



# International Union of Operating Engineers

AFFILIATED WITH THE AMERICAN FEDERATION OF LABOR AND CONGRESS OF INDUSTRIAL ORGANIZATIONS

April 10, 2013

Director Jim Maddux  
Directorate of Construction  
Occupational Safety and Health Administration  
U.S. Department of Labor  
200 Constitution Avenue, N.W., Room N-3468  
Washington, DC 20210

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Re: Crane Operator Certification - Capacity and Type

Dear Director Maddux:

The International Union of Operating Engineers (“IUOE”) appreciated the opportunity to present our views and to hear the comments of the other participants in the stakeholder meeting conducted by OSHA on April 2 and 3, 2013.

This letter follows up on the IUOE’s November 28, 2012 letter which requested clarification that an operator who is certified on a type of crane may operate all cranes of that type regardless of capacity. In the interests of timely addressing the facts adduced at the stakeholder meeting concerning “capacity and type,” the IUOE will address in a separate letter facts and legal arguments relating to OSHA’s view that certificants should be “deemed qualified” in 1926.1427(b)(2).

## **I. Comments by ANSI and Testing Organizations on Arbitrariness of Practical Testing by Capacity**

All four accredited testing organizations (also known as “certification bodies”) – the Operating Engineers Certification Program (“OECF”), the National Commission for the Certification of Crane Operators (“NCCCO”), the Crane Institute of America (“CIC”), and the National Center for Construction Education and Research (“NCCER”) - expressed the view that the degree of difficulty in operating a crane is affected by configuration, boom length, and attachments, but that capacity itself is meaningless and the selection of capacity bands is arbitrary.

The CIC and the NCCER admit that compliance with OSHA’s post-rulemaking requirement is the reason that they offer separate certifications for different capacities of the same type. Neither OSHA nor these organizations pointed to a scintilla of evidence that safety is advanced by capacity bands.

### **A. The NCCER**

Ted Blanton, who is the owner of a training company, North American Crane Bureau, which is closely affiliated with NCCER spoke on behalf of the NCCER. Mr. Blanton stated that the NCCER “put in capacity when this rule was written. We



can easily take it out.” He also stated that NCCER could not get “enough psychometric data” to figure out what is proper.

### B. The CIC

James Headley, president and owner of Crane Institute of America, a training company, and Crane Institute Certification (CIC), and Nathan Dickinson appeared on behalf of the CIC at the stakeholder meeting. Mr. Dickinson commented that CIC selected capacity bands for certifications following OSHA’s announcement concerning capacity and type at earlier stakeholder meetings, and that the CIC would not have done so if OSHA had not announced the requirement of separate certification for different capacities of the same type. He further stated that capacity may be “arbitrary”, but it is required by OSHA, and that “depending upon how this meeting [the stakeholder meeting] turns out,” CIC would “possibly” develop a “300-ton certification.” Mr. Dickinson added that “we have to draw the line somewhere.”

Mr. Headley stated that the CIC “always had in mind boom length” and luffers in creating capacity bands and that it is “harder to pass a test with long boom versus short boom.”

