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Article 37. Confined Spaces in Construction

Amend Section 1951 as follows:

§1951. Definitions.

The following terms are defined for the purposes of this Article only:

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Entry means the action by which any part of a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space, whether or not such action is intentional or any work activities are actually performed in the space.

Entry employer means any employer whose employees enter or ~~decides that an employee it directs will enter~~ a permit space.

~~NOTE: An employer cannot avoid the duties of the standard merely by refusing to decide whether its employees will enter a permit space, and the Division will consider the failure to so decide to be an implicit decision to allow employees to enter those spaces if they are working in the proximity of the space.~~

Entry permit (permit) means the written or printed document that is provided by the employer who designated the space a permit space to allow and control entry into a permit space and that contains the information specified in Section 1955.

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Hazard means a physical hazard or hazardous atmosphere. See definitions below.

Hazardous atmosphere means an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

- (1) Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);
- (2) Airborne combustible dust at a concentration that ~~meets or exceeds its LFL~~ exceeds 20 percent of the minimum explosive concentration (MEC);

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~~NOTE to subsection (2): This concentration may be approximated as a condition in which the combustible dust obscures vision at a distance of 5 feet (1.52 meters) or less.~~

(3) Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;

(4) Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Article 4 of the Construction Safety Orders and Group 16 of the General Industry Safety Orders and which could result in employee exposure in excess of its dose or permissible exposure limit;

NOTE to subsection (4): An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this definition.

(5) Any other atmospheric condition that is immediately dangerous to life or health.

NOTE to subsection (5): For air contaminants for which the Division has not determined a dose or permissible exposure limit, other sources of information, such as Safety Data Sheets that comply with the Hazard Communication Standard, Section 5194, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

Host employer means the employer that owns or manages the property where the construction work is taking place.

NOTE: If the owner of the property on which the construction activity occurs has contracted with an entity for the general management of that property, and has transferred to that entity the information specified in Section 1952(h)(1), the Division will treat the contracted management entity as the host employer for as long as that entity manages the property. Otherwise, the Division will treat the owner of the property as the host employer. In no case will there be more than one host employer.

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Line breaking means the intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

Lockout means the placement of a lockout device on an energy isolating device, in accordance with an ~~established~~ effective procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

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Lower flammable limit (LFL) or lower explosive limit (LEL) means the minimum concentration of a substance in air needed for an ignition source to cause a flame or explosion.

Minimum explosive concentration (MEC) means the minimum concentration of a combustible dust suspended in air, measured in mass per unit volume that would support (subsonic) combustion.

Monitor or monitoring means the process used to identify and evaluate the hazards after an authorized entrant enters the space. This is a process of checking for changes that is performed in a periodic or continuous manner after the completion of the initial testing or evaluation of that space.

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Serious physical damage means an impairment or illness in which a body part is made functionally useless or is substantially reduced in efficiency. Such impairment or illness may be permanent or temporary and includes, but is not limited to, loss of consciousness, disorientation, or other immediate and substantial reduction in mental efficiency. Injuries involving such impairment would usually require treatment by a physician or other licensed health-care professional.

Tagout means:

(1) Placement of a tagout device on a circuit or equipment that has been deenergized, in accordance with an ~~established~~ effective procedure, to indicate that the circuit or equipment being controlled may not be operated until the tagout device is removed; and

(2) The employer ensures that:

(A) tagout provides equivalent protection to lockout, or

(B) ~~that~~ lockout is infeasible and the employer has relieved, disconnected, restrained and otherwise rendered safe stored (residual) energy.

Test or testing means the process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

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NOTE: Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to, and during, entry.

Ventilate or ventilation means controlling a hazardous atmosphere using continuous forced-air mechanical systems that meet the requirements of Section 1530, General Requirements for Mechanical Ventilation Systems.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend Section 1952 as follows:

§1952. General Requirements.

~~(a) Before it begins work at a worksite, each employer shall ensure that a competent person identifies all confined spaces in which one or more of the employees it directs may work, and identifies each space that is a permit space, through consideration and evaluation of the elements of that space, including testing as necessary.~~

(a) Identification of confined spaces and evaluation of permit spaces.

(1) The employer shall have a competent person conduct an initial survey of its work area for confined spaces existing at the time work begins.

(2) The employer shall have a competent person periodically inspect its work area to effectively identify new confined spaces.

