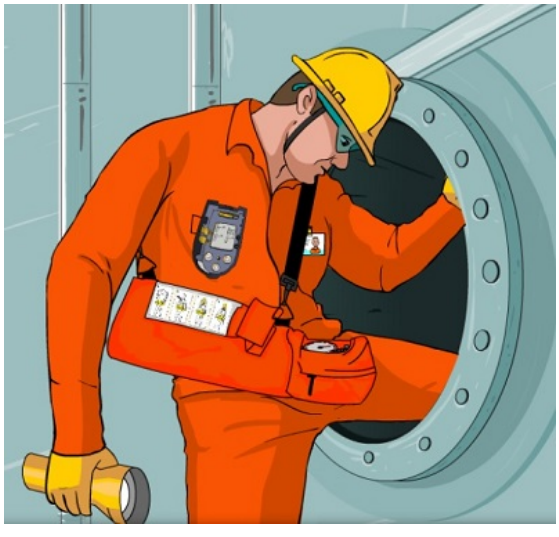
State of Washington
Department of Corrections



CONFINED SPACE ENTRY HANDBOOK

Department of Corrections
WASHINGTON STATE

"ENSURING EMPLOYEES COME TO WORK AND GO HOME SAFE EVERYDAY"

INTRODUCTION

The Department recognizes the inherent dangers associated with entering confined spaces. This handbook, in conjunction with WAC 296-809 and DOC policy 890.020 Confined Space Entry, is designed to serve as a reference manual for those Department facilities having confined spaces.

The designated Confined Space Manager and Entry Supervisor will find this handbook helpful in establishing and maintaining a viable Confined Space Entry Program.

GLOSSARY

CONFINED SPACE PROGRAM OVERVIEW

IMPORTANT: Identify and evaluate the hazards of permit-required confined spaces and the work performed to assist in developing the required written program.

Section 1 – Develop a written permit-required confined space program

1. Before workers enter permit-required spaces, develop a written program that describes the means, procedures, and practices for safe entry. Include the following when applicable to the confined space entry program:

    a. Documentation of permit entry procedures.
    b. Designation of employees that have active roles, including; attendants, competent persons, entrants, entry supervisors, rescuers, program administrator, or those who test or monitor the atmosphere in a permit-required space.
    c. Identification of each designated employee's duties.
    d. Training of personnel on their designated roles and responsibilities.
    e. How to identify and evaluate hazards.
    f. Use and maintenance of equipment.
    g. How to prevent unauthorized entry.
    h. How to coordinate entry with another employer.
    i. How to rescue entrants.
    j. If you intend to enter using alternative methods for entry, the procedures must address all measures used before entry to isolate and eliminate hazards from the space to include the control of potential atmospheric hazards.

        - Identify the entry supervisor who authorizes the use of the alternative methods and has the responsibility for ensuring safe entry conditions.
        - The hazards of the space.
        - The methods used to eliminate hazards including verification.
        - The methods used to ensure that the hazards are eliminated.
        - The methods used to test and monitor the atmosphere within the space, where applicable, for all atmospheric hazards.
        - The methods used to determine if unsafe conditions arise before or during entry.
        - The criteria and conditions for evacuating the space during entry (like monitoring and test data).
        - Methods for training employees in these procedures.
        - The methods used to ensure employees follow these procedures.
        - Documentation required. For examples of documentation, see Appendix J Alternative Method Documentation by visiting the labor and industries web site at http://www.lni.wa.gov/safety/rules/chapter/809/.

2. You must consult with affected personnel and their authorized representatives when developing and implementing all aspects of your program.
3. You must make the written program available to employees and their authorized representatives.
4. You must update your written program as necessary when you have identified deficiencies. Revise your program and entry procedures before allowing subsequent entries.
5. You must designate a confined space program administrator/manager who has overall responsibility for your program and has sufficient training or experience with permit-required confined space entry to oversee program development, coordinate implementation, and conduct required evaluations of program effectiveness.

Section 2 – Identify Permit-required Confined Spaces

1. Identify all permit-required confined spaces in the workplace.

    a. Note each location on a map
    b. Identify all potential and known hazards for each space
    c. Define the procedures and PPE necessary to mitigate the hazards identified

2. Assume any confined space is a permit-required confined space, unless determined otherwise.

    a. If the space is entered to determine the hazards, follow the requirements in WAC 296- 809.
    b. Upon evaluating the confined space and concluding there are no potential or actual hazards, the space may be considered a non-permit confined space and alternate entry procedures can be utilized.

