

OSHA Confined Space Standard 1910.146 “Confined Space Definition and Attributes – A Literature Review”

JSOG/COMET

Florida American Industrial Hygiene Association

Fall Conference October 2023

By Jon Spezialetti, MSPH, CIH, CSP

Disclaimer

- **This presentation is for informative purposes and only represents my personal views or opinions. This presentation is not to be interpreted as the views, opinions, and/or requirements of Jacobs Space Operations Group, Jacobs Technology, or NASA.**

Overview

The following is a review of applicable documents that speak to the topic of Confined Space definition(s) and attributes.

Source materials;

- 29CFR1910.146 Permit-Required Confined Spaces.
- Final Rule Preamble – F.R., Vol. 58, No.9, January 14, 1993, pgs. 44XX-44XX
- OSHA Publications 3138-01R & 3325-09
- OSHA Enforcement Program Instructions CPL 02-00-100
- OSHA Standard Interpretations
- Consensus Organization Standards and Guidance Documents ANSI/ASSP & AIHA.

What has been will be again, what has been done will be done again; there is nothing new under the sun. Ecclesiastes 1:9

Overview

- **29CFR1910.146(b) Definitions.**

- *Confined Space is a space that:*

- 1) Is large enough and so configured that an employee can bodily enter it and perform assigned work; and
- 2) Has limited or restricted means of entry and 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.

- *Permit Required Confined Space:*

- 1) Contains or has the 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 that tapers to a smaller cross-section
- 4) Contains any other recognized serious safety or health hazard

- *Non-Permit Confined Space:*

means a confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

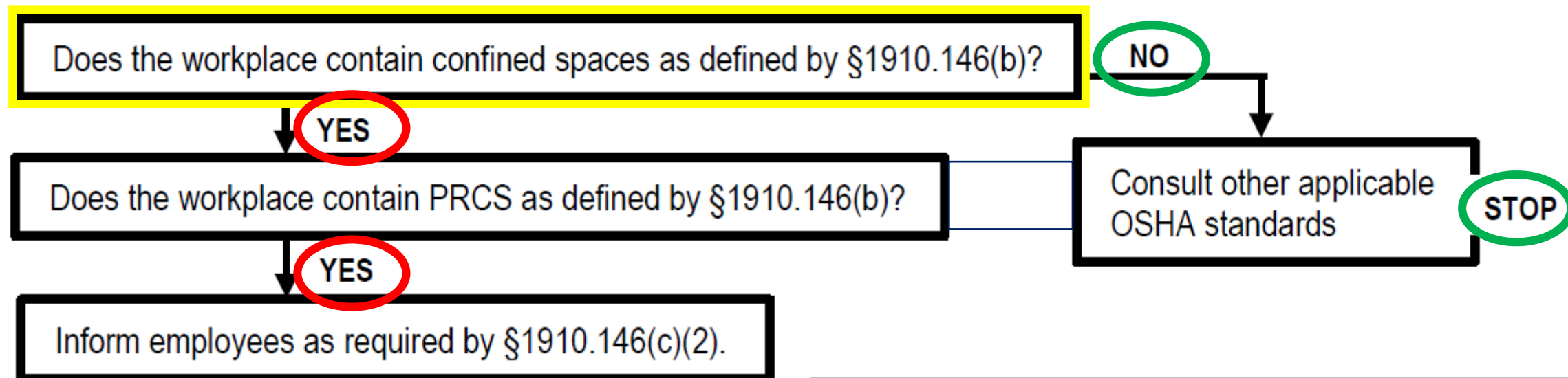
<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.146>

Overview – Let's make it simple

- 29CFR1910.146.

Appendix A

Permit-Required Confined Space Decision Flow Chart



Thanks for coming. Any questions?

29 CFR 1910.146 Permit Required Confined Space for General Industry; Final Rule – Preamble [F.R., Vol. 58, No. 9, January 14, 1993](#)

What was OSHA thinking?

“Let's start at the very beginning, a very good place to start...”

