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FAQs: Confined Spaces in Residential Construction

A new standard for construction work in confined spaces became effective **Aug. 3, 3015**. The new standard (Subpart AA of 29 CFR 1926) is intended to help prevent construction worker injury or death by eliminating and isolating hazards in confined spaces at construction sites. This standard is similar to the standards for confined space work in the manufacturing and general industries.

On May 24, 2016, the Occupational Safety and Health Administration (OSHA) issued a memorandum answering various frequently asked questions regarding the application of the new confined spaces standard in residential construction. Specifically, the memorandum explains how the standard applies to attics, crawl spaces, basements and other potential confined space exposure in residential construction work.

LINKS AND RESOURCES

- OSHA <u>memorandum</u> on confined spaces for residential construction work
- OSHA confined spaces in construction standard
- OSHA confined spaces <u>final rule</u> and <u>website</u>
- Protecting Workers in Confined Spaces: Small Entity Compliance Guide

HIGHLIGHTS

CONFINED SPACES

- Are not designed for continuous occupancy and are difficult to exit in the event of an emergency
- Pose life-threatening hazards including exposure to toxic substances, electrocution, explosion and asphyxiation

FINAL RULE

- Provides construction workers with protections similar to those for manufacturing and general industry workers
- Emphasizes training, continuous worksite evaluation and communication requirements to further protect workers' safety and health





GENERAL QUESTIONS ON ATTICS, CRAWL SPACES AND BASEMENTS

In some residential home building projects, the home builder constructs multiple homes with the same or similar basic configuration. If the presence or absence of any potential hazard in an attic, crawl space or basement is known, does the standard require a competent person to examine each attic, crawl space or basement in each home to make a determination as to whether the space is a permit-required confined space?

No. The standard requires a competent person to identify all permit-required confined spaces in which employees may work "through consideration and evaluation of the elements of that space, including testing as necessary." 1926.1203(a). If a competent person can reliably determine whether attics, crawl spaces or basements with the same or similar configuration contain one of the hazards or potential hazards listed in response to Question 2 without physically inspecting each of the spaces, the competent person need not physically examine each space to make the identification required under 1926.1203(a).

Does the mere presence of a physical hazard, electrical equipment, animals or water in an attic, crawl space or basement (before steps are installed) make the space a permit-required confined space under the standard?

No. However, permit-required obligations are triggered if:

- The physical hazard is not isolated (see 1926.1203(g)) or if there is potential employee exposure to the
 physical hazard. Note that not all unsafe conditions constitute "physical hazards," which the standard
 defines as only those conditions that could impede an entrant's ability to exit the space without assistance;
- An entrant has exposure to a serious hazard associated with the electrical equipment, such as an exposed live conductor, and the exposure could impede the entrant's ability to exit the space without assistance, would the presence of electrical equipment make the attic, crawl space or basement (before steps are installed) a permit-required confined space; or
- The animals posed a physical hazard, as defined by the standard.

Are attics, crawl spaces or basements (before steps are installed) containing utility service lines (e.g., water, natural gas, fuel oil, sewage, steam and electric power) that pass through them always considered to be permit-required confined spaces?

No. If utility services pass through attics, crawl spaces or basements (before steps are installed) that are confined spaces, the inherent hazards of the material flowing through the service lines do not have to be considered in the permit space determination unless it is reasonably foreseeable that a rupture or leak could occur such that the contents of the service lines could cause a serious safety or health hazard that could impede an entrant's ability to exit the space without assistance.

SPECIFIC QUESTIONS ON ATTICS

Are all attics in a residential home considered confined spaces under the standard?

No. A confined space is 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. All

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three criteria must be met for an attic to be considered a confined space. In many instances, an attic will not be considered a confined space because there is not limited or restricted means for entry and exit. For example, attics with a permanent, full-size doorway and/or stairwell access would rarely meet the definition of a confined space, provided that there are no other impediments to egress. An attic under construction where there is no drywall in place would also not have limited or restricted means for entry or exit and would not be considered a confined space.

Are attics that are confined spaces generally considered permit-required confined spaces?

No. Attics that are determined to be confined spaces would generally not be permit-required confined spaces because they typically do not contain the types of hazards or potential hazards that make a confined space a permit-required confined space (see response to Question 2).

Does the presence of a fall hazard alone in an attic make an attic a permit-required confined space?

