

POLICY

This confined spaces policy is designed to ensure the safety and health of E & B Oilfield Services, Inc.'s employees by limiting exposure to the hazards present while working in construction, in and around confined spaces. There are new components in the Confined Spaces in Construction regulations that reflect different challenges present at a construction worksite to include: higher employee turnover, changing worksites, and multiple contractors (controlling and subcontractors).

Except where another policy states otherwise, this written confined space policy will be followed whenever and wherever the company's employees could enter or be exposed to confined space hazards for all construction work including modifications and upgrades. This program will be available to any employee and their representative at any time.

RESPONSIBILITIES

Confined space safety is a responsibility shared between the Company and its employees.

Employer Responsibilities

- Involve affected employees on this policy, ensuring they are educated on the elements of confined space safety and trained in worksite specific procedures.
- Seek employee input during an annual review of this policy.
- Provide all necessary information to ensure employees work safely in and around confined spaces.
- Determine that employees can proficiently perform their assigned duties.
- Document training and keep training records for all current employees.
- Keep cancelled permits until an annual review can be conducted.
- Provide all documents to the Secretary of Labor upon request.
- Reevaluate confined spaces whenever an employee requests it.

Each employer who identifies, or receives notice of a permit space and has not authorized employees it directs to work in that space, must take effective measures to prevent those employees from entering that permit space.

Employee Responsibilities

- Follow all OSHA rules and regulations.
- Follow established safe work policy and procedures.
- Participate in all required training.
- Be aware of potential hazards and request a reevaluate when a new hazard is suspected.

STANDARDS AND REGULATIONS

- Subpart AA — Confined Spaces in Construction 29 CFR 1926.1201 - 1213
- Federal OSHA General Duty Clause, Section 5(a)(1)

DEFINITIONS

Attendant means an individual stationed outside one or more permit spaces who assesses the status of authorized entrants and who must perform the duties specified in § 1926.1209.

Authorized entrant means an employee who is authorized by the entry supervisor to enter a permit space.

Competent person means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them.

Confined space means a space that: 1. Is large enough and so configured that an employee can bodily enter it; 2. Has limited or restricted means for entry and exit; and 3. Is not designed for continuous employee occupancy.

Controlling Contractor is the employer that has overall responsibility for construction at the worksite.

Entry means the action by which any part of a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space, whether or not such action is intentional or any work activities are actually performed in the space.

Entry Employer means any employer who decides that an employee it directs will enter a permit space.

Entry supervisor means the qualified person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this standard.

Host employer means the employer that owns or manages the property where the construction work is taking place.

Permit-required confined space (permit space) means a confined space that has one or more of the following characteristics: 1. Contains or has a potential to contain a hazardous atmosphere; 2. Contains a material that has the potential for engulfing an entrant; 3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross section; or 4. Contains any other recognized serious safety or health hazard.

Rescue service means the personnel designated to rescue employees from permit spaces.

Test or testing means the process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

Ventilate or ventilation means controlling a hazardous atmosphere using continuous forced-air mechanical systems that meet the requirements of § 1926.57 (Ventilation).

General Safety Considerations

The company must implement the measures necessary to prevent unauthorized entry; identify and evaluate the hazards of permit spaces before employees enter them; develop and implement the means, procedures, and practices necessary for safe permit space entry operations; provide entry equipment at no cost to each employee, maintain that equipment properly, and ensure that each employee uses that equipment properly.

For permit required pre-entry testing and periodic monitoring, the company will provide an early-warning system that continuously monitors for non-isolated engulfment hazards, and continuously monitor atmospheric hazards.

In an emergency or failed non-entry rescue, the attendant will summon rescue and emergency services. No unauthorized personnel may attempt a rescue.

The safety coordinator will be consulted for all permit required matters, including preparation, issuance, use, and cancellation of entry permits under both planned and emergency conditions.

When the measures taken under the permit space program may not protect employees, the program will be revised to correct deficiencies found to exist before subsequent entries are authorized. Examples of circumstances requiring the review of the permit space program include, but are not limited to: any unauthorized entry of a permit space, the detection of a permit space hazard not covered by the permit, the detection of a condition prohibited by the permit, the occurrence of an injury or near miss during entry, a change in the use or configuration of a permit space, and employee complaints about the effectiveness of the program. The company will review the permit space program, using the canceled permits within 1 year after each entry. It is permitted to 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.

Before permit required entry is authorized, each entry employer must document the completion of measures for safe entry. The documentation must be made available at the time of entry to all authorized entrants by posting it at the entry portal or by any other equally effective means. The permit may not exceed the time required. The permit will be cancelled when the entry operations is completed; suspended or cancelled when conditions dictate. The permit must be fully reassessed before allowing re-entry. The entry employer must retain each canceled entry permit for at least 1 year to facilitate the review of the permit-required confined space program. It is permitted to 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.