The Preamble tells... “First, the final rule separates the PRCS definition into two components; “confined space” and “permit required confined space”.

OSHA intended that, in order to qualify as a permit space, a space have all three of the first three characteristics (paragraphs (b)(23)(i) through (iii)) and at least one of the characteristics listed under paragraph (b)(23)(iv) of the NPRM's definition. In the final rule, OSHA has clarified this intent in two ways.

First, the final rule separates the PRCS definition into two components: “confined space” and “permit-required confined space”. The characteristics common to all confined spaces (proposed paragraphs (b)(23)(i) through (iii)) are now contained in the definition of “confined space”, which clearly indicates that all three criteria must be met in order for a space to be considered “confined”. A permit space is now defined to be a “confined space” meeting one of four criteria corresponding to those listed in proposed paragraph (b)(23)(iv).

Second, OSHA has adopted language clarifying the intent of these two definitions. The word “and” has been inserted between the first and second criteria and between the second and third criteria of the definition of a “confined space” to indicate clearly that all three criteria must be met. The introductory text of the definition of “permit-required confined space” states that “one or more of the [listed] characteristics” (corresponding to those given in proposed paragraph (b)(23)(iv)) must be met before a confined space is considered a permit space.

And is a small yet very important word.

Criterion #1 – Is Large Enough to Bodily Enter



29 CFR 1910.146 Permit Required Confined Space for General Industry; Final Rule – Preamble [F.R., Vol. 58, No. 9, January 14, 1993](#)

Proposed paragraph (b)(23)(i) stated, as the first criterion, that a space had to be “large enough and so configured that an employee can bodily enter and perform assigned work” in order to be considered a permit-required confined space. Several commenters (Ex. 14-4, 14-42, 14-94, 14-99, 14-143) stated that it was confusing for proposed paragraph (b)(23)(i) to provide that a permit space was sized and configured for bodily entry when the definition of “entry” provided that entry began when

the employee’s face broke the plane of the opening into the space. Some of the commenters (Ex. 14-42, 14-94) noted that the proposed definition excluded spaces which contained hazardous atmospheres and into which employees were able to insert only their heads and shoulders. For example, Mr. Martin Finkel, a Certified Marine Chemist with Marine & Environmental Testing, Inc. (Ex. 14-4) stated:

The definition of Permit Required Confined Space, as stated, does not allow for small space[s] which permit entry of a worker[’]s head, but not his/her whole body. Such a space may prove just as hazardous if it contains an IDLH atmosphere which the worker breathes. I recall seeing photos of a [fatality] on a barge where only the worker’s head was in the tank—his body remained sprawled on deck—yet the worker was just as dead as if he had entered bodily. Therefore, I suggest removing [paragraph (b)](23)(i) entirely from the definition of Permit Required Confined Space.

Some commenters suggested changing the “body entry” wording, because the apparent confusion with the definition of “entry” which is when any part of a person’s body breaks the plane of the space.

Also, some were concerned about small spaces that only head and shoulders could fit.

Hold onto the small space(s) thought...

Criterion #1 - Is large enough to bodily enter

■ OSHA 3138-01R 2004 – Permit-Required Confined Spaces

Definitions

By definition, a confined space:

- Is large enough for an employee to enter fully and perform assigned work;
- 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.

By definition, a 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

■ OSHA 3325-09 2015 – Protecting Construction Workers in Confined Spaces – Small Entity Compliance Guide

What is a “confined space?”

A *confined space* is a space that:

- (1) Is large enough and so arranged 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.

A space has a **limited or restricted means of exit** if a person could not readily escape from the space in an emergency. Any of the following factors indicate that a work space has a limited or restricted means of exit:

- The need to use a ladder or movable stairs, or stairs that are narrow or twisted;
- A door that is difficult to open or a doorway that is too small to exit while walking upright;
- Obstructions such as pipes, conduits, ducts, or materials that a worker would need to crawl over or under or squeeze around;
- The need to travel a long distance to a point of safety.