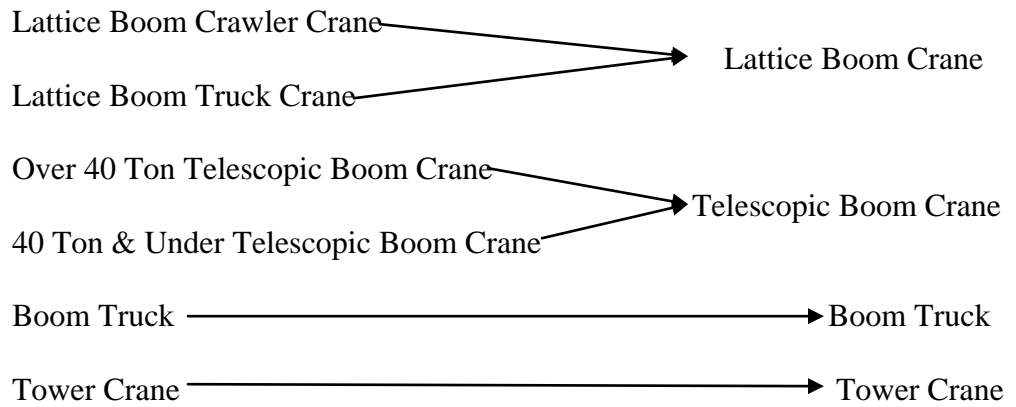
### C. The OECP

Larry Hopkins, a member of the Board of Directors of the OECP and Assistant Director of Training of IUOE Local 12 Operating Engineers Training Trust, participated on behalf of the OECP.

Mr. Hopkins stated that mastery of the skills needed to safely operate cranes is an ongoing process since cranes themselves, particularly the electronics, evolve rapidly. He opined that proper use of an “LMI,” a load moment indicator, “evolves so quickly” that testing organizations “cannot keep up with it.”

Mr. Hopkins commented that differentiating between capacities was “nothing more than a façade”; that pass rates did not “discriminate statistically” for different capacities of the same crane type; and that setting of capacity bands is “arbitrary and capricious.” According to Mr. Hopkins, it is not the “amount of weight” that a crane can lift that requires higher levels of skill “but the configurations that it can be put into.” He also stated that if the job tasks do not differ according to size, there is no need to conduct a separate test for the same tasks on the performance assessment. Mr. Hopkins stated that to obtain accreditation, there must be a level of validity for each test. He posed the question, “Where’s the study that says you need all these different tests?”

I am attaching for your information a November 28, 2006 letter from Ron Havlick, Executive Director of OECP, formerly known as the Southern California Crane & Hoisting Certification Program (“SCCHCP”), concerning “certification consolidation.” At that time, the SCCHCP provided certifications in six different categories, including categories which differentiated based on crane capacity:



As stated in Mr. Havlick’s letter, a “Job Task Analysis” was conducted by “Subject Matter Experts” to confirm the hypothesis that consolidation of “select certifications could be accomplished with no detrimental effects on the program’s ability to assess qualified minimally competent crane operators.” The SCCHCP then hired an independent, third-party statistician to conduct a statistical analysis of the test data, and the accrediting body, the National Commission for Certifying Agencies (“NCCA”), agreed that certification consolidation was appropriate.

Currently, the OECP offers certifications on crane types without regard to the crane capacity:

- Boom truck crane
- Lattice boom crane
- Telescopic boom crane
- Tower crane

As noted in Mr. Havlick’s November 28, 2006 letter, the crane capacity selected by the OECP for testing depends on “availability at any particular testing site.”

#### D. The NCCCO

NCCCO Executive Director Graham Brent commented that certification involves the testing of “fundamentals” and “no test could ever cover the multitude of crane configurations.”

Mr. Brent and former C-DAC member Bill Smith both commented that NCCCO had more tests when they first started, but at the recommendation of the accrediting agency, the NCCCO reduced the number of tests.<sup>1</sup> The accrediting agency viewed the number of tests - 12 mobile crane tests - as unnecessary if the same percentage of those tested would pass each similar test. After review by NCCCO’s psychometric consultants at the time, the number of tests was ultimately reduced to just four after they determined that further testing revealed nothing

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<sup>1</sup> While employed as IUOE Director of Safety & Training in the mid-1990’s, Mr. Smith was instrumental in the development of crane certification.

additional about the candidate's skill level and that therefore it didn't differentiate between different levels of proficiency. Mr. Smith stated that the NCCCO was creating "more tests to get the same results."

A reference to capacity was initially retained in two categories; "Small Telescopic Crane, Below 17.5 tons Capacity" and "Large Telescopic Crane, Above 17.5 tons Capacity." However, the capacity threshold of 17.5 tons was selected because it marked the point at which crane manufacturer Grove switched controls in its crane model range from fixed cab controls to swing cab controls. In other words, capacity was merely a function of the real determinant of a change in skills, namely control system. Subsequently, the NCCCO changed the name of these two categories to more accurately reflect this fact, namely Telescopic Boom Crane, Fixed Cab and Telescopic Boon Crane, Swing Cab, which is how it stands today.

