

OSHA Requires Operator Evaluation

This is the third article covering OSHA's three steps to operator qualification. The first, "OSHA Takes Training to a Higher Level," (*Crane Hot Line*, June 2019, page 12) covers OSHA's expansion of operator training.

The second article, "Misunderstanding Crane Operator Certification," (*Crane Hot Line*, July 2019, page 12) covers unreasonable expectations regarding operator certification.

This article, like the previous two, is intended to help employers comply with the OSHA rule and to enhance crane safety, which is always the goal.

Evaluating a crane operator is much like inspecting a crane, except that it's the operator who is being inspected.

Operator evaluation is just as important as crane inspection. It must be taken seriously.

I can't stress enough how big an issue proper evaluation will likely become, particularly in OSHA citations and civil litigation! Sadly, many employers don't even know operator evaluation is required.

Connection Between Certification and Evaluation

What makes a crane operator qualified? OSHA requires three steps: training, certification, evaluation.

OSHA's standard reads: "through an evaluation, the employer must ensure that each operator is qualified by *demonstration of: The skills, knowledge and ability to recognize and avert risk necessary to operate the equipment safely...*" 1427(f)(1)(i).

To understand why OSHA added operator evaluation to the standard and how to conduct an evaluation, requires a little history.

OSHA's 1926.550 Cranes and Derricks standard was originally published in 1979.

A revised version took effect on Nov. 10, 2010 — except for section 1427, which covered crane operator certification.

The effective date of that section was extended by four years, to Nov. 10, 2014, so accredited testing organizations had time to develop programs and to give operators and employers time to prepare for certification.

During those four years, OSHA expected employers to continue ensuring their operators were competent and to provide training when necessary. The standard said: "*The employer must ensure that operators of equipment covered by this standard are competent to operate the equipment safely... The employer must ensure that each operator is evaluated to confirm that he/she understands the information provided in the training.*" 1427(K)(2)(i)(ii)

During the revised standard's four-year phase-in, OSHA began to hear from stakeholders who were surprised that once the new certification requirements took effect on Nov. 10, 2014, employers would no longer be responsible for ensuring that operators were competent. The standard said: "*an operator will be deemed qualified to operate a piece of equipment if the operator is certified under paragraph (b) of this section for that type and capacity of equipment or for higher-capacity equipment of that type.*" 1427(b)(2)

Commenters told OSHA that simply certifying an operator would not ensure safe crane operation. In their eyes, a standardized certification test was more akin to a learner's permit. It couldn't replicate all the conditions



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an operator must safely navigate on a jobsite.

Stakeholders reasoned that employers should play a direct role in ensuring that their operators were competent, since employers usually know information that can help ensure their operators have the skills, knowledge, and judgment to run a specific crane safely.

Furor Over Capacity

During the four-year phase-in period, OSHA also heard complaints about certifying operators by crane type and capacity.

Commenters argued that "and capacity" should be taken out of the standard, and operators should be certified only by equipment type.

Those comments came years after OSHA originally had published its proposed revised rule in October 2008, had had 350 comments, and had held a public hearing in March 2009. No commenters or participants in the 2009 public hearing had asked OSHA to remove the requirement that operators be certified both by

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equipment type and capacity. After the 2009 public hearing, certification by type and capacity was approved by the Cranes and Derricks Advisory Committee (C-DAC) and set to go into effect in 2014.

It's interesting that some people who later wanted to remove the capacity requirement as part of operator certification were the very ones recommending it as members of C-DAC.

Why, after all those years, did certifying operators by crane type and capacity suddenly become an issue?

The reason: Two of the four testing organizations issued certifications just by crane type, not by crane type *and* capacity, as the revised standard was to require.

They realized the approximately 100,000 operator certifications they had issued would not be legal once the phase-in period ended in 2014. (OSHA once again extended the date for operator certification to take effect by four more years. It became effective Nov. 10, 2018.)

Reason for Evaluation

OSHA realized that the rule, as written, would make certification the key factor in determining whether a crane operator was qualified.

That would mean the testing agencies issuing the certifications — not the employer — would be responsible for operator competence.

Since OSHA always wants the employer to be responsible for safety, it knew the rule needed to be modified.

That made two powerful entities who needed the standard changed: the two testing organizations that didn't want operator certification by type and capacity, and OSHA, who wanted the employer held responsible for ensuring operator competency.

