

Memorandum

Date: October 11, 2023

To: Autumn Gonzalez, Chief Counsel
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Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
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From: Eric Berg, Deputy Chief
Jason Denning, Principal Safety Engineer
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Division of Occupational Safety and Health

Subject: Evaluation of Petition No. 598 to amend title 8 sections 5006.1 and 5006.2 regarding crane operator re-certification.

1.0 INTRODUCTION

On August 2, 2023 the Division of Occupational Safety and Health (Cal/OSHA) received a petition from Thom Sicklesteel (Petitioner), representing the National Commission for the Certification of Crane Operators (NCCCO). NCCCO is a non-profit organization formed in 1995 that develops performance standards for crane operators.

The petitioner is requesting a change to title 8 subsections 5006.1(d) and 5006.2(d)(3). These subsections address re-certification requirements for crane operators.

Labor Code Section 142.2 permits interested persons to propose new or revised standards concerning occupational safety and health, and requires the Occupational Safety and Health Standards Board (Standards Board) to consider such proposals. California Labor Code section 147 requires the Standards Board to refer to Cal/OSHA for evaluation any proposed occupational safety and health standard.

2.0 PETITIONER'S PROPOSAL AND BASIS FOR AMENDMENT OF TITLE 8 REGULATIONS

The petition pertains to title 8 sections 5006.1 and 5006.2. These sections require crane operators to have a certificate of competency (certificate) from an accredited certifying entity. An accredited certifying entity is a crane operator testing organization approved by a nationally recognized accrediting agency such as the American National Standards Institute (ANSI). The petitioner, NCCCO, is an accredited certifying entity.

Section 5006.1 is intended to apply to general industry only and section 5006.2 is intended to apply to the construction industry only. Both regulations contain similar requirements for obtaining a crane operator certificate.

The petitioner proposes to amend certain requirements for crane operators to be re-certified every five years in subsections 5006.1(d) and 5006.2(d)(3). For re-certification, these subsections require crane

operators to pass a physical examination, a substance abuse test, a written examination, and a practical/hands-on examination for crane operators.

The petitioner's proposal is specific to the practical/hands-on examination for re-certification of crane operators. Subsections 5006.1(d) and 5006.2(d)(3) exempt crane operators from taking the practical/hands-on examination if an operator has at least 1000 hours of operating experience with the type of crane for which certification is sought within the previous five-year certification period.

The petitioner proposes to remove the 1000 hours of experience requirement to qualify for an exemption. In lieu of the experience requirement, the petitioner proposes to permit accredited certifying entities, such as NCCCO, to use their expertise and judgement to determine if an operator has sufficient experience to be exempt from the practical/hands-on examination.

The petitioner also proposes to eliminate the requirement that only experience specific to the type of crane for which re-certification is sought can be considered. The petitioner proposes to allow operator-experience based on operating a variety of cranes to be considered when determining if an operator should be exempt from the practical/hands on examination.

The petitioner asserts the requirement for 1000 hours of experience for crane operators to be exempt from the practical/hands-on examination for their recertification is not reasonable for four reasons:

- There is no information in the rulemaking record to establish the soundness of 1000 hours as a threshold for exemption.
- Crane operators spend "...many hours on a job site waiting for instructions instead of actually operating the equipment."
- Crane operators who hold multiple certifications are burdened with having to gain 1000 hours of experience for each type of crane for which each certificate is sought.
- General industry crane operators, such as municipal utility workers, who operate cranes infrequently have difficulty accumulating 1000 hours of experience.

The petitioner asserts existing recertification requirements may cause a burden on stakeholders in the following ways:

- The 1000 hours of documented experience will result in operators not being exempt and having to take the practical/hands-on exam. The process of taking the practical/hands-on exam is a financial burden to both employers and the operators.
- The burdensome recertification requirements may indirectly cause a shortage in the industry of certified crane operators, especially for less common types of equipment.