A space is **not designed for continuous employee occupancy** if it is not designed with features such as ventilation, lighting, and sufficient room to work and move about that are needed if people are to occupy it continuously.

Criterion #1 - Is large enough to bodily enter

- **OSHA Instruction CPL 2.100 – Directorate of Compliance Programs**

- Subject: Application of Permit-Required Confined Spaces (PRCS)
Standard 29 CFR 1910.146

- A. **Purpose.** This instruction establishes enforcement policy and provides explanation of the standard to ensure uniform enforcement.
- B. **Scope.** This instruction applies OSHA-wide.

Definition of Entry. While the standard defines the process of "entry" into a confined space as beginning with the insertion of any part of the body into that space, it defines as confined spaces **only those areas that can contain the whole body**, and not cabinets or control panels which are accessed by simply reaching in to turn a valve or a switch. This is stated explicitly in the preamble to the final rule (page 4477 column 2 of the final 1910.146 standard).

Pages F-4 & F-5

Criterion #1 - Is large enough to bodily enter

- **ANSI/ASSP Z117.1-2022 Safety – Requirements for Entering Confined Spaces**
- **Confined Space.** Enclosed area large enough and configured to allow a person to bodily enter and has the following characteristics;
 - Its primary function is other than human occupancy
 - Has restricted entry and exit. (Restricted entry and exit is a physical configuration, which requires the use of the hands for support or contortion of the body to enter into or exit from a confined space.)
- **American Industrial Hygiene Association (AIHA) Guidance Document**
 - Prevention through Design: Eliminating Confined Spaces and Minimizing Hazards; Updated 2018
- Make the confined space too small to bodily enter. This principle has limited applicability, but some spaces can be partitioned or otherwise broken into multiple compartments that are too small for a person to get inside. For example, a large compressed air receiver could be filled with a honeycomb lattice to prevent entry without affecting function as an air reservoir. Inability to enter due to size keeps employees out of harm's way and eliminates classification as a confined space.

29 CFR 1910.146 Permit Required Confined Space for General Industry; Final Rule – Preamble [F.R., Vol. 58, No. 9, January 14, 1993](#)

Well, what about small spaces?

Aren't those confined spaces too?

The Agency has not adopted this suggestion. While OSHA is concerned that spaces that are too small for complete bodily entry may pose hazards for employees, the Agency did not intend to cover such spaces under the permit space standard. OSHA believes that the NPRM preamble discussion of permit space incidents and of proposed provisions clearly indicates that the proposed rule was intended to cover only spaces that were large enough for the entire body of an employee to enter. As commenters have correctly noted, the proposed definition of "permit required confined space" did not cover the "small" spaces. Such spaces do not

the "small" spaces. Such spaces do not meet the definition of "confined space", nor do they pose hazards comparable to those associated with confined spaces. Since an employee cannot totally enter such spaces, he or she should not have difficulty withdrawing from the space. In order for a space to be considered a permit-required confined space, it must first be a confined space. A space that cannot be entered is not confined; therefore, it does not pose hazards related to the difficulty of exiting the space.

OSHA Letters of Interpretation – Bodily Enter & Small Spaces

- **Standards Interpretation / A chest freezer is not a PRCS April 28, 1998**
 - Gregory W. Faeth, SCT, Fairfield Iowa

Specifically, your question is, "Is a freezer (chest type with the lid on top) a permit-required confined space?" You further stated that the freezer in question meets the definition of a confined space (large enough to bodily enter and perform assigned work, would have restricted entry, and is not designed for continuous employee occupancy).

The hazard characteristics would be freezing temperatures and suffocation if the lid were shut. **Generally speaking**, the chest type freezers (10 to 22 cubic feet) found in the home or in the workplace **should not be considered as meeting the PRCS standard's definition of a confined space.**

The second element of the confined space definition is that it "... 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)."