Training will be at no cost to the employee, and the company will ensure that the employee possesses the understanding, knowledge, and skills necessary for the safe performance of the duties assigned. Training must be in both a language and vocabulary that the employee can understand. Training must be conducted: before the employee is assigned confined space entry work; before there is a change in assigned duties; whenever there is a change in permit space entry operations that presents a hazard about which an employee has not previously been trained; whenever there is any evidence of a deviation from the permit space entry procedures or there are inadequacies in the employee's knowledge or use of these procedures. The training must establish employee proficiency in their assigned duties and must introduce new or revised procedures. The company must maintain training records: contain each employee's name, the name of the trainers, and the dates of training. The documentation must be available for inspection by employees and their authorized representatives, for the period of time the employee is employed by that employer.

IDENTIFYING CONFINED SPACES AND HAZARDS

A confined space is an area a worker can enter, but isn't designed for continuous occupancy and doesn't have an unrestricted entry or exit. A permit required confined space (PRCS) has a serious health or safety hazard, such as the possibility for a hazardous atmosphere, material that can engulf a person, or is in a shape that can trap or asphyxiate a person (e.g. converging or sloping walls or floor).

To help provide an understanding for determinations OSHA has provided a limited list of work sites that could have a confined space: bins, boilers, pits, elevators, escalators, pumps, manholes, and tanks (containers).

The company will ensure that a competent person will identify all confined spaces an employee might work in, before the work begins, and determine which requires permits. Employees and the controlling contractor will be informed directly of the location and danger in each permit space. Signs that effectively warn of the danger and prohibit entry will be placed at permit space entrances.

Each entry employer will have a competent person evaluate non-permit spaces initially and when there are changes to the use or configuration that might increase entrant hazards to decide whether to reclassify it.

Work will be scheduled as much as reasonably possible to avoid confined spaces by finishing tasks in areas before they become confined spaces.

COMMUNICATING BETWEEN EMPLOYERS

As the host employer, all details (e.g. entry employer's entry program, known hazards, new hazards, and hazard elimination/isolation procedures) about confined spaces at the worksite will be communicated with the controlling contractor before and after entry. Where the company has contracted with the property owner to manage it and transmit all confined space details, it will be considered the host employer.

As the controlling contractor, all details (e.g. employer's entry program, location of confined spaces and PRCS, known hazards, new hazards, and hazard elimination/isolation procedures) will be communicated with the host employer and all entry employers (i.e. subcontractors) before and after entry, ensuring that information is transferred to the different entry employers (e.g. posting signs) before and during entry so they don't create additional hazards for other entry employers' workers. Details will be communicated with other non-entry employers so that their workers do not create hazards or go into the confined space.

As the entry employer, all details (e.g. entry program, known hazards, new hazards, and hazard elimination/isolation procedures) about confined spaces at the worksite will be communicated with the controlling contractor before and after entry.

As a non-entry employer, essential details about confined spaces will be communicated with the controlling contractor to determine where the confined spaces are and the necessary steps to prevent employees from accessing them or creating hazards for other workers. Employees will be instructed to not enter the identified confined spaces.

CONFINED SPACES WITH ONLY ATMOSPHERIC HAZARDS

The following procedures and conditions are for entering a confined space with only atmospheric hazards that can be made safe to enter through forced air ventilation during entry.

To be more specific, all physical hazards have to be eliminated or isolated through engineering controls, and the forced air ventilation has to keep the space safe for entry, and entrants must be able to exit safely if ventilation stops working.

If the above can be proven and documented with monitoring and inspection where the data is available to each entrant, the space can be entered without a permit, attendant, or rescue and emergency equipment once the company certifies that:

- Entrance covers can be safely removed.
- Entrance openings are immediately guarded by a railing, temporary cover or barrier that prevents accidental falls into the opening and protects entrants from foreign objects falling into the space.
- The internal atmosphere is tested with a calibrated direct-reading instrument in the following order: oxygen content, flammable gases and vapors, and potential toxic air contaminants. The testing procedure is evaluated to ensure it is appropriate for the possible atmospheric hazards. This may mean identifying the possible toxic air contaminants and ensuring the gas detector can detect it, and testing at the top, middle, and bottom of the space to account for different gases' density.
- Testing and continuous monitoring ensures there is no hazardous atmosphere.
- Continuous forced air ventilation from a clean source directed — to the lowest spot or furthest corner — so that it eliminates any hazardous atmosphere from the space while anyone is in there.
- Continuously monitoring the atmosphere in the space with monitoring equipment, unless necessary monitoring equipment isn't commercially available, that will sound an alarm notifying all entrants if a hazard exceeds the atmospheric thresholds.
- Where the preferred continuous monitoring is not used because of equipment limitations, or that periodic monitoring is demonstrably sufficient, periodic monitoring will be often enough to detect a hazardous atmosphere is building up and that entrants have time to exit.
- Once a hazard is observed everyone will immediately leave the space. The hazard source is then found — and the company will take steps that protect employees before they enter that space again.
- There is a safe way to enter and exit the space, including a personnel hoist made for that purpose, or a job hoist approved ahead of time in writing by a registered professional engineer.