The petitioner asserts that federal OSHA does not require a practical/hands-on exemption based on a 2012 Federal OSHA letter of interpretation describing when the practical/hands-on examination can be exempted in the following statement:

...when a nationally recognized accrediting agency determines that a requisite number of equipment-operation hours are sufficient for verifying an individual's operating skills, no practical exam would be needed for recertification purposes...

3.0 APPLICABLE TITLE 8 REGULATIONS

Title 8 sections 5006.1 and 5006.2 requirements for the re-certification of crane operators are the following:

General Industry Safety Orders
Group 13. Cranes and Other Hoisting Equipment
Article 98. Operating Rules

§5006.1. Mobile Crane and Tower Crane -- Operator Qualifications and Certification (Applicable to Cranes in General Industry Only).

(a) Qualifications. The employer shall only permit operators who have a valid certificate of competency (certificate) issued in accordance with this section by an Accredited Certifying Entity for the type of crane to be used to operate a crane covered by this section. Certificates shall be issued to operators who:

* * * * *

(4) Pass a "hands-on" examination to demonstrate proficiency in operating the specific type of crane, which at a minimum shall include pre-start and post-start inspection, maneuvering skills, shutdown, and securing procedures.

* * * * *

(d) Re-certification. Crane operators shall re-certify every five (5) years and shall be required to meet all of the qualifications set forth in subsection (a). Operators with at least one-thousand (1,000) hours of documented experience operating the specific type of crane for which re-certification is sought as covered by this section during the immediately preceding certification period and who meet the physical examination, substance abuse, and written examination requirements set forth in subsections (a)(1), (a)(2) and (a)(3) of this section shall not be required to take the practical/hands-on examination specified in subsection (a)(4) to re-certify.

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§5006.2. Operator Training, Certification, and Evaluation for Cranes and Derricks in Construction.

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(d) Option (1): Certification by an accredited crane operator certifying entity.

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(3) Re-certification. Crane operators shall re-certify every five (5) years and shall be required to meet all of the qualifications set forth in subsection (d)(1). Operators with at least one-thousand (1,000) hours of documented experience operating the specific type of crane for which re-certification is sought as covered by this section during the immediately preceding certification period and who meet the physical examination, substance abuse, and written examination requirements set forth in subsection (g)(1)-(g)(3) shall not be required to take the practical/hands-on examination specified in subsection (g)(4) to re-certify.

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(g) Certification criteria. The employer shall only permit operators who have a valid certificate of competency (certificate) issued in accordance with this section by an Accredited Certifying Entity for the type of crane to be used to operate a crane covered by this Group 13. Certificates shall be issued to operators who:

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- (4) Pass a “hands-on” examination to demonstrate proficiency in operating the specific type of crane, which at a minimum shall include the following:
- (A) Ability to recognize, from visual and auditory observation, the items listed in Section 5031 (shift inspection).
 - (B) Operational and maneuvering skills.
 - (C) Application of load chart information.
 - (D) Application of safe shut-down and securing procedures.

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4.0 APPLICABLE FEDERAL OSHA REGULATIONS

Federal OSHA does not require certification of crane operators in general industry.

In construction, federal OSHA addresses the requirements for the training, certification, and evaluation of crane and derrick operators in Title 29 Code of Federal Regulations (CFR) section 1926.1427:

Safety and Health Regulations for Construction

1926 Subpart CC

Cranes and Derricks in Construction

§1926.1427 Operator training, certification, and evaluation.

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1926.1427(d)(1)(iv)

Have testing procedures for re-certification designed to ensure that the operator continues to meet the technical knowledge and skills requirements in paragraphs (j)(1) and (2) of this section.

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1926.1427(j)(1)

A determination through a written test that:

1926.1427(j)(1)(i)

The individual knows the information necessary for safe operation of the specific type of equipment the individual will operate, including all of the following:

1926.1427(j)(1)(i)(A)

The controls and operational/performance characteristics.

1926.1427(j)(1)(i)(B)

Use of, and the ability to calculate (manually or with a calculator), load/capacity information on a variety of configurations of the equipment.

1926.1427(j)(1)(i)(C)

Procedures for preventing and responding to power line contact.

1926.1427(j)(1)(i)(D)

Technical knowledge of the subject matter criteria listed in appendix C of this subpart applicable to the specific type of equipment the individual will operate. Use of the appendix C criteria meets the requirements of this provision.

1926.1427(j)(1)(i)(E)

Technical knowledge applicable to the suitability of the supporting ground and surface to handle expected loads, site hazards, and site access.

1926.1427(j)(1)(i)(F)

This subpart, including applicable incorporated materials.

1926.1427(j)(1)(ii)

The individual is able to read and locate relevant information in the equipment manual and other materials containing information referred to in paragraph (j)(1)(i) of this section.

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1926.1427(j)(2)

A determination through a practical test that the individual has the skills necessary for safe operation of the equipment, including the following:

1926.1427(j)(2)(i)

Ability to recognize, from visual and auditory observation, the items listed in §1926.1412(d) (shift inspection).

1926.1427(j)(2)(ii)

Operational and maneuvering skills.

1926.1427(j)(2)(iii)

Application of load chart information.

1926.1427(j)(2)(iv)

Application of safe shut-down and securing procedures.

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5.0 APPLICABLE CONSENSUS STANDARDS

ASME B30.5 Mobile and Locomotive Cranes is a consensus standard by the American Society of Mechanical Engineers. ASME B30.5-2000 is specifically referenced in sections 5006.1 and 5006.2. The most recent version is ASME B30.5-2021. ASME B30.5 are the origins of section 5006.1 crane operator qualifications for certification. These qualifications from ASME B30.5 include requirements for physical health soundness, substance abuse screening, written examination, and a practical/hands-on examination. ASME B30.5 does not specify the time interval or experience requirements for recertification.

ISO/IEC17024-2012 Conformity Assessment-General Requirements for Bodies Operating Certification of Persons is a consensus standard, which organizations such as NCCCO use to be an accredited certifying entity. ISO/IEC17024-2012 does not cover requirements for recertification of crane operators.

6.0 Cal/OSHA ANALYSIS

6.1 Basis for 1000-hours experience in each crane type

The petitioner's assertion that 1000 hours of experience has no basis in the rulemaking record is not correct. The 1000-hour experience over a five-year period threshold was derived through consensus by an advisory committee in the December 2002 Rulemaking¹ when section 5006.1 was adopted into title 8. The advisory committee, including NCCCO members, testified that through its experience, 1000 hours provided the operator with sufficient time to maintain crane operating proficiency.

The petitioner asserts crane operators spend many hours on a job site waiting for instructions instead of actually operating the equipment. Title 8 does not define or provide guidance when hours of crane operation count towards the 1000 hours of experience. In general, it is reasonable to count operational hours when an operator is at the control seat of a powered crane. Cal/OSHA interviewed a stakeholder who commented that a crane operator will be sent home if the crane is not being used at the jobsite. Certain crane models automatically log hours of crane-operation facilitating documentation for the operator. Although documentation of operational hours by the operator is through an honor system, it is

¹ December 2002 Rulemaking, Crane Operator and Certification, page 36 of 922

the responsibility of the accredited certifying entity to verify 1000 hours of experience prior to exempting an operator from the practical/hands-on exam.

The petitioner asserts crane operators who hold multiple certificates are burdened with having to gain 1000 hours of experience for each type of crane. From 1994 through the current 2021 version, ASME B30.5 has maintained crane operators must qualify on a specific type of crane. California's requirement to obtain experience for each type of crane were adopted from ASME B30.5 to ensure operators who hold a certificate for a crane type have a minimum proficiency to operate it safely. Individuals who choose to be certified in multiple crane types must either accumulate 1000 hours of experience for each type or take the practical/hands-on examination to prove minimum proficiency for each crane type during recertification. Obtaining 1000 hours of experience for multiple crane types may be burdensome but it provides a metric for operator competency and ultimately leads to a safer workplace.

