

# 20 FACTS

## ABOUT CRANE OPERATOR CERTIFICATION

1. **Twenty one (21)** of the twenty three (23) **CDAC members supported operator certification** as outlined in the final consensus document submitted to OSHA in August 2004.
2. The CDAC consensus document was **unanimously approved** by OSHA's Advisory Committee on Construction Safety and Health (ACCSH).
3. Much of the industry that uses cranes (steel erection, petrochemical, crane rental, construction) already certifies their operators. For example, NCCCO is **endorsed or recognized by nine (9) industry management and labor associations** including AGC, International Union of Operating Engineers and the Steel Erectors Association of America. A comprehensive industry study published in June 2008<sup>1</sup> recommends certification not just for crane operators, but also for signalpersons, riggers and inspectors.
4. Some employers are reluctant to test their employees for fear their **lack of training** will result in their failing tests. In many cases a stated opposition to certification masks an opposition to **training**. A federal requirement would bring those **employers who are reluctant to train** and test their employees into line with industry standards.
5. **Six (6) states have enacted crane operator certification requirements** in the four years since the CDAC report was completed<sup>2</sup>. At least six (6) more states and two (2) cities have introduced legislation or are in the process of drafting it.
6. Nationwide mandatory crane operator certification is coming. The only remaining question is: Will this be a state-by-state (city-by-city, county-by-county) process, or a **national program** that will be uniform for employers everywhere?
7. Does it make sense for each state, county or city to **repeat the work that CDAC has already done?** In the absence of a federal requirement, this is **already happening** (State of Washington, County of Miami-Dade, City of Philadelphia).
8. A **federal requirement** with a nationally recognized process **would cost employers less** than state-by-state licensure that could require mobile crane operators to have 50 different licenses, or worse if counties (like Florida's Miami-Dade) mandate county-wide requirements.
9. Under CDAC, **employers are able to develop their own tests** so long as they are audited by an accredited certifying organization.
10. There are **no restrictions on sourcing training** in CDAC. Certification bodies like NCCCO do not offer training. Employers are free to train their own employees or hire in trainers of their choice.
11. Certification provides the **proof that training has been effective**, specifically that crane operators have the requisite knowledge and skill to operate a crane safely. OSHA officially recognizes certification as evidence of an employer having met its requirements for training.<sup>3</sup>

12. Certification must be **independent of the training** process to ensure no conflict of interest in the testing process (e.g. schools instruct students, while Educational Testing Service administers the SAT test).
13. **Training is readily available.** There are more than 100 training schools nationwide offering crane-specific training<sup>4</sup> in addition to numerous trade association chapters and union locals.
14. Certification must be **accredited** in order to be valid. This accreditation must be done by an organization that audits the certification organization to national **personnel certification standards**. The National Commission for Certifying Agencies (NCCA) and the American National Standards Institute (ANSI) both offer this. (The type of accreditation used to approve educational institutions does **not** meet this requirement and was rightly removed from the CDAC document prior to completion.)
15. CDAC's crane operator certification requirements are not monopolistic. While there are currently two (2) certification organizations nationally accredited to provide crane operator certifications, several more have applied and are in **process of being accredited**. Once the Proposed Rule is published, many more can be expected to meet accreditation requirements.
16. Employers have **five (5) years** from the time the Final Rule is published to meet the certification requirements recommended under CDAC, more than enough time for those that have not voluntarily certified their operators to do so.
17. The financial impact of certification to employers is negligible. For example, **CCO certification costs as little as 2¼ cents per hour** per employee over the period of certification. Recertification after five (5) years costs just **1½ cents per hour**.
18. The **risk management benefits** and reduced workers compensation and insurance premiums that certification brings far **outweigh the costs** of training and certification.
19. Certification has been proven to **save lives** through reduced accidents. The Province of Ontario has demonstrated this conclusively since 1978 with its ongoing study<sup>5</sup> that shows an **80% decrease in the crane-related death rate** and a 50% reduction in crane and rigging accidents as a percentage of all construction accidents since training and licensing were mandated.
20. A study just conducted by Cal-OSHA<sup>6</sup> shows a similar 80% decrease in the number of fatalities due to crane accidents since **California's state-wide crane operator certification** requirement was introduced in 2005, despite an exponential increase in the number of cranes active in the state during that time.

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<sup>1</sup> *Crane-Related Deaths and Injuries in Construction 1992-2006*, Center for Construction Research and Training, June 2008.

<sup>2</sup> Web Site [www.nccco.org](http://www.nccco.org), National Commission for the Certification of Crane Operators (NCCCO).

<sup>3</sup> *Voluntary Agreement between the Occupational Safety & Health Administration and the National Commission for the Certification of Crane Operators*, 1999.

<sup>4</sup> Web Site [www.nccco.org](http://www.nccco.org), National Commission for the Certification of Crane Operators (NCCCO).

<sup>5</sup> *Crane and Rigging Fatalities, Province of Ontario*, Construction Safety Association of Ontario (CSAO).

<sup>6</sup> *Report on Fatal Crane Related Accidents, June 1, 2002 to May 31, 2008*, California Division of Occupational Safety and Health.

# Certification: A Vital Role in Crane Safety

Welcome to the national program of crane operator certification developed by industry and administered by the National Commission for the Certification of Crane Operators (NCCCO). By providing a thorough, independent assessment of operator knowledge and skills, NCCCO aims to enhance lifting equipment safety, reduce workplace risk, improve performance records, stimulate training, and give due recognition to the professional skill of crane operation.

