Sample Permit-Required Confined Space Written Program

Purpose

The purpose of this document is to communicate Employer’s compliance with MIOSHA’s requirements for a permit-required confined space entry and to outline Employer’s confined space entry program.

Employer has identified all permit-required confined spaces at this location and has determined entry and rescue procedures.

This document contains:

- the employer’s procedures for permit-required confined space entry,
- the names of the entry supervisors trained to issue permits,
- the names of all employees (authorized entrants) trained to enter permit-required confined spaces or serve as attendants,
- the names of the trained rescue and emergency service members.

In addition, the document specifies:

- all personal protective equipment (PPE), air monitoring equipment, and rescue equipment that employees use at this location.
- The employer’s responsibilities to contractors and the contractor’s duties to the employer.

Scope and Application

[Name of Municipality] defines a permit-required confined space as a space that has all four (4) of the following characteristics:

1. It is large enough and has a configuration that allows an employee to bodily enter it and perform assigned work; and
2. It also has limited or restricted means for entry or exit; and
3. It is not designed for continuous employee occupancy, and
4. It has one or more of the following characteristics:
   - It contains, or has a potential to contain a hazardous atmosphere,
   - Contains a material with the potential for engulfing an entrant,
   - Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls, or a floor which slopes downward and tapers to a smaller cross-section, or
   - Contains any other recognized serious safety or health hazard.

Administrative Measures for Preventing Unauthorized Entries Into Permit-Required Confined Spaces

The employer has taken administrative measures to prevent unauthorized entries. These measures include the use of signs, barriers, covers, guardrails, fences, and locks.

Entry supervisors will remove unauthorized individuals who enter or attempt to enter the permit-required confined spaces.

Attendants will advise unauthorized persons that they must exit immediately if they have entered the PERMIT-REQUIRED confined space. Attendants will also inform authorized entrants and the entry supervisor if unauthorized persons have entered the PERMIT-REQUIRED confined space.
It is the responsibility of the individual(s) entering a PERMIT-REQUIRED confined space to be sure they have been issued a PERMIT-REQUIRED confined space entry permit. Entering a permit-required confined space without a permit or required training is an unauthorized entry and violates Employer policy.

**Identification and Evaluation of Permit-Required Confined Spaces**

Employer has conducted a survey of this facility and determined that the following locations are PERMIT-REQUIRED Confined Spaces. Employer performed an analysis to determine the hazards, entry procedures, protective equipment required, rescue and emergency services necessary.

\{ See sample analysis form at end of program.  

Entry supervisors will review the analysis for the location for which they are to issue a permit.

An analysis of each PERMIT-REQUIRED confined space at this facility follows this section.

**Means, Procedures And Practices**

It is the responsibility of Employer to issue permits and to enforce compliance with PERMIT-REQUIRED confined space entry procedures.

Employer has trained entry supervisors in the skills necessary to issue permits.

The entry supervisor is responsible for testing the atmosphere and evaluating the hazards of the PERMIT-REQUIRED confined space. The entry supervisor will place the written permit at the entry point into the PERMIT-REQUIRED confined space prior to entry. The entry supervisor will make certain that employees comply with the following means, procedures, and practices for a safe permit space entry operation.

**Acceptable Entry Conditions**

The entry supervisory shall test the PERMIT-REQUIRED confined space for acceptable entry conditions.

**Acceptable Entry Conditions Are:**

- more than 19.5%, but less than 23.5% oxygen, and
- less than 10% of the Lower Flammable Limit (LFL) of a flammable liquid or gas, and
- not to exceed the Permissible Exposure Level (PEL) of a toxic chemical.
Isolation and Lockout

The entry supervisor shall assure the isolation of the permit-required confined space from serious hazards. Mechanical equipment that poses a hazard in the space must be “locked out” in accordance with the MIOSHA General Industry Standards. Chemical or gas lines that are open within the permit space must be isolated by appropriate means. These include blanking, misaligning or removing sections of lines, pipes, or ducts, or a double block and bleed system.

