



According to 29 CFR 1910.146, what are the options for entry into a permit confined space?

When entry into the permit space can't be avoided, employers have three options.

Procedural options for PRCS entry

- *Options for entry into Permit Required Confined Space (PRCS)*
 - *Reclassification*
 - *Alternate entry procedures*
 - *Permit program*





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1. Reclassification

In some cases it may be possible to completely eliminate all hazards from the space without having to enter the space in order to do so. In this case it may be possible to temporarily reclassify the PRCS as a non-permit space. Non-permit spaces are confined spaces, but do not require a permit for entry, because the hazards have been eliminated. The reclassification continues only as long as all hazards remain eliminated.

Reclassification as non PRCS

- A PRCS can be reclassified as a non-permit space **IF AND ONLY IF** the space contains no actual or potential atmospheric hazards, and if all other hazards can be eliminated without entry into the space
 - *Reclassification requires that no ongoing measures are required to keep the space safe*
 - *The employer must certify that all hazards from the space have been eliminated and provide that certification to all employees entering that space*
 - *The reclassification is valid only as long as the hazard is eliminated*
 - *When hazards are reintroduced into a space, the space becomes a permit space again*

Temporary Reclassification
(From PRCS To Non-PRCS Certification)

Location of Confined Space: **Mixer in High Bay Area**

Date & time space is reclassified as a non-PRCS:
Date: **8/11/2005** Time: **4:05pm**

Certificate sections complying with this requirement may resemble the following:

Describe how hazards have been eliminated. Be detailed such as: lockout/tagout of electrical or mechanical hazards, isolation of gas lines, removal of engulfment hazards, etc.

Mixer has been locked out and no hazardous atmosphere present

I certify that all hazards have been eliminated.
Signature: **John Doe** Date: **8/11/2005** Time: **4:05pm**



2. Alternate Entry Procedures

In cases where the only hazards are exclusively atmospheric in nature, and where continuous forced air ventilation alone is sufficient to maintain the permit space safe for entry, entry may be by means of the “Alternate Entry Procedures” contained in Paragraph (c) (5) (ii) of the standard.

The alternate entry procedures require that before employees enter, the internal atmosphere must be tested for:


- (1) Oxygen content,
- (2) Flammable gases and vapors, and
- (3) Potential toxic air contaminants

Alternate Entry Procedures

Requirements

- removal of entrance covers.
- temporary barriers.
- test atmosphere initially and periodically.
- certify safe.
- continuous forced air ventilation must be provided, and
- detection of hazardous atmosphere.

- *If a hazard cannot be eliminated, but can be controlled by continuous forced air ventilation, then alternate entry procedures can be used*
- *Before employee enters the space, internal atmosphere must be tested with a calibrated, direct-reading instrument for oxygen, flammable gases and vapors, and for potential toxic air contaminants*
- *Once testing is completed, the atmosphere within the space must be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere*
- *There may be no hazardous atmosphere within the space whenever any employee is inside the space*



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Once testing has been completed, the atmosphere within the space must be periodically tested, or continuously monitored, to ensure that the atmosphere remains safe for the entrants. There must be no hazardous atmosphere within the space when an employee is inside the space. If a hazardous atmosphere is detected during entry, employees must exit immediately, the space must be evaluated, and corrective measures must be taken.

When entries are undertaken by means of the Alternate Entry Procedures, there are no formal requirements for the presence of an attendant, entry supervisor, or standby rescue team. Solo entries are permitted. The emphasis is squarely on use of continuous ventilation, and atmospheric monitoring to ensure that atmospheric hazards are controlled, and that the atmosphere remains safe for entry.

Because of the reliance on atmospheric monitoring to verify that conditions remain safe, the “best practice” followed by many employers is to define “hazardous atmosphere” more conservatively than in other types of confined space entry. As an example, a concentration of 5% LEL rather than 10% LEL combustible gas, or a concentration of one half the normal permissible exposure limit (PEL) concentration of a toxic gas might be used as the employer’s hazardous condition threshold used during “Alternate” entry procedures.

Alternate Entry Procedures


- *If a hazard cannot be eliminated, but can be controlled by continuous forced air ventilation, then alternate entry procedures can be used*
- *Before employee enters the space, internal atmosphere must be tested with a calibrated, direct-reading instrument for oxygen, flammable gases and vapors, and for potential toxic air contaminants*
- *Once testing is completed, the atmosphere within the space must be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere*
- *There may be no hazardous atmosphere within the space whenever any employee is inside the space*

Requirements

- removal of entrance covers.
- temporary barriers.
- test atmosphere initially and periodically.
- certify safe.
- continuous forced air ventilation must be provided, and
- detection of hazardous atmosphere.

