address all permit required confined space entries including TI entries, contractor entries, and joint entries at TI sites worldwide. The provisions of this standard apply to all TI employees, contractors, suppliers, vendors, and visitors at TI sites worldwide

# reference documents

## TI Standard Policy and Procedure (SP&P) 04-04-01: "Environmental, Health and Safety"

## TI ESHMS 4.5.4 Records Management

## US OSHA – [**29CFR 1910.146**](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9797): Permit required Confined Spaces

# Definitions

[TI ESH Standards Glossary of Definitions](https://sps01.itg.ti.com/sites/wwf/esh/standards/Knowledge_Bank/00.01.xlsx)

# Requirements

## General Requirements

### Each site shall develop an inventory of all permit required confined spaces on TI property or leased spaces TI employees or contractors would enter.

#### Each space shall be classified as to whether entry or non-entry rescue is required.

##### See **Appendix A** Flowchart: Entry / Non-Entry Rescue Requirements

#####  Permit required confined space inventories shall be reviewed and updated at least annually.

### Employees shall be informed where permit required confined spaces exist by posted signs at the entrance to each permit required confined space.

#### The sign shall be written in local language and read “DANGER - PERMIT REQUIRED CONFINED SPACE, DO NOT ENTER” or similar wording. In addition, the signage shall conform to and be compliant with each site’s national laws and regulations.

#### When the space is a trench, or trench like, with multiple entry points, the distance between labels shall not exceed 20 feet (6.1 meters)

### When there are changes in the use or configuration of a confined space that might create hazards to entrants, the site shall reevaluate that space and, if necessary, reclassify it as a permit required confined space.

### Unauthorized personnel shall not enter a permit required confined space.

### Entrance into a permit required confined space shall only occur under a confined space permit as identified in Section 5.2 of this standard.

### At least one attendant shall be provided outside a permit required confined space into which entry is authorized and the attendant shall remain outside the permit required confined space for the duration of entry operations or until relieved by another attendant.

### When permit required confined spaces require entry rescue, the rescue team shall remain on scene, outside the permit required confined space for the duration of the entry operations and until the permit is terminated.

### If the entry rescue team leaves the scene then all entrants must exit the permit required confined space until the entry rescue team returns to the scene.

## Permit System

### Before entry into a permit required confined space is authorized the site shall prepare, at a minimum, the permit required confined space entry form found in **Appendix B and begin the atmospheric monitoring of the confined space using Appendix C**.

#### Any unexpected conditions encountered during an entry operation shall be noted on the pertinent permit so that appropriate revisions to the site’s permit required confined space inventory can be made.

### The completed Confined Space Entry Permit and any other required pre-entry documentation shall be made available at the time of entry to all permit required confined space entrants so that the entrants can confirm that pre-entry preparations has been completed.

### The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit or maximum of 12 hours or 1 shift.

### The confined space permit shall be terminated when:

#### The entry operations covered by the entry permit have been completed; or

#### A condition that is not allowed under the entry permit arises in or near the permit required confined space.

#### The work generates an unexpected hazard or the planned work activity changes.

### The entry supervisor shall complete a post entry debrief with the entrants and attendants using the form found in **Appendix B**.

### The site shall retain each completed and closed entry permit(s), as employee exposure records, as required by the TI Record Retention matrix.

## Temporary Reclassification of Permit Required Confined Space(s)

### A permit required confined space may be temporarily reclassified as Non-Permit Required Confined Space or as a space that is not considered to be a confined space.

### Temporary reclassification must be documented using the elements found in **Appendix D**.

### The document must be made available to employees at the space. Temporary reclassification must be documented using the elements found in **Appendix D**.

### A permit required confined space may be temporarily reclassified as Non-Permit Required Confined Space under the following procedures/process:

#### The permit required confined space poses no actual or potential hazards (atmospheric, engulfment, asphyxiation, other); and

#### All hazards within the space can be eliminated without entry into the space.

### A permit required confined space may be reclassified so that it is not considered to be a confined space if one or more of the confined space criteria listed in Section 4.0 are eliminated.