No. A fall hazard in an attic—such as falling through the drywall of the attic—could cause a serious injury. However, fall hazards within an attic would not generally impede the ability of an entrant to exit the space without assistance and therefore would not trigger the permit-required confined space requirements. OSHA notes that even though permit-required confined space requirements would not be triggered in this situation, employers would still be obligated to protect their employees from fall hazards—as appropriate and required—when they are working in an attic where fall hazards exist.

Does the presence of asbestos in an attic make the attic a permit-required confined space?

No. Asbestos would not trigger the permit-required confined space requirements of the standard. However, if asbestos were present in an attic, an employer would need to follow any applicable requirements of OSHA's asbestos standards.

In the residential home building industry, frequently an employee will need to perform a final inspection of an attic before turning over a home to a homeowner. This inspection is often of limited duration. Does this inspection constitute an "entry" into a permit-required confined space under the standard if there is no reasonably foreseeable hazard present?

No. A final inspection of an attic would rarely constitute an "entry" because even if an attic were a confined space, it would not normally contain any of the hazards or potential hazards that would trigger the permit-required confined space requirements of the standard: (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 and tapers to a smaller cross-section; or (4) contains any other recognized serious safety or health hazard (see 1926.1202). An entry employer may rely on a competent person's expertise and experience in determining whether the presence of such a hazard or potential hazard is reasonably foreseeable during such an inspection or any other time when it is necessary to enter into an attic that is a confined space. If the attic is a permit-required confined space, the employer must comply with the permit-required confined space provisions of the standard whenever there is an entry, regardless of the duration of the entry.

The same analysis would apply to other inspections conducted by employees either at the outset of a construction project or as the project progresses. If there is no reasonably foreseeable hazard or potential hazard present in an

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attic or any other space during the construction process, the permit-required confined space requirements would not be triggered.

How hot must it be in an attic that is a confined space for the attic to be considered a permit-required confined space under the standard?

Extreme heat can be considered a serious physical hazard in attics such that the attics could be considered permit-required confined spaces. OSHA has not quantified how hot it must be to trigger the permit-required confined space requirements. However, the heat must be so extreme that it could potentially impede an entrant's ability to exit the attic without assistance. Factors that the agency would consider are (1) the temperature of the space while work is performed, (2) the nature and duration of the tasks performed in the heat, and (3) whether the entrant is acclimatized to work in extreme heat. A short-duration, light-duty task performed in a hot attic would typically not constitute a physical hazard triggering the permit-required confined space requirements. In addition, measures to control the heat in an attic (e.g., use of a fan) will be considered by the agency in determining whether a serious hazard exists in the first instance.

Many new residential homes are constructed with pull-down stair access to the attics, often referred to as "disappearing attic stairways." For attics that use this type of stair access, would OSHA consider the attics to be confined spaces?

Whether an attic with pull-down stair access would be considered a confined space depends on whether the configuration of the stairs impedes the ability of employees to exit the space. Ladder-like pull-down stairs that require employees to ascend/descend hand-over-hand, limit egress and could therefore render an attic a confined space. An attic that can be accessed via pull-down stairs that resemble the structure of a stationary stairway and do not require an employee to ascend/descend hand-over-hand would not be considered a confined space if there are no impediments to egress.

During some residential home building projects, employees may be performing work activities in an attic with no atmospheric or physical hazards present. However, after starting work, another crew of employees may perform activities outside of the space (e.g., painting or staining parts of a home outside of the attic) that could impact conditions in the attic. Does the performance of duties outside of an attic typically turn a "confined space" into a "permit-required confined space"?

No. The performance of duties outside of an attic would only turn a "confined space" into a "permit-required confined space" if the work outside of the attic could create a hazardous atmosphere or physical hazard in the attic that could impede the ability of an entrant to safely exit the space without assistance. It would be rare for this to occur in the residential home building environment. For example, the use of portable power tools outside of an attic will rarely, if ever, create a noise hazard that would impede the ability of an entrant to safely exit the attic without assistance. Similarly, performing painting and staining outside of an attic will rarely create a hazard that would impede the ability of an entrant to safely exit an attic without assistance. However, using certain high VOC (volatile organic compound) solvents in paint thinners or in floor stripping could potentially create a hazardous atmosphere in an adjacent attic or other confined space.

During remodeling work on residential homes, the remodelers will often need to enter a confined space to assess certain aspects of the construction of the home (electrical wiring, location of plumbing

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lines, etc.). Do employees performing this initial assessment have to follow the permit-required confined space requirements of the standard?