3. Document the determination that the space is non-permit.

Section 3 – Control Worker Entry

1. Inform workers and control entry to permit-required confined spaces.

2. Provide information about confined spaces as follows:

    a. Make all information and documents required by WAC 298-809 available to affected employees and their authorized representatives.

    b. Inform affected employees about the existence, location, and danger of any permit-required confined spaces in the workplace by: Posting signs reading “Danger – Permit Required Confined Space – DO NOT ENTER,” or using any other equally effective means to inform employees.

    Note: *Equally effective means must warn employees about the existence, location and danger of permit-required confined spaces for all affected employees.*

3. Take effective measures to prevent unauthorized workers from entering permit-required confined spaces (e.g., padlocks, bolted covers, special tools to remove covers, and worker training).

PROCEDURES

Section 1 – Atmospheric Testing

1. Atmospheric testing of permit-required confined spaces is performed to:

    a. Evaluate potential atmospheric hazards.

    b. Verify that acceptable atmospheric entry conditions exist.

Section 2 – Evaluate Hazards

1. Collect and analyze data on the atmosphere of the space using equipment sensitive and specific enough for any hazardous atmosphere that may arise to:

    a. Develop appropriate entry procedures, and;

    b. Maintain acceptable entry conditions.

2. Have a technically qualified individual perform, or at least review, the following:

    a. Evaluation and interpretation of the data;
    b. Identification of all serious hazards;
    c. Development of appropriate entry procedures.

Section 3 – Verify that Acceptable Entry Conditions Exist

1. If the space may contain a hazardous atmosphere, test for all potential contaminants.

    a. Use the equipment specified on the permit, as directed by the manufacturer, to determine whether contaminants are within the range of acceptable entry conditions.
    b. Measure for the time recommended by the manufacturer.

2. Perform tests in this order:

    a. First, perform a test for oxygen. Most combustible gas meters are oxygen dependent and will not provide reliable readings in an oxygen deficient atmosphere.
    b. Second, test for combustible gases. They present an immediate threat to life through inhalation, fire, or explosion.
    c. Last, if necessary, test for toxic gases and vapors.

3. Record test results, such as the actual concentration, in the appropriate space on the permit.

4. When monitoring atmospheres that may be stratified, also test the atmospheric envelope at a distance of approximately 4 feet (i.e., 1.22 m) in the direction of travel, and to each side. If using a sampling probe, adapt the entrant's rate of progress to the sampling speed and detector's response.

Note: *Ensure required calibration and bump testing is completed prior to the use of air sampling equipment.*

ALTERNATIVE METHODS

Section 1 – Ensure the following conditions are met if using alternative methods

1. You may enter permit-required confined spaces without a permit using alternative methods when you have monitoring and inspection data that supports the following:

    a. You have eliminated all the hazards1; or

    b. You have eliminated all of the physical hazards (1, 2), and continuous forced air ventilation controls the actual or potential hazardous atmosphere. You must also have monitoring data that demonstrates the use of continuous forced air ventilation will maintain the permit-required confined space for safe entry. In the event the ventilation system stops working, entrants can exit the space safely.

2. You must have written documentation for the entrants before each entry that includes the following information:

    a. The location of the space;
    b. Date of entry;
    c. Duration of the entry;
    d. The hazards of the space and the work;
    e. The specific measures used to eliminate the hazards1;
    f. The ventilation system used to control atmospheric hazards, when applicable, direct reading instruments used to test the atmosphere, and results of the atmospheric testing that demonstrate the absence of a hazardous atmosphere;
    g. All conditions that required evacuation of the space3; and
    h. The name, title, and signature of the entry supervisor ensuring safe entry procedures

3. You must make sure all documentation produced is available to each affected employee and their authorized representative.

4. You must make sure all monitoring and inspection data is documented and available to each affected employee and their authorized representative.

5. If you must enter prior to the completion of the hazard elimination, you must perform the entry according to WAC 296-809-500 Permit entry procedures. For example – To collect monitoring inspection data or apply hazard elimination measures.