The written certificate must contain the date, location of the space and the signature of the person certifying the above conditions have been met. The certification must be made before anybody enters and be available to every employee entering the space. The employer will reevaluate the space if there is a change to the space that may increase hazards or there is indication the current evaluation is incorrect.

RECLASSIFYING PRCS FOR ENTRY

Permit required confined spaces without any potential atmospheric hazard can be reclassified as non-permit required once the entry employer certifies that:

- The hazards can be eliminated or isolated without entering the space.
- If the entry employer can show they have to enter the space to remove the hazard, then they can do that following the permit process.

The written certificate must contain how all the hazards have been eliminated or isolated, the date, location of the space, and the signature of the person certifying the above conditions have been met. The certification must be made before anybody enters and be available to every employee entering the space. If new hazards are identified everyone must leave the space, and the entry employer will reevaluate.

ENTRY EMPLOYER RESPONSIBILITIES

As an entry employer, the company will create and put into action the following measures to protect its and other employees both inside and outside confined spaces.

- Prevent unauthorized entry. Using covers, signs, or an attendant at the entrance etc.
- Ensure safe permit space entry operations.
- Provide the necessary equipment.
- Evaluate permit spaces during entry.
- Provide attendants outside permit spaces during entry.
- Describe how the attendant monitoring multiple spaces will respond to emergencies.
- Assign a role to every person in an entry, identify their duties and provide required training.
- Rescue and emergency services for PRCS.
- Entry permits.
- Coordinate entry operations.
- Review this policy annually and following any incidents or near misses.

SAFE PERMIT SPACE ENTRY OPERATIONS

A competent person will identify and evaluate permit space hazards before any employees enter it and establish all the elements to ensure safe work in the area, especially:

- Citing the acceptable entry conditions.
- Authorized entrants can observe space testing and monitoring.
- Isolating the space and its hazards.
- Controlling atmospheric hazards through purging, inerting, flushing, or ventilating.
- Reducing the atmosphere to below 10 percent of its Lower Flammable Limit (LFL) or inerting the atmosphere so that it is entirely non-combustible and addressing the other atmospheric hazards like oxygen deficiency through PPE.
- Ensuring monitoring procedures will detect atmospheric hazard level increases quickly enough for entrants to exit, in case ventilation stops working.
- Having necessary barriers to protect entrants from outside hazards, namely pedestrian and vehicle barriers.

- Conditions continue to allow safe entry the entire time.
- The necessary PPE effectively protects every employee, and that they have the PPE before entering a hazardous atmosphere.
- Conditions, like high pressure, that can make removing an entrance cover unsafe are eliminated.

EVALUATING PERMIT SPACE CONDITIONS

The entry employer will take the following steps to check out the PRCS when conducting entry.

Test the conditions in the PRCS before entering or making any additional ventilation if the atmosphere can be isolated. Oxygen will be tested first, followed by combustible gases and vapors, and finally toxic gases and vapors.

If it is part of a larger continuous system and can't be isolated, pre-entry testing will be done, and conditions will be continuously monitored unless necessary monitoring equipment isn't commercially available. Work in large or continuous systems also requires a sufficient early-warning system continuously monitoring for engulfment hazards.

Continuously monitoring the atmosphere in space with monitoring equipment, unless necessary monitoring equipment isn't commercially available, that will sound an alarm notifying all entrants if a hazard exceeds the atmospheric thresholds.

Authorized entrants will be allowed to observe the pre-entry and all other testing and monitoring, and the results will be posted with the permit at the entry to the confined space.

ENTRY PERMITS

Each entry employer will ensure conditions are safe for entry in permit spaces through establishing, suspending and cancelling entry permits. If there are multiple entry employers in a confined space during the same entry, then one permit will be completed by coordinating with the controlling contractor and all entry employers. The permit will be made available (e.g. posted at the entry) for all entry employers to document the completion of necessary safety measures.

Through completing an entry permit all measures needed to make the PRCS safe for entry will be documented. The entry supervisor on the permit will sign the entry permit authorizing that these necessary measures have been taken. The permit's duration will be the amount of time needed to complete the task as identified on the permit. Every entry permit will be kept for at least one year and addressed in the annual review. The entry supervisor will terminate the permit when the task identified is completed, suspended, or will cancel the permit when necessary.

A permit will be suspended when a temporary condition not allowed in the permit occurs in or near the PRCS and doesn't change its configuration or creates any new hazard. The entry supervisor needs to reevaluate the PRCS before lifting any suspension or cancelling the permit. A permit will be canceled when a condition not allowed in the permit occurs in or near the PRCS and isn't temporary or, changes its configuration or creates any new hazard.