Atmospheric Hazards

The entry supervisor will assure adequate purging, inerting, flushing, or ventilation of the space before authorized entrants enter a permit-required confined space. This is accomplished by ventilating the atmosphere, after purging, if the space is a flammable liquid container or if purging is otherwise necessary, before an authorized entrant enters the space.

Inerting is the displacement of the atmosphere in a permit space by a noncombustible gas to such an extent that resulting atmosphere is noncombustible. This procedure produces an IDLH oxygen-deficient atmosphere. The entry supervisor must ensure proper respiratory protection is provided to the authorized entrant before entering the permit space using this procedure.

Barriers

The entry supervisor will provide (if applicable) for barriers around the permit space opening to:

- prevent unauthorized entry into the space, and
- protect authorized entrants inside the space from objects and persons outside the space.

Verification

The entry supervisor will assure that conditions in the permit space are acceptable for entry throughout the duration of entry operations. To accomplish this, the supervisor will use calibrated test instruments to monitor the atmosphere within the space and make inspections to assure that isolation is being maintained for the space.

Attendant

The entry supervisor will provide at least one attendant outside the permit space into which entry is authorized for the duration of entry operations.

NOTE: An entry supervisor who receives adequate training may serve as the attendant.

Personal Protective Equipment (PPE)

Employer will provide any personal protective equipment (PPE) necessary for safe entry into and rescue from permit-required confined spaces at no cost to employees. The employer will maintain that equipment properly and assure that employees use it properly.

Permit-Required Confined Space equipment program includes:

- testing and monitoring equipment
- ventilation equipment
- communications equipment
- lighting equipment
- barriers and shields
- ingress and egress equipment
- rescue and emergency equipment
- PPE
- any other equipment necessary for safe entry into and rescue from permit spaces.

**Evaluation of Permit Space Conditions**

The **entry supervisor** will evaluate permit-required confined space conditions as follows when entry operations take place. The entry supervisor will:

- Test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized.
  
  If it is not feasible to isolate the space because the space is large or is part of a continuous system, pre-entry testing shall be performed to the extent feasible before entry is authorized. Entry conditions shall be monitored in the areas where authorized entrants are working.

- Test or monitor the permit space as necessary to determine if acceptable entry conditions are being maintained during the course of entry operations.

- When testing for atmospheric hazards, test for oxygen first, then flammables (LFL), and then for toxic substances (PEL).

{  See sample entry permit at end of program.
Personnel Roles and Duties

Entry Supervisors

Only the entry supervisor may issue permit-required confined space entry permits. The entry supervisor or **Employer** has had training in permit-required confined space entry procedures. The training includes:

- hazard recognition,
- recognition of the physical signs and symptoms of exposure to a hazard,
- understanding the consequences of exposure to a hazard,
- communication requirements,
- personal protective equipment requirements,
- written permit-required confined space information,
- rescue procedures,
- use of appropriate air testing equipment,
- details of **Employer's** written plan,
- hazards of temperature extremes, and
- lockout/tagout and isolation.

Duties of the entry supervisor

**The entry supervisor:**

1. Knows the hazards (or potential hazards) that workers may face during entry, including information on the mode, signs and symptoms, and consequences of the exposure(s) to the entrants;
2. Verifies, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit are in place before endorsing the permit and allowing entry to begin;
3. Terminates the entry and cancels the permit as required;
4. Verifies that rescue services are available (during entry operations) and that the attendant has a means of communications available for calling rescue services;
5. Removes unauthorized individuals who enter or attempt to enter the permit space during entry operations; and
6. Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space that entry operations remain consistent with the terms of the entry permit and that acceptable entry conditions are maintained.
Training

The following employees have received training as **Entry Supervisors** and are, therefore, qualified to issue permits at this facility:

**NAME:**

1. __________________________________________________________
2. __________________________________________________________
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Authorized Entrants

Only those individuals who received training in permit-required confined space entry and stand-by procedures may enter confined spaces. Authorized entrants have received training in:

- recognizing and understanding the hazards that they may face during entry operations,
- recognizing the physical signs and symptoms of exposure to a hazard(s),
- understanding the consequences of exposure to a hazard(s),
- communication requirements for confined space entry operations,
- procedures for notifying the attendant when the entrant(s) initiate the evacuation of a permit space,
- the use or PPE, such as retrieval lines, body harness, respirators/SCBA, and protective clothing needed for safe work operations, entry, and exit,
- verifying that the atmosphere of a confined space is tested before entering the space after an absence, i.e. lunch,
- the external barriers required to protect entrants from external hazards and the proper use of those barriers,
- evacuating a confined space when ordered by the attendant, entry supervisor, or another entrant,
- evacuating a confined space when an alarm is activated,
- evacuating a confined space when entrants perceive that they may be in danger,
- evacuating a confined space when atmospheric monitoring equipment alarms.

Duties of the Authorized Entrant Include:

1. Knowing the hazards (or potential hazards) that they may be faced with during entry, including the mode, signs or symptoms, and consequences of the exposure(s);
2. Properly using all equipment;
3. Communicating with the attendant as necessary to enable the attendant to monitor entrant status and enable the attendant to alert entrants of the need to evacuate the space as required;
4. Alerting the attendant whenever:
   - The entrant recognizes any warning sign or symptom of exposure to a dangerous situation; or
   - The entrant detects a prohibited condition; and
5. Exiting from the space as quickly as possible whenever:
   - The attendant, the entry supervisor, or another entrant gives an order to evacuate;
   - The entrant recognizes any physical warning sign or symptom of exposure to a dangerous condition (that is, the entrant feels better or worse than before he or she did before entering the confined space),
   - The entrant detects a prohibited condition,
   - An evacuation alarm goes off; or
   - The atmospheric monitoring equipment alarms.
Training

The following employees have been trained as **Authorized Entrants** and have the authority to enter permit required confined spaces in this facility.

**NAME:**

1. __________________________________________________________
2. __________________________________________________________
3. __________________________________________________________
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Attendants

The attendant is aware of the hazards of the permit-required confined space, of the actions necessary to make the space safe for entry, and of the fact that any condition can change. Attendants have received training in:

- the duties of the attendant. This includes the requirement that the attendant must be stationed and remain outside the permit space at all times during entry operations (unless another attendant relieves him or her),
- the need to continuously maintain an accurate count of all persons in the space,
- knowing and recognizing potential hazards and the symptoms of exposure to a hazard,
- monitoring activities inside and outside the permit space to determine if it is safe for entrants to remain in the space,
- the need to maintain effective and continuous communication with the entrants,
- summoning rescue services, and
- entry permits.

Duties of the Attendants include:

1. Knowing the hazards (or potential hazards) that workers may face during entry,
2. Knowing what the physical signs or symptoms and consequences of the exposure(s) are.
3. Being aware of possible behavioral effects of hazard exposure to authorized entrants.
4. Maintaining an accurate count of authorized entrants in the permit space and assuring that the means used to identify authorized entrants accurately identifies who is in the permit space.
5. Remaining outside the permit space during entry operations unless another trained attendant relieves him or her.
6. Communicating with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space.
7. Monitoring activities inside and outside the permit space to determine if it is safe for entrants to remain in the space, and
8. Ordering the entrants to evacuate the permit space immediately if the attendant under any of the following conditions:
   - The attendant detects a prohibited condition such as an alarm on the air monitor,
   - The attendant detects the behavioral effects of hazard exposure in an entrant,
   - The attendant detects a situation outside the space that could endanger the entrants,
   - The entry supervisor orders an evacuation, or
   - The attendant cannot effectively and safely perform all the duties required.
9. Summoning rescue and other emergency services as soon as the attendant determines that the entrants may need help to exit from the permit space.
10. Taking the following actions when unauthorized person(s) approach or enter a permit space while entry operations are underway:
    - Warn the unauthorized person(s) that they should stay away from the permit space,
    - Advise the unauthorized person(s) that they must exit immediately if they have entered the permit space, and
    - Inform the authorized entrants and the entry supervisor if unauthorized person(s) have entered the permit space.
In addition, Attendants:

- Can perform **non-entry rescues** if they have received proper training.
- Will **not** perform any duties that might interfere with the attendant’s primary duty to monitor and protect the authorized entrants.