#### 5.3.6 Temporary reclassification can only remain in effect for as long as the applicable criteria in 5.3.4 or 5.3.5 are in place.

## Training

### Training shall be provided to ensure that all authorized personnel have the understanding, knowledge and skills necessary for the safe performance of their duties during permit required confined space entry.

### The training shall establish employee proficiency in the duties required by this standard and for compliance with this section.

### Training for all authorized personnel shall be conducted:

#### Initially, prior to an employee being first assigned work duties in a permit required confined space;

#### When there is a change in an employee's assigned duties, or when there is a change in the permit required confined space that presents a hazard for which the employee has not been previously trained;

#### When it is suspected that the employee has deviated from the permit required confined space entry procedures, or there are observed inadequacies in the employee's knowledge or use of the procedures;

#### At least annually.

### Authorized Permit Writers

#### Training shall be provided to ensure the authorized permit writer has been trained in the following:

##### How to complete a confined space permit

##### Inspection of equipment

##### Inspection of rope log

##### Inspection of monitoring equipment

#### Training Frequency shall not exceed 3 years

#### Permits must be maintained per the TI ESH Document Management process

## Responsibilities

### Duties of permit required confined space entrants.

#### The site shall ensure that all permit required confined space entrants:

##### Know the hazards and the hazard effects, that may be faced during entry into the permit required confined space and how to properly use all equipment as required by the permit and **Appendix B**;

##### Stay in communication with the attendant to enable the attendant to monitor entrant status;

#### Alert the attendant whenever:

##### The entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or

##### The entrant detects a prohibited condition.

#### Exit from the permit required confined space as quickly as possible whenever:

##### Any unexpected condition occurs such as a recognized or suspected serious safety or health hazard,

##### An order to evacuate is given by the attendant or the entry supervisor, or

##### An atmospheric monitor detection occurs or an evacuation alarm is activated.

### Duties of attendants.

#### The site shall ensure that each attendant:

##### Knows the hazards, and the hazard effects, that may be faced during entry into the permitted space;

##### Continuously maintains an accurate count of permit required confined space entrants in the permit required confined space;

##### Remains outside the permit required confined space during entry operations until relieved by another attendant;

##### Communicates with entrants, as necessary, to monitor entrant status and to alert entrants of the need to evacuate the space;

##### Perform no other duties that may interfere with attendant’s primary duties.

#### Attendants shall monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space and order the permit required confined space entrants to evacuate the space immediately under any of the following conditions;

##### If the attendant detects a prohibited or unexpected condition such as a recognized serious safety and health hazard;

##### If the attendant detects the behavioral effects of hazard exposure in an permit required confined space entrant;

##### If the attendant detects a situation outside the space that could endanger the permit required confined space entrants; or

##### If the attendant cannot effectively and safely perform all the duties required under this standard.

#### Attendants shall only participate in and perform non-entry rescue, provided that it does not interfere with the attendant's primary duty to effectively monitor and protect all of the permit required confined space entrants.

#### Attendants shall immediately notify necessary parties when emergency or medical services are needed.

### Duties of entry supervisors

#### The site shall ensure that each entry supervisor:

##### Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;

##### Verifies, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before signing the permit and authorizing entry to begin;

##### Terminates the entry and cancels the permit as required by Section 5.2.4 of this standard; and

##### Verifies that rescue services are on-scene when required.

### Duties of an Authorized Permit Writer

#### The Permit Writer shall:

##### Review the permit space database to verify the possible hazards present;

Note: If the confined space is not in the Confined Space Database, an assessment must be completed including a rescue plan prior to issuing a permit.

