

# Matters of Interpretation

*In OSHA's permit required confined space interpretations we find examples of the why, how, and does/does not of a safety standard.*

By [Gary M. Hutter](#) | Feb 01, 2005

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**JUST** about every industrial facility and parking lot with a manhole has the potential to contain an Occupational Safety and Health Administration-defined "confined space." The definition is:

"A confined space means a space that:

- (1) Is large enough and so configured that an employee can bodily enter and perform assigned work; and
- (2) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and
- (3) Is not designed for continuous employee occupancy."

Every sewer entry point, silo, tank, ventilation duct, pit, heat exchanger, piping system, equipment vault, 4-foot-deep excavation site, and shaft large enough for human entry is most likely a suspect confined space. Depending on use and design, basements, attics, tunnels, and crawl space of various types also could be classified as confined spaces.

Confined spaces have been the basis for myth, mystery, and deadly mayhem for decades, often because of the unexpectedness of the hazards and because of the repeated multiple chain of deaths for entrants and would-be rescuers. Stories abound of some individual entering an excavation site and collapsing. Rescuers, thinking the downed person has had a heart attack or similar debilitating health event, enter, only to lose consciousness, too. On many occasions, multiple entries are made unsuccessfully until it becomes obvious the location is the cause of the problem, not pre-existing health conditions.

At an excavation site there could be an accumulation of toxic gases or a displacement of oxygen by various sources. One such accident was attributed to the improper use of an inert gas to operate an air-driven water pump, and in other cases the atmosphere was oxygen deficient because of an accumulation of methane generated from manure from cattle and pig operations.

To reduce these types of confined space accidents, OSHA implemented standard 29 CFR 1910.146, "Permit-required Confined Spaces" (PRCS) in 1993 with subsequent revisions and amendment in 1994 and 1998. In previous years, OSHA had either invoked sections of other OSHA standards that contained confined space entry criteria or had invoked the General Duty clause, and thereby used the pre-existing ANSI standard for confined space entry. This 1993 OSHA PRCS standard was one of the new procedural standards employing methods and the assignment of responsibility and training as the means to implement safety; versus many of the older standards that defined safety in terms of dimensions and hardware.

Because the Permit-required Confined Spaces standard needed to be general enough to address all of those confined spaces listed above, and those more cleverly occurring confined spaces not listed above (dock leveler pit), the standard required almost 20 pages of two-column, small print text in the Code of Federal Regulations, an appendix, a flow chart for decision-making, a pre-entry and entry check list, and several demonstrative examples.

And yet, questions still arise out of the complexity of industrial situations and other potentially overlapping standards and codes that are not fully addressed in this standard. A visit to the OSHA Web site ([www.osha.gov](http://www.osha.gov)) lists no fewer than 96 published interpretations for the PRCS standard, in addition to the countless unreported and undocumented explanations made by various OSHA representatives.

By comparison, the OSHA standard for general equipment guarding (29 CFR 1910.212 "General Requirements for All Machines") is contained in less than one page of the regulations and has no appendices or further explanations. A visit to the OSHA site for interpretations for the 1910.212 general guarding standard lists an almost equal number of interpretations as for the PRCS, even though the guarding standard has been in place three times longer than the confined space standard and is applicable to just about every machine used in industry.

Below is a review of a few of the more interesting interpretations and nuances of the OSHA Permit-required Confined Spaces standard that have been issued during its approximately 10-year life. The importance of these historical interpretations is that they demonstrate the ways in which safety rules and regulations can be applied in a consistent, yet evolving fashion to accommodate society's and industry's needs. As with any standard, these interpretations do change over time with changes in our societal value system, and these interpretations are offered for insight purposes. The reader should consult the most recent interpretations for the current status on any OSHA regulation.

### **Is it a Confined Space?**

While considerable time and text have been given in the standard to define and identify what a confined space is and is not, there are always questions about locations that do and do not look exactly like the descriptions in the standard. Early on in the life of the PRCS standard, and even in more recent times, there have been several interesting descriptions of places with the question, *Is this a confined space or not?* Below are some of the answers to those questions.