Items on an Entry Permit

In order to identify everything needed to make a permit safe for entry the following items will be addressed:

- The permit space's location.
- The reason for entry.
- Date and duration of the entry.
- Authorized entrants identified so the attendant can easily track who is inside the PRCS.
- How any hazardous atmospheric levels will be tracked should ventilation stop.
- The name of every attendant.
- The name of every entry supervisor and the signature of the one that authorized entry.
- Hazards in the PRCS.
- How the hazards will be isolated, eliminated or controlled before entry (e.g. lockout tagout, purging, inerting, ventilating, and flushing).
- Acceptable entry conditions.
- Results and times of appropriate testing and monitoring, including the names or initials of who did the test.
- Rescue and emergency services and how they will be called.
- How entrants and attendants will communicate during entry.
- The necessary equipment.
- Additional permits needed to complete the task in the confined space.

EQUIPMENT

As an entry employer, the company will provide suitable equipment needed to safely enter, exit from, and conduct rescues in confined spaces. The equipment will also be properly maintained and all employees will know how to and be expected to use it correctly. Any equipment must also meet the regulations specific to it. For example respiratory equipment must meet the respiratory regulations, 1926.103, and barriers are governed by the rules for guardrails, 1926.502(b). The following equipment is specifically mentioned by OSHA:

- Adequate testing and monitoring equipment.
- Ventilating equipment that makes entering possible.
- Communication equipment that allows attendant to talk to entrants, assess status, and tell them to evacuate.
- PPE that meets any other applicable regulations where engineering and administrative controls do not give enough protection.
- Lighting that meets construction's minimum illumination in foot-candles (1926.56), that won't ignite the specific gas, vapor, dust or fiber present, and that enables employees to work safely and exit during emergencies.
- Barriers and shields that effectively isolate the confined space.
- Ladders needed to enter and exit the confined space.
- Rescue and emergency equipment that is called for in the company's emergency rescue policy.

AUTHORIZED ENTRANTS

Authorized entrants will know and understand which potential hazards are in each confined space such as: how they could be exposed, signs, symptoms, and consequences.

Entrants are expected to properly use all equipment, communicate with attendant, and be ready to exit any permit space quickly.

Communication includes working with the attendant to instill awareness of personal health in light of the potential hazards. This awareness includes sharing information with the attendant about any symptoms, warning signs or prohibited conditions.

The entrant must exit permit spaces when: told to by the attendant or entry supervisor; there is an exposure warning sign or symptom; they detect a prohibited condition; or an evacuation alarm is activated.

ATTENDANT RESPONSIBILITIES

An attendant's primary responsibility is to evaluate and protect authorized entrants inside permit required confined spaces. These responsibilities include:

- Knowing the hazards of the confined space.
- Keeping track of authorized entrants.
- Remaining outside permit spaces during entry and communicating with entrants.
- Assessing the confined space conditions.
- Ordering necessary evacuations.
- Calling emergency services.
- Non-entry rescues.
- Keeping unauthorized entrants out.
- Focusing exclusively on primary responsibility.

Attendants will know and understand which potential hazards are in each confined space such as: how entrants could be exposed, signs, symptoms, and consequences. This includes knowing how the hazard could affect entrants' behavior.

Attendants will also continuously track authorized entrants in the permit space, and accurately document it on the permit.

Attendants will know and understand which potential hazards are in each confined space such as: how entrants could be exposed, signs, symptoms, and consequences. This includes knowing how the hazard could affect entrants' behavior. Attendants will also continuously track authorized entrants in the permit space, and accurately document it on the permit.

In the event of an emergency, if more than one confined space is monitored by a single attendant, the attendant must:

- Immediately call for help over the radio
- Request backup
- Order the evacuation of all entrants
- Keep in contact with affected entrants
- Remain on scene until help arrives

An attendant must stay outside the permit space during an entry, even during emergencies regardless of whether entrants can escape, until relieved by another attendant. Once another attendant is on the scene, the attendant still can only try an entry rescue if they have the necessary equipment, are trained to do so, and the entry permit allows for it.

Communication includes working with the entrant to instill awareness of personal health in light of the potential hazards, the confined space conditions and when to evacuate.

The attendant is responsible for determining when a confined space is no longer safe and ordering entrants to evacuate whenever: there is a prohibited condition, the entrant is showing behavioral effects of exposure, something outside the confined space could be dangerous to entrants, or if the attendant can't focus on all required responsibilities.

As soon as the attendant assesses that entrants need help to evacuate the permit space, he/she will immediately call rescue and emergency services as described in the permit and start non-entry rescue established in the permit.

When an unauthorized person approaches a confined space, the attendant will tell he/she to exit immediately. The attendant will tell the entrants and supervisor there is an unauthorized person in the permit space.

Attendants will not be assigned or allowed to do any work that takes their attention away from their focus on the confined space and the safety of people inside and outside it. This means attendants can do tasks that add to their knowledge of permit space conditions, like monitoring atmospheric conditions or passing tools to entrants from outside the space. Although this knowledge can be part of the job description, tasks that do not require continued attention away from or leaving the permit-required confined space are not included. An attendant will not monitor more than one confined space at a time.