NCCCO was formed in January 1995 as a non-profit organization to develop effective performance standards for safe crane operation to assist all segments of general industry and construction. The establishment of NCCCO was the culmination of almost 10 years continuous work by representatives of all industries that use cranes. In essence, the CCO program was developed by industry *for* industry, and continues to be supported by it.

This diversity continues to be reflected through NCCCO's Commissioners and Board of Directors who represent such groups as: contractors, labor unions, rental firms, owners, government, regulatory and standards-setting agencies, steel erectors, petrochemical, energy, automotive, manufacturers, equipment distributors, construction firms, training consultants, and insurance companies.

The wealth of crane knowledge these experts have brought to this effort has been coupled with the psychometric expertise of one of the nation's most prestigious credentialing organizations, International Assessment Institute (IAI). IAI played a crucial role in the development of the CCO program and continues to assist in the administration and further development of CCO written and practical examinations.

This combination of crane-related experience and exam development knowledge has been supplemented with input from the Occupational Safety & Health Administration (OSHA) as well as the ANSI/ASME committees that developed and revise the B30 crane standard. The result is a sound, valid and effective test of an operator's proficiency.

Clearly, everyone—employers, operators, and the general public—has much to gain from ensuring only qualified people operate cranes. If you'd like to learn more about how the CCO operator certification program can work for you, just contact NCCCO at (703) 560-2391; fax: (703) 560-2392; [info@nccco.org](mailto:info@nccco.org); [www.nccco.org](http://www.nccco.org).



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## NATIONAL COMMISSION FOR THE CERTIFICATION OF CRANE OPERATORS

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# Practical Exam Key Facts

- All CCO certification programs include practical (hands-on) skills tests.
- The Mobile Crane practical examination consists of three categories:
  - Lattice Boom Cranes
  - Small Telescopic Boom Cranes (fixed cab)
  - Large Telescopic Boom Cranes (swing cab)
- The Tower Crane and Overhead Crane practical examinations consist of one category each since the skill sets tested are essentially the same within each category. The Tower Crane exam may be taken on a hammerhead, luffing or self-erecting type of crane. The Overhead Crane exam may be taken on a cab-controlled or pendant-controlled crane.
- Candidates must also pass the written examination and meet physical requirements in order to be certified. For recertification, a candidate must pass a recertification written exam and a practical exam. The practical exam requirement is waived if a candidate can document 1,000 hours' experience during his/her 5-year certification period.
- The tests comprise various tasks that increase progressively in the skill level tested. Depending on the exam type being taken, the skills tested may include: hoisting, booming, swinging, traveling, following hand signals, and combination (multi-function) operations. Operation is required with load and without load.
- The test site layout is adapted for each model and configuration of crane to ensure the test remains standardized. NCCCO provides full details of test construction and CAD layouts for each test site.
- The scoring system has been developed to remove subjectivity or bias by the Examiner. Actual grading is done off-site by International Assessment Institute (IAI). Demerits are incurred by a combination of operational errors and time penalties.
- The entire exam and the scoring system it uses has been validated by a Pilot Program and verified by subject matter experts and psychometric specialists.
- Practical Examiners are trained and accredited by NCCCO through a Workshop Program. Examiner accreditation is specific to each crane category, and is open to all CCO-certified individuals.
- The practical exam is given on demand at host sites nationwide including employer locations, industry organizations, CCO-run sites and association chapters.



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# CCO Tests: Valid and Reliable

To ensure the CCO examinations remain psychometrically sound, fair and effective measurements of a crane operator's knowledge and skills, NCCCO has combined the expertise of its subject matter experts with one of the nation's leading professional credentialing organizations, International Assessment Institute (IAI).

IAI can draw on Block and Associates' 40-year history in the construction trades, and National Assessment Institute's 22 years of subject-matter knowledge depth.

IAI played a vital role in the development of the original CCO tests, and continues to assist NCCCO in the administration and further development of written and practical examinations used in this national certification program.

This combination of crane knowledge and psychometric expertise, supplemented with input from OSHA and ANSI/ASME committees, is unprecedented in this industry.

## Written Examination Development and Organization

The first step in the development of fair and objective tests is a "job analysis" study. The team of crane experts that NCCCO assembled initially identified the knowledge necessary for safe crane operations. A survey was then given to several hundred crane operators, who validated that the knowledge recommended by the experts was vital to safe operations. The test "blueprints" or content specifications generated from the validation study were used to begin the item (question) writing process.

The CCO written examinations consist of multiple-choice items, all of which have been developed by experts with knowledge and expertise in the area of crane operation. All items that appear on the

examinations have been reviewed at least four times: (a) items are first reviewed by crane operation subject-matter experts for content relevance, competency level, and importance; (b) IAI reviews each item for psychometric quality; (c) editorial staff review each item for grammar, spelling, and usage; and (d) additional panels of crane experts review and validate all items prior to approving them for inclusion on an examination.

Development of the written certification examinations involves panels of crane operation content experts who work with NCCCO and the staff of IAI to write and review all questions used in the examinations. Each examination contains a unique combination of items from the item bank; items are selected for the examination on the basis of the content areas as defined by the test blueprints.

The content areas have been developed through the original role delineation and serve to guarantee each test is consistent in difficulty and question content. Each of the written examination outlines (see the *Candidate Handbooks*) is based on the crane operator validation study conducted by NCCCO in conjunction with IAI. Minimum passing scores are determined following test construction.

Each stage of this rigorous examination development process follows the standards established by the American Educational Research Association as outlined in its *Standards for Educational and Psychological Testing*. These procedures are recognized by professional test developers nationwide in all professional disciplines. Their use by NCCCO and IAI ensures that only fair and reliable competency-based certification examinations are used in the assessment of crane operator competency.



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# What is Certification?

Certification is generally considered to be the final link in a process designed to educate people in the correct way to operate cranes. Well-trained operators, with independently verified knowledge and skills, make less mistakes, and therefore have fewer accidents, than those with less or inferior knowledge.

However, while certification generally involves some form of testing, not all testing qualifies as certification. For example, while training is clearly essential to a valid certification process, care must be taken to ensure the two functions remain separate. And an improperly developed certification program may be worse than no certification at all, creating a false sense of security both among those who have it, and those who rely on it for hiring purposes.

Fortunately, industry guidelines for professional certification have been established by two independent credentialing authorities, the National Commission for Certifying Agencies (NCCA) and the American National Standards Institute (ANSI).

NCCA is an independent non-profit organization set up by the National Organization for Competency Assurance (NOCA) to establish industry guidelines for professional certifying organizations. In April 1998, NCCCO received its first five-year accreditation from NCCA, recognizing that the CCO program meets or exceeds NCCA's exacting standards for certification competency. NCCCO is currently accredited through 2009. OSHA referenced this accreditation by NCCA in its formal agreement signed with NCCCO in 1999.

NCCCO was awarded accreditation by the American National Standards Institute (ANSI) in 2007.

The CCO crane operator certification programs—Mobile Crane Operator, Tower Crane Operator and Overhead Crane Operator—are accredited by ANSI to the ISO/IEC 17024 International Standard for organizations that certify personnel.

The decision of ANSI's Professional Certification Accreditation Committee to award accreditation came after rigorous onsite and field audits by ANSI assessors of NCCCO's management systems and psychometric procedures.

*NCCCO is the only national crane operator certification program accredited by a nationally recognized accrediting authority.*

Other authorities that have conducted independent audits of the CCO certification program include:

- The Department of Education, on behalf of the Department of Veterans Affairs, which has qualified CCO certification for candidate fee reimbursement under the provisions of the Montgomery GI Bill of 2000;
- The Department of Defense, which has approved the CCO program through its DANTES program to provide certification to serving military personnel worldwide.

The NCCA requirements are rigorous and designed to give assurance to those who use a certification program that the tests are a fair, sound and valid assessment of the knowledge and skills they are intended to measure.

To preserve its status as an independent, impartial testing authority, NCCCO does not offer training. However, it does provide an objective means of verifying that training has been effective—that learning has, in fact, taken place. Only third-party, independent certification can do this, and then only if it has been validated by the industry it is intended for, and recognized as psychometrically sound by certification specialists. NCCCO has met all these criteria.

The key elements of the CCO program are that it:

- actively encourages training, yet is separate from it
- verifies that training has been effective
- was developed in a non-regulatory environment
- is modeled on ANSI/ASME consensus guidelines
- meets recognized professional credentialing criteria
- has participation from all industry sectors
- is officially recognized by federal OSHA as meeting crane operator qualifications
- is accredited by independent accrediting bodies (ANSI and NCCA)

Accredited by:



ANSI Accredited Program  
PERSONNEL CERTIFICATION



# CCO Certification Key Facts

- The National Commission for the Certification of Crane Operators (NCCCO) is an independent, not-for-profit organization incorporated in January 1995 to establish and administer a nationwide program for the certification of crane operators.
- Among the goals of CCO's nationwide certification program are: reduced risk of loss, fewer accidents, more consistent training, and expanded job opportunities for operators.
- CCO programs meet federal OSHA regulations and American National Standard ASME B30.
- NCCCO has the support of a wide and diverse group of crane-using industries such as construction, utilities, energy, steel erection, crane rental, automotive, petrochemical, and pulp/paper.
- NCCCO activities center around three specific areas: 1) validating crane operators' knowledge and proficiency; 2) developing and administering examinations to test that knowledge and proficiency; and, 3) issuing certification cards to those operators who meet the criteria for crane operator certification.
- CCO certification is designed to assure both industry and the general public that operators are skilled and knowledgeable.
- Features of the CCO program are that it is:
  - National in scope;
  - Operated by the private sector (non-profit);
  - Independent of labor relations policies;
  - Tailored to different types of cranes;
  - Designed so certifications must be renewed every 5 years;
  - Tested in two parts: written and practical.
  - Accredited by nationally recognized professional credentialing authorities (ANSI and NCCA)
  - Officially recognized by Federal OSHA
- Examinations are administered on demand at sites across the US. While a minimum of 15 candidates is preferred for a written examination, fewer candidates can be accommodated for a modest additional administrative fee.
- A certification card is issued to those operators who meet eligibility requirements and pass written and practical exams, demonstrating their fundamental knowledge of, and skill in, safe crane operation.
- All CCO written examinations comprise questions in multiple-choice format. While the Tower Crane and Overhead Crane programs use a single written exam, the Mobile Crane program consists of a Core Exam and four Specialty Exams. The Specialties are: Lattice Boom Truck Crane, Lattice Boom Crawler Crane,

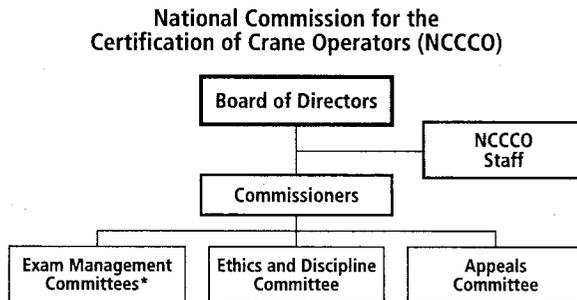
Small Telescopic Boom Crane (fixed cab); and Large Telescopic Boom Crane (swing cab).

- The mobile crane practical (hands-on) examination is offered in three categories: Lattice Boom Crane, Small Telescopic Boom Crane (fixed cab), and Large Telescopic Boom Crane (swing cab). The Tower Crane and Overhead Crane practical examinations consist of one category each since the skill sets tested are essentially the same within each category. The Tower Crane exam may be taken on a hammerhead, luffing or self-erecting type of crane. The Overhead Crane exam may be taken on a cab-controlled or pendant-controlled crane. The CCO Practical Examiner Accreditation Program trains CCO-certified crane operators in the administration of the practical exam, and authorizes them to administer the CCO hands-on tests at sites nationwide.
- In its first 12 years, CCO administered over 320,000 written and practical examinations to more than 60,000 operators in all 50 states, a significant step toward its goal of ensuring an informed, trained and qualified population of crane operators throughout the nation.
- The CCO national crane operator certification program is recognized by the Occupational Safety & Health Administration as meeting OSHA's requirements for crane operator competency. The formal Agreement between OSHA and NCCCO, the only one of its kind between a private sector organization and a government agency in this field, provides significant benefits for employers who adopt the CCO certification program.
- In addition to the Occupational Safety & Health Administration, NCCCO also works closely with other federal agencies including the Department of Defense, the Department of Education, the Department of Energy, the Department of the Navy, the U.S. Army Corps of Engineers, and the Department of Veterans Affairs.
- NCCCO coordinates its testing services through all major industry groups, and is formally recognized by many including the American Society of Civil Engineers (ASCE), the American Subcontractors Association (ASA); the Association of Equipment Manufacturers (AEM); the Associated General Contractors of America (AGC); the Crane Manufacturers Association of America (CMAA); the Association of Union Constructors (TAUC); the Specialized Carriers & Rigging Association (SC&RA); the International Union of Operating Engineers (IUOE); and the Steel Erectors Association of America (SEAA).



# How is NCCCO Structured?

The National Commission for the Certification of Crane Operators (NCCCO) has been structured to allow fair representation from all industries that use cranes. This is reflected at all three major levels of the organization including: the Board of Directors, Commissioners, and Committees.



\*Written Exam Management Committee (Mobile Crane)  
 Practical Exam Management Committee (Mobile Crane)  
 Tower Crane Management Committee  
 Overhead Crane Management Committee

## BOARD OF DIRECTORS

Board members serve a three-year term. Officers are re-elected annually. The Board establishes policy and sets strategic goals.

**PRESIDENT: John M. Kennedy**, Manitowoc Crane Group

**VICE PRESIDENT: Garry M. Higdem**,  
 CH2M Hill

**SECRETARY/TREASURER: J. Chris Ryan**,  
 Boh Bros. Construction Co.

**IMMEDIATE PAST PRESIDENT: Ronald Schad**,  
 Essex Crane Rental Corp.

**CHAIRMAN, COMMISSIONERS: Kerry Hulse**,  
 Deep South Crane & Rigging Co.

**Stephen Brown**, International Union of Operating Engineers

**Dale Daul**, McGough Construction

**Gene Owens**, Granite Construction

**Robert Steiner**, Kelley Equipment Co. of Florida, Inc.

## COMMISSIONERS

NCCCO has provision for 25 Commissioners representing 10 broad industry groups that make policy recommendations and oversee the activities of the four main committees that report to it. Commissioners are also entitled to nominate one individual to serve as an alternate to the main member. Current Commissioners and Alternates include:

Roy Bolton, Cianbro Corp.  
 Tom Broderick, Construction Safety Council  
 Walter Brumley, Shell Oil  
 Bo Collier, Crane Tech  
 Joseph Collins, Zachry Construction  
 Kevin Cunningham, NationsBuilders Insurance Services  
 Dale Daul, McGough Construction

Larry DeMark, IUOE Local 825  
 Paul Doran, Truck Crane Service Co.  
 Dennis Eckstine, Eckstine & Associates  
 Patrick Finn, Department of Energy  
 Donald Frantz, IUOE Local 18  
 Dennis Gonzalez, Crane America Services  
 John Hartwell, IUOE Local 324  
 John Hellums, Bishop Lifting Services  
 Brian Hill, Manitowoc  
 Kerry Hulse, Deep South Crane & Rigging  
 Paul Johnson, BP Products North America, Inc.  
 Don Jordan, BP America  
 Peter Juhren, Morrow Equipment Co.  
 Ron Kohner, Landmark Engineering Services  
 Troy Krumm, Link-Belt  
 Anthony Lusi, IUOE Local 542  
 Dana Morgan, Fluor Hanford  
 Jack Pletcher, IUOE Local 66  
 John Rahilly, Construction Safety Council  
 David Ritchie, Travelers  
 Chris Ryan, Boh Brothers Construction  
 Douglas Sidelinger, Cianbro Corp.  
 Don Silva, Granite Construction  
 Fred Simmons, Foley Material Handling  
 Bill Smith, NBIS  
 John Teller, IUOE Local 3  
 Jorge Vial, Vial Equipment Sales & Equipment  
 Ellis Vliet, Nichols Construction  
 J.R. Williams, Texas Crane Academy

## COMMITTEES

NCCCO develops and maintains its certification programs through a series of committees that report to the Board of Directors. A total of four (4) **Exam Management Committees** are responsible for monitoring and participating in the development of crane operator certification examinations for mobile, tower and overhead cranes. Members of these committees suggest revisions to NCCCO's testing procedures; work with and monitor the administration of the exams; oversee the work of item writers; monitor and oversee testing companies which may be contracted with for exam development and/or administration; and collect data necessary for psychometrically sound examinations.

Two additional committees that play an important role in the review, discipline and appeals processes are: the **Ethics and Discipline Committee**, which is responsible for establishing standards of conduct, such as ethical standards, policies and procedures for disciplinary action and implementing those standards, policies and procedures, and the **Appeals Committee** which is responsible for establishing policies and procedures for hearing appeals of decisions; and for hearing such appeals.



# Official Recognition

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*Mobile, Tower and Overhead Crane Programs **ACCREDITED** (#0756) by the **American National Standards Institute.***



***RECOGNIZED** by **Federal OSHA** as meeting OSHA and ANSI (ASME) requirements for crane operator qualifications.*



***ACCREDITED** by the **National Commission for Certifying Agencies** for fairness, validity and reliability in testing.*



***APPROVED** by the **Department of Defense** to provide certification to military personnel.*



***APPROVED** by the **Department of Education** to provide certification to veterans.*



***RECOGNIZED** by the **Department of Energy** as meeting DOE qualification requirements.*

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# Cooperative Agreements

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**American Subcontractors  
Association**



**Associated General  
Contractors of America**



**Association of Equipment  
Manufacturers**



**Association of  
Union Constructors**



**Construction Institute, American  
Society of Civil Engineers**



**Crane Manufacturers  
Association of America**



**International Union  
of Operating Engineers**



**Specialized Carriers  
& Rigging Association**



**Steel Erectors  
Association of America**

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# CERTIFICATION NEWS

FROM



## NCCCO Awarded ANSI Accreditation

*October 5, 2007, Fairfax, Virginia* – The National Commission for the Certification of Crane Operators (NCCCO) today announced that it had been awarded accreditation by the American National Standards Institute (ANSI).

All three CCO crane operator certification programs—Mobile Crane Operator, Tower Crane Operator and Overhead Crane Operator—are now accredited by ANSI to the ISO/IEC 17024 International Standard for organizations that certify personnel.

The decision of ANSI's Professional Certification Accreditation Committee to award its prestigious accreditation came after rigorous onsite and field audits by ANSI assessors of NCCCO's management systems and psychometric procedures.

Singled out for particular mention by ANSI was NCCCO's practical exam program. ANSI Assessors commended NCCCO and International Assessment Institute (IAI), the firm that provides test processing and development services to NCCCO, for the "preparation, administration and execution of the practical exam."

In particular, ANSI applauded the manner in which the tasks for the practical exam had been selected, the objectivity and clarity of the criteria that had been established for practical examiner observations, and the systematic way examiner observations had been integrated into the scoring process.

"Accreditation by ANSI of the CCO crane operator certification program is a remarkable validation of the vision, determination and dedication of the hundreds of volunteers from across the country who worked tirelessly to establish this national program of crane operator proficiency and who, over the last ten years, have strived to maintain it," said NCCCO President, John M. Kennedy.



ANSI Accredited Program  
PERSONNEL CERTIFICATION  
# 0756

“Candidates and employers alike can now be assured that, with ANSI’s independent verification of NCCCO’s policies and procedures, CCO certification meets the highest professional standards of examination development and administration,” Kennedy added. “They can be confident that each and every CCO Certification Card is backed by the ANSI guarantee of program excellence unequalled in this industry,” Kennedy added.

“As someone who was involved in the development of the CCO program from the outset,” said NCCCO Commission Chairman, Kerry Hulse, “and who remembers the passion for improving crane safety among members of the very first task forces that began meeting almost two decades ago, this a remarkable vindication of their vision, determination and sheer hard work. I can’t think of a more appropriate validation of their efforts than for the organization they helped to create receiving this affirmation from ANSI, the nation’s pre-eminent standards-setting body.”

“Achieving ANSI accreditation is a major undertaking,” said ANSI Program Director, Roy A. Swift, PhD, “and NCCCO can be very proud of this accomplishment. Crane operators holding any of the three CCO certifications can be assured they meet the American National Standard, as well as ISO’s international requirements for ANSI/ISO/IEC 17024.

Accreditation of certifying bodies is increasingly being required by state regulators in their attempts to ensure the quality of the certifications issued, on which many state licenses are based, noted NCCCO Executive Director, Graham J. Brent. Fully two-thirds of the states that have requirements for crane operators, now require or recognize CCO certification.

“While NCCCO has received numerous industry accolades, as well as recognition by state and federal agencies in its 11-year history, and has been nationally accredited by the National Commission for Certifying Agencies (NCCA) since 1998, accreditation of CCO certification by ANSI is clearly a major milestone in the history of this organization,” Brent said.

“A central part of NCCCO’s goal since its inception has been to establish a national testing program that is fair to all candidates, while at the same time is both a valid and a reliable assessment of essential crane operator knowledge and skill,” he added. “ANSI’s accreditation of all three CCO certification programs is clear testimony that this goal has been achieved.”

**National Commission for the Certification of Crane Operators (NCCCO)**

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*Executive Director: Graham J. Brent*

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**The National Commission for the Certification of Crane Operators (NCCCO)** is a non-profit industry organization formed in January 1995 to develop effective performance standards for safe crane operation to assist all segments of construction and general industry. Since NCCCO began testing in April 1996, more than 250,000 written and practical exams have been administered to over 50,000 crane operators in all 50 states.

CCO certification has been nationally accredited by the National Commission for Certifying Agencies (NCCA) since 1998. The NCCCO crane operator certification program is also the only program to be recognized by federal OSHA as meeting OSHA and ASME (ANSI) requirements for crane operator competency. The program is unique in that it is: third-party; independent of training; developed and supported by industry; a joint labor/management initiative; psychometrically sound; validated through peer review; and administered on a standardized, secure, nationwide basis.

Founded in 1918, the **American National Standards Institute (ANSI)** is a 501(c)3 not-for-profit organization, whose mission is to enhance both the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems, and safeguarding their integrity.

ANSI is the official U.S. representative to the International Organization for Standardization (ISO) and, via the U.S. National Committee, the International Electrotechnical Commission (IEC). ANSI is also a member of the International Accreditation Forum (IAF).

Among the American National Standards developed under ANSI guidelines are the ASME B30 lifting standards, on which CCO certifications are extensively based.

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# CONSTRUCTION EQUIPMENT

Since 1949

Ideas and Insight for the Equipment Pro

## Attention Crane Operators

By GRAHAM W. HARRIS, Executive Director, NCCCO

Even as industry mandates are discussed, operators are taking action on certification and training.

**"It's 7 a.m. Do you know if your crane operators are qualified?"**

Today, as never before, fleet managers are asking themselves this question (or variations of it) before they allow an operator to climb into the cab of one of their cranes. Over the past decade, the spotlight has truly turned full and square onto the subject of the qualifications of operators of construction equipment (and, in particular, cranes). And the related issues of certification and training have not been far behind.

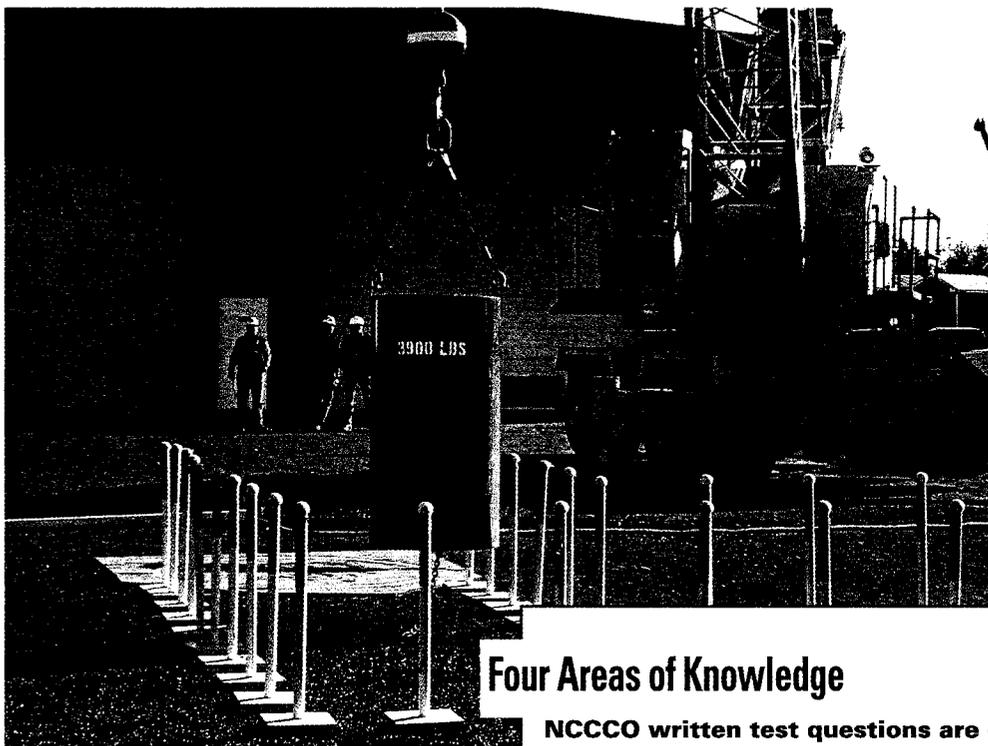
Managers are realizing they can no longer rely merely on an operator's opinion of his or her ability to operate a particular piece of equipment before they roll it out of the yard. Even a supervisor's assessment may be suspect, particularly if he has little direct experience on cranes, or if he is relying largely (but quietly) on the operator's opinion as the basis of his own.

And while operator experience is vitally important (especially documented evidence of a safe track record), owners of cranes that today leave their manufacturers' assembly lines with an unprecedented array of sophisticated features providing unparalleled versatility are asking, "how relevant is the experience an operator may bring to a construction site to the

particular operating characteristics of my machines?" Cranes have changed over the past decade as in none previous, and attitudes toward the qualifications of the person in the "hot seat" are shifting into top gear in an effort to catch up.

Of course, some companies have had effective crane operator evaluation programs in place for many years. But they are in the minority. And while the "cowboy mentality" persists in many parts of the country, the gradual realization that cranes are no longer built to take the brutal handling that has been a characteristic of the "good ol' days" of lift-equipment operation is contributing to a sea change in industry's approach to crane-operator qualifications.