Notes:

1. *For the purposes of this section, energy control procedures must isolate the space and result in the elimination of the hazards including applicable stored energy. Evaluate your energy control procedures (lockout) to ensure they fully eliminate the hazards when used. See chapter 296-803*
2. *Controlling atmospheric hazards through forced air ventilation does not eliminate the hazards.*
3. *Do not use alternative methods to enter a continuous system unless you can do the following:*
    - *Completely isolate the area entered from the rest of the space.*
    - *Demonstrate that the conditions that caused the hazard or potential hazard no longer exist within the system for the duration of the entry including engulfment; and*
    - *You have sufficient quantities of continuous ventilation to control the atmospheric hazard.*

Section 2 – Implementation of alternative methods for permit-required spaces.

1. You must implement your procedures for hazard elimination and alternative methods from your written program.
2. Before entry, eliminate any unsafe conditions including removing an entrance cover. When entrance covers are removed, promptly guard the opening with a railing, temporary cover, or other temporary barrier to prevent any accidental falls through the opening and protect entrants from objects falling into the space.
3. For spaces with potential atmospheric hazards you must do all of the following:

    a. Test before an employee enters the confined space. Use a calibrated, direct-reading instrument to test the internal atmosphere for all of the following, in this order:

    - Oxygen content.
    - Flammable gases and vapors.
    - Potential toxic air contaminants.

    b. Make sure the atmosphere within the space is not hazardous when entrants are present. Continuously test the atmosphere within the space to ensure hazards do not accumulate.

    c. Use continuous forced air ventilation, as follows:

    - Wait until the forced air ventilation has removed any hazardous atmosphere before allowing entrants into the space.
    - Direct forced air ventilation toward the immediate areas where employees are, or will be working. Continue ventilation until all employees have left the space.
    - Provide the air supply from a clean source and make sure it does not increase hazards in the space.

4. Provide entrants, or their authorized representatives, with an opportunity to observe the pre-entry and periodic testing.
5. Evacuate employees from the space immediately when any of the following occurs:
    a. Detection of a hazardous atmosphere by air-monitoring instrumentation;
    b. Failure of a direct-reading instrument;
    c. Any failure of the ventilation; or
    d. Introduction of a hazard; a hazard develops; or conditions change within a space.
6. When a space is evacuated, it cannot be reentered as alternative methods unless you do all of the following:
    a. Correct conditions that necessitated evacuation.
    b. Treat any reentry as a new entry.

SEWER SYSTEM ENTRY

Sewer system entries differ from other confined space entries in the following ways:

1. The space usually cannot be isolated.

2. The atmosphere may suddenly become lethally hazardous (e.g., toxic, flammable, or explosive atmospheres may enter the work area from another portion of the system).

3. Unlike other types of work where entry is rare, a sewer worker's usual work environment is a permit-required confined space.

Section 1 – Entrants

Designated entrants should be employees who:

1. Are thoroughly trained in the sewer entry procedures, and

2. Can demonstrate that they follow entry procedures when entering sewers.

Section 2 – Monitoring the Atmosphere

Consider the unique circumstances of the sewer system when preparing for entry, including the unpredictability of the atmosphere. Based upon knowledge and experience, decide the best types of testing instruments for any specific entry operation.

1. Ensure entrants are equipped with, and trained to use, atmospheric testing equipment that is capable of identifying at least the following:

    a. Oxygen concentrations of less than 19.5%.
    b. Flammable gas or vapor of 10% or more of the lower flammable limit (LFL).
    c. Hydrogen sulfide of 10 parts per million (ppm) or more.
    d. Carbon monoxide of 35 ppm or more.

2. The selected testing instruments should be carried and used by the entrants to:

    a. Continuously monitor the atmosphere; and
    b. Warn of any potential atmospheric hazards, in the direction of travel.

3. If several entrants are working together in the same immediate location, decide how many test instruments are required.

4. Calibrate atmospheric testing equipment according to the manufacturer's recommendations.

5. Prior to each use conduct a bump test to ensure atmospheric testing equipment is collecting accurate measurements.

6. Oxygen or broad range tests are best suited when actual or potential contaminants have not yet been identified.

    a. Unlike substance specific tests, these enable overall reading of the

hydrocarbons/flammables present in the space.
b. They do not measure the levels of specific substance contamination.

7. Substance specific tests, which measure levels of specific substances, are important when actual and potential contaminants have been identified. These tests:

   a. Aid in deciding on appropriate entry conditions and proper protection for entrants (e.g., with ventilation and personal protective equipment).
   b. May not detect other potentially lethal atmospheric hazards when the sewer environment suddenly and unpredictably changes.