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Frequently Asked Questions about Confined Space Entry



3. Permit Entry procedures

If the hazard cannot be eliminated or controlled, then the only remaining option for entry is the implementation of a comprehensive permit space program.

Paragraph (c) (4) of the standard requires employers whose employees enter permit spaces to establish a written permit space program (permit program). Employers must make this written program available to employees and their authorized representatives. The written program includes specific details regarding how the employer will comply with each of the requirements of 1910.146. Employer obligations include:

- (1) To secure permit spaces to prevent unauthorized entry.
- (2) To evaluate and identify hazards before entry.
- (3) To implement operation procedures that ensures safe entry.
- (4) To provide and maintain the necessary equipment.
- (5) To evaluate PRCS conditions.
- (6) To provide attendant(s).
- (7) To develop and implement the specific methods to be used if attendants are responsible for monitoring more than one PRCS at the same time, or if an emergency occurs.
- (8) To designate the roles and responsibilities of all active PRCS entry team personnel.
- (9) To develop and implement effective rescue and emergency procedures.

- (10) To develop and implement an entry permit system.
- (11) To develop and implement procedures to coordinate entry operations when employees of more than one employer will enter a PRCS.
- (12) To develop and implement procedures for concluding an entry.
- (13) To periodically review entry operations.
- (14) To periodically review the permit space system.

Permit Program

- **If hazards cannot be eliminated or controlled, only remaining option is implementation of comprehensive permit space program**
- **Permit specifies means, procedures, and practices for safe entry**
- **Establishes all protective measures have been taken**

CONFINED SPACE ENTRY PERMIT							
<i>All copies of permit will remain at job site until project is completed. Permit is good for one shift only.</i>							
LOCATION AND DESCRIPTION OF CONFINED SPACE: <i>Process Hall / SPC Mixer</i>				Date: <i>1-14-98</i>			
PURPOSE OF ENTRY: <i>Clean Tank</i>				Time: <i>12:15</i>			
DEPARTMENT: <i>SW06</i>				PERSON IN CHARGE OF WORK: <i>Jim Mayberry</i>			
AUTHORIZED ENTRANTS		TIME IN	TIME OUT				
<i>Jim Mayberry</i>		<i>1:45</i>	<i>3:10</i>				
<i>Jeff Berry</i>		<i>1:45</i>	<i>3:10</i>				
<i>Penny Green</i>		<i>1:45</i>	<i>3:10</i>				
<i>If number of entrances exceeds available signs in space, the ERP signs in form shall be used to track entrants in and out of the space.</i>							
SPECIAL REQUIREMENTS		YES	NO	Special Requirements (cont.)		YES	NO
Lockout/Tagout		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Escape Harness/Lifeline		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lines/Benches Capped or Blanketed		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Emergency Escape Unit		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Purge/Flush and Vent		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Fire Extinguisher		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ventilation		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Protective Clothing		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Secret Area		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hot Work		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Communications Device(s): <i>N/A</i>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Respirator Type: <i>Post Mask</i>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
ATMOSPHERIC TESTING		P.E.L. (Permissible Exposure Limit)		Test Results			
<i>(Add for one (4-hour) test only)</i>		Yes	No	<i>12:15</i>			
% of Oxygen		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>19.0%</i>			
% of L.E.L.		<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Carbon Monoxide		<input type="checkbox"/>	<input checked="" type="checkbox"/>				
Name of Tester: <i>Jim Mayberry</i>							
<i>Note: Continuous/potential tests shall be established before beginning job.</i>							
INSTRUMENTS USED		NAME		TYPE	IDENT. NO.		
<i>Mind Guard III</i>				<i>air sampler</i>			
ATTENDANTS				SIGNATURE			
<i>Jeff Berry</i>		<i>Jeff Berry</i>					
<i>Penny Green</i>		<i>Penny Green</i>					
EMERGENCY RESPONSE NOTIFICATION NUMBERS:				SAFETY: <i>DM94302/104</i>			
AMBULANCE: <i>911</i>		FIRE: <i>911</i>		RESCUE: <i>911</i>			
ENTRY SUPERVISOR AUTHORIZATION: <i>Jim Mayberry</i>				DATE: <i>1-14-98</i>			