From a practical point of view, these freezers are shallow (approximately 29 inches to 30 inches deep without anything inside), and as such, they do not present a restriction to entry or exit. In evaluating this second element, the following "Rule of Thumb" question can be **applied to assist in making a determination. Is an entrant's ability to escape in an emergency hindered?**

In this case, a person could simply stand up and literally be outside the space. Your student's other question, "What if the employee fell in by reaching into the lower section of the freezer?", "becomes moot from a PRCS perspective because the standard is not applicable.



<https://www.bestbuy.com/site/insignia-14-0-cu-ft-garage-ready-chest-freezer-white/6444379.p?skuld=6444379>

Criterion #1 – Bodily Enter & Small Spaces



Examples of telecom “handholes”

Criterion #2 - Limited or restricted means of entry and exit



<https://rescuesolutionsllc.com/the-nfpa-350-guide-for-safe-confined-space-entry-and-work/>



<https://www.holtop.com/industrial-air-handling-units-ahu.html>

29 CFR 1910.146 Permit Required Confined Space for General Industry; Final Rule – Preamble [F.R., Vol. 58, No. 9, January 14, 1993](#)

Proposed paragraph (b)(23)(ii) stated, as the second criterion, that a space had to have “limited or restricted means for entry or exit” in order to be considered a permit-required confined space. The proposed paragraph listed tanks, vessels, silos, storage bins, hoppers, vaults, pits, and diked areas as examples of spaces with this characteristic. Some commenters (Ex. 14–69) felt that it was appropriate for the definition to cover open top spaces, such as dikes and excavations, while others (Ex. 14–185) stated that those same spaces should not be included.

OSHA listed these spaces as examples of limited or restricted entry or exit, not as examples of permit spaces, as some rulemaking participants believed. The final rule, under the definition of “confined space”, adopts a slightly revised version of the language enumerating the examples to state this intent more clearly. As indicated in the preamble to the proposal (54 FR 24089), OSHA notes that doorways and other portals through which a person can

walk are not considered to be limited means for entry or exit.

Proposed paragraph (b)(23)(iii) stated,

Criterion #2 - Limited or restricted means of entry and exit

■ OSHA 3138-01R 2004 – Permit-Required Confined Spaces

Definitions

By definition, a **confined space**:

- Is large enough for an employee to enter fully and perform assigned work;
- 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.

By definition, a **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

■ OSHA 3325-09 2015 – Protecting Construction Workers in Confined Spaces – Small Entity Compliance Guide

What is a “confined space?”

A *confined space* is a space that:

- (1) Is large enough and so arranged 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.

A space has a **limited or restricted means of exit** if a person could not readily escape from the space in an emergency. Any of the following factors indicate that a work space has a limited or restricted means of exit:

- The need to use a ladder or movable stairs, or stairs that are narrow or twisted;
- A door that is difficult to open or a doorway that is too small to exit while walking upright;
- Obstructions such as pipes, conduits, ducts, or materials that a worker would need to crawl over or under or squeeze around;
- The need to travel a long distance to a point of safety.

A space is **not designed for continuous employee occupancy** if it is not designed with features such as ventilation, lighting, and sufficient room to work and move about that are needed if people are to occupy it continuously.

Criterion #2 - Limited or restricted means of entry and exit

- **OSHA Instruction CPL 2.100 – Directorate of Compliance Programs**
 - Subject: Application of Permit-Required Confined Spaces (PRCS)
Standard 29 CFR 1910.146

SECTION (b) Definitions

1. Under what circumstances will stairs or ladders constitute a limited or restricted means of egress under the standard?

Ladders, and temporary, movable, spiral, or articulated stairs will usually be considered a limited or restricted means of egress. Fixed industrial stairs that meet OSHA standards will be considered a limited or restricted means of egress when the conditions or physical characteristics of the space, in light of the hazards present in it, would interfere with the entrant's ability to exit or be rescued in a hazardous situation.

2. Does the fact that a space has a door mean that the space does not have limited or restricted means of entry or exit and, therefore, is not a "confined space"?