(3) The employer shall inform their employees and the controlling contractor of each new confined space discovered or created as a result of construction or demolition activity.

(4) The employer shall have a competent person identify each confined space that is a permit space, through consideration and evaluation of the elements of that space, including testing as necessary.

(b) If the workplace contains one or more permit spaces, the employer who identifies, or who receives notice of, a permit space shall:

(1) Inform exposed employees by posting danger signs or by any other equally effective means, of the existence and location of, and the danger posed by, each permit space; and NOTE to

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Section 1952(b)(1): A sign reading "DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER" or using other similar language would satisfy the requirement for a sign.

(2) Inform, in a timely manner and in a manner other than posting, its employees' authorized representatives and the controlling contractor of the existence and location of, and the danger posed by, each permit space.

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~~(d) If any employer decides that employees it directs will enter a permit space, that employer~~  
Entry employers shall have a written permit space program that complies with Section 1953 implemented at the construction site. The written program shall be made available prior to and during entry operations for inspection by employees and their authorized representatives.

(e) An employer may use the alternate procedures specified in Section 1952(e)(2) for entering a permit space only under the conditions set forth in Section 1952(e)(1).

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(2) The following requirements apply to entry into permit spaces that meet the conditions set forth in Section 1952(e)(1):

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(C) Before an employee enters the space, the internal atmosphere shall be tested, with a calibrated direct-reading instrument, for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants, in that order. Concurrent testing for atmospheric hazards may be conducted with a multi-gas meter, provided the order in which readings are examined is preserved. Any employee who enters the space, or that employee's authorized representative, shall be provided an opportunity to observe the pre-entry testing required by subsection (e).

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NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

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Amend Section 1953 as follows:

§1953. Permit-Required Confined Space Program.

(a) ~~Each~~ A permit space program shall be documented in accordance with Section 1952(d) and as part of the program, each entry employer shall:

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(3) Develop and implement the means, procedures, and practices necessary for safe permit space entry operations, including, but not limited to, the following:

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(D) Purging, inerting, flushing, or ventilating the permit space as necessary to eliminate or control atmospheric hazards;

~~NOTE to Section 1953(a)(3)(D): When an employer is unable to reduce the atmosphere below 10 percent LFL, the employer may only enter if the employer inertes the space so as to render the entire atmosphere in the space non-combustible, and the employees use PPE to address any other atmospheric hazards (such as oxygen deficiency), and the employer eliminates or isolates all physical hazards in the space.~~

1. Except when the entry employer complies with all of the following, no entry shall be made into a permit space where the entry employer is unable to reduce the concentration of flammable gases, mists, or vapors below 10 percent of the LFL:

a. The permit space is rendered inert for the duration of entry into the permit space.

b. The entry employer provides employees entering the permit space with respiratory protection pursuant to Section 5144(d)(2), Respirators for IDLH atmospheres.

c. The entry employer eliminates or isolates all additional physical hazards within the permit space.

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(G) Verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry, and ensuring that employees are not allowed to enter into, or remain in, a permit space with a hazardous atmosphere unless the employer can demonstrate

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that ~~personal protective equipment (PPE)~~ will provide effective protection for each employee in the permit space and provides the appropriate PPE to each employee; ~~and~~

(H) Eliminating any conditions (for example, high pressure) that could make it unsafe to remove an entrance cover; ~~i~~

(I) Prohibiting work involving the use of flame, arc, spark, or other source of ignition within a permit space (or any adjacent space having common walls, floor, or ceiling with the permit space) which contains, or is likely to develop, a hazardous atmosphere due to flammable or explosive substances, or contains, or is likely to develop an oxygen enriched atmosphere; and

(J) Conducting surveillance of the surrounding area(s) to avoid hazards such as drifting vapors from tanks, piping, and sewers.

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(5) Evaluate permit space conditions in accordance with the following Sections 1953(a)(5)(A) through (a)(5)(F) when entry operations are conducted:

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(C) When testing for atmospheric hazards, test first for oxygen, then for combustible gases and vapors, and then for toxic gases and vapors; Concurrent testing for atmospheric hazards may be conducted with a multi-gas meter, provided the order in which readings are examined is preserved;

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(9) Develop and implement procedures for:

(A) ~~s~~Summoning rescue and emergency medical services (including procedures for summoning emergency assistance in the event of a failed nonentry rescue);

(B) ~~for~~ ~~r~~Rescuing entrants from permit spaces;

(C) ~~for providing necessary~~ Obtaining emergency medical services specified under Section 1512(e) ~~to~~ for rescued employees; and

(D) ~~for~~ ~~p~~Preventing unauthorized personnel from attempting a rescue;

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NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend Section 1955 as follows:

§1955. Entry Permit.