#### E. ANSI

Dr. Roy Swift of the American National Standards Institute stated that there is no "data that says capacity is a factor" in assessing operator competence and that there would need to be a "national study" to "establish that for validation." According to Dr. Swift, the selection of bands was not the product of a job task analysis.

The comments of Dr. Daniel R. Winder, PhD of Course Outcomes, Inc., were consistent with the views of ANSI. Dr. Winder stated that the "practical" test is a misnomer, and that the hands-on test should be called a "performance" test because the tests do not simulate the actual functions executed on worksites.

#### F. OSHA's Statements at the Stakeholder Meeting

OSHA pointed out at all three stakeholder meetings that the CIC and NCCER allegedly offer separate certifications based upon different capacities of the same crane type apparently in support of feasibility. OSHA further stated at these meetings that it is prepared to let the "marketplace rule" in the establishment of certification standards of accredited testing organizations and that "certifying bodies will need to add new tests and certifications as needed." As stated in the IUOE's November 28, 2012 letter to you, OSHA should not permit private market forces to dictate the number of certifications required.

OSHA stated at the stakeholder meetings that "capacity and type" requirement originated with C-DAC. The three participants who are former C-DAC members, Robert Weiss, Vice President of Crane, Inc. in Queens, New York; Bill Smith, Executive Vice President, Nations Builders Insurance Company; and George R. "Chip" Pocock, C.P. Buckner Steel, strongly disputed OSHA's statement. As Bill Smith pointed out, "If C-DAC thought capacity was so important, they would have made sure capacity got included in options 2, 3 and 4."

## **II. Invalidation of Certifications**

The participants in the stakeholder meeting raised other cogent arguments which demonstrate that the record does not support imposition of capacity bands. NCCCO Executive Director Graham Brent commented that the SBREFA's cost analysis did not contemplate that 58,000 NCCCO certifications would be invalidated. Bill Smith expressed concern that the expense of obtaining new certifications would be imposed on blue collar workers if existing certifications are invalidated. He further stated that operators would be unable to obtain work if the capacity and type of their certifications did not enable them to legally perform available work.

## **III. Commentary on the Operation of High "Capacity" Cranes**

There was no disagreement among the participants that certification bodies conduct performance exams test with only a light load on the hook, using a single part line which dramatically reduces the "maximum rated capacity" of the crane advertised by the manufacturer. The overwhelming majority of participants expressed the view that performing the same practical tests with a larger capacity crane will not assess the skill of the operator with greater reliability. Here is a representative sampling of the views of the participants:

- Barry Cole of Preferred Safety Consulting stated that it does not matter "a bit about size. A 25 ton friction rig is a lot more challenging to operate than a 300 ton hydro."
- Randy Stemp of Lampson International: "Tonnage doesn't imply greater skill; it's the control system that determines skill."
- Bob Berry of Sims Crane & Equipment stated that, in considering a crane's capacity, one cannot "just look at what is written on the side of the crane" because capacity changes depending on what is on the boom. Mr. Berry posed the question: "A 1,000 ton crane becomes a 3.5 ton crane when lifting on one part of line, so what capacity are you talking about?"
- George R. "Chip" Pocock, C.P. Buckner Steel, appeared on behalf of Associated General Contractors of America ("AGC") and stated that the AGC cannot support "banding" or "disenfranchisement of crane operators" and that "capacity has to be eliminated."
- Dan Reda, of IUOE Local 150's training program, which is one of the largest training programs in the country, stated that greater capacity alone does not make a test more difficult, but use of higher capacity cranes makes administration of practical tests more costly. He noted, in particular, the costs of transporting high capacity cranes to testing sites.