A space has limited or restricted means of entry or exit if an entrant's ability to escape in an emergency would be hindered. The dimensions of a door and its location are factors in determining whether an entrant can easily escape; however, the presence of a door does not in and of itself mean that the space is not a confined space. For example, a space such as a bag house or crawl space that has a door leading into it, but also has pipes, conduits, ducts, or equipment or materials that an employee would be required to crawl over or under or squeeze around in order to escape, has limited or restricted means of exit. A piece of equipment with an E-4 access door, such as a conveyor feed, a drying oven, or a paint spray enclosure, will also be considered to have restricted means of entry or exit if an employee has to crawl to gain access to his or her intended work location. Similarly, an access door or portal which is too small to allow an employee to walk upright and unimpeded through it will be considered to restrict an employee's ability to escape.

Criterion #2 - Limited or restricted means of entry and exit

- **OSHA Instruction CPL 2.100 – Directorate of Compliance Programs**
 - Subject: Application of Permit-Required Confined Spaces (PRCS)
Standard 29 CFR 1910.146

3. Can the distance an employee must travel in a space such as a tunnel, to reach a point of safety be a determinant for classifying a space as a confined space?

Yes. The determination would most likely be a function of the time of travel to the point of safety.

4. How will OSHA assess a space which is entirely open on one plane, such as a pit, in determining whether a space has limited or restricted means for entry or exit?

In determining whether a space has limited or restricted means for entry or exit, OSHA will evaluate its overall characteristics to determine if an entrant's ability to escape in an emergency would be hindered. Thus, a pit, shaft or tank that is entirely open on one plane can be considered a confined space if the means for entering the space (stairway, ladderway, etc.) are narrow or twisted, or otherwise configured in such a way as to hinder an entrant's ability to quickly escape (See question No. 1 of this section). Similarly, the pit, shaft, or tank itself may be confining because of the presence of pipes, ducts, baffles, equipment or other factors which would hinder an entrant's ability to escape.

Criterion #2 - Limited or restricted means of entry and exit

- **ANSI/ASSP Z117.1-2022 Safety – Requirements for Entering Confined Spaces**
- **Confined Space.** Enclosed area large enough and configured to a person to bodily enter and has the following characteristics;
 - Has restricted entry and exit. (Restricted entry and exit is a physical configuration, which requires the use of the hands for support or contortion of the body to enter into or exit from a confined space.)

Criterion #2 - Limited or restricted means of entry and exit

▪ American Industrial Hygiene Association (AIHA) Guidance Document

— Prevention through Design: Eliminating Confined Spaces and Minimizing Hazards; Updated 2018

▪ *Make the confined space too small to bodily enter.*

This principle has limited applicability, but some spaces can be partitioned or otherwise broken into multiple compartments that are too small for a person to get inside

▪ *Provide unrestricted access and egress.*

Workers should be able to enter and exit the space without hindrance. They should not have to contort their bodies, crawl, or use their hands to climb.

Provide large access openings, such as standard doorways, through which workers can pass easily and quickly. Provide standard overhead clearances so that workers can stand in the space whenever possible.

- Install standard steps with handrails in lieu of ladders or spiral staircases. Steps allow safer, unrestricted entry and exit from the space.
- Provide sufficient aisle clearances within the space and provide clear access to openings and exits.
- Locate pipes, ducts, and other equipment so that workers do not have to climb over, under, around, or through them.
- Provide multiple access openings at regular intervals in long spaces, such as crawl spaces and tunnels, to ensure that employees' ability to exit the space is not hampered by distance.
- House equipment in enclosures above ground with standard doorways for access rather than placing equipment in vaults below grade.

OSHA Letters of Interpretation – Limited or restricted means of entry and exit

Standards Interpretation / Confined space requirements for a testing chamber with/without limited access.

— Kelly Boyle, Davenport, Iowa

Question 1:

Would a testing chamber, that can go from an extremely cold to an extremely hot temperature, similar in design to a walk-in freezer be considered a confined space if the chamber does not have a limited or restricted means for entry or exit?