##### Inspect the confined space to verify identified hazards and determine if any additional hazards are present;

##### Complete the Confined Space Permit and monitoring of the space;

##### Verify all entrants/attendants are properly trained in confined space activities and that the training is up to date;

##### Ensure all monitoring and rescue equipment is on scene.

### Turnkey Suppliers (Contractors)

#### Prior to any confined space entries, Turnkey Suppliers shall be responsible for the following:

##### Advising TI that a confined space entry is part of the project whether existing or newly created by the contractor;

##### Obtaining from TI all available information regarding confined space hazards and entry operations associated with their work. This communication shall include the Contractor Communication Checklist (CCC) provided in Appendix E;

##### Independently verifying the conditions of the particular confined space before authorizing entry;

##### Communicating TI’s procedures for confined space entry to all its personnel working at TI;

##### Providing or verifying all necessary and required training for their own personnel who will enter, attend, supervise or provide rescue for a confined space;

##### Providing or procuring qualified emergency response/rescue resources that comply with regulatory requirements and meet the requirements of this Standard;

##### Providing and issuing their own confined space entry permits that meet the minimum requirements of **Appendix B** (TI **does not** sign other companies confined space permits);

##### Provide TI with a copy of the confined space entry permit(s) for record retention upon completion of confined space permit work;

##### Informing TI during the debriefing of any unexpected hazards encountered or created during the confined space entry, that were not noted initially on the permit.

## Rescue and Emergency Services

### Sites shall:

#### Evaluate the prospective on-scene entry-rescue service's ability, in terms of proficiency with rescue-related tasks and equipment, to function appropriately while rescuing entrants from the particular permit space or types of permit required confined spaces identified;

##### At a minimum, utilize the information found in **Appendix F** – On-Scene Rescue Service Evaluation Checklist.

#### Select an on-scene entry-rescue service from those evaluated and:

##### Inform each on-scene rescue team or service of the hazards they may confront when called on to perform on-scene rescue at the site;

##### Provide the on-scene rescue service selected with access to all permit required confined spaces from which on-scene rescue may be necessary so that the on-scene rescue service can develop appropriate rescue plans and practice rescue operations and;

##### Ensure the service selected has employees trained in basic first-aid, cardiopulmonary resuscitation (CPR) and the use of an automatic external defibrillator (AED). Sites shall ensure that at least one member of the on-scene rescue service on duty is holding a current certification in first aid and CPR and is available on-scene for response.

#### Sites where TI employees have been designated to provide permit required confined space on-scene rescue shall implement the following measures:

##### Has the capability to reach the victim(s) within a time frame that is appropriate for the permit space hazard(s) identified;

###### For entry rescue spaces this means on-scene.

##### Is equipped with necessary rescue equipment and proficient in performing the needed on-scene entry-rescue services;

##### Inform the rescue team of the hazards they may confront when called on to perform rescue at the site;

##### Provide the rescue team with access to all permit required confined spaces from which rescue may be necessary so that they can develop appropriate rescue plans and practice rescue operations and;

##### Provide TI rescue team members with the personal protective equipment (PPE) needed to conduct permit space rescues safely and train TI rescue team members so they are proficient in the use of that PPE, at no cost to those employees;

##### Train affected employees to perform assigned rescue duties. The sites must ensure that such employees successfully complete the training required to establish proficiency as an entrant, as provided by paragraphs below;

##### Train affected employees in basic first-aid, cardiopulmonary resuscitation (CPR) and the use of an automatic external defibrillator (AED). Sites shall ensure that at least one member of the rescue team, on duty, is holding a current certification in first aid and CPR and is available for response; and

##### Ensure that TI rescue team members practice making permit required confined space rescues at least once per quarter, by means of simulated rescue operations in which they remove manikins, or actual persons from the actual permit required confined spaces or from representative permit required confined spaces. Representative permit required confined spaces shall, with respect to opening size, configuration, and accessibility, simulate the types of permit required confined spaces from which rescue is to be performed.

###### All training and drills will be documented.

#### If the retrieval equipment would increase the overall risk to the entrant during entry or would not contribute to the rescue of the entrant then on-scene entry rescue must be provided.

#### To facilitate non-entry rescue, retrieval systems shall be in place while entrant(s) enter a permit required confined space.

##### Vertical non-entry retrieval systems shall meet the following requirements:

###### Each authorized entrant shall use a full body harness, with a retrieval line attached to the entrant's back near shoulder level, above the entrant's head, or at another point which the employer can establish that presents a profile small enough for the successful removal of the entrant from the space.

###### The other end of the retrieval line shall be attached to a mechanical retrieval device (3:1 mechanical advantage or greater) located outside the permitted space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary.