**Training**

The following employees have been trained as **Attendants** and have the authority to work as **Attendants** during permit-required confined space operations.

**NAME:**

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Rescue Team

The Chief of [Name of Municipality]’s Fire Department has agreed to provide rescue services, if needed, for Employer permit-required confined space operations. The written agreement signed by the chief is attached.

or

Employer has identified and trained several individuals to be members of the municipal rescue and emergency services team. Rescue team members have received training in:

- personal protective equipment, including respirators and rescue equipment necessary for making rescues from the permit spaces in our facility,
- assigned rescue functions,
- authorized entrant training,
- making confined space rescues at least once every 12 months using mannequins or personnel through representative openings and portals whose size, configuration, and accessibility closely approximate those of the permit spaces from which rescues may be required in the plant,
- basic first aid, and
- CPR.

Notification of Rescue and Emergency Services

The Entry Supervisor will establish a procedure by which the attendant will notify rescue and emergency services before issuing a permit-required confined space permit. The means to call for rescue services will be on the entry permit.
Training

The following individuals have received training in confined space rescue and are qualified to serve on the Rescue Team:

NAME:

1. _____________________________________________________________________
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Preparation, Issuance, Use, and Cancellation of Entry Permit

Permit System

Before entry begins, the **entry supervisor** identified on the permit shall sign the entry permit to authorize entry.

The permit shall be made available to all authorized entrants, by posting it at the confined space opening or by any other equally effective means. This enables entrants to confirm the pre-entry preparations are complete.

The duration of the permit may not exceed the time required to complete the task or job identified on the permit in accordance with the purpose of the entry. The duration of the permit can not exceed one shift. If the job requires two shifts for completion, then two permits, at least, are necessary.

The entry supervisor should terminate entry and cancel the permit when:

- The entry operations that the entry permit covers are complete; or
- A condition that the entry permit does not allow arises in or near the permit space.

Any individual designated as the entry supervisor has the authority to terminate entry and cancel a permit.

**Employer** shall retain each canceled entry permit for at least one year to facilitate the review of the permit-required confined space entry program. The entry supervisor should note any problems encountered during an entry operation on the appropriate permit so that revisions to the permit space program can be made.

Entry Permit

The entry permit that documents compliance and authorizes entry to a permit space should identify:

1. The permit space to be entered;
2. The purpose/reason of the entry;
3. The date and the authorized duration of the entry permit;
4. The authorized entrants within the space, by name, as this will enable the attendant to determine quickly and accurately, for the duration of the permit, which entrants are inside the space;
5. The personnel, by name, currently serving as the attendant(s);
6. The individual, by name, currently serving as the entry supervisor, with a space for the signature or initials of the entry supervisor who originally authorized entry;
7. The potential or real hazards of the space to be entered;
8. The measures used to isolate (lockout) the permit space and to eliminate or control permit space hazards during entry;
9. The acceptable entry atmospheric conditions;
10. The results of initial and periodic air monitoring tests performed, accompanied by the names or by an indication of when the tests were performed;
11. The rescue and emergency services that can be summoned and the means for calling those services;
12. The communication procedures used by authorized entrants and attendants to maintain contact during the entry operations;
13. The equipment, such as PPE, air testing equipment, communications equipment, alarm systems, and rescue equipment to be provided.
14. Any other information whose inclusion is necessary, given the circumstances of the particular confined space, in order to ensure employee safety; and
15. Any additional permits, such as for hot work, that have been issued to authorized work in the permit space.

A copy of Employer entry permit is included at the end of this written program.

The entry permit can be thought of as a safety checklist.