Finally, in closing, the testimony of Donald Frantz, former Regional Coordinator for the Cygnet Training Center for the Ohio Operating Engineers Apprenticeship Fund at the March 17, 2009 hearing held during the rulemaking, sums up the limitations on practical testing (Tr. at 249):

[T]here are practical limitations on the types of functions which even a high quality exam can test. There are no practical exams to test a crane operator's ability to respond to weather conditions, including variable wind speeds, rain, or snow, the crane operator's ability to recognize when ground conditions are not firm, drained, and graded, and a crane operator's ability to handle the mobile equipment coordination such as operation of a crane within a working radius of another crane or derrick.

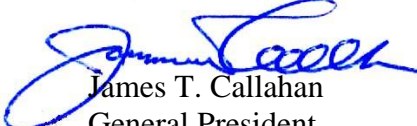
Furthermore, it is not feasible to test an operator on the following crane operator functions and at the same time retain an objective and uniform standard as part of the practical exam -- crane assembly and disassembly, crane set up, operation of a crane with a variety of attachments and boom configurations, and crane inspection.

An examination of a crane operator's ability to perform these functions cannot be standardized and consistently administered to applicants. While a certified examiner could observe an applicant assemble or disassemble a crane, the performance evaluation would be subjective.

Based on the commentary from a broad spectrum of industry experts at the stakeholder meeting and the IUOE's November 28, 2012 letter, we respectfully request expeditious resolution of the capacity and type issue due to the great adverse impact that OSHA's current interpretation will have on the crane industry in general and individual operators.

Thank you for taking the time to conduct the stakeholder meeting. The IUOE is available to provide further commentary on any aspect of the crane standards.

Sincerely,

  
James T. Callahan  
General President

JTC:as

cc: Seth Harris, Acting Secretary of Labor  
M. Patricia Smith, Solicitor of Labor  
Business Managers, IUOE Local Unions





## Southern California Crane & Hoisting Certification Program

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November 28, 2006

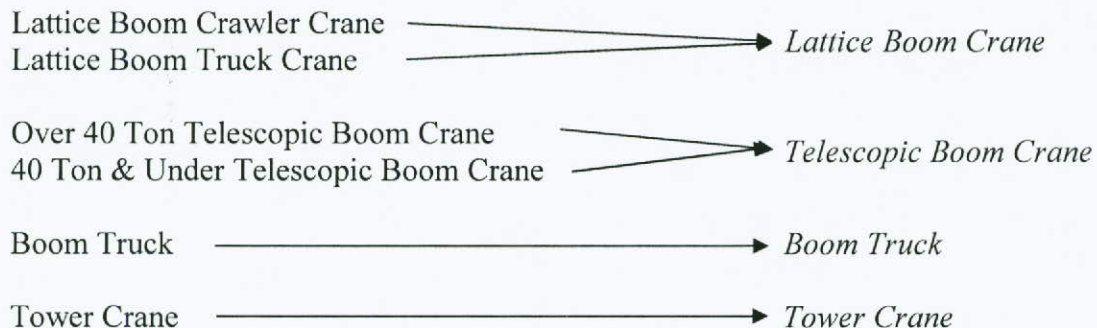
Mr. Lawrence J. Fabrey, Ph.D  
Chairman  
National Commission for Certifying Agencies  
2025 M Street, NW, Suite 800  
Washington, DC 20036-3309

### Re: Certification Consolidation

Dear Mr. Fabrey:

1. Overview. As per our short discussion at the recent NOCA Conference, I am writing in regards to our desire at the Southern California Crane & Hoisting Certification Program (SCCHCP) to consolidate several of our certifications. As you know, the SCCHCP provides certifications to crane operators. These certifications are required by existing state statute in the areas in which we operate, including California--and commencing in January 1, 2007--the state of Nevada as well.

Currently, the SCCHCP provides certifications in six (6) different crane categories (as shown below on the left-hand side). Our consolidation would result in those four (4) crane certification categories as shown on the right-hand side (*in italics*).



Note: Pictures of these crane types are provided as a bookmark.

