

# OSHA's PRCS Requirements



**Session # – Entry Permits & Requirements**

# Three (3) options to enter

- Once a space has been classified as a Permit-Required Confined Space (PRCS), there are three (3) options to enter:
  1. 1910.146(c)(5) or 1926.1203(e)
  2. 1910.146(c)(7) or 1926.1203(g)
  - 3. 1910.146(d)-(k) or 1926.1204 - 1926.1211**

# PREVENT or ALLOW Entry?

- When an employer identifies, or receives notice of, a PRCS and has NOT authorized it's employees to work in PRCS(s) it **MUST** take effective measures to **PREVENT ENTRY**, in addition to complying with all other applicable requirements of this standard
- When an employer decides it employees **WILL ENTER** a PRCS, it **MUST** have a written PRCS program that complies with 1910.146 or 1926.1204
- The written program **MUST** be available PRIOR TO and during entry for inspection by employees and their authorized representatives

# Permit-Required Confined Space Program

- IMPLEMENT the measures necessary to **PREVENT UNAUTHORIZED ENTRY**
- Identify and evaluate the hazards of PRCs **BEFORE** entry
  - NOTE: this is the 2<sup>nd</sup> Evaluation of the space and is done BEFORE EACH entry

# Permit-Required Confined Space Program

- **DEVELOP AND IMPLEMENT** the means, procedures, and practices necessary for safe entry operations, including, but not limited to, the following:
  - Specifying acceptable entry conditions
  - Providing each authorized entrant or (authorized rep) with the opportunity to observe any monitoring or testing of permit spaces
  - Isolating the PRCS and physical hazard(s) within the space

continue

# Permit-Required Confined Space Program

- Means, procedures, and practices necessary for safe entry operations, including, but not limited to, the following:
  - Purging, inerting, flushing, or ventilating the PRCS as necessary to eliminate or control atmospheric hazards

Note: When an employer is unable to reduce the atmosphere below 10% LFL, the employer may only enter if the employer inertes the space so as to render the entire atmosphere in the space non-combustible, and the employees use PPE to address any other atmospheric hazards (such as oxygen deficiency), and the employer eliminates or isolates all physical hazards in the space.

continue

# Permit-Required Confined Space Program

- Means, procedures, and practices necessary for safe entry operations, including, but not limited to, the following:
  - Determining that, in the event the ventilation system stops working, the monitoring procedures will detect an increase in atmospheric hazard levels in sufficient time for the entrants to safely exit the permit space
  - Providing external entry portal barriers to protect entrants from external hazards

continue

# Permit-Required Confined Space Program

- Means, procedures, and practices necessary for safe entry operations, including, but not limited to, the following:
  - Verifying that conditions in the PRCS are acceptable for entry **throughout the duration of the entry**, and ensuring that employees are **NOT** allowed to enter into, or remain in, a PRCS with a hazardous atmosphere **UNLESS** the employer can demonstrate that PPE will provide effective protection and provides the appropriate PPE to each entrant

continue



# Permit-Required Confined Space Program

- Means, procedures, and practices necessary for safe entry operations, including, but not limited to, the following:
  - Eliminating any conditions (for example, high pressure) that could make it unsafe to remove an entrance cover

# REQUIRED Equipment

- Provide the following at **NO COST** to each employee, **maintain** that equipment **properly**, and **ENSURE** that each employee uses that equipment properly:
  - Atmospheric testing and monitoring equipment
  - Ventilating equipment needed to obtain acceptable entry conditions
  - Communications equipment, including equipment for attendants assessing entrants' status in multiple spaces
  - PPE when feasible engineering and work-practice controls do not adequately protect employees
    - The other PPE requirements continue to apply to the use of PPE in a PRCS. For example, if employees use respirators, then the respirator requirements in 1926.103 or 1910.134 must be met.

