PLANNING ADVISORY NOTICE

Reviewing OSHA's Updated 2010 Crane Standard

his planning advisory notice (PAN) is intended to introduce organizations to the vast array of free online guidance and educational materials that the Occupational Safety and Health Administration (OSHA) publishes and to particularly draw your attention to these materials as it relates to cranes and derricks. It is important to understand that OSHA is not just an enforcement agency, OSHA also has a charter to educate and it plays a vital role in compliance assistance and education. As a part of OSHA's educational initiative, there are many Frequently Asked Questions (FAQ), sections available to provide employers with literature that can be used to assist them in developing safety and health programs that ensure a safe work environment. In this PAN we will be focusing on the FAQ that OSHA has set up for the new crane standard (See 29 CFR 1926 Subpart CC). It is our goal to help share information that may be of assistance to employers, end users and others involved in

the maintenance, restoration, and installation of telecommunications infrastructure.

OSHA's FAQ on cranes and derricks can be found at osha.gov/cranes-derricks-construction/faq; this page has been designed to aid with the common questions that impact employers using owned cranes or when they engage crane companies as sub-contractors. Of particular importance is the recognition that there are twenty-eight (28) states and territories that have their own OSHA-approved safety and health plans F. Most of these OSHA-approved state plans cover private and state & local government workplaces, however, there are a few states and territories whose plans only cover state/local government workers (see below image). These OSHA-approved state plans must be "at least as effective as" the federal OSHA program. This is important to note because federal OSHA applies everywhere; states & territories may only place ad-

ditional requirements on the employer that does not contravene the federal OSHA rules. Within the telecommunications industry many employers work across multiple states and as a result, it is incumbent upon them to verify that they are compliant with both federal OSHA and any **OSHA-approved** state plan. In most cases it is best for an employer that works in multiple states to build their programs to meet federal OSHA

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| Occupational Safety and | Health Administration | | CONTACT US FAQ A TO 2 | z Index English Español | |
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| Cranes & Derricks in Construction / Cranes & Derricks in Construction | | | | | |
| Frequently Asked Questions - Revised July 18, 2016 | | | | | |
| IMPORTANT: On September 26, 20 years, to November 10, 2017 (publi safely for the same three year perio the crane operator certification and | 114, OSHA published a final rule that shed in the Federal Register). The fin d. During this extension, OSHA will a qualification requirements as it beco | extends the deadline for crane oper- nal rule also extends the employer's ddress operator qualification througi mes available on OSHA's Cranes & | ator certification in the cranes standard at duty to ensure that operators are compet n additional rulemaking. OSHA will provide Derricks in Construction page. | 29 CFR 1926.1427 for 3 ent to operate the crane e updated information about | |
| PLEASE NOTE: OSHA is working of purpose equipment are included in alarms and insulating links for cons | in proposed amendments to address and excluded from the cranes standa truction work in proximity to power li | some other issues in the cranes sta ard, as well as the unavailability of N nes. | ndard, including clarifying the scope of wi ationally Recognized Testing Laboratory (f | hat forklifts and multi- NRTL) approved proximity | |
| General Overview Inspectio | State Plan Impact Operator Certific ns Rigger Qualifications Signal Per | cation/Qualification Scope Forklift son Qualifications Equipment Issue | s Material Delivery Ground Conditions Is Cranes Standard Basics and Backgrou | Power Lines and | |
| General Overview | | | | | |
| What standard currently applie | s to the use of cranes and derric | ks in construction? | | | |
| Subpart CC of 29 CFR Part 1926 (§1926.1400 et seq.), Cranes and Derricks in Construction ("cranes standard"), applies to cranes and derricks when used in construction activities. Section 1926.1400—Scope of the cranes standard sets forth the types of equipment that are included in the cranes standard and excludes from the standard certain types of equipment and cranes engaged in certain types of activities. | | | | | |
| What standard currently applie | s to the use of cranes and derric | ks in demolition and undergrour | nd construction work? | | |

Who, besides crane operators and riggers, is affected by the cranes standard?

rules and create a means to address any state-specific requirements. These state plan states can be identified by visiting the following OSHA website address: **osha.gov/stateplans/**.