OSHA's concern was legitimate. The issue of certification equaling qualification had to be changed. The other group was just trying to get out of the hole they had dug.

Both OSHA and the type-only testers got what they wanted: a special meeting, held from March 31 to April 1, 2015, before the Advisory Committee for Construction Safety

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and Health (ACCSH). There, OSHA presented a draft proposal for changing crane operator requirements.

Special Meeting

Although rumors about OSHA requiring employers to evaluate their crane operators had been hanging in the air, the first time most of us saw specifics was the draft proposal OSHA presented at the meeting in March of 2015. In addition to employer evaluation, the draft indicated that OSHA wanted to expand operator training requirements and deal with the issue of certification by type and capacity. (Both issues are covered in the previous two articles.)

During the meeting, expansion of training drew little interest. Participants discussed whether trainers would need an operator certification and who would monitor an operator-in-training. Interest in an operator evaluation focused on who would conduct the evaluation, how often was it to occur, and what areas was it going to cover.

At the time, we didn't know the real reason behind the push to add an employer evaluation and how big an issue evaluation would become.

Importance of Certification

To its credit, OSHA understood that certification doesn't indicate that an operator is qualified to operate a particular crane performing a specific job. Certification does, however, provide an objective baseline of knowledge and skill by which a crane operator is measured.

Having a baseline of knowledge and skill is a must, particularly for operators just starting out.

That's why Crane Institute Certification (CIC) issues certifications based both on the type of crane and its capacity range.

Certifying an operator by both the type of crane and its capacity requires more written exams and a practical exam that uses a longer boom. Certification by type and capacity raises the baseline and brings operators closer to meeting evaluation criteria.

Passing a practical exam gets an operator started, but essentially expires once the operator begins operating cranes in the workplace. That's when the employer's evaluation process begins. Evaluation makes gaining practical experience vital to operating a crane safely.

An operator gets experience in the seat, one day at a time, one lift at a time. To get that experience an operator must have a good foundation to build on.

Certification and good training form that solid foundation. It's much like learning to play golf. If one does not first learn the fundamentals of the swing, one will face constant frustration over one bad shot after another.

After several extensions, OSHA's requirement for employers to evaluate crane operators took effect on April 15, 2019. If conducted properly, the evaluations should sharply reduce crane accidents.

Before getting into the specifics of operator evaluation, a few things need clarifying.

Clarifications

First, in 1427, OSHA uses "equipment" and "cranes" interchangeably to refer to cranes, derricks, and other equipment covered under 1926 Subpart CC.

Evaluators must know their limitations.

Therefore, an operator evaluation must be conducted on all equipment covered by the standard. However, operators of derricks, sideboom cranes, and equipment with a lifting capacity of 2,000 lbs. or less are exempt.

Second, evaluations are intended to focus directly on the operator's ability to safely perform specific tasks while operating specific equipment in specific conditions.

Third, whenever an individual is receiving formal, practical instruction or being evaluated, he or she is considered an operator in training and must be monitored continuously onsite by a trainer while operating the equipment.

An operator cannot move out of this status until successfully completing an evaluation.

Fourth, OSHA says: *"employers may only assign tasks within the operator-in-training's ability... The operator-in-training shall not operate the equipment in any of the following circumstances unless certified. (b)(3)(i-v)*

- (i) *If any part of the equipment load line, load, (including rigging or accessories), if operated up to the equipment's maximum working radius in the work zone... could get within 20 feet of a power line that is up to 350 KV, or within 50 feet of a power line over 350 KV.*
- (ii) *If the equipment is used to hoist personnel.*
- (iii) *In multiple-equipment lifts.*
- (iv) *If the equipment is used over a shaft, cofferdam, or in a tank farm.*
- (v) *In multiple-lift rigging operations, except where the operator's trainer determines that the operator-in-training's skill are sufficient for this high skill work...."*

Fifth, the individual monitoring the operator-in-training must meet the following requirements.

"(A) The operator's trainer is an employee or agent of the operator-in-training's employer.

(B) The operator's trainer has the knowledge, training, and experience necessary to direct the operator-in-training on the equipment in use."

*See 1926 Sub-part CC for more information on monitoring operators-in-training.

Who Can Evaluate?