Concluding Permit-Required Confined Space Operations

The entry supervisor must perform four major tasks to conclude a permit-required confined space entry. They are:

1. Making sure that all employees are out of the confined space.
2. Securing the permit-required confined space. The entry supervisor will assure that the appropriate employees remove all lockout devices, replace any safety guards that they may have removed, and will assure that the opening to the space is securely closed.
3. Assuring that the appropriate personnel perform the proper maintenance on equipment.
4. Notifying rescue and emergency services that the entry is complete.

Review of Permit-Required Confined Space Operations

Employer will:

- Review entry operations whenever measures taken under the permit space program fail to properly protect employees, and
- Correct any deficiencies in the program before authorizing subsequent entries.

The following are some examples of circumstances requiring the review of the permit-required confined space program:

- any unauthorized entry of a permit-space,
- the detection of a permit space hazard that the permit did not cover,
- the occurrence of an injury or near-miss injury during entry,
- a change in the use or configuration of a permit space, and
- employee complaints about the effectiveness of the program.

Annual Review

Employer will review the permit-required confined space program, annually, using the canceled permits from the previous year entry operations. Revisions to the program will be done, if necessary, to ensure that employees participating in entry operations are protected from the known permit space hazards.
Contractors

Employer’s Responsibilities to Contractors

When Employer arranges to have employees of another employer perform work that involves permit space entry, the responsibilities of Employer include:

1. Informing the contractor that the workplace contains permit-required confined spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of MIOSHA.

2. Informing the contractor of the elements, including the hazards identified and Employer’s experience with the space (copies of canceled permits), that make the space in question a permit space.

3. Apprising the contractor of any precautions or procedures that Employer has implemented for the protection of employees in or near permit spaces where contractor personnel will be working.

4. Coordinate entry operations with the contractor if Employer employees and contractor employees will be working in or near permit spaces.

   This includes developing and implementing procedures to coordinate entry operations when employees of more than one contractor are working simultaneously as authorized entrants in a permit space, so that employees of one employer do not endanger the employees of any other employer.

5. Debriefing the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in the permit spaces during entry operations.

Contractor’s Responsibility to the Company

In addition to complying with the permit-required confined space requirements that apply to all employers, each contractor whom Employer retains to perform permit space entry operations should:

1. Obtain any available information regarding permit space hazards and entry operations from Employer.

2. Coordinate entry operations with Employer, when both Employer employees and contractor employees will be working in or near permit-required confined spaces. This includes developing and implementing procedures to coordinate entry operations when employees of more than one employer are working simultaneously as authorized entrants in a permit space, so that employees of one employer do not endanger the employees of any other employer.

3. Inform Employer of the permit space program that the contractor will follow and any hazards confronted or created in a permit space, either through a debriefing or during entry operations. MIOSHA requires this exchange of information from both the Employer and the contractor.

Name: ___________________________________________

Title: ____________________________________________

Date: ____________________________________________

Date Revised or Reviewed: ____________________________

NOTE: You should use this sample written program as a guide to help you develop your own program. Exposures in your environment may require that you add or possibly delete items from this sample.
### Sample Confined Space Entry Written Program

#### Michigan Municipal Workers’ Compensation Fund

#### Safety and Health Resource Manual

**PERMIT-REQUIRED CONFINED SPACE ANALYSIS**

**LOCATION:** __________________________  **DATE:** __________________________

**DESCRIPTION/NUMBER:** __________________________________________________

**This is a confined space** as a result of:
- adequate size and configuration
- limited means of access or egress; and
- is not designed for continuous employee occupancy.

**This is a Permit-Required Confined Space** due to or has the potential of:
- an atmospheric hazard;
- an engulfment hazard;
- a configuration hazard; or
- any other recognized serious hazard.