Before operating a crane around powerline hazards it is necessary for the contractor to identify the work zone and determine if the crane (including any rigging or lifting accessories) could get any closer to power lines than the Minimum Approach Distance. To identify the work zone,



the best practice is for the contractor to demarcate operational boundaries (such as by using flags) or to define the work zone as the 360* surrounding the crane's maximum operational radius. In assessing the Minimum Approach Distance, the contractor must acquire the power line voltage information from the utility owner or operator for all power lines within the work zone and utilize the following Table A provided by OSHA:

| TABLE A – MINIMUM CLEARANCE DISTANCES | | | | |
|---------------------------------------|-------------------|--|--|--|
| VOLTAGE | Minimum Clearance | | | |
| [nominal, kV, | Distance | | | |
| alternating current] | [in feet] | | | |
| up to 50 | 10 | | | |
| 50+ to 200 | 15 | | | |
| 200+ to 350 | 20 | | | |
| 350+ to 500 | 25 | | | |
| 500+ to 750 | 35 | | | |
| 750+ to 1,000 | 45 | | | |
| Over 1,000 * | See ³ | | | |

In 2010 OSHA determined it was necessary to undertake new rulemaking for cranes in an effort to reduce the high number of fatalities and injuries that were occurring, better address hazards that workers are facing, and update the standard to account for notable technological advances that occurred since the last publication in 1971 and subsequent amendments in 1988 and 1993. Some of the significant changes within the 2010 standard are (i) employers, crane users, and controlling employers must ensure adequate ground conditions; (ii) new requirements for crane assembly and disassembly; (iii) updated clearance distances from power line hazards; (iv) pre-erection inspection requirements for tower cranes; (v) use of synthetic slings when climbing tower cranes including the presence of qualified riggers for such activities; (vi) clarified fall protection guidelines; (vii) additional requirements for certain equipment, such as floating cranes, that previously had little guidance; and (viii) operators, in most cases, must now be formally qualified or certified. Throughout the remainder of this PAN we will focus on three prevalent issues in the telecommunications industry that are addressed in the 2010 standard update: powerline hazards, developing lift plans, and the requirement that the contractor is the controlling entity.

If, after reviewing Table A, there is a chance the crane (including any rigging or lifting accessories) could get within the Minimum Approach Distance, then contractor should implement at least one of the following measures to prevent encroachment: (i) proximity alarms; (ii) dedicated spotter in continuous contact with crane operator; (iii) range control warning devices; (iv) devices that automatically limit range of movement; (v) insulating link/device, installed at a point between end of the load line and the load. Additional precautions should also be taken if the work zone is near a transmitter and equipment will be close enough to induce an electrical charge. In this situation, the transmitter must be deenergized or the crane must be provided with an electrical ground and any tag lines must be non-conductive. The best practice is to review these pre-operational measures in a planning meeting with the crane operator.

Another important update to the OSHA crane standard concerning power lines is certain training that the con-

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tractor must ensure is provided. Each operator and crew member who is working with the crane and equipment must be provided with the below training in accordance with OSHA 1926.1430(g); this training should be reviewed by anyone in telecommunications who work with cranes:

- 1. Procedures to follow in the event of contact with a power line, including:
 - Information on danger of electrocution;
 - Operator staying in cab except in emergency;
 - Safest way to evacuate if equipment becomes energized;
 - Danger of energizing the zone around crane;
 - Avoid touching the crane and load; and
 - Safe clearance distances.
- 2. Powerlines are presumed to be energized unless utility owner or operator confirms that they are deenergized and the lines are visibly grounded.
- 3. Powerlines are presumed to be uninsulated.
- 4. Limitations of insulating links and devices, proximity alarms, and range control devices.
- 5. Proper procedures to ground the crane and equipment and limitations of grounding.