###### A plan (emergency contact number) must be in place for alternate rescue in the event non-entry rescue fails.

##### Horizontal non-entry retrieval systems shall meet the following requirements:

###### Each entrant shall use a full body harness, with a retrieval line attached to the entrant's back near shoulder level or at another point which the employer can establish that presents a profile small enough for the successful removal of the entrant from the space.

###### The other end of the retrieval line shall be attached to a mechanical retrieval device (3:1 mechanical advantage or greater) located outside the permitted space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary.

###### A plan (emergency contact number) must be in place for alternate rescue in the event non-entry rescue fails.

# STANDARD Approval

This standard has been approved by Zane Broadhead, TI Vice President.

# Revision history

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Rev#** | **Date** | **Nature of Revision** | **Author/Editor** | **Approver** |
| A | 05/28/2008 | Major periodic review; various minor edits at 3.1 and 3.2 to improve clarity; removed OSHA and ANSI references from 6.0. Modification to format for clarity. | Dale Moore, Kathy Meissner | 05/28/2008 |
| B | 03/29/2017 | Major rewrite/revision. | Graves, McAdams, Moilanen, Woods, Beggs | ELC |
| C | 6/24/2020 | Minor update to rescue capabilities and training for permit writers. Added back the Contractor Communication Checklist | R. Graves, P French | ELC |
|  |  |  |  |  |

1. Flow Chart For Determining Rescue Type Required

Used to determine if On-Scene Stand-By Entry Rescue or Non-Entry Rescue is required.

**Does the Space have a Present or Potential IDLH Atmosphere?**

**On-Scene Entry Rescue Required**

**(Obstructed retrieval system path while connected)**

**Attendant Non-Entry Rescue Acceptable**

**Facilities Work Permit Required**

**Is the Confined Space Permit Required?**

**N**

**Y**

**Y**

**Y**

**N**

**N**

**Can Non-Entry Rescue be Performed?**

**(Unobstructed retrieval system path while connected)**

1. Permit Required Confined Space Entry Permit

**TEXAS INSTRUMENTS INCORPORATED**

**CONFINED SPACE ENTRY PERMIT**

|  |  |  |  |
| --- | --- | --- | --- |
| **Site:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | **Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | **Time\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | **Expiration\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Entry Team Name(s)** | **Company** | **Role: Entrant/Attendant (E/A)** | **Training Date** | **Respirator Qualified?** **Y / N / NA** | **If Yes: Date** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_ |  |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_ |  |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_ |  |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_ |  |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_ |  |

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|

|  |  |
| --- | --- |
| Space ID# | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Location | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Description | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Space Rescue Classification(circle one) | Entry | Non-Entry |
| Purpose of Entry | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Potential Hazards introduced by this entry | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

|  |  |  |  |
| --- | --- | --- | --- |
| **Check Lists:** **(see also: Work Permit – JHA\*\*)** | Y | N | N/A |
| **Hazard Isolation & Controls:** |  |  |  |
| Proper Lock Out & Tag Out |  |  |  |
| Lines (blanked / drained / flushed, etc.) |  |  |  |
| Ventilation - Natural |  |  |  |
| Ventilation - Mechanical(Required in all low O2 & IDLH\*\*\* atmospheres) |  |  |  |
| **PPE:** |  |  |  |
| Appropriate PPE on job site:(Hard-Hats, Safety Glasses, Gloves, etc.) |  |  |  |
| Chemical Protective Clothing |  |  |  |
| Fall Protection: Full-Body Harness |  |  |  |
| Fall Protection: Rescue Rope / Lifeline |  |  |  |
| Fall Protection: Appropriate Anchorage |  |  |  |
| Respiratory Protection: (APR / Airline / SCBA – circle one) |  |  |  |
| **Equipment:** |  |  |  |
| Explosion-proof lighting |  |  |  |
| Fire Extinguisher |  |  |  |
| Ladders |  |  |  |
| Non-Entry Rescue Retrieval Device / System(i.e. Tripod / Winch system) Set-up |  |  |  |
| Entry Rescue Equipment Set-up |  |  |  |
| **Other:** |  |  |  |
| Other Permits: |  |  |  |
|  |  |  |  |

