



**DEPARTMENT OF LABOR**

**Occupational Safety and Health Administration**

**29 CFR Part 1926**

**[Docket No. OSHA-2007-0066]**

**RIN No. 1218-AC61**

**Cranes and Derricks in Construction: Underground Construction and Demolition**

**AGENCY:** Occupational Safety and Health Administration (OSHA), Labor.

**ACTION:** Final rule.

**SUMMARY:** On August 17, 2012, OSHA issued a notice of proposed rulemaking, as well as a companion direct final rule, that proposed applying the requirements in OSHA's 2010 cranes and derricks construction standard to underground construction work and demolition work. The notice of proposed rulemaking also proposed to correct inadvertent errors in the underground construction and demolition standards. After receiving a comment recommending that OSHA clarify the proposed regulatory text of the demolition standard, OSHA clarified the text and is issuing this final rule to apply the cranes and derricks standard to underground construction work and demolition work.

**DATES:** This final rule is effective [INSERT THE DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]. Petitions for review of the final rule are due on [INSERT THE DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** In compliance with 28 U.S.C. 2112(a), OSHA designates the Associate Solicitor of Labor for Occupational Safety and Health as the recipient of petitions for review of the final rule. Contact Joseph M. Woodward, Associate Solicitor, at the Office

of the Solicitor, Room S-4004, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210; telephone: (202) 693-5445.

**FOR FURTHER INFORMATION CONTACT:**

*General information and press inquiries:* Mr. Frank Meilinger, OSHA Office of Communications, Room N-3647, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210; telephone: (202) 693-1999.

*Technical inquiries:* Mr. Garvin Branch, Directorate of Construction, Room N-3468, OSHA, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210; telephone: (202) 693-2020; fax: (202) 693-1689.

*Copies of this Federal Register document and news releases:* This *Federal Register* document, as well as news releases and other relevant information, are available at OSHA's Webpage at <http://www.osha.gov>.

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## **I. Background**

On August 17, 2012, OSHA published a direct final rule and a companion notice of proposed rulemaking in the *Federal Register* to amend OSHA's construction standards in subpart S (Underground Construction, Caissons, Cofferdams, and Compressed Air) and subpart T (Demolition) of OSHA's construction standards at 29 CFR 1926 (77 FR 49722; 77 FR 49741). The amendments apply subpart CC (Cranes and Derricks in Construction) of 29 CFR 1926, which contains requirements for cranes and derricks used in construction, to underground construction work, and demolition work, involving equipment covered by subpart CC. Further, the direct final rule and notice of proposed rulemaking corrected inadvertent errors made to the underground construction and demolition standards in the 2010 rulemaking.

In both the proposed rule and the direct final rule, OSHA stated that it would treat comments received on the direct final rule as comments on the proposed rule, and comments received on the proposed rule as comments on the direct final rule. OSHA received two comments on the documents. The first comment addressed the timing of the implementation and enforcement of the operator-certification provisions of subpart CC (OSHA-2007-0066-0428). Specifically, the commenter claimed that extending the existing operator-certification requirement in subpart CC to crane operators in North Dakota who perform underground construction work or demolition work will make the task of certifying all crane operators in that state more difficult because of the limited number of certified examiners and qualified trainers available in that state.

OSHA is not revising the final rule in response to this comment. This comment did not challenge the application of the subpart CC standard to underground construction work or demolition work. Moreover, OSHA does not believe that requiring employers engaged in underground construction work or demolition work to meet the operator-certification requirements of subpart CC will substantially impact the availability of examiners or trainers in the commenter's state, or any other state in OSHA's jurisdiction, and the commenter did not provide any evidence to the contrary. The bulk of construction crane work already is subject to subpart CC. In addition, subpart CC already requires certification of any crane operator who performs other kinds of construction work, in addition to underground construction or demolition. As OSHA recognized in the preambles to its August 17, 2012, direct final rule and notice of proposed rulemaking, applying subpart CC to underground construction work and demolition work benefits contractors who also perform other work because they will be subject to a single standard instead of having some of their activities covered under subpart CC and other work covered by the temporary requirements in subpart DD (77 FR 49722, 49725; 77 FR 49741, 49745).<sup>1</sup>

Finally, OSHA's provisions regarding operator certification do not take effect until November 10, 2014. OSHA will continue to work with accredited testing organizations as the November 10, 2014, implementation date approaches to ensure that employers are able to meet the operator-certification requirements of subpart CC.