Response: No, a testing chamber which does not have a limited or restricted means for entry or exit would not be considered a confined space as defined in 29 CFR 1910.146. 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; and (3) Is not designed for continuous employee occupancy.

Question 2:

Would a testing chamber (with the same hazards mentioned above, including a potential oxygen deficient atmosphere) with a three-foot portal as its means of entry and exit be considered a confined space and/or a permit-required confined space?

Response: A testing chamber which has a limited or restricted means for entry or exit (such as a three-foot portal) would be considered a confined space as long as the other aspects of the definition as described above are met. Further, the testing chamber would be considered a Permit-required confined space since it has a potential to contain a hazardous atmosphere (oxygen deficiency) and other recognized serious safety or health hazard(s) (heat/cold stress)

Criterion #3 Is not designed for continuous employee occupancy.



29 CFR 1910.146 Permit Required Confined Space for General Industry; Final Rule – Preamble [F.R., Vol. 58, No. 9, January 14, 1993, pg. 4477-4478](#)

Proposed paragraph (b)(23)(iii) stated, as the third criterion, that a space had to be “not designed for continuous employee occupancy” in order to be considered a permit-required confined space. Some commenters expressed concern regarding the use of the phrase “continuous occupancy” in this proposed paragraph. Some of them (Ex. 14-94, 14-143, 14-163) argued that many spaces are not designed for continuous employee occupancy but should not be considered as confined spaces. They suggested rewording the proposed definition to “an enclosure with a primary function other than human occupancy.” (The suggested language is essentially identical to language in the ANSI Z117.1-1989 definition of “confined space”.)

OSHA notes that the criterion “not designed for continuous human occupancy” is but one of the necessary three criteria required for a space to be designated a confined space. Thus, there may be any number of spaces that are not designed for continuous human occupancy, but that cannot be considered to be confined spaces (or, subsequently, “permit-required confined spaces”) under OSHA’s definitions because they do not meet both of the other two criteria set forth in the “confined space” definition.

The Agency has determined that the suggested language from the ANSI standard is not appropriate. The ANSI language focuses on what the primary function of the space is, whereas

29 CFR 1910.146 Permit Required Confined Space for General Industry; Final Rule – Preamble [F.R., Vol. 58, No. 9, January 14, 1993, pg. 4477-4778](#)

function of the space is, whereas
OSHA's definition focuses on what the
space is designed for. If the space is
truly designed for human occupancy,
then the primary function of the space
is irrelevant. For example, a vented telecommunications vault is typically designed for continuous human occupancy—the ventilation for the vault ensures the presence of a normal atmosphere for an occupant to breathe, and the working dimensions of the space are large enough to allow an adult to work and move around while erect. It could be argued, however, that the primary function of the vault is to house telecommunications equipment.

Although the distinction between the “primary function” and the “design” of a space may seem inconsequential, OSHA believes that the final rule's definition properly places the focus on
the design of the space, which is the key
to whether a human can occupy the
space under normal operating
conditions.

Another commenter (Ex. 14–144) stated that OSHA should eliminate “continuous” from the definition

29 CFR 1910.146 Permit Required Confined Space for General Industry; Final Rule – Preamble [F.R., Vol. 58, No. 9, January 14, 1993, pg. 4477-4778](#)

because its “Manholes and vaults—to the extent they are covered—are designed for employee entry and occupancy in order to service telephone cables.”

OSHA has not accepted this recommendation. One of the characteristics of a confined space is that it is not designed for humans to enter and work for prolonged periods without any additional consideration for safety and health. With respect to manholes and unvented vaults, the Agency notes that atmospheric testing and portable mechanical ventilation are among the recognized procedures that must be undertaken (as required by §1910.268(o)) before employees can safely enter these spaces.⁹ Therefore, the final rule’s definition of confined space retains the proposed phrase “continuous human occupancy”.

OSHA Publications

▪ OSHA 3138-01R 2004 – Permit-Required Confined Spaces

Definitions

By definition, a **confined space**:

- Is large enough for an employee to enter fully and perform assigned work;
- 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.