If more than one confined space is monitored by a single attendant, E & B Oilfield Services, Inc.'s program must include the means and procedures that will be used in order to enable the attendant to respond to emergencies in one or more permit spaces that he/she is monitoring without distraction from all responsibilities.

ENTRY SUPERVISOR RESPONSIBILITIES

For every permit-required confined space entry, the entry employer will assign an entry supervisor who has the ability to complete the following responsibilities:

- Knowing the hazards of the confined space.
- Verifying the permit is completed correctly.
- Ordering evacuation and cancelling or suspending the permit.
- Communicating with and verifying the availability of emergency and rescue services.
- Removing anyone unauthorized who tries to go into a permit space.
- Assessing the permit-confined space when taking over responsibility and periodically as needed.

Entry supervisors will know and understand which potential hazards are in each confined space such as: how entrants could be exposed, signs, symptoms, and consequences. The entry supervisor will be someone who knows at least as much as the authorized entrants and attendants, and should be someone who knows even more about the space and hazards.

Before signing it, the supervisor will check the completed permit to be sure everything identified in the permit is correct: tests completed, procedures followed, and equipment in place.

The entry supervisor is responsible for deciding when there are unsafe conditions for an ongoing permit entry, terminating the entry, and then cancelling or suspending a permit. A permit can be cancelled when the entry permit is completed or there is a new condition not addressed in the permit. The supervisor can also suspend a permit if a condition requires temporary evacuation, and the space soon returns to acceptable conditions in the permit. After reevaluating the permit space, the entry supervisor can remove the suspension but will record it on the permit.

The entry supervisor will check that needed emergency and rescue services are available, can be reached, and can themselves respond in a timely manner during the permit-required confined space entry.

The entry supervisor is responsible for preventing unauthorized entry into a permit space and immediately removing from the worksite any unauthorized person who has entered a permit space.

When taking over responsibility of a permit space entry, the new entry supervisor will check the confined space conditions to make sure they are within safe levels and consistent with the permit. The entry supervisor is also responsible for periodically assessing the hazards and work within a confined space as often determined necessary according to the nature of the possible hazards and expected change of conditions.

TRAINING

Each employee will be trained in a vocabulary and language they understand so that they are proficient in their expected responsibilities. This training will occur:

- Before they are assigned duties covered in this policy.
- Before a change in assigned duties.
- When a change in permit space operations (e.g. new equipment, techniques, promotions, reassignments) introduces a new hazard the employee hasn't trained for.
- When a departure from, or a lack of knowledge in the established procedures is noticed.

Assigned duties include: authorized entrant, attendant, entry supervisor, and emergency rescue. Employees not authorized to enter confined spaces will also be trained on the hazards of the confined spaces at the worksite, and what they need to know to avoid them.

The company will determine that training has effectively taught the employee to proficiently perform their assigned duties.

The training and determination of proficiency will be documented and kept for all current employees. This documentation will be available to all employees who ask for it, and the Secretary of Labor upon request.

RESCUE AND EMERGENCY SERVICES FOR PRCS

Rescue and emergency service procedures are a necessary component of the permit and include the preferred non-entry and entry rescues. The non-entry can be initiated immediately by the attendant and entry supervisor who remains outside the PRCS. Entry rescues need to be either from a designated outside source or a team of selected employees, and each has their own requirements. Unauthorized personnel shall not attempt a rescue.

Any injured entrant that is exposed to a hazardous substance at the worksite will bring the associated Safety Data Sheet (SDS) and provide it to the facility where the medical treatment takes place.

Any injured entrant that is exposed to a substance with a Safety Data Sheet (SDS) at the worksite will be given to the medical facility where he is treated.

Non-entry Rescue

The company will establish non-entry rescue procedures for all permit-required confined spaces, unless it can demonstrate that the necessary retrieval equipment (e.g. body harness, retrieval lines, block and tackle, winch system) increases the risk or does not help rescue.

Non-entry retrieval systems will include a chest or full body harness with the retrieval line at the center of the back where it creates a small profile to successfully remove the entrant. This can be at the shoulder level or above the entrant's head. When the chest or body harness won't work or creates a greater hazard, wristlets or anklets may be used.

The line will be attached outside the permit space so that it can be used to pull entrants out as soon as they need to be rescued. This can either be a mechanical device like a block and tackle or winch system, or a fixed point. Vertical entrances more than five feet deep call for a mechanical device to assist rescue.

Circumstances described by OSHA that increase risk of or hamper rescue include anything that can catch onto or entangle the retrieval line like: physical obstructions, airlines, electric cords, and additional retrieval lines from multiple entrants. The distance entrants have to go into the space and how much they will have to move around can also affect the decision that a retrieval system is too dangerous.

Outside Rescue and Emergency Services

Outside rescue and emergency services will be evaluated to ensure they can respond quickly, and have both the equipment and ability to provide rescue when considering each PRCS and the identified hazards.