# REQUIRED Equipment

- Provide the following at **NO COST** to each employee, **maintain** that equipment **properly**, and **ENSURE** that each employee uses that equipment properly:
  - Lighting equipment that meets the minimum illumination requirements in 1926.56, that is approved for the ignitable or combustible properties of the specific gas, vapor, dust, or fiber that will be present, and that is sufficient to enable employees to see well enough to work safely and to exit the space quickly in an emergency
  - Barriers and shields at entry portal as needed
  - Equipment, such as ladders, needed for safe ingress and egress by authorized entrants

# REQUIRED Equipment

- Provide the following at **NO COST** to each employee, **maintain** that equipment **properly**, and **ENSURE** that each employee uses that equipment properly:
  - Rescue and emergency equipment needed to comply with paragraph (i) of this section (or paragraph (k) in .146), except to the extent that the equipment is provided by rescue services
  - Any other equipment necessary for safe entry into, safe exit from, and rescue from, permit spaces.

# Evaluating the PRCS

- Evaluate PRCS conditions in accordance with:
  - Test atmospheric conditions in the PRCS to determine if acceptable entry conditions exist **BEFORE** changes to the space's NATURAL ventilation are made, and **BEFORE** entry is authorized, except that, when an employer demonstrates that isolation of the space is infeasible because the space is large or is part of a continuous system (such as a sewer), the employer must:
    - Perform pre-entry testing when feasible before entry is authorized
      - CONTINUOUSLY monitor entry conditions in the entry/work areas
      - Provide an early-warning system that continuously monitors for non-isolated engulfment hazards. The system must alert authorized entrants and attendants in sufficient time for the authorized entrants to safely exit the space.

# Evaluating the PRCs

- Evaluate PRCs conditions in accordance with:
  - **CONTINUOUSLY** monitor atmospheric hazards unless the employer can ~~demonstrate that the equipment for continuously monitoring a hazard is not commercially available~~ or that periodic monitoring is of sufficient frequency to ensure that the atmospheric hazard is being controlled at safe levels.
    - If continuous monitoring is not used, periodic monitoring is required with **SUFFICIENT FREQUENCY** to ensure that acceptable entry conditions are being maintained during the course of entry operations

# Evaluating the PRCs

- Evaluate PRCs conditions in accordance with:
  - When testing for atmospheric hazards, test **FIRST** for oxygen, then for combustible gases and vapors, and then for toxic gases and vapors
    - Provide each entrant or their authorized representative an opportunity to observe the **pre-entry and any subsequent testing or monitoring**
  - Reevaluate the PRCs in the presence of any entrant or their rep who requests a re-evaluation because there is some indication that the evaluation of that space may not have been adequate

# Attendants are REQUIRED!

- Provide at least one (1) attendant outside the PRCs entry portal into which entry is authorized for the duration of entry operations:
  - Attendants may be assigned to more than one PRCs provided their duties and responsibilities can be effectively performed for **EACH** PRCs
  - Attendants may be stationed at any location outside the PRCs as long as their duties can be effectively performed for each PRCs to which the attendant is assigned
- If multiple spaces are to be assigned to a single attendant, include in the program the means and procedures to enable the attendant to respond to an emergency affecting one or more of those spaces without distraction



# Program must DESIGNATE roles

- Designate each person who is to have an active role (as, for example, authorized entrants, attendants, entry supervisors, or persons who test or monitor the atmosphere in a permit space) in entry operations, identify the duties of each such employee, and provide each such employee with the training required by § 1926.1207 or 1910.146(g)

# Procedures for summoning rescue...

- Develop and implement procedures for summoning rescue and emergency services (including procedures for summoning emergency assistance in the event of a failed nonentry rescue), for rescuing entrants from permit spaces, for providing necessary emergency services to rescued employees, and for preventing unauthorized personnel from attempting a rescue

# Entry Permit System

- Develop and implement a **SYSTEM** for the PREPARATION, ISSUANCE, USE, and CANCELLATION of entry permits as required by this standard, including the safe termination of entry operations under both planned and emergency conditions