|  |
| --- |
| **Chemicals to be used in space: List Any / All** |
|  |
|  |
|  |
| **(MSDS REQUIRED FOR CHEMICALS – Attach Any / All)** |

|  |
| --- |
| **ATMOSPHERIC PRE- TESTING:** |
| **Air/Gas Monitor – Model # / Serial # / Calibration Date** **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| O2 (19.5% - 23.5%) |  |
| CO (\*<25ppm) |  |
| H2S (\*<10ppm) |  |
| LEL (<10%) |  |
| Dust (>5% Opacity) |  |
| Other: |  |
| Other: |  |
| **Time/Initials (Issuing Authority)** | \_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_ |
|  | **PEL/TLV** |

 |

|  |
| --- |
| **Communications:** |
| TI Emergency / Rescue # : |  |
| TI Security Comm. Center # :  |  |
| Authorized Permit Issuer # : |  |
| Entrant / Attendant (E/A) Communication Method: |  |
| E/A Communication Equipment:  |  |

|  |
| --- |
| **On-Site Rescue Team Personnel Availability (2-Man minimum)** |
| **Name** | **Contact #:** |
| 1. |  |
| 2. |  |

|  |  |
| --- | --- |
| **APPROVALS** | **Signatures:** |
| Entry Supervisor  |  |
| Permit issued by |  |
| **Permit Denied? / Reason:** |  |

|  |
| --- |
| **Post Entry Debriefing / Evaluation Notes:** |
| 1. Did all parties comply with the Entry requirements?
 | Y | N |
| If **NO** explain: |  |
|  |
| 1. Were there any unanticipated hazards encountered?
 | Y | N |
| If **YES** explain: |  |
|  |
| 1. Did the work performed increase the level of hazards for future entrants?
 | Y | N |
| If **YES** explain: |  |
|  |
| 4. Obtain a copy of the Supplier Permit to be stored with Contractor Communication Checklist (CCC) |
|  |
| Entry Supervisor Signature / Date / Time: |
| **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
|  |

|  |  |
| --- | --- |
| Confined Space Inventory / Database Hazard Summary form reviewed by Entry Supervisor and Entry Team (Entrants, Attendant, Rescue) | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | (Entry Supervisor initials) |

|  |
| --- |
| **(Return Closed Permit to Confined Space Program Manager)** |
|  |
| **\* = 8-hour Time Weighted Average**  |
| **\*\*JHA = Job Hazard Analysis** |
| **\*\*\*IDLH = Immediately Dangerous to Life and Health** |

 |

1. ATMOSPHERIC MONITORING LOG

**For Entry Team Use Only**

**ATMOSPHERIC TESTING EQUIPMENT:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **OPERATOR** |  | **INSTRUMENT / Mod#** |  | **SERIAL NUMBER** |  | **CALIBRATION DATE** |
| **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |  | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |  | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |  | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |  | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |  | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |  | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |  | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |  | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |  | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| **CONTINUOUS ATMOSPHERIC MONITORING REQUIRED AT ALL TIMES: RECORD READINGS EVERY 30 MINUTES.** |