#### Hazards

<table>
<thead>
<tr>
<th>Potential Hazards</th>
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<tbody>
<tr>
<td>Oxygen Deficiency</td>
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<td>Flammable Substances</td>
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<tr>
<td>Toxic Materials</td>
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<tr>
<td>Flowable Substances</td>
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<tr>
<td>Inwardly Converging Walls</td>
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<td>Hot Slopes Downward</td>
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<tr>
<td>Mechanical Hazards</td>
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<td>Electrical Hazards</td>
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<td>Fire Suppression System</td>
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<td>Hot Work</td>
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<td>Reduced Visibility</td>
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<tr>
<td>Noise</td>
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<td>Heat/Cold</td>
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<td>Radiation</td>
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<td>Asbestos</td>
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<tr>
<td>Wet/Slippery Conditions</td>
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<td>Other:</td>
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#### Entry Procedure

<table>
<thead>
<tr>
<th>Procedure</th>
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<tr>
<td>Clean and Purge</td>
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<td>Ventilation</td>
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<tr>
<td>Isolating the Permit Space</td>
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<td>Hot Work Permit</td>
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<tr>
<td>Testing and Monitoring</td>
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<tr>
<td>Acceptable Conditions</td>
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<tr>
<td>Oxygen (19.5%-23.5% O₂)</td>
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<tr>
<td>Flammable (&lt;10% of LFL)</td>
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<td>Toxics (Not to Exceed PEL)</td>
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<tr>
<td>Pre-Entry Briefing</td>
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<tr>
<td>Reclassify Permit-Required Confined Space If Written Plan Is Followed</td>
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<tr>
<td>Copy of MSDS at the Worksite</td>
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<tr>
<td>Other:______________</td>
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#### Protective Equipment

<table>
<thead>
<tr>
<th>Equipment</th>
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<tbody>
<tr>
<td>Monitoring Equipment</td>
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<tr>
<td>Ventilating Equipment</td>
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<tr>
<td>Explosion Proof</td>
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<tr>
<td>Communications Equipment</td>
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#### Personal Protective Equipment

<table>
<thead>
<tr>
<th>Equipment</th>
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<td>Head</td>
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<td>Eye</td>
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<td>Body</td>
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<td>Foot</td>
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#### Lighting Equipment

<table>
<thead>
<tr>
<th>Equipment</th>
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<tbody>
<tr>
<td>Explosion-Proof</td>
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<td>GFCI</td>
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#### Rescue Services

<table>
<thead>
<tr>
<th>Service</th>
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<tbody>
<tr>
<td>A Mechanical Device</td>
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<tr>
<td>Rescue Team on Site</td>
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<tr>
<td>Rescue Team on Standby</td>
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<tr>
<td>Retrieval Systems</td>
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<td>Wristlets</td>
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<tr>
<td>Communications Devices</td>
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<td>Incident Command System</td>
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| Other:______________ |                  |
PERMIT-REQUIRED CONFINED SPACE ENTRY PERMIT

THIS PERMIT SHALL BE ISSUED BY AN ENTRY SUPERVISOR AND SHALL BE DISPLAYED AT EACH POINT OF ENTRY TO THE CONFINED SPACE

PLEASE PRINT  ISSUANCE DATE OF PERMIT: ___/___/___   TIME: ________

Name, location, and department of confined space area and purpose of entry:
________________________________________________________________________________________________
________________________________________________________________________________________________

Names of employees approved for entry. No other person(s) may enter the confined space.
UNAUTHORIZED ENTRY IS FORBIDDEN.
Name-Authorized Entrants       Name-Authorized Entrant

Expiration Date:   Time:   Attendant __________________________

The entry supervisor must inspect and complete this section before first entry of a work shift. After each absence, an entry supervisor must test the atmosphere again. An entry supervisor must be on-site during entry.