Section 3 – Protecting Against Surge Flow and Flooding

To the extent possible, sewer crews should develop and maintain a relationship with the local weather bureau, and fire and emergency services so that sewer work may be delayed or interrupted whenever:

1. Sewer lines are suddenly flooded by rain or fire suppression activities.
2. Flammable or other hazardous materials are released into sewers due to industrial emergencies or transportation accidents.

Section 4 – Large Bore Sewers

Special equipment may be used when entering large bore sewers. This equipment may include:

1. Self-contained breathing apparatus (SCBA) for escape purposes
2. Waterproof flashlights
3. Boats, rafts, and personal flotation devices (PFDs)
4. Radios
5. Rope stand offs for pulling around bends and corners

EMERGENCY RESCUE

Make sure you have adequate rescue and emergency services available.

A. You must make sure you have adequate rescue and emergency services available during your permit-required confined space entry operations.

   1. Evaluate and select rescue teams or services who can:

      a. Respond to a rescue call in a timely manner. Timeliness is based on the identified hazards. Rescuers must have the capability to reach potential victims within an appropriate time frame based on the identified permit space hazard

      b. Proficiently rescue workers from a permit-required confined space in your workplace. Rescuers must have the appropriate equipment for the type of rescue.
      c. Agree to notify you immediately in the event that the rescue service becomes unavailable.

B. Make sure that at least one member of the rescue team or service holds a current certification in first aid and cardiopulmonary resuscitation (CPR).

C. Inform each rescue team or service about the hazards they may confront when called to perform rescue.

D. Provide the rescue team or service with access to all permit spaces from which rescue may be necessary. This will allow them to develop appropriate rescue plans and to practice rescue operations.

E. <u>Incarcerated workers are restricted from performing entry rescues.</u>

F. You must provide workers assigned to perform permit-required confined space rescue and emergency services with:

1. Personal protective equipment needed for safe entry.

2. Other equipment required to conduct rescue safely.

3. Training so they are:

    a. Proficient in the use of the PPE and other equipment.
    b. Proficient as an entrant of permit-required confined spaces.
    c. Able to safely perform assigned rescue and emergency duties.
    d. Knowledgeable in basic first aid and cardiopulmonary resuscitation (CPR).

G. Practice sessions for permit-required confined space rescues are required **at least** once every twelve months where dummies, manikins, or actual persons are removed from either:

1. The actual permit spaces; or

2. Representative permit spaces that simulate the opening size, configuration, and accessibility of permit spaces where rescue will be performed.

H. You must establish procedures for:

1. Contacting rescue and emergency services.

2. Rescuing entrants from permit-required confined spaces.

3. Providing necessary emergency services to rescued entrants.

4. Preventing unauthorized persons from attempting a rescue.

Note: *The following is not considered to be adequate rescue and emergency services:*

- *Planning to rely on a rescue service and posting a contact number (like 911) without contacting the service provider and completing an evaluation in advance to ensure they meet rescue requirements.*

- *Timely rescue will vary according to the specific hazards involved in each entry. For example, for work areas considered to contain an IDLH atmosphere, you are required to provide a qualified standby person or persons capable of immediate rescue.*

TRAINING

Ensure workers are trained to perform their designated roles safely.

The Department's training program for confined space entry has two separate components. The first component provides workers with comprehensive awareness training that is delivered to employees online via the department's Learning Management System (LMS) and to incarcerated workers via a classroom PowerPoint presentation. The second component is site-specific orientation training that both employees and incarcerated workers receive at their assigned facility. This is hands-on training that is specific to the tools, equipment, and processes used at the assigned work location. The site-specific orientation training is delivered to workers by the local Confined Space Program Manager who uses a checklist/certification form to deliver the training (DOC 03-272 for employees and DOC 03-272A for incarcerated workers).

Note: *Both training components: #1) the Awareness Training Course; and #2) the Site-specific Orientation must be completed prior to being authorized to perform confined space entry duties.*

Provide Training (WAC 296-809-40002)

1. You must provide training at no cost to each individual involved in permit-required confined space activities. The training must be in a language and vocabulary they understand, so they acquire the understanding, knowledge and skills necessary to safely1 perform assigned duties.

    a) Establish employee proficiency in their confined space duties.

    b) Introduce new or revised procedures as necessary.

2. You must provide training to each affected employee;

    a) Before an employee is first assigned to duties covered by this chapter.

    b) Before there is a change in an employee's assigned duties.

    c) When there is a permit-required confined space hazard for which the employee has not already been trained.

    d) Retrain your employees if there are either:

        - Deviations from your procedures for permit-required confined space entry; or
        - Employee knowledge or use of your procedures is inadequate.