The second comment raised a concern about potential ambiguity in the introductory language of OSHA's proposed demolition standard. The commenter noted

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<sup>1</sup>Subpart DD of 29 CFR 1926, which OSHA drafted during the 2010 cranes rulemaking as a temporary measure to preserve the requirements of the former crane standard at §1926.550 for application to underground construction work and demolition work, has been removed.

that the amendment to §1926.800(t) of subpart S (Underground Construction, Caissons, Cofferdams, and Compressed Air) uses the phrase “employers must,” while §§1926.856(c) and 1926.858(b) of subpart T (Demolition) use the phrase “Cranes, derricks, and other mechanical equipment used must.” The commenter stated that the regulated community could misread the latter phrase to mean that only *the equipment* must comply with the provisions in subpart CC, and that employers involved in demolition work would not have to comply with the requirements in subpart CC that do not apply to equipment. Reading the proposed language in this manner would mean that many of the essential protective requirements in subpart CC would not apply to the employers, including requirements for operating equipment, operator certification and other personnel qualifications, inspections, and other requirements that do not relate to the design or function of equipment. The commenter recommended that OSHA use consistent language for all areas addressed by subpart CC.

Reading the proposed language to apply only to equipment is not consistent with OSHA’s past application of similar language, or with the stated purpose of this rulemaking. OSHA means for subpart CC to apply as a comprehensive regulatory scheme, as it made clear in the preambles of its August 17, 2012, direct final rule and proposed rule: OSHA “designed the final rule for cranes and derricks in construction, codified at 29 CFR part 1926, subpart CC, to replace the earlier rule (§1926.550) for all construction work” (77 FR 49722, 49723; 77 FR 49741, 49743) and to “bring all crane and derrick use in construction work under new subpart CC” (77 FR 49722, 49724; 77 FR 49741, 49743). The 2010 final cranes rule contains many important requirements regarding personnel qualifications and responsibilities, including: operator-certification

requirements at §1926.1427, requirements for signal persons at §§1926.1409-.1412 and 1926.1428, and requirements for operating the equipment at §1926.1417. OSHA emphasized the importance of applying all of subpart CC to demolition work. The Agency explained that doing so “would ensure that the significant benefits of subpart CC, which include saving 22 lives per year and preventing 175 non-fatal injuries per year compared to prior §1926.550 (75 FR 48079) extend to demolition and underground construction,” and that “construction workers in those sectors receive the same safety protections from new subpart CC as other construction workers” (77 FR 49722, 49725; 77 FR 49741, 49744-45). The final economic analysis for the final cranes standard, which estimated the cost of all of the requirements in the final cranes rule for industries involved in demolition work (see Section V.A (Final Economic Analysis and Final Regulatory Flexibility Analysis) below), is identical to the analysis provided with the draft final rule and proposed rule, and also demonstrates that OSHA always intended that subpart CC apply comprehensively to underground construction and demolition work in construction.

## **II. Revisions to the Demolition Standard in this Final Rule**

OSHA believes that the language in §1926.856(c) and §1926.858(b) of the proposed rule adequately specifies that the full scheme of requirements for cranes and derricks used in construction, including requirements for personnel qualifications and responsibilities, applies to demolition work. In addition, for the reasons stated in the proposed rule, OSHA concludes it is appropriate to apply those requirements to demolition. However, OSHA agrees that adopting different language similar to that in the §1926.800(t) amendment would clarify application of the provisions. Therefore, to

avoid any ambiguity, OSHA is amending the demolition standard by adding subparagraph headings and replacing the “equipment used must” language in both §§1926.856(c) and 1926.858(b) with a reference to the employer’s duty to comply with all subpart CC requirements.

OSHA is making the other minor, proposed revisions to the demolition rule for the reasons explained in the preamble to the proposed rule. These revisions include reinserting into §1926.858 the requirement to comply with subpart N, in addition to subpart CC, of 29 CFR 1926.

### **III. Revisions to the Underground Construction Standard in this Final Rule**

OSHA is not making any revisions to the underground construction standard other than the revisions specified in the proposed rule; OSHA is including those revisions for the reasons explained in the preamble to the proposed rule (see 77 FR 49724-49725). Most significantly, OSHA is requiring employers using cranes and derricks in underground construction to comply with all of the requirements in subpart CC. OSHA also is correcting several inadvertent errors in the underground construction standard by making several minor grammatical corrections and amending the introductory paragraph of §1926.800(t) to restore the provision allowing employers to use cranes to hoist personnel for routine access to the underground worksites via a shaft without requiring them to demonstrate that conventional means of access are more hazardous or impossible for this purpose. OSHA also is correcting §1926.800(t) by restoring the clause “Except as modified by this paragraph (t)” to the beginning of the introductory paragraph, and restoring §1926.800(t)(1) through (t)(4).