<table>
<thead>
<tr>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td>Are all lines disconnected or blanked off (electrical, steam, hydraulic, pneumatic)?</td>
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<td>Is power locked out?</td>
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<td>Has confined space been properly vented?</td>
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<td>Circle ventilation method:</td>
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<td>• mechanical</td>
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<tr>
<td>• natural</td>
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<tr>
<td>Is acceptable air quality present?</td>
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<tr>
<td>Oxygen-19.5% to 23.5% LFL-Less than 10%</td>
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<tr>
<td>(CO 35 ppm/H₂S 10 ppm)</td>
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<tr>
<td>Toxic-Not to exceed PEL(s)</td>
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<td></td>
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<tr>
<td>(CO 35 ppm/H₂S 10 ppm)</td>
<td></td>
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<tr>
<td>Dust-Not to obscure vision more than 5 feet.</td>
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<tr>
<td>Are ventilators in proper place?</td>
<td></td>
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<td></td>
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<tr>
<td>Is appropriate fire extinguishing and rescue equipment available?</td>
<td></td>
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<tr>
<td>Have safety procedures been outlined and involved employees informed?</td>
<td></td>
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</tr>
<tr>
<td>Are employees wearing required personal protective equipment?</td>
<td></td>
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<tr>
<td>Have they been medically evaluated to wear them?</td>
<td></td>
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<tr>
<td>Is welding permit required?  Is welding permit issued and posted with this permit?</td>
<td></td>
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<tr>
<td>Is access adequate and clear?</td>
<td></td>
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<tr>
<td>Is an attendant trained, available, and properly equipped (rescue/communications)?</td>
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<tr>
<td>Is the confined space clean?</td>
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<tr>
<td>Have arrangements been made for standby rescue personnel?</td>
<td></td>
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</tr>
</tbody>
</table>

ATMOSPHERIC MONITORING EQUIPMENT UTILIZED:

<table>
<thead>
<tr>
<th>Model</th>
<th>Serial Number</th>
<th>Date of Field Testing*</th>
<th>Date of Calibration**</th>
</tr>
</thead>
</table>

* To be performed before testing a permit space
** To be performed by manufacturer’s representative
ATMOSPHERIC TESTING RESULTS (Atmosphere to be retested after absence of entrants from a permit space.)

<table>
<thead>
<tr>
<th>Time</th>
<th>Oxygen %</th>
<th>Combustibles, % LFL</th>
<th>Carbon Monoxide, ppm</th>
<th>Hydrogen Sulfide, ppm</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

CIRCLE PERSONAL PROTECTIVE EQUIPMENT REQUIRED
- Supplied-air respirator
- Hard-hats
- Full Face Shield
- Powered Air Purifying Respirator (PAP)
- Other
- Safety Alert System
- Aprons
- Air Purifying Respirator
- Self-contained Breathing Apparatus (SCBA)
- Impervious Boots/Pants/Gloves
- Other

CIRCLE RESCUE/EMERGENCY EQUIPMENT REQUIRED (Must have equipment available and in working condition at confined space entry area when required by the written plan or entry supervisor.) Mechanical device shall be available for vertical entry of more than five feet.

- Tripod Harnesses with Retrieval Lines*
- Winch/chain or cable
- Communications devices (specify method)
- Other

COMMENTS OR SPECIAL INSTRUCTIONS
* Authorized entrant(s) shall use a body harness with a retrieval line unless the entry supervisor can document safety hazards to the authorized entrants if a retrieval line is connected to a fixed point.

HAS COMMUNICATION BEEN ESTABLISHED BETWEEN AUTHORIZED ENTRANTS AND ATTENDANT?

☐ YES   ☐ NO   If no or not required, please explain: _____________________________

HAS COMMUNICATION BEEN ESTABLISHED BETWEEN ATTENDANT AND THE RESCUE AND EMERGENCY SERVICE?

☐ YES   ☐ NO   If no or not required, please explain: _____________________________

LOCATION OF NEAREST PHONE: _____________________________

PHONE NUMBER: _____________________________

IS THERE A COPY OF MSDS(s) AT THE JOB SITE?

☐ YES   ☐ NO

PERMIT ISSUANCE APPROVAL**

____ / ____ / _____   TIME   ENTRY SUPERVISOR’S SIGNATURE (Initial Permit)

____ / ____ / _____   TIME   EMPLOYEE(s) SUPERVISOR’S SIGNATURE

____ / ____ / _____   ENTRY SUPERVISOR’S SIGNATURE***

** Permit must be on file one year after it has been canceled.  ***Atmosphere must be retested before permit is signed.

VERIFYING AND CANCELLATION OF PERMIT

ENTRY SUPERVISOR’S SIGNATURE   DATE