

Confined Spaces in Construction: Attendants

Scenario Answer Key

OSHA regulation focuses on those spaces with immediate risk to health or safety, called “permit-required” confined spaces (permit spaces). A permit-required confined space is 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 where 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.
- Contains any other recognized serious safety or health hazard.

It happened like this

The vat in the production area had to be entered in order to perform an inspection and to get some new equipment installed.

Tony was assigned to be the entry supervisor (and the entry attendant), while Vern and Justin were to enter the permit-required confined space. Tony was also a member of the confined space rescue team.

The vat was large and had internal baffles, which meant that Tony would not be able to stay in visual contact with the two men. In addition, there was the potential for a small amount of cleaning agent vapors to be present in the space. However, the oxygen content should have been fine since the vat was just ventilated to rid it of the cleaning agent vapors.

Vern entered the space first, wearing a respirator designed to filter the cleaning agent vapor. His duty was to test the atmosphere for oxygen content and vapor. After five minutes he still hadn't returned. Tony and Justin were both concerned. Justin donned his self-contained breathing apparatus (SCBA) —

and also a harness and rope to assist in rescue, if necessary — and went in to find Vern. They both had the radios, but Tony insisted that they agree on another non-verbal signal to indicate trouble. They decided that if there was a problem, Justin would call on the radio first and tug on the rope if, for some reason, the radio wasn't an option.

Five minutes passed without either man returning. Tony decided to tug on the rope. There's no reply, so he tugged harder. There was a feeble tug back and then nothing — just dead weight on the other end of the rope.



Tony knew something was terribly wrong and used his radio to call for help. The emergency rescue team would arrive in about ten minutes, much too long for Tony's liking. After all, he had a SCBA and was a trained member of the rescue team. However, OSHA regulations require that he remain outside the permit-required confined space.

Tony decided to go in, anyway. He got back on the radio and told the rescue team he was going in to find Vern and Justin.

As Tony entered the vat, his thought was to follow the rope tied to Justin's rescue harness.

What are the issues?

- Possible hazardous atmosphere.
- Communication breakdown.
- Employees in distress.
- Violation of emergency procedures.

What did Tony do right?

- Monitored the conditions, inside and outside of the space to determine safety.
- Realized there was a problem with Vern.
- Worked out a signal (tug on the rope) with Justin if there was a problem.
- Immediately reported the emergency.

What did Tony do wrong?

- Didn't have Vern wear a retrieval system (such as a chest or full body harness attached to a mechanical device outside the permit space). This could have been used to rescue Vern by pulling him out immediately.
- Failed to contact the rescue team immediately.
- Allowed Justin to enter the space and didn't attempt to pull him out.
- Abandoned the attendant's position and didn't wear a retrieval system himself when he went into the space.
- Went into the confined space without waiting for the rescue team to arrive.

What do you think should happen next?

- Tony should be disciplined (if he makes it out alive).
- The hazard(s) in the vat must be determined.



- Provide additional training on entry procedures, proper use of equipment, communication procedures, and emergency response.

Training tips

- Is approved respiratory equipment required if the atmosphere inside the confined space cannot be made acceptable?
- Is the permit space being tested or monitored as necessary to determine if acceptable entry conditions are being maintained during the course of entry operations?
- Is ventilating equipment available to obtain acceptable entry conditions?
- When testing for atmospheric hazards, has oxygen been tested for first, then flammable gases and vapors, and then toxic gases and vapors?
- Is at least one attendant stationed outside the confined space for the duration of the entry operation?
- Is communications equipment provided to allow the attendant to communicate with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the permit space?
- Is the attendant or other employees prohibited from entering the confined space without lifelines and respiratory equipment if there is any question as to the cause of an emergency?
- Is the attendant trained and equipped to handle an emergency?
- Is there at least one attendant whose sole responsibility is to watch the work in progress, sound an alarm if necessary, and render assistance?