The company will provide hazard information about its confined spaces and allow the service to go to the PRCS and develop rescue plans. The service selected must have the training, equipment, ability, and willingness to perform rescues. The service also has to agree to tell the company when it will be unable to perform rescues.

The time it takes the service to reach the permit space, enter and retrieve entrants will also be considered, along with the rescue requirements of other regulations. In particular, if the PRCS could have an atmosphere that is immediately dangerous to life or health (IDLH), the respiratory protection standard requires standby rescue personnel equipped with respiratory protection. A response time of 15 minutes may be determined adequate for mechanical hazards that could cause broken bones or abrasions.

Employee Rescue and Emergency Services

When selecting a team of employees to provide rescue and emergency services, they will: have the necessary equipment and PPE; be trained to be proficient as entrants and rescuers, correct PPE use, basic first aid and cardiopulmonary resuscitation (CPR); and practice attempting the type of rescue needed at least once every 12 months. At least one member of the rescue team will have current basic first aid and CPR certifications.

If a rescue operation is correctly performed in the last 12 months, then practice is not necessary.

REVIEW

This policy will be reviewed annually and when measures may not protect employees, such as after any incidents or near misses. Any deficiencies will be corrected before entering any additional PRCS.

Some examples of situations that may require a review are:

- An unauthorized person enters a PRCS.
- A new hazard not covered by the permit is detected in a PRCS.
- A new condition prohibited by the permit is detected in a PRCS.
- An injury takes place during entry.
- A change in the PRCS configuration or use.
- An employee issues a complaint.

The annual review will ensure that all cancelled permits are included in the review within one year after entry. This review will evaluate the policy's effectiveness of providing protection to all affected employees.

Definitions

Confined space: Is large enough for an employee to enter fully and perform assigned work; which is not designed for continuous occupancy by the employee; and has a limited or restricted means of entry or exit. These spaces may include underground vaults, tanks, storage bins, pits and diked areas, vessels, silos and other similar areas.

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 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 3 floor that slopes downward and tapers to a smaller cross section; and/or contains any other recognized serious safety or health hazards.

Entry: The action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

Entry supervisor: The person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

Inerting: The displacement of the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is non-combustible.

Isolation: The process by which a permit 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 or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.

FORMS AND ATTACHMENTS

Evaluate the documents on the following pages along with their source material from the General Industry Regulation's appendixes, and consider using them to implement and maintain your safety program.

- Confined-Space Entry Permit
- Confined Space Entry Training Record Sheet
- Initial Evaluation of Confined Space Rescue Plans
- Evaluation of Confined Space Rescue Program
- Planning Confined Space Rescue Drills

CONFINED SPACES ENTRY PERMIT (1 OF 3)

GENERAL INFORMATION				CONTROLS AND EQUIPMENT	
Permit Space Location				<input type="checkbox"/> ISOLATION <input type="checkbox"/> Lockout/Tagout <input type="checkbox"/> Blanking/Blinding <input type="checkbox"/> Double Block and Bleed <input type="checkbox"/> Line Breaking/Misalignment <input type="checkbox"/> Other: _____	
Purpose of Entry					
Permit Valid For	Date		To		
	Time		To		
PERMIT SPACE HAZARDS			Y	N	<input type="checkbox"/> INERTING <input type="checkbox"/> PURGE/CLEAN <input type="checkbox"/> METHOD FOR SAFE COVER REMOVAL AND SECURING AREA <input type="checkbox"/> ATMOSPHERIC TESTING <input type="checkbox"/> Periodic (give interval) _____ <input type="checkbox"/> Continuous <input type="checkbox"/> VENTILATION <input type="checkbox"/> Natural <input type="checkbox"/> Continuous Forced Air <input type="checkbox"/> Local Exhaust <input type="checkbox"/> ENTRY EQUIPMENT <input type="checkbox"/> Ladders <input type="checkbox"/> Other: _____ <input type="checkbox"/> PERSONAL PROTECTIVE EQUIPMENT <input type="checkbox"/> Respiratory (SCBA, SAR, air purifying) <input type="checkbox"/> Clothing <input type="checkbox"/> Eye and Face Protection <input type="checkbox"/> Hearing Protection <input type="checkbox"/> RESCUE and RETRIEVAL EQUIPMENT <input type="checkbox"/> Full Body Harness <input type="checkbox"/> Lifeline <input type="checkbox"/> Tripod w/Mechanical Wench <input type="checkbox"/> Explosion-Proof Lighting <input type="checkbox"/> NON-SPARKING TOOLS <input type="checkbox"/> SAFE ELECTRICAL EQUIPMENT and GFCI <input type="checkbox"/> COMMUNICATION EQUIPMENT <input type="checkbox"/> Radio <input type="checkbox"/> Phone <input type="checkbox"/> Other: _____ <input type="checkbox"/> HOT WORK PERMIT <input type="checkbox"/> FIRE EXTINGUISHERS
ATMOSPHERIC	Oxygen Deficient		<input type="checkbox"/>	<input type="checkbox"/>	
	Oxygen Enriched		<input type="checkbox"/>	<input type="checkbox"/>	
	Explosive (Gas/Vapor)		<input type="checkbox"/>	<input type="checkbox"/>	
	Explosive Dust		<input type="checkbox"/>	<input type="checkbox"/>	
	Carbon Monoxide		<input type="checkbox"/>	<input type="checkbox"/>	
	Hydrogen Sulfide		<input type="checkbox"/>	<input type="checkbox"/>	
	Other Toxic Vapors		<input type="checkbox"/>	<input type="checkbox"/>	
ENGULFMENT			<input type="checkbox"/>	<input type="checkbox"/>	
CONFIGURATION (ENTRAPMENT)			<input type="checkbox"/>	<input type="checkbox"/>	
MECHANICAL			<input type="checkbox"/>	<input type="checkbox"/>	
ELECTRICAL			<input type="checkbox"/>	<input type="checkbox"/>	
SUBSTANCE HAZARD TO SKIN/EYES			<input type="checkbox"/>	<input type="checkbox"/>	
HEAT STRESS			<input type="checkbox"/>	<input type="checkbox"/>	
OTHER POTENTIAL HAZARDS (radiation, noise, etc., list)			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	

