



Whenever OSHA passes a new regulation it often leaves us with as many questions as it attempts to answer. Certainly the passing of the new Cranes and Derricks Standard (29 CFR Part 1926 Subpart CC) is no exception. As with many regulatory changes, enforcement will evolve as case law is established and letters of interpretation are issued.

The current rule replaces the original rule that has been in place since 1971 and reflects more current industry recognized standards. In addition to more stringent training requirements, which are typical of most new OSHA regulations, the new standard also addresses the main hazards that have resulted in the leading causes of fatalities while working with and around cranes. These include more stringent electrical approach distances to prevent electrocution, as well as many other requirements to prevent crushing and struck-by hazards during assembly and disassembly, crane collapse, overturning and hoisting operations.

The purpose of this article is not to focus on what we don't know about this new standard (that which will be clarified through interpretations), but what we do know, and to focus on those things that contractors need to know about the new regulation and how its provisions will pertain to them.

The leading cause of fatality when working with and around cranes is electrocution. From 1992 to 2006 twenty-five percent of all crane fatalities were a result of electric contact or working near cranes that contacted overhead power lines. The new requirements provide options for contractors working around overhead power lines. Options for preventing electrical contact include de-energization or proper clearance distances. When clearance alone is the only means to prevent electrical contact, either determination of line voltage and use of Table A, or minimum clearance distances of 20 feet must be applied.

The standard requires this clearance distance to include the crane, the line, and the load at the crane's maximum working radius. Though not defined in the regulations, the terminology "maximum working radius" is discussed in the pre-amble as the intended length of the boom and not the potential length. For example if the crane is equipped with a 100-foot boom, but operations require only a 75-foot extension, the working radius will be defined at 75 feet, and clearance distances will need to be added accordingly.

Understanding this terminology is crucial as the new regulation addresses many of these situations by requiring that a work zone be marked. This zone is to define, by flag or an electronic device, the area of operations in an attempt to prohibit the operator from working outside the designated zone. Without such delineation, the work zone would have to be considered an area 360 degrees around the center pin, at the crane's maximum working radius.



Struck-by hazards represent the second leading cause of fatalities and injuries when working with and around cranes. From 1992-2006 struck by loads and struck by the crane itself represented the two most significant struck-by exposures. These accounted for 21% and 20% of the fatalities (respectively) that occurred during this time period. Struck by hazards associated with the crane itself are addressed with requirements for barricading the swing radius of the crane. Though this is not a significant change from the previous standard, the new regulation permits the use of warning lines, control line, railings or other suitable barrier for such protection where the previous standard only allowed these options through letters of interpretation.

An important addition to the new regulation is the requirement for qualified riggers. Though the term “qualified rigger” is not new within the OSHA standards (this term also appears in the Steel Erection Standard which took effect in 2002), the use of the word qualified has raised many questions. In short, OSHA’s position on this is that the rigger meets the requirements of a qualified person. Thus this individual must be qualified in the equipment that is used, possess knowledge and have the ability to apply different hitches for load retention, understand the inspection requirements for the different equipment used, and have an understanding of sling capacities based on the different rigging configurations that will be used.

In an effort to reduce the hazards associated with cranes overturning and striking employees, the new standard also puts responsibility on the controlling entity to ensure that ground conditions are adequate to support the crane and hoisting operations. This responsibility includes that notification be given prior to hoisting operations and that such notification include the locations of voids, underground utilities and other unseen hazards that can affect the stability and capacity of the crane. Additionally, the controlling entity is also responsible to ensure that the site drained, graded, and firm.

Some of the most significant changes to the standard are the general training requirements as well as the specific training requirements for operators, signal persons, and competent and qualified people. The new standard requires operator qualification and certification. This is probably the most critical news to operators in New York State, as the State’s current licensing requirements do not meet the new OSHA standard for operator qualification and certification.

The intent of OSHA, when the standard was written, was to write the standard in such a way that those states and cities that had pre-existing licensing requirements would meet the new OSHA qualification and certification requirements. Unfortunately, New York State’s current requirements fall short in the following areas:

1. NYS is not aware if their current licensing requirements meets industry recognized criteria as required by § 1926.1427(e)(2)(ii). It is possible that their practical testing requirements may, but the knowledge based test, as it currently exists, will not as it is not equipment specific.
2. The new OSHA standard (§ 1926.1427(e)(2)(iv) requires that a knowledge based test and practical test be given as part of the re-licensing process, at least every 5 years. Though New York States requires re-licensing every 3 years, there are no testing requirements in place for re-licensing at this time.



3. New York State does not require licensing for operators of knuckle-boom cranes. The new OSHA standard exempts operators of these pieces of equipment, when using them for delivering and offloading materials to the jobsite; however if they are used in the construction process they do require operator licensing and fall under the scope of the new requirements.

To further complicate matters, New York State does not recognize crane licenses from NCCCO or other independent testing organizations. This change will have the most impact on existing operators in New York, as they will be required to pass both a written and performance test to satisfy the new federal requirements.

Other requirements of the new standard specify the certification requirements of signal persons and similarly require both knowledge based and practical testing to ensure such individuals are qualified. Testing is required for the different types of signals to be used and documentation showing that individuals were trained must be kept at the jobsite, including the types of signals in which that person was qualified.

Other training requirements include training for employees working with and around the crane in proximity to overhead power lines, and competent and qualified people such as riggers and Assembly/Disassembly Directors and all other employees who may work with the equipment. Required training topics include, but are not limited to, crush and pinch points, tagout provisions, fall protection.

All in all, this article is not an attempt to answer every question. OSHA has an information page on their website to address many of these questions and to provide compliance assistance (see <http://www.osha.gov/cranes-derricks/>). What we do know is that the regulation took effect on November 8th, 2010 with some provisions to be effective four years from that date. In the immediate future contractors should look at the training provisions required as well as develop a comprehensive understanding of the marking of working zones. For most compliance personnel, these will be the easiest conditions to recognize for purposes of issuing citation.

Doug Miller
President
Occupational Safety Consultants, Inc.
www.workriskfree.com