Certify Proficiency (WAC 296-809-40004)

1. You must determine and certify employee proficiency in their assigned duties.

2. You can establish proficiency by:

a. Systematically observing worker performance using safe work procedures and equipment to perform specific job tasks during training exercises that simulate actual confined space conditions;
b. Administering a written exam; or
c. Establishing any other method that effectively demonstrates practical knowledge and skills to safely perform confined space entry duties.

3. Make sure the certification:

a. Contains each worker's name, the trainer's written or electronic signature or initials, and the dates of training.
b. Is available for review and inspection.

Additional References

Implement procedures for entry permits	WAC 296-809-50002
Use an entry permit that contains all required information	WAC 296-809-50004
Keep and review entry permits	WAC 296-809-50006
Prevent unauthorized entry	WAC 296-809-50008
Provide, maintain, and use proper equipment	WAC 296-809-50010
Evaluate and control hazards for safe entry	WAC 296-809-50012
Ensure adequate rescue and emergency services are available	WAC 296-809-50014
Use non-entry rescue systems or methods whenever possible	WAC 296-809-50016
Ensure Entry Supervisors perform their responsibilities and duties	WAC 296-800-50018
Provide an attendant outside the permit-required confined space	WAC 296-809-50020
Ensure entrants know the hazardous conditions and their duties	WAC 296-809-50022
Implement procedures for ending entry	WAC 296-809-50024

DEFINITIONS

Acceptable Entry Conditions
The conditions that must exist in a permit-required confined space to allow safe entry and work.

Affected employee
A designation of employees that have active roles, including attendants, competent persons, entrants, entry supervisors, rescuers, program administrators, and testers/monitors. All these parties are considered affected employees for the purpose of confined spaces.

Attendant
An individual stationed outside one or more permit-required confined spaces to monitor the entrants.

Blanking or Blinding
Absolute closure of a pipe, line, or duct by fastening a solid plate, (e.g. a spectacle blind or a skillet blind) that completely covers the bore. It is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

Confined Space
A space that meets all of the following criteria:
- Large enough and arranged so that a worker could fully enter the space and work.
- Has limited or restricted entry or exit (e.g., tanks, vessels, silos, storage bins, hoppers, vaults, excavations, and pits).
- Not primarily designed for human occupancy.

Confined Space Manager
The person designated in writing responsible for:
- Establishing and maintaining a viable Confined Space Entry Program;
- Maintaining the facility map, identifying the location of confined spaces, types of hazards and the safe procedures to control exposures;
- Ensuring Confined Space equipment is available, operational, and properly used;
- Ensuring initial awareness and site specific training is conducted and documented.
- Maintaining each DOC 03-201 Confined Space Entry Permit for one year;
- Conducting an annual review of the completed DOC 03-201 Confined Space Entry Permits and revise the program if necessary.

Permit Required Confined Space
Has one or more of these characteristics:
- Contains or has the potential to contain a hazardous atmosphere;
- Contains a material with the potential to engulf or crush someone who enters the space;
- Has an internal configuration that might cause an entrant to be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section; and/or
- Contains any other recognized serious safety or health hazard(s).

Double Block and Bleed
The closure of a line, duct, or pipe by closing and locking/tagging 2 in line valves and by opening and locking/tagging a drain or vent valve in the line between the 2 closed valves.

Emergency
An occurrence, including any failure of hazard control or monitoring equipment, or an event internal or external to the permit-required confined space that could endanger affected employees.

Engulfment
The surrounding capture of a person by a liquid or finely divided, flowable solid substance that can be inhaled to cause death by filling or plugging the respiratory system, or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

Enter/Entry
The action by which a person passes through an opening into a permit-required confined space, and includes work activities in that space. Entry has occurred once any part of the entrant's body breaks the plane of an opening into the space.

> ***Note:*** *If the opening is large enough for the worker to fully enter the space, a permit is required even for partial body entry. Permits aren't required for partial body entry where the opening isn't large enough for full entry.*
> *Other rules, such as Lockout/Tagout or Respiratory hazards may also apply.*

Entry Supervisor
The person (e.g., the employer, crew leader, or crew chief) responsible for:
- Determining if acceptable entry conditions are present at a permit-required confined space where entry is planned;
- Authorizing entry and overseeing entry operations, and;
- Terminating an entry, as required.