A competent person must assess these spaces to determine whether they are permit-required confined spaces prior to any entry. The employer will only need to follow the requirements of a permit-required confined space program if, based on the competent person's assessment, the employer has reason to believe the space is a permit-required confined space. It would be rare that a remodeler would need to follow the permit-required confined space requirements in this situation because most confined spaces in a residential home will not contain the hazards that would trigger the permit-required confined space provisions: (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 and tapers to a smaller cross-section; or (4) contains any other recognized serious safety or health hazard (see 1926.1202).

If an HVAC unit in an attic that is a confined space needs repair, requiring a contractor to enter the attic to perform certain activities to fix the unit, is that entry into the attic covered by OSHA's Confined Spaces in Construction Standard?

No, provided the repair is considered maintenance work on the unit (covered by the general industry standards) such as adjusting existing equipment or replacing component parts in kind. However, upgrading the HVAC system or its component parts would be considered construction work covered by the standard. This would also be the case for any other piece of equipment in an attic that is a confined space.

Some attics in residential homes are accessed through standard door openings, which include the following dimensions:

24" x 80"	32" x 79"	36" x 78"	38" x 82"	64" x 80"	74" x 96"
30" x 80"	32" x 80"	36" x 79"	42" x 80"	68" x 80"	
32" x 78"	34" x 80"	36" x 80"	60" x 80"	72" x 80"	

For attics with entry doors of standard dimensions, such as those listed above, would OSHA consider the attics to be confined spaces under the standard, assuming there are no other impediments to access/egress on or around the entrance?

No. Attics with full-sized doors at least 2 feet in width and 6 feet, 6 inches in height would not meet the definition of a confined space, provided the path to the entrance and area around the entrance are kept clear of structural or temporary impediments to egress.

Is the contractor who creates a permit-required confined space responsible for placing a warning sign on or around the entrance to the space warning of the existence of a permit-required confined space?

Only an employer that should reasonably anticipate that the employees it directs may enter a permit-required confined space is required to post a sign or other equally effective means to warn employees of the location of and danger posed by the permit-required confined space. For example, if a contractor affixes drywall to the roof trusses of a residential home and creates a confined space, that contractor is not required to post a warning sign that the attic constitutes a permit-required confined space, unless (1) the attic meets the criteria of a permit-

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required confined space, and (2) the contractor should reasonably anticipate that the employees it directs may enter the attic.

Is the permit for a permit-required confined space required to be posted?

No. However, the permit must be "made available" at the time of entry to all authorized entrants or their authorized representatives. This requirement to make the permit available could be met by posting the permit or by "any other equally effective means" (see 1926.1205(c)).

SPECIFIC QUESTIONS ON BASEMENTS

Is a basement in a residential home that is designed for continuous occupancy by a homeowner a confined space under the standard?

No, provided the basement is configured as designed (e.g., has permanent stairs, walk-out entry/exit, or egress window installed).

Before a set of stairs is installed in a residential home into a basement, home builders may access the space through a walk-in door to/from the outside (i.e., walk-out basement). Under these circumstances, would the basement be considered a confined space?

No. Provided there is a door to/from the outside to the basement, the basement would not be considered a confined space as there would not be limited or restricted means of egress.

In some homes, before a set of stairs is installed into a basement, home builders may access the space through a basement egress window that complies with Section R310 of the 2012 or 2009 International Residential Code. Under these circumstances, would the basement be considered a confined space?

No. If the basement has an egress window that meets the specifications of Section R310 of the 2012 or 2009 International Residential Code, the basement would not be considered a confined space as there would not be limited or restricted means of egress to and from the basement.

OTHER SPACES IN RESIDENTIAL HOMES

There are some spaces in a residential home that may technically meet the definition of a confined space, but there is no reasonably foreseeable hazard within the space that could impede an employee's ability to exit the space without assistance. Examples of this would be a small pantry or a small space underneath a stairwell in a home. Are these spaces considered permit-required confined spaces under the standard?

No. Even if the space is a confined space (see response to Question 1), if there is no reasonably foreseeable hazard or potential hazard within a space that could impede an entrant's ability to safely exit the space without assistance (see response to Question 2), then a residential home builder would not be required to consider the space a permit-required confined space under the standard. A residential home builder may rely on a competent person's experience and expertise in determining whether any such hazard or potential hazard in a space is reasonably foreseeable.

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MULTI-EMPLOYER COMMUNICATION PROVISIONS

Do the multi-employer communication requirements of 1926.1203(h)(1) of the standard apply to host employers that do not have employees who work on the worksite?