By definition, a **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

▪ OSHA 3325-09 2015 – Protecting Construction Workers in Confined Spaces – Small Entity Compliance Guide

What is a “confined space?”

A *confined space* is a space that:

- (1) Is large enough and so arranged 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.

A space has a **limited or restricted means of exit** if a person could not readily escape from the space in an emergency. Any of the following factors indicate that a work space has a limited or restricted means of exit:

- The need to use a ladder or movable stairs, or stairs that are narrow or twisted;
- A door that is difficult to open or a doorway that is too small to exit while walking upright;
- Obstructions such as pipes, conduits, ducts, or materials that a worker would need to crawl over or under or squeeze around;
- The need to travel a long distance to a point of safety.

A space is **not designed for continuous employee occupancy** if it is not designed with features such as ventilation, lighting, and sufficient room to work and move about that are needed if people are to occupy it continuously.

OSHA Publications

- **OSHA Instruction CPL 2.100 – Directorate of Compliance Programs**

- Subject: Application of Permit-Required Confined Spaces (PRCS)
Standard 29 CFR 1910.146

- A. **Purpose.** This instruction establishes enforcement policy and provides explanation of the standard to ensure uniform enforcement.

- B. **Scope.** This instruction applies OSHA-wide.

- 8. Can a space that is initially designed for continuous human occupancy become a "confined space" because of changes in its use?**

If the changes alter the character of the space or if new or more serious hazards are introduced, those changes require reevaluation of whether the space is fit for continuous employee occupancy. If the space is not fit for continuous employee occupancy and the other criteria of the confined space definition are met, the space should be reclassified as a confined space.

Page E-5

Consensus Organizations Publication

- **American Industrial Hygiene Association (AIHA) Guidance Document**

- Prevention through Design: Eliminating Confined Spaces and Minimizing Hazards; Updated 2018

- 1) Either Avoid Creating or Eliminating Existing Confined Spaces (page 3)

Make the space suitable for continuous human occupancy during normal use.

Some confined spaces, such as utility vaults, need only minor modification to make them much safer and to eliminate classification as confined spaces.

- Install continuous-operation or door-switched mechanical ventilation to control air quality and temperature in confined spaces. If a confined space is dependent on ventilation for human occupancy, install an alarm to indicate when ventilation is not working, and consider installing appropriate fixed-gas detection equipment with an alarm to verify air quality.

- Install adequate fixed lighting in the space. Place light switches at entrances.

- Seal the space to prevent water intrusion and/or ensure proper drainage to prevent accumulation of free-standing liquid.

- Ensure that mechanical equipment is guarded properly and that electrical equipment is sealed correctly.

- Guard open-sided edges, floor holes, wall holes, and any other hazards that may cause falls.

Consensus Organizations Publication

▪ American Industrial Hygiene Association (AIHA) Guidance Document

— Prevention through Design: Eliminating Confined Spaces and Minimizing Hazards; Updated 2018

1) Either Avoid Creating or Eliminating Existing Confined Spaces (page 3)

Make the space suitable for continuous human occupancy during normal use.

Some confined spaces, such as utility vaults, need only minor modification to make them much safer and to eliminate classification as confined spaces.

- Install continuous-operation or door-switched mechanical ventilation to control air quality and temperature in confined spaces. If a confined space is dependent on ventilation for human occupancy, install an alarm to indicate when ventilation is not working, and consider installing appropriate fixed-gas detection equipment with an alarm to verify air quality.

- Install adequate fixed lighting in the space. Place light switches at entrances.

- Seal the space to prevent water intrusion and/or ensure proper drainage to prevent accumulation of free-standing liquid.

- Ensure that mechanical equipment is guarded properly and that electrical equipment is sealed correctly.

- Guard open-sided edges, floor holes, wall holes, and any other hazards that may cause falls.