# Contractors

- Develop and implement procedures to coordinate entry operations when employees of more than one employer are working simultaneously in a PRCs or elsewhere on the worksite where their activities could, either alone or in conjunction with the activities within a permit space, foreseeably result in a hazard within the PRCs, so that employees of one employer do not endanger the employees of any other employer

NOTE: 1910.146(c)(8) REQUIRES contractors be “debriefed” after entry

# Terminating Entry Procedures

- Develop and implement procedures (such as closing off a PRCS and canceling the permit) necessary for concluding the entry after entry operations have been completed

# Program Review

- Review entry operations when the measures taken under the entry program may not protect employees and revise the program to correct deficiencies found to exist **BEFORE** subsequent entries are authorized

Note: Examples of circumstances requiring the review of the PRCs program include, but are not limited to:

1. Any unauthorized entry of a permit space,
2. the detection of a PRCs hazard not covered by the permit,
3. the detection of a condition prohibited by the permit,
4. the occurrence of an injury or nearmiss during entry,
5. a change in the use or configuration of a permit space, and
6. employee complaints about the effectiveness of the program.

NOTE: 1910.146 requires only an annual review

# Program Review

- Review the PRCs program, using the canceled permits, within 1 year after **EACH ENTRY** and revise the program as necessary to ensure that employees participating in entry operations are protected from PRCs hazards.

Note: Employers may perform a single annual review covering all entries performed during a 12-month period.

If no entry is performed during a 12-month period, no review is necessary.

# Permitting Process

- **BEFORE** entry is authorized, employer **MUST DOCUMENT** the completion of the means, procedures, and practices necessary for safe entry by preparing an **ENTRY PERMIT**
- **BEFORE** entry begins, the entry supervisor identified on the permit **MUST** sign the permit to authorize entry
- Signed permit **MUST** be made available to all authorized entrants or reps, by posting it at the entry portal or by any other equally effective means, so that the entrants can confirm that pre-entry preparations have been completed



# Permitting Process

- Duration of permit may **NOT** exceed the time required to complete the assigned task identified on the permit
- Entry Supervisor **MUST** terminate entry and take the following action when **ANY** of the following apply:
  - Cancel the permit when the entry operations have been completed
  - Suspend or cancel the permit and fully reassess the PRCS before allowing re-entry when a condition that is not allowed under the permit arises
  - Cancel the permit when a condition that is not allowed in or near the PRCS

# Permitting Process

- Employer **MUST** retain each canceled entry permit for at least 1 year to facilitate the review of the PRCS program
- Any problems encountered during an entry **MUST** be noted on the permit so that appropriate revisions to the PRCS program can be made

# Entry Permit

- Entry permit must identify:
  1. space to be entered
  2. purpose of the entry
  3. date and duration of entry permit
  4. entrants by name or other means as will enable the attendant to determine quickly and accurately, which entrants are inside the PRCs
  5. Means of detecting an increase in atmospheric hazards in the event the ventilation stops working
  6. Each person, by name, currently serving as an attendant
  7. The individual, by name, serving as entry supervisor, and the signature or initials of entry supervisor
  8. hazards of the PRCs to be entered
  9. measures used to isolate the PRCs and to eliminate or control hazards
  10. acceptable entry conditions
  11. results of tests and monitoring, accompanied by the names or initials of the testers and by an indication of when the tests were performed

# Entry Permit (continued)

- Entry permit must identify:

12. rescue and emergency services that can be summoned and the means (such as the equipment to use and the numbers to call) for summoning those services
13. communication procedures used by entrants and attendants to maintain contact during the entry;
14. Equipment, such as PPE, testing equipment, communications equipment, alarm systems, and rescue equipment, to be provided for compliance with this standard
15. Any other information necessary, given the circumstances of the particular confined space, to ensure employee safety
16. Any additional permits, such as for hot work, that have been issued to authorize work in the permit space