No. The requirements only apply to host employers with employees who work at the worksite, regardless of when those workers are at the site.

Under the standard, is the host employer required to perform a separate assessment of all spaces to gather the information required by this paragraph?

No. The standard only requires the host employer to communicate the information in paragraph (h)(1) if it is known by the host employer. The standard does not require the host employer to perform a separate assessment to gather the information. In addition, the communication provisions only require host employers to convey the information to the controlling contractor through reasonable means. There is no requirement in the standard for the host employer to verify that the information has been received by the controlling contractor or transmitted to entry employers by the controlling contractor. A host employer that has the information in paragraph (h)(1) need only communicate the information to the controlling contractor one time to satisfy the requirements of the standard. Additional communications will only be required if the host employer gains additional information not included in the original communication.

Are host employers/controlling contractors responsible for compliance with the permit-required confined space program provisions of the standard if they have no reason to anticipate that the employees they direct will enter a permit-required confined space?

No. However, these employers must nonetheless (1) take effective measures to ensure that the employees they direct do not enter any known permit spaces (see 1926.1203(c)), and (2) comply with 1926.1203(h). Otherwise, only employers that should reasonably anticipate that the employees they direct may enter a permit space are responsible for compliance with the permit-required confined space requirements of the standard. For example, employers that will not direct any employees to enter a confined space are not required to comply with the following provisions of the rule: permit-required confined space program (1926.1204), permitting process (1926.1205), entry permit (1926.1206), training (1926.1207), duties of authorized entrants, attendants, and entry supervisors (1926.1208-1210), and rescue and emergency services (1926.1211).

Can a residential home builder serving as a host employer or controlling contractor perform a single communication (whether from a host employer to a controlling contractor or from a controlling contractor to an entry employer) to fulfill its obligations under 1926.1203(h) of the standard provided there are no expected deviations in the presence or absence of potential hazards in a confined space in a home?

Yes. The standard does not require multiple communications of the information in paragraph (h) between employers on a residential home building site (whether at a single home building site or a site with multiple homes being constructed) where the potential hazards of confined spaces remain the same or substantially the same as long as any minor differences between the spaces are not relevant to which provisions of the standard apply to the spaces. However, if a host employer or controlling contractor learns of new information relevant to assessing the

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space under the standard after an initial communication, the host employer or controlling contractor would need to convey the new information in a subsequent communication.

Does 1926.1203(h) necessarily require entry employers to communicate the specified information before and after each time an employee goes into an attic, basement or crawl space that is a permit-required confined space?

No. An entry employer must communicate the information required under 1926.1203(h)(3) before "entry operations" begin, and it must communicate the information required under 1926.1203(h)(5) after "entry operations" have ended. Entry employees may go in and out of the space multiple times while completing the tasks identified on the permit without making additional communications, as long as the entry employer maintains control over the space between the pre-entry and post-entry communications required under 1926.1203(h)(3) and (h)(5). In addition, a single pre-entry communication could address entry operations in multiple spaces under 1926.1203(h)(3) and a single post-entry communication could address multiple entry operations under 1926.1203(h)(5), provided each space has its own permit and is addressed in the communication.

Do the communication provisions in 1926.1203(h) apply to non-permit confined spaces?

No. These provisions only apply to permit-required confined spaces. Employers who have confined spaces—but not permit-required confined spaces—are under no obligation to follow the communication requirements of the standard.

Does the exchange of information set forth between employers in 1926.1203(h) have to be in writing?

No. OSHA does not specify how the information is to be exchanged. The agency will deem it sufficient for each employer to provide the necessary information through any appropriate mechanism. The information exchange requirements can be oral. There is no requirement in the standard for written communications between employers on multi-employer worksites.

If an employer chooses to exchange the required information in writing under 1926.1203(h), can the written communication be informal?

Yes. While the exchange of information does not have to be in writing, some employers may choose to establish a mechanism for a written exchange. The written exchange does not have to be formal. It can be performed through email, text message or other informal means, so long as the required information is provided.

Under 1926.1203(h), is the controlling contractor under any obligation to enter a space to get information to relay to a host employer or entry employer?

No. A controlling contractor only needs to obtain information on permit-required confined spaces from the host employer and entry employer(s) and provide this information and other known information on permit-required confined spaces to a host employer or entry employer. The standard does not require a controlling contractor to enter spaces to gather information.

On multi-employer worksites, is every employer responsible under 1926.1203(a) to assess the worksite to determine the location and presence of confined spaces and information about permit-required confined spaces?