### **IV. Agency Determinations**

## **A. Final Economic Analysis and Final Regulatory Flexibility Analysis**

When it issued the final cranes rule in 2010, OSHA prepared a final economic analysis (FEA) as required by the Occupational Safety and Health Act of 1970 (OSH Act; 29 U.S.C. 651 *et seq.*) and Executive Order 12866 (58 FR 51735). OSHA also published a Final Regulatory Flexibility Analysis as required by the Regulatory Flexibility Act (5 U.S.C. 601-612). OSHA's approach to estimating costs and economic impacts in these analyses began by estimating, for all construction sectors, the total number of cranes and whether they were owned and rented, owned without rental, or leased. As a result, both analyses covered all cranes engaged in construction activities, including cranes engaged in underground construction work and cranes engaged in construction work involving demolition. The FEA for the final cranes standard, which included all cranes, crane operations, and industry sectors subject to this final rule, found that the requirements of the rule were technologically and economically feasible.

Because the FEA drew these conclusions from calculations encompassing all of the underground construction and demolition crane operations covered by this final rule, the conclusions in the earlier FEA are valid for this final rule. The reference to the FEA for the final cranes rule, therefore, establishes that this final rule is technologically and economically feasible, addresses significant risks, and reduces those risks significantly. The FEA, which OMB reviewed, meets the requirements of Executive Orders 12866 and Executive Order 13563 with respect to the operations covered by this final rule; OSHA included these operations in the FEA for the final cranes standard. Therefore, OSHA believes that that this final rule also complies with Executive Orders 12866 and Executive Order 13563.

To determine if this final rule has annual costs of greater than \$100 million, or would have a significant economic impact on a substantial number of small firms, OSHA examined the sectors most affected by this final rule. This final rule affects two construction sectors: NAICS 237990 (Other Heavy and Civil Engineering Construction), which includes all establishments engaged in underground construction, and NAICS 238910 (Site Preparation Contractors), which includes all establishments engaged in demolition. This analysis, therefore, reviews the results for these two sectors reported in the final crane standard's FEA, which the *Federal Register* published on August 9, 2010.

That FEA simply considered all cranes and crane operations in these sectors, and did not analyze separately those operations involving underground construction or demolition because OSHA planned to apply subpart CC to these operations. OSHA will report here the results for the entire heavy-and-civil engineering sector and the entire site-preparation sector, which will inevitably involve greater costs and impacts than for the activities addressed in this final rule because employers included in the heavy-and-civil engineering sector, or the site-preparation sector, have many cranes and crane jobs that do not involve underground construction or demolition activities. Table B-9 of the FEA shows that NAICS 237990, which includes all crane operations involved in underground construction operations, had annualized compliance costs of \$1,903,569 for firms that own and rent cranes, \$205,532 for firms that own but do not rent cranes, and \$1,151,759 for firms that lease cranes, for total annualized costs of \$3,260,860 (75 FR 48102–48105). Table B-9 also shows that NAICS 238910, which contains all crane operations involving demolition, had annualized compliance costs of \$1,232,974 for firms that own and rent cranes, \$292,601 for firms that own but do not rent cranes, and \$1,626,463 for

firms that lease cranes, for total annualized compliance costs of \$3,152,038. The total annualized compliance cost for both sectors is \$6,412,898. Because these two NAICS sectors include operations not involved in underground construction or demolition, the total estimated annualized compliance costs of \$6,412,898 for these sectors will be greater than the actual costs of this final rule. Based on these costs, OSHA concludes that this final rule is not a significant rule under either E.O. 12866 or the Unfunded Mandates Act. OSHA reached the same conclusion in its preliminary analysis of the demolition standard published in the preamble of the proposed rule on August 17, 2012, and requested comment. OSHA did not receive any comments on this issue.

With respect to technological feasibility, the earlier FEA, which included consideration of both underground construction and demolition operations, noted:

In accordance with the OSH Act, OSHA is required to demonstrate that occupational safety and health standards promulgated by the Agency are technologically feasible. Accordingly, OSHA reviewed the requirements that would be imposed by the final regulation, and assessed their technological feasibility. As a result of this review, OSHA has determined that compliance with the requirements of the final standard is technologically feasible for all affected industries. The standard would require employers to perform crane inspections, utilize qualified or certified crane operators, address ground conditions, maintain safe distances from power lines using the encroachment prevention precautions, and to fulfill other obligations under the standard. Compliance with all of these requirements can be achieved with readily and widely available technologies. Some businesses in the affected industries already implement the requirements of the standard to varying degrees (some states have requirements), as noted during the SBREFA Panel. OSHA believes that there are no technological constraints in complying with any of the proposed requirements, and received no comments that suggested that these standards were technologically infeasible.

(75 FR 48095.)