As contained in the OSHA October 27, 1995, reply:

"Question #1 Is a sewer lift station with a built in power ventilator considered designed for human occupancy thereby NOT a confined space?"

Answer: "When hazards are eliminated and/or managed or controlled through the application of engineering controls for the safety and health of the humans who will be occupying the space, the employee protective measures, intended by the standard, have been met."

"Using or employing a pump station such as those described in the literature [providing a minimum of 20 air changes an hour? demonstrates that this unit was designed to accommodate the worker?] provided would negate the application of the 1910.146 standard for routine entries."

"Question #3 Under what circumstances might a dike be considered [a] confined space?"

Answer: "As a containment structure, the design of the dike will determine whether it falls within the definition of the PRCS standard. A dike formed of mounded or sloped earth to a height of 4 or 6 feet would not normally represent restricted means for entry or exit. Conversely a dike formed of a vertical block or concrete wall of the same height would constitute a restricted means for entry or exit."

As contained in OSHA's more recent interpretation of December 2, 2002:

"Question 1: Are dock leveler pits confined spaces?"

Reply: "Dock leveler pits could be a confined Space. A confined space means a space that (1) Is large enough and so configured that an employee can bodily enter and perform assigned work; and (2) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and (3) Is not designed for continuous employee occupancy."

In summary, if it looks like a confined space, it probably is; but in theory you may be eligible for an exemption if the space is design in anticipation of occupancy. The problem is that if the anti-confined space design features fail, serious injuries still may occur.

### **But Does the Standard Apply?**

The provisions of the PRCS standard were far reaching, but many industries had well-established means of addressing these concerns. During the comment period of the proposed PRCS standard there were many comments from industry representatives who already had addressed this safety issue and did not need an additional standard.

The general counsel and secretary of the American Gas Association asked this very question on behalf of his membership and industry: Does this PRCS standard apply to his membership, those involved in the gas utility operations (e.g., gas vaults) already regulated by the Department of Transportation's Office of Pipeline Safety?

On May 25, 1994, OSHA's assistant secretary replied that: ". . . in light of the preemption provision in Section 4(b)(1) of the OSH Act, the final rule on Permit-Required Confined Spaces (PRCS), . . . does not apply to gas utility vaults."

This "preemption" is a statutory concept so there should not be duplicative regulation by multiple government agencies on the same issue. In this case, the Office of Pipeline Safety had rules about gas vaults, so OSHA rules might be duplicative with respect to safety and therefore may not apply.

But the interpretation went on to say:

". . . enforcement of the PRCS standard in vaults is not entirely preempted. Because the OPS regulatory scheme primarily relates to the hazards of gas in vaults, the more comprehensive PRCS standard may apply to these spaces to the extent that hazards other than those related to gas are involved."

Effectively, if these two standards overlap on the issue of gas safety, the OPS regulations preempt OSHA. If the OPS regulations do not address other hazards, then the PRCS 1910.146 standard is applicable.

The codes for the telecommunications industry (1910.268 and other regulatory agency rules), on the other hand, do have significant specificity concerning access into confined spaces such as manholes, and that access in the telecommunications industry generally is not required to follow OSHA's 1910.146 standard.

In summary, the OPS rules of another government regulatory agency (e.g., DOT) addressed only the hazard of the presence of gas, and the PRCS standard covered more safety hazards. The PRCS standard applies if other standards are not as comprehensive in addressing the additional hazards of entry. For industries that already had complete standards for at least some confined spaces, the new rule would not apply to those already regulated locations.

### **Other Situations**

Can the standard not apply or only partially apply, even if it is an OSHA controlled location? This question seems odder than most: Could a work location under the jurisdiction of OSHA that has a confined space not have to follow the criteria of the 1910.146 Permit-required Confined Spaces Standard? This was a question effectively asked by a representative of the American Forest and Paper Association, which is regulated by some other specific OSHA regulations. The replied was issued July 7, 1993. The short answer is as follows:

"Pursuant to 29 CFR 1910.5, Applicability of Standards, the provisions of the more specific applicable standard, 1910.261(b)(5) [19931] supersede the general standard 1910.146 for the entry of confined spaces, such as tanks, chip bins and similar equipment, insofar as the more specific standard addresses the hazards to which entrants would be exposed."  
"Employees assigned to enter other 'permit spaces' within mills (manholes, pits, tunnel and large diameter piping systems) or exposed to hazards not specifically addressed by 1910.261(b)(5) must comply with the requirements of 1910.146."