CONFINED SPACES ENTRY PERMIT (2 OF 3)

PERSONNEL							
Entrant(s)		Time In		Time Out			
Attendant(s)							
Entry Supervisor(s)							
COMMUNICATION PROCEDURES							
Visual	<input type="checkbox"/>	Voice	<input type="checkbox"/>	Rope	<input type="checkbox"/>	Radio	<input type="checkbox"/>
Other							
RESCUE AND EMERGENCY SERVICES				RESCUE PROCEDURES			
Name			Phone				
Name			Phone				
Summoning Procedure							

CONFINED SPACES ENTRY PERMIT (3 OF 3)

ATMOSPHERIC TESTING RECORD										
Condition	Acceptable Level	Record continuous monitoring results every 2 hours								
OXYGEN	19.5% - 23%									
EXPLOSIVE (GAS/VAPOR)	<10% LFL									
EXPLOSIVE DUST	<LFL (5ft Visibility)									
CARBON MONOXIDE	50ppm									
HYDROGEN SULFIDE	10ppm									
OTHER (Specify)										
NAME(S) OF TESTER(S)										
TESTING EQUIPMENT	Type									
	Serial #									
ENTRY AUTHORIZATION (ENTRY AUTHORIZED BY)										
Signature		Date		Time						
ENTRY SUSPENSION (ENTRY SUSPENDED BY)										
Signature		Date		Time						
Resumed after Reevaluation		Date		Time						
Description										
ENTRY CANCELLATION (ENTRY CANCELLED BY)										
Name							Date			
Signature							Time			
Reason for Cancellation	<input type="checkbox"/>	Entry Operations Completed				<input type="checkbox"/>	Prohibited Condition Arose			
Problems Encountered										

INITIAL EVALUATION OF CONFINED SPACE RESCUE PLANS

Use this worksheet to determine if a permit-required confined space rescue plan is sufficient. This plan could be a response team of employees trained by the employer or calling 911. Both must pass muster. Answering “no” to any question means an alternative must be considered to satisfy the requirements in this guide.

Tasks	Results
<p>1. Determine the rescue response time needed for permit-required confined spaces. In other words, how long can a person remain trapped in the confined space? Consider any PEL, REL time limits (e.g. H₂S has an NIOSH REL 10 ppm ceiling for 10 minutes)</p> <p>If there is a possible IDLH, a rescue team needs to be standing by. If the hazards are only physical (e.g. broken bones, abrasions) a longer response time can be tolerated.</p>	<p>Needed rescue response time _____ minutes</p>
<p>2. Calculate the time required for the rescue service by adding the needed time to: get the notification, arrive at the scene, set-up and be ready to enter. Consider the rescue team’s distance from each worksite, quality of roads and traffic, reliability and training of the drivers.</p> <p>Then subtract the needed response time. The answer must be a positive number to continue.</p>	<p>Receive notification _____ minutes + Arrive at the scene _____ minutes + Set up and be ready for entry _____ minutes - Needed rescue response time _____ minutes = _____ minutes Must result in a positive number</p>
<p>3. Determine the rescue response service availability:</p> <p>a) Is the rescue service available when workers will enter the permit-required confined space?</p> <p>b) Are key rescue members available at these times?</p> <p>c) Can the rescue service notify the attendant when they are unavailable so entries can be prevented or stopped?</p>	<p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>
<p>4. Has the rescue service passed the most recent performance requirement evaluations?</p>	<p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>
<p>5. Is the planned 911 service willing to perform rescues:</p> <p>a) If you call 911, is a responder available?</p> <p>b) Is the 911 responder willing to perform rescue and first aid?</p> <p>c) Are the 911 responders able to perform rescues at the worksite?</p>	<p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>
<p>6. Can the attendant immediately request a rescue?</p>	<p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>

EVALUATION OF CONFINED SPACE RESCUE PLANS

Follow this checklist to determine if a permit-required confined space rescue plan meets all performance requirements. This critique should occur during any periodic drills or following a successful rescue. Answering “no” to any question, means an appropriate corrective action must be considered.