The petitioner asserts general industry crane operators, such as municipal utility workers, who operate cranes infrequently have difficulty accumulating 1000 hours of experience, thus not meeting exemption of having to take the practical/hands-on exam. It appears section 5006.1(d) and 5006.2(d)(3) are functioning as intended. Operators who lack experience in operating cranes must take the practical/hands-on examination to show proficiency before receiving recertification.

6.2 Financial burden of practical/hands-on examination

Cal/OSHA inquired with stakeholders to determine the assertions of the existing recertification process as being a financial burden. According to a stakeholder interviewed by Cal/OSHA, the practical/hands-on examination is indeed a financial burden to both employers and operators. During practical/hands-on examination, the operators must take time off from work and spend time and money to recertify. Based on information provided by stakeholders, the practical/hands-on examination portion can double the cost of recertification.

Cal/OSHA interviewed two stakeholders who provided the cost to recertify for labor union crane operators. One stakeholder's total cost in 2023 to recertify were \$773. The cost without having to take the practical/hands-on exam was \$360. A second stakeholder's total cost of the examination plus practical/hands-on exam is \$315. The second stakeholder said it cost \$225 to take the exam without the practical/hands-on exam. Thus, the cost to maintain a crane operator certification is comparable to the cost of maintaining specialty certifications in other professions.

However, employees should not be paying for certification. Title 8 section 5006.2 requires the employer to pay for all costs of certification or licensure of crane operators and that none of the costs can be passed on to employees:

§5006.2 Operator Training, Certification, and Evaluation for Cranes and Derricks in Construction.

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(c) Operator certification and licensing..

(1) Whenever operator certification or licensure is required under this section, the employer shall provide the certification or licensure at no cost to employees.

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In addition, California Labor Code section 2802 requires the employer to reimburse employees for any costs related to employment, which would include crane operator certification.

Labor Code §2802. Indemnification of employee for expenditures or loses in discharge of duties or obedience to directions...

(a) An employer shall indemnify his or her employee for all necessary expenditures or losses incurred by the employee in direct consequence of the discharge of his or her duties, or of his or her obedience to the directions of the employer, even though unlawful, unless the employee, at the time of obeying the directions, believed them to be unlawful.

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6.3 Alternative to 1000-hour experience requirement in each crane type

The petitioner did not offer any criteria as an alternative to gaining 1000 hours of operating experience. The petitioner asserts accredited certifying entities, such as NCCCO, have the expertise to determine operating-experience instead of a quantitative accumulated hours threshold.

The lack of criteria may result in each accredited certifying entity creating their own individual subjective criteria for operator experience resulting in varying degrees of difficulty to be exempt from having to take the practical/hands-on examination for recertification. Additionally, certifying entities could potentially charge additional fees for assessment of operating-experience resulting in additional costs to recertification. Cal/OSHA believes the lack of a consistent objective criteria for experience decreases worker safety.

The petitioner also did not offer any criteria as an alternative to operators gaining experience on a specific crane type. The petitioner suggests certifying entities, such as NCCCO, will determine “overall” operator experience gained from operating a variety of cranes and then determine if the operator is exempt from the practical/hands-on examination. This type of evaluation is subjective and difficult to audit or to be held accountable.

As previously stated in part 6.1 of this evaluation, ASME B30.5 requires crane operators to qualify based on a specific type of crane. Section 5006.1(d) and 5006.2(d)(3) requirements aim to ensure crane operators who hold a certificate for a crane type have the proficiency to operate it safely. Basing operator experience on a certifying entity’s subjective decision decreases worker safety.

7.0 CONCLUSION

Cal/OSHA recommends that petition 598 be DENIED.

cc: Jeff Killip, Cal/OSHA Chief