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SUBCOMMITTEE MINUTES

Proposal to Consolidate Safety Orders for Cranes in Construction (CSO Article 15) into
General Industry Safety Orders Group 13 (Cranes and Other Hoisting Equipment).

January 21, 2015
Sacramento, CA

1. Opening remarks.

The meeting was called to order by Chair, Conrad Tolson, Senior Engineer, Occupational Safety and Health Standards Board (OSHSB), at 9:30 am. The Chair was assisted by Leslie Matsuoka, Associate Government Program Analyst, OSHSB. The meeting opened with self-introductions by those in attendance, including members and interested parties. Kevin Bland, one of the subcommittee (SC) members was flying-in and his flight was delayed by fog, so Bruce Wick, California Professional Association of Specialty Contractors (CalPASC), sat-in for Bland at the morning session. Jana Saastad represented Tim Cremins, International Union of Operating Engineers (IUOE), who was unable to attend due to a schedule conflict.

2. Background of the subcommittee.

The Chair reviewed the Standards Board policy regarding the use of advisory committee meetings; i.e. they are informal and advisory in nature. The Board will use consensus recommendations to develop a reasonable and effective proposal; however, it may be necessary later in the rulemaking process to amend, modify or reject these recommendations, due to the review process. Furthermore, California must be at least as effective as federal standards.

Chair briefly reviewed the background of the proposal: At the first advisory committee meeting in September, three primary options seemed to emerge on how to scope the rulemaking with respect to forklifts and multi-purpose machines, but there was no consensus on any of them. Those 3 options were:

- (1) Anything with a suspended load should be subject to crane operator certification requirements.
- (2) Only equipment with a winch and hook should be subject to the requirements, and
- (3) Modify the powered industrial truck (PIT) standard, Article 25, section 3668, to accommodate multi-purpose machines when configured to lift like a crane.

Chair stated that if the SC is unable to reach consensus on the scope and definition of multi-purpose machines, the rulemaking will be unable to move forward and the likely outcome is that Title 8 will remain as it currently is with separate crane safety orders for construction and general industry. He opined that most stakeholders would like to consolidate the crane safety orders into General Industry, but agreement on multi-purpose machines and forklifts is essential to move forward with consolidation. If this SC is able to reach agreement, the results will go back to the next full advisory committee for their

concurrence. He expressed optimism that the full committee would go along with the consensus of this SC because members represented the different points of view on the subject.

With respect to the third option (modify the PIT standard to accommodate lifting attachments), the Division had identified approximately 50 problems with that approach. Other than the Division's comments on the problems with using the PIT standard to address machines with lifting attachments, no other comments on the proposal had been received prior to the meeting.

Chair noted that the SC invitation package included relevant portions from the Washington Administrative Code (WAC) regarding multi-purpose machines. The package had also included a federal OSHA letter of interpretation, a recent OSHA Compliance Directive (CPL) with a portion relevant to forklifts and multi-purpose machines, and a relevant portion of the CDAC preamble.

3. Section-by-section review.

The subcommittee turned to review of the "working draft." Chair noted that the draft was color-coded with editorial modifications from the September 9-10 AC, proposed modifications based on the WAC, and proposed modifications based on the OSHA letter of interpretation and CPL.

Section 4880, Scope, subsection (a)(1).

Chair asked the SC for input on the OSHA CPL which proposed to change "winch or hook" to "boom and hoist."

Bob Hornauer (NCCCO representing AGC) favored the change but had concerns whether this would pass muster with the feds. However, Chair opined that since this verbiage is in the CPL, it likely will be eventually adopted by the feds. Jim Jacobs, Operating Engineers Local 3 (OE3) asked for clarification of what a "boom" is. Brad Closson noted that it is defined in section 4885. There was discussion whether the definition of boom might need some modification to apply to forklift add-ons, or whether "boom" was even necessary in this context; i.e. some felt that "hoist" was the key word. A consensus seemed to emerge that using only the term "hoist" would be more suitable to address the concern. Closson noted that the section 4885 definition includes a number of different types of hoists. Ed Yarbrough (Caltrans) opined that "boom" is not necessary in this context. Wick (alternate for Bland) added that the intent is to insure that a forklift operator will know their limitations and to be clear when the machine stops being a forklift and becomes a crane. He opined that the proposed verbiage would help clarify when the change in classification occurs.

Chair commented that this seems consistent with what Washington State had done. He quoted an email from Chuck Lemon who had worked on the WAC verbiage:

"...we realized that we had to be at least as effective as the Feds, but we also wanted to be clear that (1) the forklift is always a powered industrial truck and not a crane, so therefore it would not need to be certified as a crane would, and (2) the operator had to be qualified per our horizontal safety standard for powered industrial trucks, (WAC 296-863), not a certified crane operator.

With that being said, we had to be sure that there were some parts of the crane rule that would apply to these machines when configured to hoist and lower a load by means of a winch or hook and also are able to move the suspended load horizontally."

Eric Berg commented that they see more accidents caused by improper rigging of forklifts being used as cranes; than with cranes. Chair asked whether putting a 15,000 lb., 25' limit on forklift/multi-purpose machine operator certification, similar to 5006.1 would be helpful. Closson opined that the root problem is improper rigging.

Yarbrough (Caltrans) added that almost every accident they see that involves forklifts/multi-purpose machines is caused by operators not following the manufacturer's instructions. Berg added at this juncture that the Division has a problem because Title 8 does not require PIT operators to follow the manufacturer's directions.

Russ McCrary (Ironworkers) added that he didn't think the 25' limit would help because there are machines that can be safely operated beyond 25' provided they are operated correctly in accordance with the manufacturer's instructions.

Yarbrough agreed that the problem is improper operation. He added that everyone at this table represents major contractors and labor with good safety procedures and training. Most of the problems he sees are with smaller "mom & pop" operators that don't have those resources and don't understand the limitations of the equipment they are using. We need to develop something that will clarify to these smaller operators when their forklift is exceeding its limits and has become like a crane.

Keith Harkey (Ironworkers) added that there will always be those who will try to find ways around the regulation; for example, using a shackle if the standard prohibits the use of a hook.

Jacobs opined that committee members are probably thinking Gradall's when we talk about multi-purpose machines, but we need to look ahead to what is coming next. Some manufacturers are selling telehandlers that are not built to ASME B30 or any recognized standard. For example, he showed the committee pictures of a Merlo Roto that is an all-terrain forklift that can be rigged as a crane and includes outriggers. He said a number of these machines have toppled because the operators aren't required to be certified (in fact, he said that some manufacturers advertise that certified operators aren't required) and they can easily exceed the lifting limits of the machine.

Wick agreed that we need to craft something that will address machines that are coming. He also inquired of Berg why they can't cite for forklifts not operated in accordance with manufacturer's instructions. Berg said that Title 8 doesn't address forklift operation, and they also can't cite unqualified riggers loading forklifts.

There was more discussion about the problem of telehandlers built to circumvent crane operator certification standards. Brian Miller (CEA) added that some telehandlers can be remotely controlled.

Closson said that the ASME B30 committee was going to discuss these machines at their May meeting. They are pretty common in Europe. He also recommended that the Division submit a Form 9 to amend section 3650 to require powered industrial trucks to be operated in accordance with manufacturer's recommendations. He added that some PIT manufacturers do not want attachments on their trucks.

Yarbrough liked the verbiage in 4880(a)(1) that includes PIT's "with or without attachments" as well as "configured to raise or lower by means of a hoist." He opined that it's a powered hoist that makes the PIT subject to these standards; although he felt that we might need to clarify that the hoist is powered. Closson opined that the section 4885 definition for "hoist" provides that clarity. A check of the work-in-

progress definition for “hoist” indicated that the list of common types of hoists would remain unchanged; therefore, it was felt that the term “hoist” is sufficiently clear.

Harkey said that ironworkers often will reach into a building using a PIT boom to provide a pick point for chainfall hoists to place building stairs. At that point the PIT or multi-purpose machine is not being moved; the boom is just a point of attachment and he wanted to be sure that application wouldn't require operator certification.

At this point Closson observed that the committee hadn't yet defined “multi-purpose machine” (Section 4885) and that having a definition might help in our discussion. The committee then turned to working on the definition of “multi-purpose machine.”

Section 4885, Definitions.

Closson commented that the first sentence (as proposed) would read: “A machine that is designed to be configured in various ways...” He opined that a forklift is not designed to be configured as a crane and thus this clause would help prevent the misuse of forklifts; however, it would include multi-purpose machines designed to function as forklifts and cranes.

Chair commented that the proposed definition added “or shackle” to the parenthetical “by means of a winch or hook” based on comments he had heard from others, including Washington State that some people have tried to get around the definition by using a shackle instead of a hook.

As discussion started, Closson noted that the term “winch” is used in section 4885 whereas we are using “hoist” in 4880. He recommended consistency and since “hoist” has been defined, we should replace “winch” with “hoist.”

There was then committee discussion on how to go about replacing “winch” with “hoist” as the terms appear several times in the definition.

Closson also suggested deleting the examples. He opined that the danger is that when you list examples, machines not included can be interpreted to be excluded. Furthermore, people wanting to skirt the regulation will look for gaps they can use to avoid compliance.

Yarbrough suggested adding a requirement that the equipment be operated in accordance with manufacturer's instructions. He said that Caltrans' experience is that operators get in trouble when they operate their equipment outside the limits of the manufacturers' instructions.

Chair said that the most appropriate location for requiring PIT operators to follow manufacturers' operating instructions would be in Article 25, and he would investigate what the most appropriate method would be to accomplish this change (probably a separate RM). Committee members agreed that the PIT regulations should be changed to include this requirement.

Closson also stated that it is important to retain the phrase “A machine that is designed to be configured in various ways...” In his opinion the word “designed” is essential and defines the core of a multi-purpose machine.

Wick asked Jacobs if the changes discussed thus far address his concern about rotating equipment. Jacobs opined that new machines are “outrunning” attempts to regulate them. Closson noted that the

rotating machines are coming from Europe and they are built to ISO standards; there is not currently a B30 standard that covers them.

The committee continued looking at the terminology (boom, jib, hoist, winch, winch pack, etc.) used in the examples. For discussion purposes, the phrase:

“For example, a machine that can rotate and can be configured with removable forks/tongs (for use as a forklift) or with a winch pack, jib (with a hook or shackle at the end) or jib used in conjunction with a winch” was shown struck-out.

The committee then discussed the remaining part of the definition:

“When configured with the forks/tongs, it is not covered by these Orders. When configured with a winch pack, jib (with a hook or shackle at the end) or jib used in conjunction with a winch, it is covered by these Orders.”

Closson cautioned that we need to be very careful when using specific terms. He also noted that “winch” and “hoist” are being used rather interchangeably in this section, but they are not the same. With regard to the first sentence, a knuckle-boom crane on a sheetrock delivery truck is still a crane even when fitted with forks/tongs. Bob Hornauer added that CCO has a certification process for knuckle-boom cranes.

There appeared to be agreement to delete the last two sentences so that the section 4885 definition would read:

“Multi-Purpose Machine. A machine that is designed to be configured in various ways, at least one of which allows it to raise or lower by means of a hoist and horizontally move a suspended load.”

The committee then took a lunch recess to allow time to consider the modifications made thus far.

Afternoon session:

The committee returned from lunch at 12:45. Kevin Bland joined the group (he missed the morning session due to a fog-related flight diversion).

Section 4885, Definition of Multi-purpose Machine.

Closson recommended adding, “other than a crane or derrick” to the first sentence of the definition so that it would read:

“Multi-Purpose Machine. A machine, other than a crane or derrick, that is designed to be configured in various ways...”

His rationale was that we already have a full set of standards for cranes and derricks, so this will clarify coverage for multi-purpose machines.

There was agreement on these modifications, so the committee returned to review of section 4880.

Section 4880, Scope, subsections (a)(1), (c)(8) and 4885 Definitions.

Returning to section 4880(a)(1), it was suggested that the phrase: “when configured to hoist and lower (by means of a winch or hook [alt. boom and hoist]) and horizontally move a suspended load” was duplicative and unnecessary in light of having defined multi-purpose machine in section 4885.

Miller however, questioned how sections 4880 and 4885 interfaced, and it became apparent that it would be necessary for the committee to review both sections concurrently. Miller was concerned that

“in various ways” would capture more multi-purpose machinery than was intended. Bland agreed with Miller that the intention was to capture multi-purpose machines when designed to raise or lower by means of a hoist.

Yarbrough noted that 4880(a)(1) reads: “This standard applies to power operated equipment that can hoist, lower and horizontally move a suspended load with or without attachments.”

Chair noted that exception (c)(8) to section 4880 might clarify this and perhaps it should also be taken into consideration at this time. He noted that two subsections (c)(8) were mailed-out. The green text was based on the OSHA letter of interpretation and the blue text was based on the recent OSHA CPL.

Bland opined that the intent is to exclude forklifts from regulation unless they are configured with a hoist. The committee focused on the blue (CPL) text for (c)(8) which read (before committee modification):

“Powered industrial trucks (forklifts), except when configured to hoist and lower (by means of a boom and a hoist) and horizontally move a suspended load.”

Closson proposed to modify (c)(8) to read: “Powered industrial trucks (forklifts), except when they meet the definition of a multi-purpose machine.”

There was more discussion, primarily by Harkey and Bland. The intent of the modifications was to exclude forklifts except when they meet the definition of a multi-purpose machine (i.e., when configured to raise and lower by means of a hoist). However, coordination of sections 4880(a)(1), (c)(8) and the section 4885 definition was still needed to accomplish this.

Section 4885

Bland opined further that the limitation was only to affect multi-purpose machines when they are configured to raise and lower by means of a hoist. The phrase “designed to be configured in various ways” is too broad.

Closson felt that it is important to keep “designed and configured” for the purposes of defining a multi-purpose machine.

Bland conceptualized that a crane can be configured like a pile driver (which does not require operator certification) but when configured as a crane, operator certification is required. The same concept applies to multi-purpose machines; they only require certified operators when performing certain tasks.

Yarbrough commented that something very similar had happened on a Caltrans jobsite: a contractor showed-up with a pile driver and wanted to convert it to lifting service to assemble another crane.

Bland summed-up that it is the configuration and not the design that determines what requirements apply. Furthermore, it doesn't require an operator until it is used.

At this point, the section 4885 definition of multi-purpose machine read as follows:

Multi-Purpose Machine. A machine, other than a crane or derrick, that is designed to be configured and used in various ways, at least one of which allows it to raise or lower by means of a hoist and horizontally move a suspended load.

Someone opined that the regulation could be skirted by not moving horizontally; however, Bland responded that if it is configured to be moved horizontally, the definition would apply regardless of whether it was stationary or not. There appeared to be a consensus.

Section 4880(a)(1)

Yarbrough noted that (a)(1) includes cranes and derricks but (c)(4) excludes digger derricks. He added that every roadside sign is placed using a digger derrick, just not the kind used for electrical work. Although there is an exception for Caltrans workers, roadside signs are often placed by contractors not subject to the Caltrans exception. He said these cranes can have more than 25 ft. stick and 15,000 lb. lifting capacity. He raised the question because he opined it would be good to clarify that the digger derrick exception does not apply to digger derricks used in construction such as those he described that are used for placing signs. A suggestion was made that this could be done by specifically including digger derricks in (a)(1) [except as excluded in (c)(8)]. However, the consensus appeared to be that this change was unnecessary.

[Ed note: (a)(1) concludes with the phrase – “side boom cranes; derricks; and variations of such equipment” – this would seem to include digger derricks used in construction].

Harkey raised a question about an earlier proposal to modify (a)(1)... “multi-purpose machines” to include “as defined in section 4885.” He felt that 4885 only defines a multi-purpose machine, but this verbiage should specify the machine configuration that brings the multi-purpose machine into the scope of these standards.

Bland agreed with Harkey and made a proposal to modify 4880(a)(1) to read:

“...multi-purpose machines when configured to raise or lower by means of a hoist...”

Bland noted that multi-purpose machines are defined in section 4885, but the scope needs to be narrowed in 4880 to when they are covered by the standards. “As defined in section 4885” will be replaced with the new text. There was consensus on this modification.

There was discussion whether, in light of changes made to 4880(a)(1), any more changes to the section 4885 definition would be needed. At this time the 4885 definition read:

“Multi-Purpose Machine. A machine, other than a crane or derrick, that is designed to be configured and used in various ways, at least one of which allows it to raise or lower by means of a hoist and horizontally move a suspended load. “

The committee reviewed this definition and the consensus was to retain it as shown above.

The committee then turned to the exceptions to the scope.

Section 4880(c)(8) Exclusion for powered industrial trucks (forklifts).

There were two proposals before the committee; one based on an OSHA Letter of Interpretation, dated 6/21/2012, and another based on OSHA CPL 02-01-057 dated 10/17/2014.

Bland proposed using the CPL version with minor modifications so that it would read:

“Powered industrial trucks (forklifts), except when configured to raise or lower by means of a hoist and horizontally move a suspended load.”

This verbiage would be consistent with the section 4885 definition for multi-purpose machine.

Section 4880(c)(8) Exclusion for come-alongs and chainfalls.

Harkey wanted to revisit the chainfall scenario discussed earlier to be sure the modification to (c)(8) wouldn't prevent ironworkers from using forklifts and multi-purpose machines as a pick-point for chainfalls to raise stairway sections. Miller opined that exclusion (c)(10) would address the chainfall scenario. Bland reviewed the section 4885 definition for "hoist" (from the "Work-in-Progress" Form 9):

"Hoist. An apparatus for raising or lowering a load by the application of a pulling force, but does not include a car or platform riding in guides. Some common types of hoists are defined as follows: ..."

Bland was concerned that this definition is too broad. Bland opined that (c)(10) should be clarified, because using a chainfall or come-along with a forklift would not be excluded from regulation as things currently stood. Furthermore, he opined that "machinery that hoists" is too broad and could lead to disputes. Upon further consideration, he suggested changing (c)(10) from "Machinery that hoists" to "Machinery or industrial trucks (forklifts)..."

Closson had concerns about leaving "machinery" in the exception (again because it is overly broad). Miller agreed and made a suggestion to replace "machinery" with "multi-purpose machines." Hornauer suggested replacing "that hoists" with "hoisting by use of a come-along or chainfall" because the concern is the act of hoisting. Bland noted that at this point the forklift is stopped and is not doing the hoisting; it is just a point of attachment for the come-along or chainfall.

At this point (c)(10) had been modified to read:

"Machinery hoisting by using a come-along or chainfall."

Review.

The subcommittee's review appeared to be complete. The Chair then reviewed the proposal and agreements as they had been recorded by the analyst to verify their accuracy. Additional modifications were made during the review process as noted below and are reflected on the attached consensus Form 9.

Section 4880(c)(2):

The Chair noted that the committee had not discussed exclusion (c)(2) although modifications had been proposed. The committee reviewed and had no comment on (c)(2) as proposed.

Section 4880(c)(10):

Closson questioned exclusion (c)(10) and whether it was intended to exclude come-alongs and chainfalls from all Group 13 requirements; for example: monorails with chain hoists? He noted that Group 13 had never excluded them before, but unless this exception is changed, they would be excluded.

The committee considered ways to correct this oversight.

Bland proposed replacing "machinery" with "multi-purpose machines or industrial trucks (forklifts)" to be more specific. Other members proposed replacing "by using" with "hoisting by use of," so the modified consensus (c)(10) read:

"Multi-purpose machines or industrial trucks (forklifts) hoisting by use of a come-along or chainfall.

This concluded the section-by-section review.

4. Economic Impact.

Economic impact of the clarifications made was not discussed at this meeting; however none are anticipated since the changes are merely clarifications of existing scope.

5. Conclusion.

Chair thanked subcommittee members for attending and assisting in the rulemaking process. He estimated that the next full committee meeting would be in March or April, and that minutes of the subcommittee meeting will be distributed before that time. The meeting adjourned at 2 pm.