|  |
| --- |
| **MONITORING LOG:** |
|  | **Pre-entry** |  |  |  |  |  |  |  |  |
|  | **(1)** |  | **(2)** |  | **(3)** |  | **(4)** |  | **(5)** |
| **Oxygen** |  |  |  |  |  |  |  |  |  |
| **LEL** |  |  |  |  |  |  |  |  |  |
| **CO** |  |  |  |  |  |  |  |  |  |
| **H2S** |  |  |  |  |  |  |  |  |  |
| **Other** |  |  |  |  |  |  |  |  |  |
| **TIME / INIT** |  | / |  |  |  | / |  |  |  | / |  |  |  | / |  |  |  | / |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **(6)** |  | **(7)** |  | **(8)** |  | **(9)** |  | **(10)** |
| **Oxygen** |  |  |  |  |  |  |  |  |  |
| **LEL** |  |  |  |  |  |  |  |  |  |
| **CO** |  |  |  |  |  |  |  |  |  |
| **H2S** |  |  |  |  |  |  |  |  |  |
| **Other** |  |  |  |  |  |  |  |  |  |
| **TIME / INIT** |  | / |  |  |  | / |  |  |  | / |  |  |  | / |  |  |  | / |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **(11)** |  | **(12)** |  | **(13)** |  | **(14)** |  | **(15)** |
| **Oxygen** |  |  |  |  |  |  |  |  |  |
| **LEL** |  |  |  |  |  |  |  |  |  |
| **CO** |  |  |  |  |  |  |  |  |  |
| **H2S** |  |  |  |  |  |  |  |  |  |
| **Other** |  |  |  |  |  |  |  |  |  |
| **TIME / INIT** |  | / |  |  |  | / |  |  |  | / |  |  |  | / |  |  |  | / |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **(16)** |  | **(17)** |  | **(18)** |  | **(19)** |  | **(20)** |
| **Oxygen** |  |  |  |  |  |  |  |  |  |
| **LEL** |  |  |  |  |  |  |  |  |  |
| **CO** |  |  |  |  |  |  |  |  |  |
| **H2S** |  |  |  |  |  |  |  |  |  |
| **Other** |  |  |  |  |  |  |  |  |  |
| **TIME / INIT** |  | / |  |  |  | / |  |  |  | / |  |  |  | / |  |  |  | / |  |

|  |  |  |
| --- | --- | --- |
| **% Oxygen ( 19.5 to 23.5)** | **% Explosive (LEL) (<10%)** | **Carbon Monoxide (\*<25ppm)** |
| **H2S (\*<10ppm)** | **Other** | **TIME / INITIALS** |
| **Note: \*8 hour Time Weighted Average Exposure Limit** |

1. TI Temporary PRCS Reclassification Pre-Entry Checklist

**THIS FORM IS NOT A CONFINED SPACE ENTRY PERMIT.**

**Date of work:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Work Permit #:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Location / identification number of space(s) to be entered:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Reason for entry:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Project Manager or Supervisor:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **Phone Number:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Information to be completed and verified prior to approval:**

[ ]  Review of the confined space assessment summary;

[ ]  **Yes**  [ ]  **No** The confined space can be re-classified from a Permit Required to a Non-Permit Required?

* If yes, method(s) to ensure all hazard(s) will be eliminated: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Information to be completed at the space prior to entry:**

[ ]  **Yes** [ ]  **No** Have hazards been eliminated prior to entry (methods listed above are completed)?

* If no, this is a Permit Required Confined Space and cannot be de-classified.

[ ]  None of the following hazards have been added to the confined space since the assessment:

* Exposed electrical hazards;
* Flammable or explosive vapors or liquids which create an atmospheric hazard;
* Toxic or corrosive chemicals, solids or liquids which create an engulfing hazard;
* Mechanical hazards, moving, or falling equipment;
* Potential for an oxygen deficient atmosphere;
* Poisonous insects and snakes;
* Other recognized safety or health hazard.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  The work being performed in or near the space will not create any of the hazards listed above;

[ ]  Weather condition will not create any new hazards;

[ ]  The potential hazards involved have been communicated to the entrants and attendants;

[ ]  Entrants and other confined space entry participants are trained and knowledgeable

[ ]  **Yes**  [ ]  **No** The confined space has been re-classified from a Permit Required to a Non-Permit Required?

Perform a post-entry debriefing with entrants and attendants and provide information to the ESH Team on any unexpected hazards encountered and any new hazards created within the confined space during the entry.

**Entrant(s): Signature(s):**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Contractor Communication Checklist (CCC) for Confined Space Entry

**NOTICE**

**THIS FORM IS NOT A CONFINED SPACE ENTRY PERMIT.**

**Contractors are only authorized to enter confined spaces on TI property in accordance with applicable local standards and under their own permit-required confined space programs**

SECTION I

**Date:**  **Time:**   **TI Representative:**

**\*\*Location / identification number of space to be entered:**

**Name of Person who will issue the entry permit:**

**Company:**  **Contact Number:**

**Name of TI’er who requested work be performed in the confined space:**

**Contact Number**:

**Location / Description of the space to entered**:

1. Provide Contractor with information about the confined space to be entered.

2. Provide known hazard information about the space to be entered.

3. Provide information about TI’s experience with the space to be entered:

 **Yes** **No**

4. The space is normally classified as a permit-required confined space.

If NO, the space may become a permit-required confined space depending upon the nature of activities performed in the space.