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No. Only employers that should reasonably anticipate that the employees they direct may enter confined spaces are required to perform this assessment. For host employers and controlling contractors that have no reason to anticipate that the employees they direct may enter confined spaces, there is no obligation to perform this initial assessment of the worksite.

APPLICATION OF THE STANDARD

Can an entry supervisor also serve as an attendant during an entry into a permit-required confined space?

Yes. An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by the standard for each role he or she fills.

Is guarding by location an acceptable form of isolation under the standard?

Yes. Guarding by location—that is, configuring the space or equipment in the space to eliminate employee exposure to the hazard—is an acceptable form of isolation under the standard.

OSHA has identified "noise" as a potential physical hazard. What noise level must be reached in order to constitute a physical hazard such that the permit-required confined space requirements apply?

There is no specific threshold noise level that must be reached in order for noise to constitute a physical hazard triggering the permit-required confined space requirements. However, the noise must be so extreme that it could impede an entrant's ability to safely exit the space without assistance. In most instances, noise levels below the eight-hour TWA permissible exposure limit for noise in construction of 90 DBA would not constitute a physical hazard triggering the permit-required confined space requirements.

If engineering and administrative controls cannot be implemented in a residential homebuilding project to address potential noise exposures, is it acceptable for a residential home builder to rely on personal protective equipment to address noise exposures for purposes of the standard?

Yes. A residential home builder may rely on personal protective equipment to address a noise hazard for purposes of complying with the standard so long as the personal protective equipment itself does not serve to impede the ability of an entrant to safely exit the space without assistance.

If a competent person determines that a confined space in a residential home does not contain or have the potential to contain a hazardous atmosphere, would an entry employer need to conduct atmospheric testing of the space before an entry and provide for continuous monitoring of the space during the entry?

No. If a confined space does not contain or have the potential to contain a hazardous atmosphere, an entry employer is not required to perform atmospheric testing or atmospheric monitoring.

In determining whether a space has limited means of egress such that it would be considered a confined space, does the size of the entry employee matter?

No. Whether a space has limited means of egress is a fact-dependent determination based on the size of the entrance and the configuration of the inside of the space. It is not dependent on the size of an entry employee.

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Can OSHA cite an employer for not documenting the initial evaluation of the workplace required by 1926.1203(a)?

No. The initial evaluation need not be documented. The employer, however, must be able to explain how the evaluation was conducted and describe the results. Thus, any citation will be for failure to evaluate the workplace as required by the standard, rather than for failure to create a record of the evaluation.

Does the initial evaluation for determining if a confined space is a permit space, required by 1926.1203(a), mandate a specific physical survey of each space?

No. The evaluation requirement may be met through existing experience and knowledge of the space, provided this information is adequate to make the determination required by the standard. For example, a competent person may have information which shows that the hazards or potential hazards of all attics, crawl spaces and basements (before steps are installed) will not impede an entrant's ability to exit the space without assistance. Therefore, these spaces would not need to be evaluated individually before each entry. This same approach can be used for any entry employer which has a number of identical spaces and information to support its determination(s). See the response to Question 6.

Under the standard, which employer issues the permit for permit-required confined spaces?

The permit is issued by the entry employer (see 1926.1205(a) and the definition of "entry employer" in 1926.1202: the "employer who decides that an employee it directs will enter a permit space").

If a rescue service fails to notify an entry employer that the rescue service is unavailable, will the entry employer be cited under the standard?

No. So long as the entry employer informed the rescue service that rescue services may be needed and of the requirement that the rescue service notify the employer if it is unavailable for rescue, and the rescue service agreed to provide the notification, no citation will be issued to the entry employer if the rescue service fails to fulfill its agreement to notify the entry employer that it is unavailable to perform rescue services.

If an employer establishes a policy prohibiting the employees it directs from working in a permitrequired confined space and effectively communicates the policy to those employees, does that employer still need to have a rescue harness on-site and train the employees it directs in rescue operations?

No. Only employers that can reasonably anticipate that the employees they direct may enter permit-required confined spaces are subject to the requirement to develop and implement procedures for rescue and emergency services under 1926.1204(i) and 1926.1211.

In fulfilling the requirements of 1926.1203(a), can a competent person rely on experience and past practice in terms of assessing the existence of confined spaces and permit-required confined spaces?

Yes. A competent person can draw from his or her experience and expertise in making the required assessment under 1926.1203(a).

Source: Occupational Safety and Health Administration

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