In Table B-12 of the FEA for the final cranes rule, OSHA examined the costs as a percentage of revenues and as a percentage of profits in these two sectors. This table shows that the greatest potential impacts were on establishments that own and rent cranes with operators. This table showed that for NAICS 237990, which includes all underground construction operations, costs were 0.18 percent (less than 1 percent) of revenues and 3.54 percent of profits. This table also showed that for NAICS 238910, which includes all demolition operations involving cranes, costs were 0.18 percent of revenues and 4.05 percent of profits. (Table B-12 of the FEA, and the FEA as a whole, provide the full calculations and derivations.) The FEA from the 2010 final cranes standard stated:

The Agency concludes that the final standard is economically feasible for the affected industries. As described above, a standard is economically feasible if there is a reasonable likelihood that the estimated costs of compliance “will not threaten the existence or competitive structure of an industry, even if it does portend disaster for some marginal firms.” *United Steelworkers of America v. Marshall*, 647 F.2d 1189, 1272 (DC Cir. 1980). The potential impacts on employer costs associated with achieving compliance with the final standard fall well within the bounds of economic feasibility in each industry sector. Costs of 0.2 percent of revenues and 4 percent of profits will not threaten the existence of the construction industry, affected general industry sectors, or the use of cranes in affected industry sectors. OSHA does not expect compliance with the requirements of the final standard to threaten the viability of employers or the competitive structure of any of the affected industry sectors. When viewed in the larger context of the construction sector, an increase in costs of \$148.2 million a year is effectively negligible, and will have no noticeable effect on the demand for construction services. Even when viewed as an increase in the costs of using cranes, an increase in the cost of rentals services of 0.2 percent will not cause the construction industry to forego the use of cranes and, thus, put crane leasing firms out of business.

(75 FR 48112.) Because the 2010 FEA included the costs of this underground construction and demolition final rule, which was only one part of the overall costs of the 2010 final rule, and OSHA considered the total cost of the 2010 final rule to be

economically feasible, OSHA concludes that the FEA for this underground construction and demolition final rule is economically feasible. OSHA included the same conclusion in its preliminary economic analysis of the underground construction and demolition proposed rule and requested comment on that conclusion (77 FR 49746), but did not receive any comments on this issue.

Tables B-14 and B-15 of the FEA for the cranes and derricks final rule examine the costs as a percentage of revenues and as a percentage of profits in these two sectors for small firms as defined by the Small Business Administration, and very small entities with fewer than 20 employees, respectively. Because so many firms owning cranes are small, there is no appreciable difference between the impacts on small and very small firms versus the impacts for all firms already discussed. Comparison of the two tables shows that, for NAICS 237990, the impacts for very small firms were equal to or greater than those for small firms. Table B-15 shows that, for NAICS 237990, costs were 0.18 percent of revenues and 3.54 per cent of profits. This table also shows that, for NAICS 238910, including all demolition operations involving cranes, there were no very small entities that owned and rented cranes, with the result that the greatest impacts are for small entities that own and rent cranes, for which costs are 0.18 percent of revenues and 4.05 percent of profits.

In its regulatory flexibility analysis, OSHA generally defines a significant economic impact on small entities as one with costs in excess of one percent of revenues or five percent of profits. The possible costs of this final rule clearly are well below these thresholds. OSHA reached the same conclusion in its preliminary economic analysis of the proposed amendments to the underground construction and demolition standards (77

FR 49746), and requested comment on that conclusion, but did not receive any comments. OSHA, therefore, certifies that this final rule will not have a significant economic impact on a substantial number of small entities.

## **B. Paperwork Reduction Act of 1995**

When OSHA issued the final cranes rule on August 9, 2010, it submitted an Information Collection Request (ICR) to the Office of Management and Budget (OMB) titled *Cranes and Derricks in Construction (29 CFR Part 1926, Subpart CC)*. This ICR<sup>2</sup> covered all establishments in the construction industry, including all of the establishments in NAICS 237990 and NAICS 238910. On November 1, 2010, OMB approved the ICR under OMB control number 1218-0261, with an expiration date of November 30, 2013. Subsequently, in December 2010, OSHA discontinued the *Cranes and Derricks Standard for Construction (29 CFR 1926.550)* ICR (OMB Control Number 1218-0113) because the new ICR superseded the existing ICR. In addition, OSHA retitled the new ICR to *Cranes and Derricks in Construction (29 CFR Part 1926, Subpart CC and Subpart DD)*.<sup>3</sup>

This final rule requires no additional collections of information.<sup>4</sup> OMB's approval of OSHA's ICR under Control Number 1218-0261 already covers all collections of information required by this final rule, and OSHA does not believe it is necessary to submit a new ICR to OMB seeking to collect additional information under this final rule.