# Training

- Employer must provide training to each employee involved in any aspect of entry into a PRCs, at no cost to the employee, and ensure that the employee possesses the understanding, knowledge, and skills necessary for the safe performance of the duties assigned
- This training must result in an understanding of the hazards in the PRCs and the methods used to isolate, control, or in other ways protect employees from these hazards, and for **those employees NOT AUTHORIZED to perform entry rescues, in the dangers of attempting such rescues**

# Training

- Training must be provided to each affected employee:
  - In both a language and vocabulary that the employee can understand
  - Before the employee is first assigned duties
  - Before there is a change in assigned duties
  - Whenever there is a change in PRCS entry operations that presents a hazard about which an employee has not previously been trained; and
  - Whenever there is any evidence of a deviation from the entry procedures or there are inadequacies in the employee's knowledge or use of these procedures

# Training

- Training must establish employee proficiency in the duties and must introduce new or revised procedures, as necessary
- Employer must maintain training records to show that the training has been accomplished.
- Training records must contain
  1. each employee's name,
  2. the name of the trainers, and
  3. the dates of training
- Training documentation must be available for inspection

# Duties of Authorized Entrants

- Employer must ensure that all authorized entrants:
  - Are familiar with and understand the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
  - Properly use equipment
  - Communicate with the attendant as necessary
  - Alert the attendant whenever:
    - There is any warning sign or symptom of exposure to a dangerous situation; or
    - The entrant detects a prohibited condition



# Duties of Authorized Entrants

- Employer must ensure that all authorized entrants:
  - Exit from the permit space as quickly as possible whenever:
    - An order to evacuate is given by the attendant or entry supervisor
    - There is any warning sign or symptom of exposure to a dangerous situation
    - The entrant detects a prohibited condition; or
    - An evacuation alarm is activated

# Duties of Attendants

- Employer must ensure that each attendant:
  - Is familiar with and understands the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure
  - Is aware of possible behavioral effects of hazard exposure in authorized entrants
  - **CONTINUOUSLY** maintains an accurate count of authorized entrants in the PRCs and ensures that the means used to identify authorized entrants, **ACCURATELY** identifies who is in the PRCs
  - Remains outside the permit space during entry operations until relieved by another attendant

# Duties of Attendants

- Employer must ensure that each attendant:
  - Communicates with entrants to assess entrant status and to alert entrants of the need to evacuate the space
  - Assesses activities and conditions **INSIDE AND OUTSIDE** the PRCS to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions:
    - If there is a prohibited condition
    - If the behavioral effects of hazard exposure are apparent
    - If there is a situation outside the space that could endanger entrants
    - If the attendant cannot effectively and safely perform all their duties

# Duties of Attendants

- Employer must ensure that each attendant:
  - Summons rescue and other emergency services **as soon as** the attendant determines that entrants may need assistance
  - Takes the following actions when unauthorized persons approach or enter a PRCs while entry is underway:
    - Warns the unauthorized persons that they must stay away from the permit space
    - Advises the unauthorized persons that they must exit immediately if they have entered the permit space; and
    - Informs the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space

# Duties of Attendants

- Employer must ensure that each attendant:
  - Performs **NON-ENTRY** rescues as specified by the employer's rescue procedure
  - Performs no duties that might interfere with the attendant's primary duty to assess and protect the authorized entrants

# Duties of Entry Supervisors

- The entry employer must ensure that each entry supervisor:
  - Is familiar with and understands 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 allowing entry to begin
  - Terminates the entry and cancels or suspends the permit

# Duties of Entry Supervisors

- The entry employer must ensure that each entry supervisor:
  - Verifies that rescue services are **AVAILABLE** and the means for summoning them are **OPERABLE**, and that the **employer will be notified** as soon as the services become unavailable
  - Removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations; and
  - Determines, whenever responsibility for an entry operation is transferred, and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained