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FINAL STATEMENT OF REASONS

CALIFORNIA CODE OF REGULATIONS

Title 8, Division 1, Chapter 4, Subchapter 7, Article 91, Section 4885;
Article 93, Section 4924; and Article 98, Section 5004(e)(3)
of the General Industry Safety Orders

Mobile Crane Load Safety Devices

MODIFICATIONS AND RESPONSE TO COMMENTS RESULTING FROM THE 45-DAY PUBLIC COMMENT PERIOD

There are no modifications to the information contained in the Initial Statement of Reasons except for the following sufficiently related modifications that are a result of public comments and further Board staff evaluation of the proposal.

Section 4924, Load Safety Devices.

Section 4924 provides the general requirements for load safety devices for cranes with a rated capacity exceeding one ton.

Subsection (a).

Existing subsection (a) contains two exceptions. Exception 1 is applicable to boom-type excavators and equipment that is configured for pile driving or log handling work. Exception 2 is applicable to articulating boom cranes. Amendments for clarity in these existing exceptions are provided in the proposal that was noticed for a 45-day comment period.

A modification is proposed for subsection (a) to add an Exception 3 to clarify that digger derrick trucks designed, built and maintained in accordance with ANSI/ASSE A10.31 consensus standards are exempt from the provisions in Section 4924. Digger derrick trucks are special multipurpose vehicle-mounted machines that have a lifting boom, but they are primarily designed to accommodate components that dig holes, set poles and position materials and apparatus for electric power line construction and maintenance work.

Division of Occupational Safety and Health representatives indicate that there is sometimes confusion among the personnel of electrical utility companies as to whether the provisions in Section 4924 are applicable to digger derrick trucks. Section 4924 is intended for and applicable

to mobile cranes that are designed and built in accordance with the ASME B30.5 consensus standards for mobile cranes used in lifting service. Digger derrick trucks are not designed and built for compliance with the provisions in Section 4924 for mobile cranes. Therefore, a modification for clarity is proposed to add an Exception 3 to subsection (a).

Subsection (b)(1).

Proposed new subsection (b)(1) specifies that mobile cranes manufactured after September 27, 2005, with a maximum rated capacity exceeding 3 tons shall have a load indicating device, load moment device, or a device that prevents an overload condition. An editorial modification is proposed for clarity to replace the word "have" with terminology that would require cranes to "be equipped with" load indicating devices.

An exception to subsection (b)(1) states that when load indicating devices are not functional, a qualified person shall determine load weights until the device can be restored to operation. An editorial modification is proposed for clarity to insert the word "installed" so that the exception pertains to "installed" load indicating devices as opposed to those that may be in storage for repair or replacement of parts.

For clarity, an additional editorial modification of this exception is proposed to replace the words "can be" with the word "is" so that the exception would read in part that a qualified person shall determine load weights until the device "is" restored to operation.

Subsection (c).

Proposed subsection (c) states that mobile cranes shall be provided with a boom angle or radius indicator which clearly shows the boom angle in degrees to the operator at all times. A modification is proposed to add an exception that provides when a boom angle or radius indicator is inoperative or malfunctioning, a qualified person shall determine the radius or boom angle by measurement until the indicator is restored to operation.

Written and oral comments received indicate that when a boom angle or radius indicator is inoperative or malfunctioning, the radius or boom angle can be effectively determined by measurement. In addition, the ASME B30.5-2004 consensus standard for mobile cranes permits the radius or boom angle to be determined by measurement when an indicator is not inoperative or malfunctioning. The proposed modification is necessary to permit operation of the crane using measurement as an alternative method for determining the radius or boom angle of the crane.

New subsection (c)(1).

A new subsection (c)(1) is proposed that is necessary to ensure that boom angle or radius indicators are repaired in accordance with the manufacturer's recommendations.

SUMMARY AND RESPONSE TO WRITTEN AND ORAL COMMENTS

I. Written Comments

Mr. Bradley D. Closson, Craft Forensic Services, by e-mail dated January 7, 2008.

Comment No 1:

With respect to the requirements for the load indicating devices prescribed in Section 4924(b)(1), Mr. Closson commented that the term "have" should be replaced with the term "be equipped" for clarity and consistency with other standards.

Response:

Board staff concurs that the comment has merit for clarity and consistency and an editorial modification is proposed accordingly in Section 4924(b)(1).

Comment No. 2:

With respect to the "Exception" proposed Section 4924(b)(1), Mr. Closson commented that the words "the installed" should be inserted before the first use of the word "load".

Response:

The Board believes that adding the word "installed" before the first use of the word "load" in the exception would add clarity to standard and a modification is added accordingly.

Comment No. 3:

With respect to proposed Section 5004(e)(3)(A), Mr. Closson commented that the proposed wording does not appear to be enforceable; it is a just a restatement of the definition for "anti two-block device" being added in the proposal, and it is not consistent with the two previously stated requirements of the section. Mr. Closson recommended rewording the subsection to read, "Cranes shall be equipped with an anti two-block device".

Response:

The existing language in 5004(e)(3)(A) lacks clarity as indicated in the Initial Statement of Reasons. The language as proposed requires that the anti two-block device is to be used and prescribes what the device must achieve when activated without the need to look up a definition. Board staff believes that the language as proposed is enforceable and sufficiently clear.

The Board thanks Mr. Closson for his comments and participation in the Board's rulemaking process.

Michael J. Vlaming, Executive Director, Crane Owner's Association, Inc., by letter dated February 15, 2008.

Comment:

Mr. Vlaming provided background information regarding the membership of the Crane Owner's Association and indicated that it is an association of crane rental contractors in Northern California. Regarding the monitoring of crane loads, Mr. Vlaming stated that most, if not all new cranes have electronic components to monitor and warn the crane operator of certain hoisting conditions. Two of these components are the load moment indicator and the boom angle/radius indicator. He stated that the proposed amendments in Section 4924 contain an inconsistency: an exception to subsection (b)(1) permits the operation of a crane load when load indicating devices are not functional (provided loads can be determined by a qualified person); however, no similar exception is provided under subsection (c) when a boom angle/radius indicator is not functional.

Mr. Vlaming stated that in many, if not all, cranes with electronic monitoring components, the load moment and boom angle/radius indicator are contained and displayed on the same component (unit). If the monitoring device/unit is not functioning, both the load indicating device and boom angle/radius information are not available. A qualified operator is capable of determining both the load weight and the boom angle/radius information to allow continued operation of the crane. Mr. Vlaming provided recommended language that would provide an exception for boom angle/radius provisions contained subsection (c)(1).

Response:

Board staff discussed this comment with a major mobile crane manufacturer (Link-Belt Cranes) and was advised that their crane operator's manual provides that when a boom angle or radius indicator is inoperative or malfunctioning, the radius or boom angle shall be determined by measurement. Further, the ASME B30.5 – 2004, Standard for Mobile and Locomotive Cranes contains a similar provision that permits, when a boom angle or radius indicator is inoperative or malfunctioning, the radius or boom angle shall be determined by measurement. For these reasons, and upon evaluation of the proposal comments, a modification is proposed to provide an exception to subsection (c) to address situations when a boom angle or radius indicator is inoperative or malfunctioning.

The Board thanks Mr. Vlaming for his comments and participation in the Board's rulemaking process.

Ms. Teresa A. Harrison, Acting Regional Administrator, Region IX, Occupational Safety and Health Administration (Federal OSHA), by letter dated February 26, 2008.

Federal OSHA commented that it had completed its review of the proposal and it outlined the main provisions of the proposal. Federal OSHA stated that the proposed standards contain requirements

not specifically addressed in federal regulations and therefore is more effective that the federal standard in protecting in protecting employees from accidents as a result of two-blocking conditions.

The Board thanks Federal OSHA for their review, comments and participation in the Board's rulemaking process.

II. Oral Comments

Oral comments received at the February 21, 2008, Public Hearing in Sacramento, California.

Mr. Alvan Mangalindan, representing the Crane Owner's Association.

Comment:

Mr. Mangalindan expressed concern that the exception to subsection (b)(1) in the proposal allows for the operator of an upright crane to continue operation when the load indicating device fails or malfunctions, but the same type of exception does not apply when a similar electronic hoisting monitoring device, a boom angle or radius indicator, also fails or malfunctions. He stated that on most, if not all cranes, the load indicating device and the boom angle or radius indicator are displayed on the same component; thus, if one indicator fails, the other will also fail and not be displayed. He recommended that the same type of exception in Section 4924(a) be applicable to the boom angle/radius indicating device required in Section 4924(c).

Response:

See the response to Mr. Vlaming's written comment. It is noted that when Mr. Mangalindan's comment is considered with reference to the actual wording of the proposal, the Board concludes that his reference to the Section 4924(a) exception was actually intended to be a reference to the Section 4924(b)(1) exception. The Board thanks Mr. Mangalindan for his comments and participation in the Board's rulemaking process.

Mr. Michael Battaini, representing Sheedy Drayage Company.

Mr. Battaini expressed support for Mr. Mangalindan's comments. He stated that the boom angle can be determined by means other than the boom angle indicator, such as measuring the radius and looking at the crane load chart, which indicates the maximum load for the configuration of the crane. By these means, the crane operator can easily assess the boom angle without the device and determine the maximum permitted load.

Response:

See the response to Mr. Vlaming's written comment. The Board thanks Mr. Battaini for his comments and participation in the Board's rulemaking process.

MODIFICATIONS AND RESPONSE TO COMMENTS RESULTING FROM THE 15-DAY NOTICE OF PROPOSED MODIFICATIONS

No further modifications to the information contained in the Initial Statement of Reasons are proposed as a result of the 15-day Notice of Proposed Modifications mailed on May 12, 2008.

ADDITIONAL DOCUMENTS RELIED UPON

1. American National Standards Institute (ANSI) A10.31-1995, American National Standard for Construction and Demolition Operations – Safety Requirements, Definitions and Specifications for Digger Derrick Trucks.

2. ANSI A10.31-2006, American National Standard for Construction and Demolition Operations – Safety Requirements, Definitions and Specifications for Digger Derrick Trucks.

These documents are available for review Monday through Friday from 8:00 a.m. to 4:30 p.m. at the Standards Board Office located at 2520 Venture Oaks Way, Suite 350, Sacramento, California.

ADDITIONAL DOCUMENTS INCORPORATED BY REFERENCE

None.

DETERMINATION OF MANDATE

These standards do not impose a mandate on local agencies or school districts as indicated in the Initial Statement of Reasons.

ALTERNATIVES CONSIDERED

The Board invited interested persons to present statements or arguments with respect to alternatives to the proposed standards. No alternative considered by the Board would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the adopted action.