There's simply too much at stake to continue making assumptions about crane operator's ability to handle a crane safely, what is inherently a hazardous occupation. This is why more firms are investing in comprehensive training and independent third-party evaluation. And for those who still view this financial outlay as a cost rather than an investment in the safety/productivity of their workforce, there is the added incentive of licensing requirements in a dozen states, including arguably the most



Manufacturers have equipped cranes with more sophisticated controls, leaving too much at stake if left to untrained operators. Comprehensive training and third-party evaluation are a must.

## Four Areas of Knowledge

NCCCO written test questions are grouped into four main areas, or domains:

- Domain 1: **Site**

For example, operators must know site hazards such as electric power lines and piping. They must know the proper use of mats, blocking or cribbing and outriggers or crawlers as they affect the suitability of supporting surfaces.

- Domain 2: **Operations**

Operators, for example, must know how to pick, carry, swing and place the load smoothly and safely on rubber tires and on outriggers/stabilizers or crawlers.

- Domain 3: **Technical Knowledge**

Examples include the knowledge of the effect of side loading, and the principles of backward stability.

- Domain 4: **Manufacturers' Load Charts**

Operators must know how to use the load chart together with the load indicators and/or load moment devices.

populous (in crane terms), California.

Although a federal requirement may be in our future, the ASME B30.5 American National Standard for mobile and locomotive cranes laid the basis for operator qualifications more than a decade ago: Operators must meet physical standards, pass a written examination, and demonstrate their skill on a hands-on test. Specifically, the ASME B30.5 mobile-crane standard requires operators to "demonstrate their ability to read, write, comprehend, and exhibit arithmetic skills and load/capacity chart usage, in the language of the crane manufacturer's operation and maintenance materials."

If ever the case needed to be made for structured, professional training, load charts would be at the center. For load chart interpretation cannot come via osmosis or simply through prolonged exposure to crane operations; it has to be taught. Knowledgeable crane experts all agree: There is no more abused, misunderstood or just plain ignored aspect of mobile-crane operations than the crane's load chart, a fact the National Commission for the Certification of Crane Operators (NCCCO) can confirm based on its experience of administering more than 200,000 tests over a 10-year period. Without a thorough understanding of a



## The C-DAC Journey

In 2003, the Occupational Safety and Health Administration formed the Cranes & Derricks Advisory Committee (C-DAC) to overhaul 29CFR 1926.550, Subpart N, of its Safety and Health Regulations for Construction. The 119-page consensus document that the hand-picked committee of subject matter experts developed over a one-year period was submitted to OSHA for review after its last meeting in July 2004.

If its provisions are adopted, it will require crane operators to be certified by an accredited crane operator testing organization or qualified by an audited employer program. Similar provisions pertain to signal persons. The speed of issuance of any final rule will depend on whether a small business review will be required, and the degree of public comment the proposed rule, when published, elicits.

mobile crane's load chart, an operator cannot have an accurate picture of either its capabilities or its limitations. Foolhardy indeed is the operator who ignores the rating chart in today's high-tech, versatile machines — his first mistake can indeed be his last.

The prospect of a federal mandate doesn't seem to be restraining state initiatives, however. Three states (California, Hawaii and New Jersey) have introduced licensing requirements in recent years, and a similar number (Minnesota, Nevada and Pennsylvania) have enacted laws or plan to do so. Others are contemplating draft legislation.

One feature all these new rules share is a desire to verify the quality of the licensing or certification process. A license is only as good as the process followed to develop the examinations used to test crane-operator knowledge and skill. A "certified" operator may be no more competent than an uncertified operator if the certification consists of little more than, say, a 20-question true/false test, with coaching in the correct answers provided by the instructor. It's often pointed out that barbers have to be licensed in most states, yet crane operators most often do not. But how comfortable would you feel sitting in the chair of a practitioner certified by the Sweeney Todd Training Institute?

That's why, more than 30 years ago, an audit process for organizations that certify per-

sonnel was developed by the National Commission for Certifying Agencies (NCCA). NCCA has since been joined by the American National Standards Institute (ANSI) in providing a means of accreditation to certifying bodies such as the National Commission for the Certification of Crane Operators (NCCCO).

## Four Tasks Determine Skill

**CCO practical exams** for construction cranes address three categories: lattice-boom cranes; telescopic-boom cranes below 17.5 tons with fixed cab, and above 17.5 tons with swing cab; and tower cranes.

They consist of four tasks that increase in the skill required:

1. Place overhaul ball in stop circle.
2. Follow hand signals.
3. Place overhaul ball in barrels.
4. Negotiate zigzag corridor with test weight.



## Questions to Ask Your Training Vendor

- Where and when are training classes held? Do you have to go to their site, or do they come to you?
- How many hours does the training last? What's the cost?
- How many instructors are certified or at least have passed the certification written examinations, and in what specialties?
- What is the average class pass rate?
- Does the training provider also offer practical exams?
- Can the training provider offer a complete training and certification package by working in concert with the certification organization?

Both the CCO mobile/tower crane operator certification programs are accredited by NCCA.

Compliance with the detailed psychometric and management system requirements of NCCA or ANSI ensures the certification issued by an accredited organization has been professionally developed and administered to the highest standards, and that the tests used during the examination process are fair, valid, reliable and (just as importantly) legally defensible.

Training and professionally developed certification (or licensing) can be a powerful "one-

two punch" in the effort to ensure all equipment operators are qualified. The effectiveness of this winning combination has been most clearly seen in recent years in the Canadian province of Ontario. Between 1969 and 1978, crane and rigging fatalities in the province accounted for almost 20 percent of all construction fatalities. This rate has more than halved since then. Accounting for this remarkable improvement

has been the introduction in 1979 of mandatory training for all crane operators as a part of the licensing process.

