Sandia National Laboratories

CONSTRUCTION NEWS SENSE

FACILITIES Management and Operations Center

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Baker/Perry Scaffolds
OSHA/SNL Requirements for Construction Scaffolds

Continual improvement efforts at Sandia National Laboratories include providing feedback on ES&H interpretations by OSHA and Sandia. There have been recent discussions regarding moving Baker (or Perry, as they are sometimes called) scaffolds while a worker is still on the scaffold. These types of scaffolds are covered under the mobile scaffold section of the OSHA Construction Safety Regulations, Subpart L.

Section 1926.452(w)(2) requires scaffold casters and wheels to be locked while it is in use to prevent movement of the scaffold. Some contractors have met this requirement with a manufacturer-supplied lock operated from the scaffold platform. With such a device in place, the scaffold could possibly be moved without a worker dismounting. Section 1926.452(w)(6) specifies the requirements and acceptable conditions for workers riding a moving scaffold. Where these conditions are met, a scaffold may be moved while workers are on it.

Sections 1926.452(w)(3) and 1926.452(w)(6)(iv) address the manual and powered forces used to move a scaffold. When a power system is used to move a scaffold, the force must be applied directly to the wheels. When a scaffold is manually moved, the force should be applied as close as practicable to the base and not more than five feet (1.5m) above the surface on which the scaffold is standing.

In the scenario where a worker is standing on a two- to four-ft-high Baker scaffold, holding on to an overhead support and moving the scaffold with his or her feet, this might be acceptable because the force being applied to the scaffold is less than five feet from the ground and is at the lowest practical point. However, the requirements specified in Section 1926.452(w)(6)(i):

> "The surface on which the scaffold is being moved [must be] within 3 degrees of level, and free of pits, holes, and obstructions."

must also be met for this to be an acceptable practice. Hazards of debris in the path of a moving scaffold are a great concern. Covers for holes can lift up or cause a depression below a floor surface and cause a scaffold to tip and a worker to fall. If such conditions were present, a worker would have to dismount a scaffold before moving it to be in compliance with OSHA requirements.

Under Section 1926.451(a)(1), "each scaffold and scaffold component shall be capable of supporting, without failure, its own weight and at least 4 times the maximum intended load applied or transmitted to it."

Under Section 1926.451(f)(1), "scaffolds and scaffold components shall not be loaded in excess of their maximum intended loads or rated capacities, whichever is less." Therefore, OSHA requirements prohibit a scaffold from being used in a way that would exceed these load restrictions. If having an employee move a scaffold while on it would result in a violation of the load restriction requirements, such a practice would be prohibited by the standard.

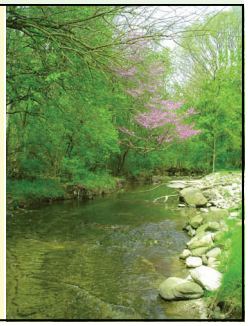
Scaffold work practices have improved over the previous few months and we need to continue to ensure this trend is maintained.

Greg Kirsch, 4844

Quarterly Construction Contractor Safety Seminar

April 21, 2009
2:00—4:00 PM

Mountain View Club
Sandia 1, 2 and 3
(NOTE the room and date change)



Confined Spaces in Construction Sites

Sandia National Laboratories (SNL) requires contractors to comply with the OSHA General Industry Standard for confined space entry. This standard is more stringent than its Construction Standard counterpart. The following is general information all contractors performing work for SNL must know.

A confined space is one that meets all of the following criteria:

1. Limited or restricted means of entry or exit.
2. Large enough for an employee to enter and perform work.
3. Not designed for continuous occupancy.

A utility chase in a building with a normal door flush with the floor is not a confined space because its means of egress is not limited or restricted. A duct or a pipe with a 6" x 6" (or even 10" x 10") hatch opening is not a confined space because an employee cannot enter the space to perform work.

SNL has a program that classifies its spaces. Contractors working in SNL spaces are informed of the classification of and potential hazards within a space either through the JSHE process or by request. Some examples of confined spaces at SNL are vaults, manholes, air handler units, cooling towers, cooling tower water pits, and sump pumps. Excavations are not considered confined spaces and are covered under 29 CFR 1926 Subpart P.

Spaces at SNL that meet the definition of a confined space are classified into two subcategories in accordance with 29 CFR 1910.146:

1. Non-permit confined spaces (NPCS)
2. Permit-required confined spaces (PRCS)

A Non-Permit Confined Space (NPCS) is one that meets the definition for a confined space but does not have the potential to contain atmospheric hazards or any other hazard capable of causing death or serious physical harm.

A Permit-Required Confined Space (PRCS) is one that meets the definition for a confined space and also has one or more of the following characteristics:

- Contains or has the potential to contain a hazardous atmosphere;
- Contains a material that has the potential to engulf an entrant;
- Has an internal configuration that could cause an entrant to become trapped or asphyxiated by walls that converge inward or by a floor that slopes downward, tapering to a smaller cross-section; or
- Contains any other recognized serious safety or health hazard.

Contract Specification 01065 requires Contractors to comply with 29CFR 1910.146 and additionally notify SNL Incident Command prior to entering a PRCS and at the completion of entry (exiting/end of work shift). Contractors must have a written confined space program and issue their own confined-space permits.

The Contractors' Confined Space Entry Program shall, at a minimum, include methods or guidance for:

- Preventing unauthorized entry
- Specifying acceptable entry conditions
- Specifying all equipment needed to safely perform all tasks in a space
- Ensuring communications capabilities
- Using personal protective equipment
- Training all employees who work in confined spaces
- Identifying and evaluating hazards
- Maintaining acceptable conditions throughout the period of entry
- Having available and using monitoring and ventilation equipment
- Providing proper lighting
- Performing non-entry rescue and emergency response capabilities
- Controlling or eliminating all hazards in a space

The following are additional requirements specified in Construction Standard Specification Section 01065 that must be met by all Contractors:

- Use the 01065 Attachment E: "Confined Space Permit Sign-In/Sign-Out Sheet when the period of entry extends beyond a single shift or personnel changes (Required for PRCS).
- Conduct atmospheric monitoring prior to and during entry (Required for PRCS/NPCS).
- If work activities adjacent to or within the space create additional hazards that will impact safeguards and entry procedures, the space shall be treated as a Permit-Required Confined Space. (Required for NPCS)
- Inform the Sandia Designated Representative (SDR) of how hazards encounter during PRCS entry (within or created) will be communicated (i.e., either through a debriefing or during the entry operation) to SNL.

Note: These requirements are summaries of the actual Construction Standard Specification Section 01065. Refer to Specification 01065 for details.

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