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<sup>2</sup>The ICR is part of Exhibit 0425 in the docket for the final rule on cranes and derricks in construction (OSHA-2007-0066). It is available at [www.regulations.gov](http://www.regulations.gov) and at [www.reginfo.gov](http://www.reginfo.gov) (OMB Control Number 1218-0261).

<sup>3</sup>This request, OMB's approval for discontinuing the previous Cranes and Derricks in Construction ICR (OMB Control Number 1218-0113) and the retitling of the ICR, are available at [www.reginfo.gov](http://www.reginfo.gov).

<sup>4</sup>Although the final rule for cranes and derricks in construction did not require employers covered by subpart DD to meet the information-exchange requirements of subpart CC, OSHA did not deduct these employers from its analysis of the burden and costs for these requirements in the paperwork analysis for subpart CC. Therefore, this approach inflated the burden and costs estimates of the ICR approved by OMB for subpart CC; however, the burden and costs estimates are accurate now that OSHA is applying subpart CC to underground construction work and demolition work.

OSHA made the same determinations in the proposed rule (77 FR 49746) and requested comment on these determinations, but did not receive any comments.

OSHA notes that a Federal agency cannot conduct or sponsor a collection of information unless OMB approves it under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), and the agency displays a currently valid OMB control number. The public need not respond to a collection of information requirement unless the agency displays a currently valid OMB control number, and, notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information requirement if the requirement does not display a currently valid OMB control number.

### **C. Federalism**

OSHA reviewed this final rule in accordance with the Executive Order on Federalism (Executive Order 13132, 64 FR 43255, August 10, 1999), which requires that Federal agencies, to the extent possible, refrain from limiting state policy options, consult with states prior to taking any actions that would restrict state policy options, and take such actions only when clear constitutional authority exists and the problem is national in scope. Executive Order 13132 provides for preemption of state law only with the expressed consent of Congress. Federal agencies must limit any such preemption to the extent possible.

Under Section 18 of the OSH Act, Congress expressly provides that states may adopt, with Federal approval, a plan for the development and enforcement of occupational safety and health standards. OSHA refers to states that obtain Federal approval for such a plan as “State Plan states.” Occupational safety and health standards

developed by State Plan states must be at least as effective in providing safe and healthful employment and places of employment as the Federal standards. 29 U.S.C. 667. Subject to these requirements, State Plan states are free to develop and enforce under state law their own requirements for safety and health standards.

OSHA previously concluded from its analysis that promulgation of subpart CC complies with Executive Order 13132. 75 FR 48128-29. That analysis applies to the extension of subpart CC to establishments engaged in underground construction work or demolition work; therefore, this final rule complies with Executive Order 13132. OSHA included this determination in the proposed rule (77 FR 49747), and did not receive any comment. In states without an OSHA-approved State Plan, any standard developed from this final rule would limit state policy options in the same manner as every standard promulgated by OSHA. In states with OSHA-approved State Plans, this rulemaking does not significantly limit state policy options.

#### **D. State Plan States**

When Federal OSHA promulgates a new standard or a more stringent amendment to an existing standard, State Plan states must amend their standards to reflect the new standard or amendment, or show OSHA why such action is unnecessary, e.g., because an existing state standard covering this area is “at least as effective” as the new Federal standard or amendment. 29 CFR 1953.5(a). The state standard must be at least as effective as the final Federal rule. State Plan states must adopt the Federal standard or complete their own standard within six months of the promulgation date of the final Federal rule. When OSHA promulgates a new standard or amendment that does not impose additional or more stringent requirements than an existing standard, State Plan

states need not amend their standards, although OSHA may encourage them to do so. The 27 states and U.S. territories with OSHA-approved occupational safety and health plans are: Alaska, Arizona, California, Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Washington, and Wyoming; Connecticut, Illinois, New Jersey, New York, and the Virgin Islands have OSHA-approved State Plans that apply to state and local government employees only.

The amendments in this final rule will result in more stringent requirements for cranes and derricks used in underground construction or demolition work. Therefore, states and territories with approved State Plans must adopt comparable amendments to their standards for cranes and derricks used in underground construction or demolition within six months of the effective date of this final rule unless they demonstrate that such a change is not necessary because their existing standards are already the same, or at least as effective, as OSHA's new final rule.

