



Technical Exchange

CONFINED SPACE ENTRY: A REVIEW OF CONFINED SPACE STANDARDS APPLICABLE TO CONTRACTORS

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When Sally kissed her husband Bruce goodbye on Tuesday morning, little did she know it would be the last time she would see him alive. Later that day, Bruce, a construction worker, was pronounced dead after he was removed from a sewer line that was being constructed. The cause of death was carbon monoxide poisoning due to a gasoline-powered pump that was placed inside the new sewer line used to remove seepage from an adjacent line. Another worker also died as he attempted to rescue Bruce.

According to OSHA, one million construction workers are exposed to the hazards of confined space entry each year. However, OSHA's general industry regulation, 29 CFR 1910.146, Permit-Required Confined Spaces, specifically states that this regulation does not apply to the construction industry due to the differences in the nature of the work sites. Does this mean that contractors do not have to follow stringent confined space rules? This question, as well as pertinent construction-related confined space regulations and standards, is discussed below.

MAINTENANCE OR CONSTRUCTION?

This is the first question that needs to be answered when determining whether or not the federal OSHA general industry rule applies to work performed by a construction contractor. If the work is considered "maintenance," the contractor is bound by law to comply with 29 CFR 1910.146. However, if the work is considered "construction," the general industry standards do not apply to the contractor. Maintenance, repair or refurbishing of existing equipment falls under the general industry confined space regulations.

Examples of "maintenance" operations include cleaning, inspecting, repainting and/or replacing components similar to the existing tank, vessel or structure, whereas "construction" operations consist of the reconfiguration or installation of substantially new equipment. However, prudent facility owners incorporate specific confined space requirements into the contract with their maintenance and construction contractors to ensure the parties involved



have a clear understanding of the confined space requirements that apply to the project.

OSHA'S RULES FOR CONSTRUCTION

Currently, there are five paragraphs within the federal OSHA construction regulations that reference working in confined spaces and/or enclosed spaces:

- **1926.21(b)(6)(i)**—This regulation requires instructions/training to employees who enter confined or enclosed spaces. Such instruction must include the nature of the hazards, the necessary precautions, use of personal protective equipment and emergency equipment that may be required.
- **1926.21(b)(6)(ii)**—This paragraph defines a confined or enclosed space that requires instruction. According to this standard, a confined space is any space having a limited means of egress that is subject to accumulation of toxic or flammable contaminants or has an oxygen deficient atmosphere. Some examples of confined spaces include storage tanks, process vessels, bins, boilers, ventilation or exhaust ducts, sewers, underground utility vaults, tunnels, pipelines and open top spaces more than four feet in depth such as pits, tubs, vaults and vessels.
- **1926.352(g)**—This paragraph describes fire prevention measures associated with the use of fuel gas and oxygen in enclosed spaces. Whenever the torch is left unattended for a substantial period of time (e.g., lunch), the gas supply must be shut off at a point located outside the

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enclosed space. The purpose of this practice is to minimize the possibility of flammable gas accumulating in the enclosed space due to leaks in the hoses or fittings. Also, the torch and the gas hose must be removed from the enclosed space at the change of shifts and overnight.

- **1926.353(b)(1)**—This paragraph states that mechanical ventilation must be provided whenever welding, cutting or heating is performed in confined spaces.
- **1926.353(b)(2)**—This standard states that airline respirators and standby persons are required whenever the means of access to the confined space is blocked by ventilation equipment.

In addition, OSHA's construction regulations also contain requirements dealing with confined space hazards in underground construction (Subpart S), underground electric transmission and distribution work (1926.956) and excavations (Subpart P). There are also six states (California, Kentucky, Michigan, Minnesota, Virginia and Washington) that have confined space standards that apply to construction.

Federal OSHA has prepared draft language of a proposed rule on confined spaces in construction. The draft language was sent to selected stakeholders to provide an initial review and comments during the first quarter of 2004. However, the proposed rule has not yet been published in the *Federal Register*. A review of the draft language indicates that the definition of "confined space" will likely be similar to the definition in the general industry standard. However, the draft language is different from the general industry standard in that there are four classifications for confined spaces in construction (continuous-system permit-required confined space, permit-required confined space, controlled-atmosphere confined space and isolated hazard confined space).

ANSI STANDARDS

It is easy to understand that if any of the promulgated standards (described above) are violated, OSHA may issue a citation. But can OSHA cite a contractor for confined space issues in those situations not covered by the above rules? The answer is yes. In those cases where a confined



space hazard is observed and not addressed by an existing construction standard but is addressed in a recognized consensus standard (such as the ANSI Z117.1-2003, Safety Requirements for Confined Spaces) OSHA may cite under 5(a)(1) of the OSH Act provided the conditions for citing the "general duty clause" are present. Section 5(a)(1) of the OSHA Act requires each employer provide a workplace that is free of recognized hazards.

ANSI Z117.1-2003 provides minimum safety requirements to be followed while entering, exiting and working in confined spaces at normal atmospheric pressure and is a recognized consensus standard. However, another ANSI committee (ANSI A10, Construction and Demolition Committee) is currently drafting ANSI A10.43, Confined Spaces in Construction and Demolition. Once completed and approved, this new standard will preempt ANSI Z117.1 for confined spaces pertaining to construction operations, since the scope of ANSI A10.43 specifically covers construction operations and ANSI Z117.1 does not apply to "tasks that have established national consensus standards."

In summary, although construction operations are specifically excluded from federal OSHA's general industry confined space standard, there are situations in which this standard may apply to work performed by a contractor. In any case, contractors should follow recognized consensus standards (such as the applicable ANSI and/or OSHA stan-

dards or equivalent) to reduce the chance of receiving OSHA penalties, but more importantly, to minimize the risk of serious injury or death. Also, due to various standards that may or may not be applicable to contractors, facility owners should specify the confined space requirements in their contract documents. 

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