Entrant
A worker who is authorized by the employer to enter a permit-required confined space.

Entry Permit
The written or printed document which allows and controls entry into a permit-required confined space, in compliance with WAC 296-809-500.

Hazardous Atmosphere
An atmosphere that may expose workers to the risk of death, incapacitation, and impairment of ability to self-rescue (i.e., escape unaided from a permit-required confined space), injury, or acute illness caused by one or more of the following:
- Flammable gas, vapor, or mist in excess of 10% of its lower flammable limit (LFL).
- Airborne combustible dust at a concentration that meets or exceeds its lower flammable limit.

Notes:

1. This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (i.e., 1.52 m) or less:
- *Atmospheric oxygen concentration below 19.5% or above 23.5%.*
- *Atmospheric concentration of any substance which may exceed a permissible exposure limit.*
- *For additional information about atmospheric concentration, see WAC 296-62, Parts*

F, G, and I, and WAC 296-841.

2. *An airborne concentration of a substance that is not capable of causing death, incapacitation, the impairment of one's ability to self-rescue, injury, or acute illness due to its health effects not covered by this definition.*
3. *Any other atmospheric condition that is immediately dangerous to life or health is not covered by this definition.*
4. *For guidance on establishing acceptable atmospheric conditions for air contaminants which have no WISHA determined doses or permissible exposure limits using other sources of information, refer to:*
   - *Safety data sheets required by WAC 296-901-14014.*
   - *Published information.*
   - *Internal documents.*

Hot Work Permit
A written authorization to perform operations such as riveting, welding, cutting, burning, brazing and heating, which may provide a source of ignition.

Immediately Dangerous to Life or Health (IDLH)
Any condition that:
- Poses an immediate or delayed threat to life;
- Would cause irreversible adverse health effects, or;
- Would interfere with an individual's ability to escape unaided from a permit space.

Note:

- *If entry is to be made into an IDLH atmosphere, or into a space that can quickly develop into an IDLH atmosphere, a rescue team or service will need to be standing by at the permit space.*
- *If the danger to entrants is restricted due to mechanical hazards that could cause injuries, (e.g. broken bones, abrasions, etc.) a response time of 10-15 minutes may be adequate.*

Inerting
The displacement of the atmosphere in a permit-required confined space by a noncombustible gas (e.g., nitrogen) to such an extent that the resulting atmosphere is noncombustible.

Note: *This procedure produces an IDLH oxygen deficient atmosphere.*

Isolation
The process by which a permit-required confined space is removed from service and completely protected against the release of energy and material into the space by such means as:
- Blanking or blinding,
- Misaligning or removing sections of lines, pipes, or ducts,
- A double block and bleed system,
- Lockout/Tagout of all sources of energy, or
- Blocking, de-energizing or disconnecting all mechanical linkages.

Line Breaking
The intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

“Non-Permit Confined Space”
A confined space that does not contain any physical hazards or any actual or potential atmospheric hazards capable of causing death or serious physical harm - (determined after continual testing in various conditions and results documented).

Oxygen Deficient Atmosphere
Atmosphere containing less than 19.5% oxygen by volume.

Oxygen Enriched Atmosphere
An atmosphere containing more than 23.5% oxygen by volume.

Permit-Required Confined Space Program
An overall program for:

- Controlling and appropriately protecting workers from permit-required confined space hazards; and
- Regulating entry into permit-required confined spaces.

Permit-Required Confined Space or “Permit Space”

- A confined space that has one or more of the following characteristics:
- Contains or has a potential to contain a hazardous atmosphere;
- Contains a material that has 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 that could either:
    1. Impair the ability to self-rescue, or;
    2. Result in a situation that presents an immediate danger to life or health.

Prohibited Condition
Any condition in a permit-required confined space that is not allowed by the permit during the authorized entry period.

Rescue Service
The personnel designated to rescue workers from permit-required confined spaces.

- ***Incarcerated workers are restricted from performing entry rescues.***

Retrieval System
The equipment used for non-entry rescue of persons from permit-required confined spaces, such as a retrieval line, full body harness or wristlets, and a retrieval device such as a tripod, winch system, etc.

Signage
A process by which confined spaces are designated as permit-required and that entry is restricted, e.g., “Danger – Permit Required Confined Space – DO NOT ENTER,”

Testing
The process of identifying and evaluating the hazards that entrants may be exposed to in a permit-required confined space. Testing includes specifying the tests that are to be performed in the permit-required confined space.

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