OSHA Letters of Interpretation

- **Standards Interpretation / Explanation from OSHA of the “not designed for continuous human occupancy” component of the definition of the term “confined space”. June, 22, 1995**
 - Mr Dan Freeman c/o Safety Management, L.C. Blue Grass Iowa

The proposed rule (F.R., Vol. 54, No. 106, June 5, 1989, pg. 24089) provided the initial clarification of OSHA's intent on this subject when we stated "In addition, OSHA proposes paragraph (b)(10)(iii) to make it clear that the work areas covered by this standard are unsuitable, by nature for continuous employee occupancy, because those spaces were created to contain such things as degreasers, sawdust, and sewage, not to accommodate people."

In the preamble of the final rule (F.R., Vol. 58, No. 9, January 14, 1993, pg. 4478), OSHA discusses comments sent to the docket and the slight differences between our definition of confined space and that of the American National Standards Institute (ANSI) definition. Although the distinction between the "primary function" (ANSI) and the "design" (OSHA) of a space may seem inconsequential, OSHA believes that the final rule's definition properly places the focus on the design of the space, which is the key to whether a human can occupy the space under normal operating conditions. Thus, if a space is truly designed for human occupancy, then the primary function of the space is irrelevant.

OSHA Letters of Interpretation

- **Standards Interpretation / Permit Required Confined Space Standard as it applies to certain operations. October 22, 1993**
 - Robert R Bee, CIH Walt Disney World Lake Buena Vista Florida

The preamble of the (PRCS) at page 4478 reflects OSHA's position: "**OSHA believes that the final rule's definition properly places the focus on the design of the space, which is the key to whether a human can occupy the space under normal operating conditions.**" If, when the space was originally designed or subsequently redesigned, the designer took into consideration that humans would be entering the space and provided for the human occupancy (such as: provided ventilation, lighting, sufficient room to accomplish the anticipated task, etc.), then the space would be designed for employee occupancy.

Question No.3 relates to a specific example the Communicore Fountain pump room.

We are not in a position to certify whether a space is a confined space within the meaning of the standard. However, to give you general guidance on how the standard works, we can tell you that, based on the information provided, the Communicore Fountain pump room does not appear to be a confined space as it seems to lack **all three elements necessary to meet the definition of confined space.** The two fixed industrial ladders at the separate

OSHA Letters of Interpretation

- **Standards Interpretation / Permit Required Confined Space Standard as it applies to certain operations. October 22, 1993, CONTINUED**
 - Robert R Bee, CIH Walt Disney World Lake Buena Vista Florida

points of entry/exit would be considered as "limited or restricted means for entry and exit". However, it is apparently designed for continuous human occupancy since: it has two points of entry and exit separate and remote from one another; has a provision for fresh air in connection with the pump room's air conditioning equipment; and the space was designed to house equipment requiring regularly scheduled maintenance.

Confined Space – Yes, or No?



Real world application @ somewhere on Las Vegas Blvd



Confined Space – Yes, or No?



Casino Fountain Filter Room @ somewhere on Las Vegas Blvd

Jacobs

JSOG/COMET

Confined Space – No



Not shown in the photos:

A 24" sump to remove water that accumulated on floor from draining sand filters and associated piping.

Ventilation fan and ducting to bring fresh air into space.

Permanently installed lighting and equipment electrical panels.

Emergency safety shower and eye wash station.

Desk and chairs.

Space was clearly designed for workers to enter and perform work.

Casino Fountain Filter Room @ somewhere on Las Vegas Blvd

Confined Space – Yes, or No?



2001: A Space Odyssey (1968)

Bodily Enter
Limited entry/exit
Not designed for human
occupancy



Bonus Question#1: What
does HAL 9000 stand for?

Heuristically programmed
Algorithmic 9000 series
computer.

Bonus Question#2: "What
is one of HALs famous
quotes?"

**"I'm sorry Dave, I'm afraid
I can't do that"**

For more on HAL's voice, NYT has an
interesting article on the movies 50th
Anniversary.

<https://www.nytimes.com/2018/03/30/movies/hal-2001-a-space-odyssey-voice-douglas-rain.html>

Questions?

COMING SOON!