(a) The entry permit that documents compliance with this section and authorizes entry to a permit space shall identify:

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(12) ~~The rescue and emergency services that can be summoned and the means (such as the equipment to use and the numbers to call) for summoning those~~ to summon rescue services and obtain emergency medical services; specified under Section 1512(e);

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NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend Section 1956 as follows:

§1956. Training.

(a) The employer shall provide training to each employee whose work is regulated by this standard, at no cost to the employee, and ensure that the employee possesses the understanding, knowledge, and skills necessary for the safe performance of the duties assigned under this standard.

~~(1) This~~ The training shall result in an understanding of:

(A) The written procedures;

(B) the hazards in the permit space; and

(C) the methods used to isolate, control or in other ways protect employees from these hazards;



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~~(2) and for those e~~Employees not authorized to perform entry rescues, shall be trained in the dangers of attempting ~~such~~ unauthorized rescues.

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NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend Section 1960 as follows:

§1960. Permit Space Rescue and Emergency Medical Services.

(a) The entry employer shall ensure the rescue services at the site are trained, immediately available, properly equipped, and capable of performing permit space rescue and obtaining emergency medical services specified under Section 1512(e).

~~(b)(a)~~ An employer who designates rescue ~~and emergency~~ services, pursuant to Section 1953(a)(9), shall:

(1) Evaluate a prospective rescuer's ability to respond to a rescue summons in a timely manner, considering the hazard(s) identified;

NOTE to Section 1960~~(b)(a)~~(1): What will be considered timely will vary according to the specific hazards involved in each entry. For example, Section 5144, Respiratory Protection requires that employers provide a standby person or persons capable of immediate action to rescue employee(s) wearing respiratory protection while in work areas defined as IDLH atmospheres.

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~~(c)(b)~~ An employer whose employees have been designated to provide permit space rescue and/or emergency medical services shall take the following measures and provide all equipment and training at no cost to those employees:

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~~(d)(c)~~ Non-entry rescue is required unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant. The employer shall designate an entry rescue service whenever non-entry rescue is not selected. Whenever non-entry rescue is selected, the entry employer shall ensure that retrieval systems or methods are used whenever an authorized entrant enters a permit space, and shall confirm, prior to entry, that

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emergency assistance would be available in the event that non-entry rescue fails. Retrieval systems shall meet the following requirements:

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~~(e)~~(d) If an injured entrant is exposed to a substance for which a Safety Data Sheet (SDS) or other similar written information is required to be kept at the worksite, that SDS or written information shall be made available to the medical facility treating the exposed entrant.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Article 108. Confined Spaces

Amend Section 5156 as follows:

§5156. Scope, Application and Definitions.

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(b) Application and Definitions.

(1) For operations and industries not identified in subsection (b)(2), the confined space definition along with other definitions and requirements of Section 5157, Permit-Required Confined Spaces shall apply.

(2) The confined space definition along with other definitions and requirements of Section 5158, Other Confined Space Operations shall apply to:

~~(A) Construction operations regulated by Section 1502;~~

~~(A)~~(B) Agriculture operations (including cotton gins) defined by Section 3437;

~~(B)~~(C) Marine terminal operations defined in Section 3460;

~~(C)~~(D) Telecommunication manholes and unvented vaults regulated by Section 8616;

~~(D)~~(E) Grain handling facilities regulated by Section 5178; or

~~(E)~~(F) Natural gas utility operation within distribution and transmission facility vaults defined in Title 49 Code of Federal Regulations Parts 191, 192 and 193.

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NOTE: Electric utility operations within underground vaults. See Section 2700 for a definition of vault and Section 2943(b) for manholes and Section 2943.1 for enclosed spaces.

NOTE: Shipyard operations are regulated by Section 8355.

NOTE: Construction operations are regulated by Article 37 of the Construction Safety Orders.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.