#### **E. Unfunded Mandates Reform Act**

When OSHA issued the 2010 final rule for cranes and derricks in construction, it reviewed the rule according to the Unfunded Mandates Reform Act of 1995 (UMRA; 2 U.S.C. 1501 *et seq.*) and Executive Order 13132 (64 FR 43255) (Aug. 10, 1999). OSHA concluded that the final rule for cranes and derricks in construction did not meet the definition of a "Federal intergovernmental mandate" under the UMRA because OSHA standards do not apply to state or local governments except in states that have voluntarily adopted State Plans. 75 FR 48130. OSHA further noted that the final rule for cranes and derricks in construction imposed costs of over \$100 million per year on the private sector

and, therefore, required review under the UMRA for those costs; OSHA determined that its final economic analysis met that requirement.

As discussed above in Section V.A (Final Economic Analysis and Final Regulatory Flexibility Analysis) of this preamble, this final rule does not impose any costs on private-sector employers beyond those costs already taken into account in the final rule for cranes and derricks in construction. Because OSHA reviewed the total costs of this final rule under the UMRA, no further review of those costs is necessary. Therefore, for the purposes of the UMRA, OSHA certifies that this final rule does not mandate that state, local, or tribal governments adopt new, unfunded regulatory obligations, or increase expenditures by the private sector of more than \$100 million in any year.

#### **F. Consultation and Coordination with Indian Tribal Governments**

OSHA reviewed this final rule in accordance with Executive Order 13175 (65 FR 67249) and determined that it does not have “tribal implications” as defined in that order. The rule does not have substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes.

#### **G. Legal Considerations**

The purpose of the Occupational Safety and Health Act of 1970 (29 U.S.C. 651 *et seq.*) is “to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources.” 29 U.S.C. 651(b). To achieve this goal, Congress authorized the Secretary of Labor to promulgate and enforce occupational safety and health standards. 29 U.S.C. 654(b), 655(b). A safety or

health standard is a standard “which requires conditions, or the adoption or use of one or more practices, means, methods, operations, or processes, reasonably necessary or appropriate to provide safe or healthful employment or places of employment.” 29 U.S.C. 652(8). A standard is reasonably necessary or appropriate within the meaning of Section 652(8) when a significant risk of material harm exists in the workplace and the standard would substantially reduce or eliminate that workplace risk. See Industrial Union Department, AFL-CIO v. American Petroleum Institute, 448 U.S. 607 (1980). In the cranes and derricks 2010 final rule, OSHA made such a determination with respect to the use of cranes and derricks in construction, while at the same time noting that the Agency would apply subpart CC to the activities addressed in this final rule (75 FR 47913, 47920-21).

This final rule will not reduce the employee protections put in place by the standard OSHA is updating under this rulemaking. Instead, this rulemaking likely will enhance employee safety by ensuring that the construction workers involved in underground construction or demolition receive the same safety protections from recently published subpart CC as other construction workers. OSHA explained in the proposed rule that the revisions also will benefit construction contractors that engage in underground construction or demolition work in addition to other types of construction work, because these contractors will now be subject to a single standard rather than having some of their construction work under subpart CC, and other work covered by former subpart DD. This action, therefore, will clarify employer obligations by applying a single cranes and derricks standard to all construction work, including demolition and underground construction projects. Accordingly, it is unnecessary to make a separate

determination of significant risk, or the extent to which this rule would reduce that risk, as typically required by *Industrial Union Department*.

### **List of Subjects in 29 CFR Part 1926**

Construction industry, Demolition, Occupational safety and health, Safety, Underground construction.

### **Authority and Signature**

David Michaels, Ph.D., MPH, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210, authorized the preparation of this document. OSHA is issuing this document pursuant to 29 U.S.C. 653, 655, and 657, 40 U.S.C. 3701 *et seq.*, 5 U.S.C. 553, Secretary of Labor's Order 1-2012 (77 FR 3912, Jan. 25, 2012), and 29 CFR part 1911.

Signed at Washington, DC, on April 12, 2013.

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**David Michaels,**  
*Assistant Secretary of Labor for Occupational Safety and Health.*

### **Amendments to Standards**

For the reasons stated in the preamble of this final rule, OSHA amends 29 CFR part 1926 to read as follows:

## **PART 1926—SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION**

**Subpart S—Underground Construction, Caissons, Cofferdams, and Compressed Air**

1. The authority citation for subpart S of 29 CFR part 1926 continues to read as follows:

AUTHORITY: 40 U.S.C. 3701; 29 U.S.C. 653, 655, 657; and Secretary of Labor’s Orders 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 5–2007 (72 FR 31159), or 1–2012 (77 FR 3912), as applicable.

2. Amend §1926.800 by revising paragraph (t) to read as follows:

**§1926.800 Underground construction.**

\* \* \* \* \*

(t) Hoisting unique to underground construction. Except as modified by this paragraph (t), employers must: Comply with the requirements of subpart CC of this part, except that the limitation in §1926.1431(a) does not apply to the routine access of employees to an underground worksite via a shaft; ensure that material hoists comply with §1926.552(a) and (b) of this part; and ensure that personnel hoists comply with the personnel-hoists requirements of §1926.552(a) and (c) of this part and the elevator requirements of §1926.552(a) and (d) of this part.