Tasks	Results
1. Has the entire team been trained as entrants, and know the potential hazards of at least the types of spaces they may have to perform a rescue?	<input type="checkbox"/> YES <input type="checkbox"/> NO
2. Can the team recognize signs, symptoms, and consequences of hazardous atmospheres possible in the permit confined space?	<input type="checkbox"/> YES <input type="checkbox"/> NO
3. Is every team member: a) Provided with and trained in PPE necessary to perform rescues? b) Trained to perform rescues and use rescue equipment (e.g. ropes, backboards)?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO
4. Is every team member trained in first-aid and medical skills to treat victims injured or overcome by possible hazards?	<input type="checkbox"/> YES <input type="checkbox"/> NO
5. Do team members perform duties safely and efficiently?	<input type="checkbox"/> YES <input type="checkbox"/> NO
6. Do team members focus on their own safety before the victim's?	<input type="checkbox"/> YES <input type="checkbox"/> NO
7. If necessary, can the rescue service test the air identifying entry conditions?	<input type="checkbox"/> YES <input type="checkbox"/> NO
8. Can team members find information that applies to rescues? a) Entry permits b) Hot work permits c) Safety Data Sheets	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO
9. Does the rescue service know of any hazards from outside the permit area (e.g. nearby construction)?	<input type="checkbox"/> YES <input type="checkbox"/> NO
10. If necessary, can the rescue service safely rescue victims from: a) A limited size opening (less than 2 ft. in diameter)? b) Limited internal space? c) Internal obstacles or hazards?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO
11. If necessary, can the rescue service safely perform an elevated rescue?	<input type="checkbox"/> YES <input type="checkbox"/> NO
12. Does the rescue service have a plan for each type of rescue needed? a) A plan for each kind of permit space rescue operation at the worksite? b) Does the plan cover all types of possible necessary rescue operations?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO

PLANNING CONFINED SPACE RESCUE DRILLS

Follow this worksheet to check off that the rescue team’s periodic drills – at least once every 12 months when a successful rescue has not been completed – covers all possible scenarios and worksite characteristics. Practices may occur in representative spaces or in the “worst-case” environment with the most restrictive access, entrance size, and configurations.

Tasks	Results
1. Horizontal Access. The entrance is located on the side of the permit space. Using retrieval lines may be difficult.	Is this a possibility at the worksite? <input type="checkbox"/> YES <input type="checkbox"/> NO Description attached? <input type="checkbox"/>
2. Vertical Access. The entrance is located: a) On the top of the permit space so rescuers must climb down, or b) On the bottom of the permit space so rescuers must climb up to enter.	Is this a possibility at the worksite? <input type="checkbox"/> YES <input type="checkbox"/> NO Description attached? <input type="checkbox"/>
3. Restricted Entrance Size. Smallest diameter entrance is 2 ft. or less. These are too small for rescuers to enter with a SCBA, or allow normal spinal immobilization of an injured employee.	Is this a possibility at the worksite? <input type="checkbox"/> YES <input type="checkbox"/> NO Description attached? <input type="checkbox"/>
4. Unrestricted Entrance Size. Smallest diameter entrance is 2 ft. or more, and allows relatively free movement into and out of the permit space.	Is this a possibility at the worksite? <input type="checkbox"/> YES <input type="checkbox"/> NO Description attached? <input type="checkbox"/>
5. Open Internal Configuration. The space has no barriers, obstacles, or obstruction (e.g. a water tank).	Is this a possibility at the worksite? <input type="checkbox"/> YES <input type="checkbox"/> NO Description attached? <input type="checkbox"/>
6. Obstructed Internal Configuration. The space has an obstacle that requires the rescuer to maneuver around it (e.g. baffle, mixing blades). Equipment brought into the space (e.g. ladder, scaffold) can be an obstruction if its position or size increases the rescue difficulty.	Is this a possibility at the worksite? <input type="checkbox"/> YES <input type="checkbox"/> NO Description attached? <input type="checkbox"/>
7. Elevated Entrance Configuration. The entrance is 4 ft. or more above grade, requiring high angle rescue procedures because of the difficulty transporting victims from the entrance to the ground.	Is this a possibility at the worksite? <input type="checkbox"/> YES <input type="checkbox"/> NO Description attached? <input type="checkbox"/>
8. Non-elevated Entrance Configuration. The entrance is less than 4 ft. above grade, and the rescue team can normally transport victims.	Is this a possibility at the worksite? <input type="checkbox"/> YES <input type="checkbox"/> NO Description attached? <input type="checkbox"/>