(Note that the referenced sections of 1910.261 have been reissued and no longer correspond to the paragraph numbering listed here. One must consult the 1993 version of 29 CFR 1910 to view the specific paragraphs.)

In summary, if OSHA has a more specific standard for an industry or for a specific procedure, then the more specific standard applies unless there are additional hazards or conditions that require analysis or the application of either rule can be considered to provide equivalent safety.

In a July 30, 1993, interpretation, a related issue of "which standard applies" was raised by an attorney from Missouri. The issue concerns the type of communications between a welder inside a tank and a person located outside the tank for PRCS rescue purposes. The scenario follows:

There is a special standard for welding, 29 Subpart Q--"Welding, Cutting & Brazing" in 1910.252. The "General Requirements" in paragraph (b)(4) (iv) require:  
". . . an attendant . . . shall be stationed outside [a tank where welding work is ongoing inside the tank] to observe the welder at all times." [assumed for rescue purposes]

This attendant "observing" criterion originated with OSHA's adaptation in 1971 of an existing American National Standards Institute's standard (ANSI Z49.1-1967) for welding operations. The Permit-required Confined Spaces standard allows for there to be other than visual observations. Its Appendix allows "tapping on tank walls" as adequate means of communication between an entrant and an attendant. The question arises, does the observer need to follow the welding "observer" criterion or the confined space standard's "tapping on tank walls" alternative?

The OSHA Directorate of Safety Standards Programs at the time replied that:

"As it is OSHA's policy to accept compliance with the provision in a current national consensus standard (ANSI) which provides equivalent protection to a provision of the OSHA standard which is based upon an earlier version of the same national consensus standard, OSHA will accept the use of a tapping procedure on the walls of tanks in lieu of the more burdensome requirement in the current 1910.252(b)(4)(iv)."

In summary, if the general rule is considered equivalent to the more specific rule, then the content of the general rule can be applied for strict compliance purposes.

#### **Do Other Rules Conflict/Override?**

Shortly before the PRCS standard was enacted, OSHA had promulgated another related standard, 29 CFR 1910.147, "The Control of Hazardous Energy (lockout/tagout). This standard was intended to effectively neutralize or make safe equipment for many maintenance operations. Because entry into a confined space is very often a part of maintenance, there was some consideration as to which standard needed to be followed. If one adequately "neutralized" or brought a system to a "Zero Energy State," was it also safe for entry? The question was answered several times in the interpretations but may have been most directly addressed in the March 3, 1994, and November 6, 1996, answers from OSHA:

"As clarified in the 3rd paragraph of the left column on page 4497 of the preamble of the Final Rule [PRCS], mechanical equipment, such as an unguarded agitator, posing a hazard within the permit space must be locked out and tagged in accordance with 1910.147."

And in the later interpretation's Q & A on the subject:

"Q2. May mechanical hazards be eliminated by compliance with 1910.147 [the lockout/tagout standard of OSHA]?"  
"A. Yes."

In summary, the lockout/tagout rules of the 1910.147 standard are complimentary to the PRCS standard for control of mechanical hazards and presumably for the control of other energy concerns associated with confined space entry. In addition, the OSHA reference to the preamble of the PRCS standard demonstrates the importance of the preamble in fully understanding the intent of an OSHA regulation.

## **Conclusions**

While most OSHA regulations, especially the ones most recently promulgated, are well codified, they cannot address all of the subtle issues surfacing in their application. It is impossible to provide an exhaustive list of examples, nor is it meaningful to try to write a standard for each and every situation. Fortunately, OSHA has a means for receiving questions and providing official answers. These answers are often contained in the "interpretations" section of OSHA files and accessible through the OSHA Web site. These files help complete the picture. They provide a most important historical basis for the appropriate application of safety standards.

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