5. Contractor informed that entry to the space is only allowed through compliance with

applicable portions of the local regulatory requirements and TI ESH Standard 07.03 Permit Required Confined Space.

6. Inform contractor of TI’s procedures and precautions for the space to be entered which may include:

 **Check appropriate boxes:**

 🞐 Pre-Entry monitoring 🞐 Communication equipment

 🞐 Continuous monitoring 🞐 GFCI

 🞐 Instrument Calibration 🞐 Other permits required

 *per manufacturers specification* 🞐 Welding & Cutting

 🞐 Lock Out / Tag Out 🞐 Hot work

 🞐 Lines blanked & purged 🞐 Excavation & Trenching

 🞐 Continuous ventilation 🞐 Fire extinguisher

 🞐 Tripod / other retrieval devices 🞐 Fall protection

 🞐 Safety harness 🞐 Explosion Proof lighting

 🞐 Lifeline 🞐 Airline / SCBA

 🞐 PPE 🞐 Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 🞐 Ladder \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 🞐 Respirator \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 🞐 Rescue Service Available 🞐 Area Secure

7. Contractor assures that emergency rescue services are readily available for emergency response.

Name of Rescue Service:

 Phone: Compliance with this requirement to be **initialed** by the contractor:

8. Contractor is provided with TI emergency phone number:

 Yes No

9. 🞐 🞐 Will contractors and TI’ers enter the space together or be working nearby in a manner that may affect conditions within the space? If yes, default to TI’s permit-required confined space program and address the following:

 🞐 Define responsibilities of everyone associated with the entry.

 🞐 Pre-plan emergency procedures and services to be utilized

 Yes No

10. 🞐 🞐 Are operations carried out near the space likely to affect conditions in the space?

🞐 If **YES**, TI safety representative shall coordinate as appropriate to ensure that no additional hazard is created.

🞐 Inform contractor of importance of debriefing requirements and how to get the permit form and debrief information back to the appropriate safety office:

🞐 Check to see if personnel listed on the permit have proof of confined space safety training for entry team members and rescue service.(must include signature of instructor and training date)

**Acknowledgment: Information stated above has been communicated to the undersigned contractor representative. Contractor certifies that entry to the space will be made in strict accordance with local regulations and in accordance with the Contractor’s own confined space safety program.**

**Contractor Representative Name**:  **Date:**

**Contractor Representative (Signature):**

SECTION II

Confined Space Entry Operations: DEBRIEFING

**The purpose of this section is to provide feedback information about the confined space entry referenced below. Of special importance is formation about the conditions encountered during the entry or changes that occurred in the space that may affect the safety of future entries to the space.**

**Date:** **Time:**  **Safety Representative**:

 (name):

**Location / identification number of space to be entered**

**Name of Person who will issue the entry permit:**

**Company:**  **Phone Number:**  **Other Number:**

IMMEDIATELY UPON COMPLETION OF THE CONFINED SPACE ENTRY referenced above, provide the information requested below and contact the Texas Instruments Emergency Services Team at pager 214-882-8014 to discuss the debriefing information requested below

Yes No Check appropriate boxes:

1. 🞐 🞐 Were any conditions encountered during the confined space entry that potentially

 affected the safety of persons in or outside of the space? If *YES*, please explain details

 and actions taken:

2. 🞐 🞐 Did results of atmospheric testing during the entry remain within acceptable ranges?