Another emerging issue in telecommunications is the development of a proper lifting plan. This is different but like the rigging plans we have discussed and that are defined in ANSI/ASSP A10.48 a lifting plan is required to meet the OSHA standard when a crane is used. As such, depending on the SOW it may be necessary to have both a rigging plan and a lifting plan (NOTE: many contractors in telecommunications create the rigging plan for the SOW under their direct control and will work with the subcontracted crane company to create the lifting plan for the SOW under the crane company's control). A lifting plan is an important part of the pre-job planning exercise for a contractor or subcontractor as it ensures that the lifting plan takes site-specific conditions into account and will be properly managed so that the lifting equipment will be safely deployed and operated on site. The lifting plan should be provided by the crane operator and may be utilized by the contractor in developing the ANSI/ASSP A10.48 site-specific rigging plan. A key element of the lift plan is specifying the roles and responsibilities of the

signal person. These responsibilities include specifying who the signal person will be, whether they will be utilizing hand signals or radios, and where the signal person will be stationed. The contractor should confirm with the crane operator that crane operator will be responsible for assessing the competency of the signal person. who may either be an employee of the contractor or of the subcontracted crane company. The signal person's qualifications must be available at the worksite (either in electronic or hard copy format). Some of the qualifications include (i) knowing and understanding the type of signals; (ii) being competent in the application of the signals; and (iii) having a basic understanding of the operation and limitations of the equipment, including crane dynamics and boom deflection. For more information on the qualification requirements for the signal person please visit Signal Person Qualifications on the FAQ page: osha.gov/cranes-derricks-construction/faq.

An important reminder: a competent rigger must always be on site when the lifting equipment is being used.

A qualified crane operator is NOT necessarily a competent rigger, which means that the contractor may need a competent rigger on site in addition to the crane operator. The qualified person who creates the lift plan must designate the competent rigger(s).

Lastly, the new OSHA Crane Standard specifies that the controlling entity or employer is responsible for ensuring that the site ground conditions are able to support the equipment; including such factors as slope, compaction, and firmness. If the controlling entity desires the crane company to take on this responsibility, this should be expressly called out in the agreement between the controlling entity / contractor and the crane company. This agreement should also confirm who is in control of the work. This duty is the responsibility of the contractor (unless they can clearly demonstrate that they are not in fact the controlling entity/employer) to ensure the site does not have excess water or snow, is unlevel, or

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is unsuited for crane operation. OSHA has published a Standard Interpretation on this very issue (See 10/1/2012 Interpretation Letter to Richard Marshall, by James G. Maddux, Directorate of Construction: osha.gov/laws-regs/ standardinterpretations/2012-10-01). In addition to the FAQ's mentioned earlier in this PAN, OSHA also publishes Standard Interpretations on many of its standards that are extremely helpful and offer advice and interpretations on specific provisions that are impacting businesses. It is important to note that the controlling entity is not only liable for ensuring safe ground conditions during hoisting operations, but they must also ensure safe ground conditions during set-up, assembly/disassembly, and when moving the crane around the site. Additionally, the controlling entity must inspect ground conditions prior to each shift to ensure proper support of the equipment and that ground conditions have not altered. The new OSHA crane standard also places a responsibility on the crane operator to inform the controlling entity of any unsafe ground conditions. (See 29 CFR 1926 Part 1402(e). Although not specifically required, this notification requirement on the part of the crane operator may place an inspection obligation on the operator prior to operation of the equipment, however it is best practice to clearly communicate that this is an expectation of the crane operator.

In conclusion remember that OSHA is not just rulemaking and enforcement the agency, OSHA also has a responsibility to educate and there are many resources available FREE of charge. You can even stop by an OSHA office (depending on Covid status) and ask to review standards that may apply to your SOW free of charge. Some other free educational resources are the compliance assistance programs and the FAQ's. We thank you all for what you do each day to properly plan your SOW so it is performed in a quality manner and in compliance with all applicable codes, regulations, and standards.