

CONFINED SPACE ENTRY... PREPARING FOR ENTRY

COURSE OUTLINE

- **What exactly is a “confined space”?**
 - According to OSHA, it’s an area that has limited or restricted means of entry or exit, and is not designed for “continuous occupancy”.
- **Confined spaces can take many forms, including...**
 - Tanks.
 - Vessels.
 - HVAC ducts.
 - Storage bins.
 - Water mains.
 - Vaults.
 - Pits.
- **When there are hazards inside of the space, it becomes a “permit-required confined space”.**
 - That means that a worker needs an “Entry Permit” to go into it.
- **OSHA breaks the hazards that exist in these spaces down into four categories.**
 - Hazardous atmospheres.
 - Asphyxiation.
 - Engulfment or crushing by materials.
 - Other types of health and safety risks.
- **For instance, “hazardous atmospheres” cause the most confined space fatalities and may contain...**
 - Too little or too much oxygen.
 - Flammable gases, vapors or dusts.
 - Toxic contaminants.
- **In a confined space, the area you’re working in is typically small.**
 - You can easily be trapped or asphyxiated
 - if you don’t take the right precautions.

- **In a confined space, asphyxiation is usually caused by reduced oxygen levels.**
 - Normally, the air around you is made up of 21% oxygen.
 - When that percentage starts to drop, it can be dangerous.
 - At around 16-12%, your pulse can increase and you might notice you are losing your coordination.
 - At 6-10%, you could experience nausea, vomiting, loss of consciousness... even death.
- **Some confined spaces may contain liquids or finely grained solid materials that can engulf, crush or suffocate you.**
 - Silos, vats, and tanks are all common places for this to happen.
 - So anyone entering a confined space should wear a body harness attached to a lifeline, so they can be extracted quickly in an emergency.
- **OSHA's "catch-all" hazard category includes any other serious safety or health risks that could be present in a confined space, such as...**
 - Unguarded machinery.
 - Exposed live wires.
 - Heat stress.
- **These hazards must also be addressed before moving forward with a confined space entry.**
- **There is a "permit" that is required to go into a confined space, and it's more than just a "permission slip".**
 - It also helps guide the "entry team" in getting the job done safely.
- **On this "Entry Permit", you will find...**
 - The location and nature of the confined space.
 - The reason for the entry.
 - The date and the authorized duration of the entry.
- **The Permit must also identify the "Entry Supervisor", "Entrants" and "Attendants" who have been approved to work on the job.**
 - Each of these roles has distinct responsibilities.
- **An "Entrant" is an employee who is authorized by their employer to enter a "permit-required confined space".**

- **An “Entry Supervisor” is typically a more experienced, senior-level employee.**
 - They are responsible for preparing for and overseeing the confined space work.
- **An “Attendant” is someone who is stationed outside of the confined space to monitor the Entrants as they work.**
- **An “Entry Permit” will have basic information about the confined space operation.**
 - It will also identify each of the hazards associated with the confined space, and the measures that will be taken to isolate, control or eliminate them.
 - It will specify what conditions have to exist inside the space before it can be entered as well.
- **The Permit will also list the personal protective equipment that should be worn when working in the space.**
 - It will include details on anything like communications gear, atmospheric monitors and alarm systems that need to be used in the space as well.
- **But PPE can’t always prevent injuries.**
 - So the Permit will also contain the contact information for local rescue squads, police and fire stations.
 - Any emergency equipment that must be on hand during the entry will be listed as well.
- **Sometimes additional documents, such as a "Hot Work Permit", are required for the work to proceed.**
 - In this case, the Entry Permit will list them too.
- **A Permit must be signed by the Entry Supervisor before the job associated with it begins.**
 - It will then remain valid until the project is either completed, or a condition arises that is prohibited by the Permit... such as a low oxygen level.
 - In this case, the work in the space will be stopped, and the space is evacuated.
- **Details of any problems that occur during the entry must be recorded on the Permit so that they can be studied later to help make future jobs safer.**
 - Entry Permits from completed jobs must be kept on file for at least one year.

- **Whenever possible, you should avoid entering a “permit-required confined space” altogether.**
 - But when that’s not an option to do the work that’s required, there are steps that can be taken to keep everyone safe.
- **OSHA’s Confined Space regulations have a set of standard "safe work practices" to help employees protect themselves while working in these areas.**
 - It’s your company’s job to develop a “Permit-Required Confined Space Program”.
 - But it’s your responsibility to read and comply with it.
- **The program should...**
 - Control the access to confined spaces.
 - Describe the hazards that could be inside the spaces.
 - Detail rescue procedures that should be used if a problem occurs.
- **First, your employer will identify all of the confined spaces within your facility, as well as the hazards someone could face by entering them.**
 - Then, they’ll share their findings with employees by posting "warning signs" near these areas.
- **When a job needs to be done inside one of these spaces, everyone should follow the step-by-step process that is outlined in the company’s “Permit-Required Confined Space Program” to guard against accidents and injuries.**
- **The “Permit Space Program” also details what training should be involved, how frequently it should occur, and how the employer will verify that it took place.**
 - This ensures that all employees who might enter a confined space will receive the training they need to do it safely.
- **In addition to procedures and safety measures, your company’s “Permit Space Program” will discuss the three major roles that people involved in a confined space entry play...**
 - Entrants.
 - Attendants.
 - Entry Supervisors.
- **Together, they form the “Entry Team” and carry out the tasks listed on the Entry Permit.**

- **An “Entrant” is an employee who is authorized by their employer to enter a permit-required confined space.**
- **An “Entry Supervisor” is typically a more experienced, senior-level employee, and is responsible for...**
 - Determining if acceptable entry conditions exist.
 - Authorizing the job.
 - Overseeing operations.
 - Terminating the permit if necessary.
- **An “Attendant” is someone who is stationed outside of the confined space to monitor the Entrants as they work. They must...**
 - Know the hazards that may be encountered during the entry.
 - Remain outside the “Permit Space” during operations unless they are relieved by another Attendant.
 - Order an Entrant to evacuate the confined space if the Attendant detects symptoms or behaviors of hazard exposure on the part of the Entrant.
- **This team is also responsible for contacting help for an evacuation and rescue if there is an emergency.**
 - This is something else that should be detailed in the Permit Space Program.
- **It’s important to recognize that a Confined Space Entry Program is not a “static” document.**
 - Your company will regularly review and revise the program, to ensure that it has been adapted to changes in procedures or equipment.
 - So you should make sure that you are familiar with the latest version!

*** * * SUMMARY * * ***

- **A confined space is an area that has limited or restricted means of entry or exit, such as a tank, vessel or vat.**
- **There are four types of hazards associated with confined spaces... hazardous atmospheres, asphyxiation, engulfment or crushing by materials, and “other” general health and safety risks.**
- **Anyone who enters a confined space needs to wear a body harness attached to a lifeline, so they can be extracted quickly in an emergency.**
- **When there are hazards present in a confined space Entrants need an “Entry Permit” to go into it.**
- **An “Entry Permit” identifies the location and nature of a confined space, the reason for the entry and the date and authorized duration of the entry.**
- **Your facility must have a “Permit-Required Confined Space Program” in place that sets out the safe work practices and procedures that Entrants, Attendants and Entry Supervisors need to follow.**
- **As we’ve seen, working in a confined space can be difficult. But with the right Permit-Required Confined Space Program and careful preparation an entry can be completed successfully... and safely!**