(1) General requirements for cranes and hoists. (i) Materials, tools, and supplies being raised or lowered, whether within a cage or otherwise, shall be secured or stacked in a manner to prevent the load from shifting, snagging or falling into the shaft.

(ii) A warning light suitably located to warn employees at the shaft bottom and subsurface shaft entrances shall flash whenever a load is above the shaft bottom or subsurface entrances, or the load is being moved in the shaft. This paragraph does not apply to fully enclosed hoistways.

(iii) Whenever a hoistway is not fully enclosed and employees are at the shaft bottom, conveyances or equipment shall be stopped at least 15 feet (4.57 m) above the bottom of the shaft and held there until the signalman at the bottom of the shaft directs the operator to continue lowering the load, except that the load may be lowered without stopping if the load or conveyance is within full view of a bottom signalman who is in constant voice communication with the operator.

(iv)(A) Before maintenance, repairs, or other work is commenced in the shaft served by a cage, skip, or bucket, the operator and other employees in the area shall be informed and given suitable instructions.

(B) A sign warning that work is being done in the shaft shall be installed at the shaft collar, at the operator's station, and at each underground landing.

(v) Any connection between the hoisting rope and the cage or skip shall be compatible with the type of wire rope used for hoisting.

(vi) Spin-type connections, where used, shall be maintained in a clean condition and protected from foreign matter that could affect their operation.

(vii) Cage, skip, and load connections to the hoist rope shall be made so that the force of the hoist pull, vibration, misalignment, release of lift force, or impact will not disengage the connection. Moused or latched openthroat hooks do not meet this requirement.

(viii) When using wire rope wedge sockets, means shall be provided to prevent wedge escapement and to ensure that the wedge is properly seated.

(2) Additional requirements for cranes. Cranes shall be equipped with a limit switch to prevent overtravel at the boom tip. Limit switches are to be used only to limit travel of

loads when operational controls malfunction and shall not be used as a substitute for other operational controls.

(3) Additional requirements for hoists. (i) Hoists shall be designed so that the load hoist drum is powered in both directions of rotation, and so that brakes are automatically applied upon power release or failure.

(ii) Control levers shall be of the “deadman type” which return automatically to their center (neutral) position upon release.

(iii) When a hoist is used for both personnel hoisting and material hoisting, load and speed ratings for personnel and for materials shall be assigned to the equipment.

(iv) Material hoisting may be performed at speeds higher than the rated speed for personnel hoisting if the hoist and components have been designed for such higher speeds and if shaft conditions permit.

(v) Employees shall not ride on top of any cage, skip or bucket except when necessary to perform inspection or maintenance of the hoisting system, in which case they shall be protected by a body belt/harness system to prevent falling.

(vi) Personnel and materials (other than small tools and supplies secured in a manner that will not create a hazard to employees) shall not be hoisted together in the same conveyance. However, if the operator is protected from the shifting of materials, then the operator may ride with materials in cages or skips which are designed to be controlled by an operator within the cage or skip.

(vii) Line speed shall not exceed the design limitations of the systems.

(viii) Hoists shall be equipped with landing level indicators at the operator’s station.

Marking the hoist rope does not satisfy this requirement.

- (ix) Whenever glazing is used in the hoist house, it shall be safety glass, or its equivalent, and be free of distortions and obstructions.
- (x) A fire extinguisher that is rated at least 2A:10B:C (multi-purpose, dry chemical) shall be mounted in each hoist house.
- (xi) Hoist controls shall be arranged so that the operator can perform all operating cycle functions and reach the emergency power cutoff without having to reach beyond the operator's normal operating position.
- (xii) Hoists shall be equipped with limit switches to prevent overtravel at the top and bottom of the hoistway.
- (xiii) Limit switches are to be used only to limit travel of loads when operational controls malfunction and shall not be used as a substitute for other operational controls.
- (xiv) Hoist operators shall be provided with a closed-circuit voice communication system to each landing station, with speaker microphones so located that the operator can communicate with individual landing stations during hoist use.
- (xv) When sinking shafts 75 feet (22.86 m) or less in depth, cages, skips, and buckets that may swing, bump, or snag against shaft sides or other structural protrusions shall be guided by fenders, rails, ropes, or a combination of those means.
- (xvi) When sinking shafts more than 75 feet (22.86 m) in depth, all cages, skips, and buckets shall be rope or rail guided to within a rail length from the sinking operation.
- (xvii) Cages, skips, and buckets in all completed shafts, or in all shafts being used as completed shafts, shall be rope or rail-guided for the full length of their travel.
- (xviii) Wire rope used in load lines of material hoists shall be capable of supporting, without failure, at least five times the maximum intended load or the factor recommended

by the rope manufacturer, whichever is greater. Refer to §1926.552(c)(14)(iii) of this part for design factors for wire rope used in personnel hoists. The design factor shall be calculated by dividing the breaking strength of wire rope, as reported in the manufacturer's rating tables, by the total static load, including the weight of the wire rope in the shaft when fully extended.