2. Background. The current requirements for becoming certified through the SCCHCP are fully explained in our Candidate Manual (see bookmarks). Presently, a variety of both written and practical (hands-on) examinations are compulsory for eligible candidates to successfully complete the certification process. As we have gained further testing experience, we have come to the conclusion that many of our test items are universal across crane types. Certainly this includes



## Southern California Crane & Hoisting Certification Program

the Fundamentals Examination--a 75 multiple-choice question written examination that is mandatory for all current certifications (excluding Tower Cranes)--but we've also found many of the test items that have, and continue to be developed, for our specialty examinations (those written examinations specific to a particular crane-type) are extremely similar across examinations as well. Additionally, many of our certificants have certified in nearly all those crane-types that could be classified as "mobile." Hence, one certification covering all of these types would better fit our candidate population.

3. Job Task Analysis. Recently, a Job Task Analysis (JTA) study conducted by a Subject Matter Expert (SME) group confirmed the hypothesis that consolidation of select certifications could be accomplished with no detrimental effects on the program's ability to assess qualified minimally competent crane operators. This JTA is currently at the statistical analysis stage . . . domains that were developed by the SME's and mailed to all the program's certified operators for review and ranking are now being analyzed by an independent, third-party, statistics consultant. Results will be available in early December.

4. Proposed Examinations. If consolidation was to happen, the assessment tools used for determining qualifications would be as shown below. Note: The current Fundamentals Examination and all current specific crane-type specialty written examinations will be eliminated with the exception of the tower crane specialty examination. The tower crane specialty examination will remain in its present form.

<b>Certification</b>	<b>Written Examination</b>	<b>Practical Examination</b>
Lattice Boom Crane	75 multiple-choice question written examination to be designated as <i>Mobile Crane Written Examination</i> .	Exact to that currently required for Lattice Boom Crawler Crane <u>or</u> Lattice Boom Truck Crane (depending on crane-type availability at any particular testing site).
Telescoping Boom Crane	Same written examination as for Lattice Boom Crane, i.e., <i>Mobile Crane Written Examination</i> .	Exact to that currently required for Over 40 Ton Telescoping Boom Crane <u>or</u> 40 Ton & Under Telescoping Boom Crane (depending on crane-type availability at any particular testing site).
Boom Truck	Same written examination as for Lattice Boom Crane, i.e., <i>Mobile Crane Written Examination</i> .	Exact to that currently required for Boom Truck.
Tower Crane	Exact to that currently required for Tower Crane.	Exact to that currently required for Tower Crane.





## Southern California Crane & Hoisting Certification Program

5. Next Steps. Our process for consolidation--if approved by the NCCA--would be as follows:

- Obtain the completed statistical review of domains from consultant.
- Develop a test blueprint (to include cut score development) for a *Mobile Crane Written Examination*.
- Obtain the program's Governing Committee approval of the test blueprint.
- Using the test blueprint and existing  $\alpha$  and  $\beta$  tested item bank questions, compose the *Mobile Crane Written Examination*.
- Revise the Candidate Manual and other applicable program instructions to reflect the new certifications. Note: Current certificants will recertify to the new certifications when their recertifications are due.
- Commence use of all new examinations for both certification and recertification.
- Report all process changes and examination results as required in the next NCCA Annual Report.

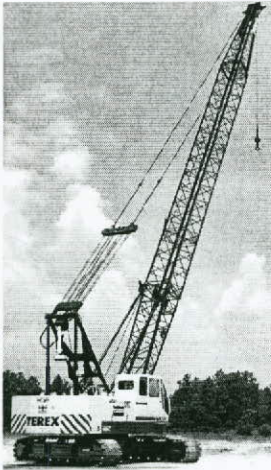
6. Conclusion. It is greatly hoped that the NCCA will approve this consolidation and the process we have proposed to enact it. With our program soon to be conducting our first recertification examinations (February 2007), it is requested that a decision and/or direction by the NCCA be forthcoming in the very near future.

Sincerely,

R. G. Havlick



## Crane-Types



**Lattice Boom Crawler Crane**



**Lattice Boom Truck Crane**



**Over 40 Ton Telescoping Boom Crane**



**40 Ton & Under Telescoping Boom Crane**



**Boom Truck**



**Tower Crane**