Individuals conducting crane operator evaluations are perhaps the most important part of these assessments. At the Crane Institute of America, questions regarding who can perform evaluations are the most frequently asked in the Employer Crane Operator Evaluator program.

OSHA's answer: *"The evaluation... must be conducted by an individual who has the knowledge, training, and experience necessary to assess equipment operators" (f)(4) "and meet the definition of a trainer."* (see above) This person may be the most important aspect of an evaluation.

OSHA also says: *"The evaluator must be an employee or agent of the employer. Employers that assign evaluations to an agent retain the duty to ensure that the requirements in paragraph (f) are satisfied. Once the evaluation is completed successfully, the employer may allow the operator to operate other equipment that the employer can demonstrate does not require substantially different skills, knowledge, or ability to recognize and avert risk to operate."* (f)(5)

However, no individual knows everything about every crane and the tasks it will perform. Everyone has limitations. Knowing this is one of the best assets an evaluator can have. Know when to say, "No, I don't have the knowledge, training, or experience to evaluate the operator on that equipment."

For example, I've been involved

with cranes all my working life, first as a trainee and operator, then as a trainer, inspector, accident investigator, and expert witness. However, there is a lot about certain cranes or the work they perform where I'm not knowledgeable or familiar.

Also, it's been a long time since I've driven pilings, run a dragline, or hung iron with a friction crane. I wouldn't feel comfortable evaluating operators in scenarios like those without boning up first. Just think of how cranes from past and present are equipped differently — from computer systems to controls, safety, operational devices, and more.

So, evaluators must know their limitations. Is there something specific about the crane, its operation, the work it's to perform, or the site that's unfamiliar? Is there something intrinsic to safety that would require that an evaluator have specific knowledge or experience? If so, involve someone who does. Sometimes it may take more than one person to conduct an evaluation. It could require an evaluator who has operated the equipment. There are certain things about the operation of a crane that only an operator will know.

Evaluation

An evaluation is not required for every conceivable difference in the equipment or tasks.

An evaluation is only needed when substantive differences would require new skills, knowledge, or abilities than the operator has already demonstrated during previous evaluations.

Documentation – "The employer must document the completion of the evaluation. This document must provide: the operator's name; the evaluator's name and signature; the date; and the make, model, and configuration of equipment used in the evaluation. The employer must make the document available at the worksite while the operator is employed by the employer." (F)(6)

Evaluations can be recorded on paper or stored electronically. However, they are not transferable from one employer to another. If an operator changes employer, the new

employer must begin the evaluation process anew.

Before the evaluation - Make sure the operator has been trained in accordance with OSHA's requirements. Record whether the operator is certified and by whom, if applicable. If needed, review the operator's manual and other information pertinent to the crane, and make sure load charts, including notes, are fully understood. Finally, don't proceed with the evaluation unless the operator is physically qualified.

During the evaluation - The evaluator can test the operator's knowledge by asking specific questions pertinent to the crane. Demonstrations are good ways for an operator to show skills

and abilities regarding specific aspects of the crane.

When tasks are performed, make sure the load is controlled. An uncontrolled load is unsafe and a sure sign the operator needs additional training. The evaluation must be stopped if the equipment is operated erratically or the task is performed unsafely. A smooth operator is a safe operator.

Although not all-inclusive, here are some examples provided by OSHA that require an operator to have, "the skills, knowledge, as well as the ability to recognize and avert risk, necessary to operate the equipment safely." (f)(1)(i) (Special attention should be paid to these during the evaluation.)

Crane Specifics - "safety devices, operational aids, software, and the size and configuration of the equipment. Size and configuration include, but is not limited to, lifting capacity, boom length, attachments, luffing jib, and counterweight set-up." (f)(1)(i)

Tasks Specifics - "... the hoisting activities required for assigned work, including, if applicable, blind lifts, personnel hoisting, and multi-crane lifts." (f)(1)(ii)

Re-training - "The employer must provide retraining in relevant topics for each operator when, based on the performance of the operator or an evidence of the operator's knowledge, there is an indication that retraining is necessary." (b)(5) When an employee is required to provide an operator with retraining under (b)(5)... the employer must re-evaluate the operator with respect to the subject of the retraining." (f)(7)

So, there you have it, from beginning to end. Crane Operator Evaluation, the third step in qualifying crane operators. ■

If an operator changes employer, the new employer must begin the evaluation process anew.

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