 If *NO*, explain details and actions taken:

3. 🞐 🞐 To your knowledge, has anything changed in the confined space that may affect the

 safety of persons entering the space in the future. If *YES* please explain:

Please provide any additional information including lessons learned that may help improve confined space entry safety in the future:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date:**\_\_\_\_\_\_\_\_\_\_\_\_\_ **Time:**\_\_\_\_\_\_\_\_\_\_\_\_

Signature of Contractor Representative Print Name

1. On-Scene Rescue Service Evaluation Checklist

**ON-SCENE Rescue Service Evaluation Checklist**

|  |  |  |
| --- | --- | --- |
| Name of Service:  |  |  |
| Phone: |  |  |
| Contact:  |  |  |
| Email: |  |  |
|  |  |  |
| **Questions** | **Y/N** | **Comments** |
| Does the service provider have the capability to provide Confined Space Entry Rescue services? |   |   |
| Is the service equipped to provide rescue in IDLH Environments?(SCBA, Airline, PPE, monitoring equipment, retrieval equipment, etc.) |   |   |
| Can the service provide High / Low Angle / Trench Rescue? (Specific and provide examples) |   |   |
| Have all members of the service been trained as permit space entrants, at a minimum, including training in the potential hazards of all permit spaces, rescue equipment or of representative permit spaces, from which rescue may be needed? (Request proof of training and certificates including name of training facility) |   |   |
| Are team members trained in the first aid and medical skills needed to treat victims overcome or injured by the types of hazards that may be encountered in the permit spaces at the facility? (Request a copy of the training documents) |   |   |
| Can rescue provider demonstrate proof of simulated rescue training or actual rescue in the prior 12 months? |  |  |
| Can the service provide Medical evaluation and treatment? (Request training level(s) i.e. emergency medical technician) |   |   |
| What is the availability of the Rescue Service? (What times are they available? i.e. 24 hours, week days only, only when prearranged) |   |   |
| Does the rescue service have the necessary equipment to perform rescues? (Ropes, tripods, pulleys, SCBA, Airline, monitoring, packaging devices, etc.) |   |   |
| Can team members recognize the signs, symptoms, and consequences of exposure to any hazardous atmospheres that may be present in those permit spaces? (Request the person being interviewed to provide you with examples on how the body reacts to low oxygen or high levels of hydrogen sulfide) |   |   |
| Is every team member provided with, and properly trained in, the use and need for PPE, such as SCBA or fall arrest equipment, which may be required to perform permit space rescues in the facility? |   |   |
| Is every team member properly trained to perform his or her functions and make rescues, and to use any rescue equipment, such as ropes and backboards, that may be needed in a rescue attempt? (Request they explain how they train including frequency of training, content of training and who leads the training) |   |   |
|  |
| **Rescue Service Provider - Hands on Demonstration** |
| Do all team members perform their functions safely and efficiently?  |   |   |
| Do rescue service personnel focus on their own safety before considering the safety of the victim?  |   |   |
| Can the rescue service properly test the atmosphere to determine if it is IDLH?  |   |   |
| Can the rescue personnel identify information pertinent to the rescue from entry permits, hot work permits, and SDSs?  |   |   |
| Has the rescue service been informed of any hazards to personnel that may arise from outside the space, such as those that may be caused by future work near the space?  |   |   |
| Can the rescue service properly package and retrieve victims from a permit space that has a limited size opening (less than 24 inches (60.9 cm) in diameter), limited internal space, or internal obstacles or hazards?  |   |   |
| Does the rescue service have a plan for differing kinds of permit space rescue operations?  |   |   |
| Are the plans adequate for all types of rescue operations that may be needed?  |   |   |
| Has the Rescue Service practiced simulated rescues based on the rescue plans provided? (minimum of confined space, vertical haul and lowering system) |   |   |
| Rescue services are required by the standard to practice rescues at least once every 12 months, provided that the team or service has not successfully performed a permit space rescue within that time. As part of each practice session, the service should perform a critique of the practice rescue, or have another qualified party perform the critique, so that deficiencies in procedures, equipment, training, or number of personnel can be identified and corrected. The results of the critique, and the corrections made to respond to the deficiencies identified, should be given to the employer to enable it to determine whether the rescue service can quickly be upgraded to meet the employer's rescue needs or whether another service must be selected. The following questions will assist employers and rescue teams and services evaluate their performance. |   |   |
| Evaluator:  |   | Attach documentation and pictures to this evaluation. |
| Site being reviewed: |   |   |
| Date of evaluation: |   |   |
|  |  |  |