(xix) A competent person shall visually check all hoisting machinery, equipment, anchorages, and hoisting rope at the beginning of each shift and during hoist use, as necessary.

(xx) Each safety device shall be checked by a competent person at least weekly during hoist use to ensure suitable operation and safe condition.

(xxi) In order to ensure suitable operation and safe condition of all functions and safety devices, each hoist assembly shall be inspected and load-tested to 100 percent of its rated capacity: at the time of installation; after any repairs or alterations affecting its structural integrity; after the operation of any safety device; and annually when in use. The employer shall prepare a certification record which includes the date each inspection and load-test was performed; the signature of the person who performed the inspection and test; and a serial number or other identifier for the hoist that was inspected and tested. The most recent certification record shall be maintained on file until completion of the project.

(xxii) Before hoisting personnel or material, the operator shall perform a test run of any cage or skip whenever it has been out of service for one complete shift, and whenever the assembly or components have been repaired or adjusted.

(xxiii) Unsafe conditions shall be corrected before using the equipment.

(4) Additional requirements for personnel hoists. (i) Hoist drum systems shall be equipped with at least two means of stopping the load, each of which shall be capable of stopping and holding 150 percent of the hoist's rated line pull. A broken-rope safety, safety catch, or arrestment device is not a permissible means of stopping under this paragraph (t).

(ii) The operator shall remain within sight and sound of the signals at the operator's station.

(iii) All sides of personnel cages shall be enclosed by one-half inch (12.70 mm) wire mesh (not less than No. 14 gauge or equivalent) to a height of not less than 6 feet (1.83 m). However, when the cage or skip is being used as a work platform, its sides may be reduced in height to 42 inches (1.07 m) when the conveyance is not in motion.

(iv) All personnel cages shall be provided with a positive locking door that does not open outward.

(v) All personnel cages shall be provided with a protective canopy. The canopy shall be made of steel plate, at least 3/16-inch (4.763 mm) in thickness, or material of equivalent strength and impact resistance. The canopy shall be sloped to the outside, and so designed that a section may be readily pushed upward to afford emergency egress. The canopy shall cover the top in such a manner as to protect those inside from objects falling in the shaft.

(vi) Personnel platforms operating on guide rails or guide ropes shall be equipped with broken-rope safety devices, safety catches or arrestment devices that will stop and hold 150 percent of the weight of the personnel platform and its maximum rated load.

(vii) During sinking operations in shafts where guides and safeties are not yet used, the travel speed of the personnel platform shall not exceed 200 feet (60.96 m) per minute.

Governor controls set for 200 feet (60.96 m) per minute shall be installed in the control system and shall be used during personnel hoisting.

(viii) The personnel platform may travel over the controlled length of the hoistway at rated speeds up to 600 feet (182.88 m) per minute during sinking operations in shafts where guides and safeties are used.

(ix) The personnel platform may travel at rated speeds greater than 600 feet (182.88 m) per minute in completed shafts.

\* \* \* \* \*

**Subpart T—Demolition**

3. The authority citation for subpart T of 29 CFR part 1926 continues to read as follows:

AUTHORITY: 40 U.S.C. 3701; 29 U.S.C. 653, 655, 657; and Secretary of Labor’s Orders 12-71 (36 FR 8754), 8-76 (41 FR 25059), 9-83 (48 FR 35736), 1-90 (55 FR 9033), 6-96 (62 FR 111), 5-2007 (72 FR 31159), or 1–2012 (77 FR 3912), as applicable.

4. Amend §1926.856 by revising paragraph (c) to read as follows:

**§1926.856 Removal of walls, floors, and material with equipment.**

\* \* \* \* \*

(c) Cranes, derricks, and other mechanical equipment. Employers must meet the requirements specified in subparts N, O, and CC of this part.

5. Amend §1926.858 by revising paragraph (b) to read as follows:

**§1926.858 Removal of steel construction.**

\* \* \* \* \*

(b) Cranes, derricks, and other hoisting equipment. Employers must meet the requirements specified in subparts N and CC of this part.

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