There is every reason to expect a similar result in the United States, but only if the various mandatory and voluntary means of becoming certified follow professional methods of exam development and, thereby, stimulate the need for training. Since

the introduction of its national mobile crane operator certification program in 1996, the National Commission for the Certification of Crane Operators (NCCCO) has witnessed a veritable explosion in the training available to crane operators.

Although NCCCO does not provide training (in order to preserve its third-party, independent status as a certification organization), it maintains on its website a list of firms that do. In 1996 there was one firm listed; at last count there were 65 from 23 states, 47 of which operate nationwide. And the number is growing almost daily. Add to that the train-the-trainer classes often used by firms wishing to develop in-house programs, and the opportunities for training have never been greater.

The decision on whether or not employers need to provide training is, of course, one that the Occupational Safety and Health Administration, industry standards, and just plain good sense has already made. If good sense is enough for some, others may need the "carrot" offered by the insurance industry's premium discounts for certified operators, or the "stick" that state or federal licensing may provide. Either way, training and certification of crane operators is here to stay. And that's a good thing — not just for those working in/around lifting equipment, but for all those whose lives may be temporarily, or permanently, affected by the often devastating consequences of a machine operated by an untrained, uncertified, inexperienced — and therefore unqualified — crane operator. 

## States That License (or plan to)

- California
- Colorado (2008?)
- Connecticut
- Hawaii
- Massachusetts
- Minnesota (2007)
- Montana
- Nevada
- New Jersey
- New Mexico
- New York
- Oregon
- Pennsylvania (2008?)
- Rhode Island
- Utah (2007)
- West Virginia

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# NEWS!

### FOR IMMEDIATE RELEASE

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## NCCCO Plans New Certification Programs *Riggers, Signalpersons to be Certified*

Fairfax, Virginia, February 27, 2007--The National Commission for the Certification of Crane Operators (NCCCO) has announced plans for the development of two new certification programs. The new programs will address riggers and signalpersons.

"The success of NCCCO's certification programs for mobile, tower and overhead crane operators has led to industry requests for similar programs to address other personnel that are involved in the lifting process," said NCCCO President, John M. Kennedy, Manitowoc Crane Group, Manitowoc, WI.

"Given the widespread adoption of its crane programs, and the endorsements they have garnered, the industry clearly believes that NCCCO is the appropriate entity to develop and administer these new programs," Kennedy added.

*NCCCO Plans New Certification Programs*

*February 27, 2007*

*Page 2*

NCCCO Commission Chairman, Kerry Hulse, Operations Manager of Deep South Crane & Rigging, Houston, TX, said that the new programs would draw on three major resources: industry support, subject matter expertise, and psychometric guidance. "All elements of the new programs will be developed according to the strict psychometric standards that have been a hallmark of NCCCO's crane operator programs, thus ensuring the certification process will be valid, reliable, and legally defensible," he said.

Hulse noted that NCCCO would be seeking accreditation for the new programs once completed, such as it had achieved for its crane operator certifications. "Accreditation from a national personnel certification accreditation body such as NCCA or ANSI is an indicator of a level of quality that is simply not available from every testing program that aspires to "certify" individuals."

Also like the existing programs, Hulse added, the new rigger and signalperson certifications would meet all prevailing ANSI and OSHA standards. "We'll have the draft proposed rule that OSHA is preparing based on the C-DAC report very much in mind," said Hulse, "Employers can be confident that CCO certification will comply with all current and future state and federal requirements."

NCCCO Executive Director, Graham Brent, said, "Employers and candidates have a right to expect that the exams they or their employees are taking are fair and accurate, and that they have been developed to the very highest professional standards of test construction and administration."

NCCCO will model the development of the new programs on its existing crane operator certification programs, Brent added. "Among the certification requirements that will be considered are written examinations, practical examinations, and a recertification requirement."

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To optimize resources, NCCCO plans to double-track development of both programs through two Task Forces, one each for Riggers and Signalpersons. Don Jordan, Technical Lifting Authority, BP America, Houston, TX, has been appointed chair of the Rigger Certification Task Force, Hulse announced. The Signalperson Task Force is chaired by Kenneth Shinn, President, K.J. Shinn, Inc., Lake Como, NJ .

Experts in their respective fields will staff the Task Forces, and will be guided by psychometric consultants from International Assessment Institute (IAI), the testing services company that has provided exam development and administration services to NCCCO since 1999. Other experts will serve as item writers. As with the current programs, a professional Job Task Analysis will be conducted to serve as the foundation for exam development activities.

NCCCO Manager of Program Development, Phillip Kinser, stated that development would begin in the second quarter of 2007 and continue throughout the year. "We have developed an aggressive schedule, with five subject matter expert meetings anticipated this year alone, beginning in early spring," he said. "However, if we maintain good progress, development of the Signalperson Program could be largely complete by the first quarter of 2008, with Rigger Certification close behind."

ENDS

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## ***Backgrounder***

The National Commission for the Certification of Crane Operators (NCCCO) is a non-profit industry organization formed in January 1995 to develop effective performance standards for safe crane operation to assist all segments of construction and general industry. Since NCCCO began testing in April 1996, more than 250,000 written and practical exams have been administered to over 50,000 crane operators in all 50 states. Two-thirds of the states that have requirements for crane operators, require or recognize CCO certification.

CCO certification has been nationally accredited by the National Commission for Certifying Agencies (NCCA) since 1998. The NCCCO crane operator certification program is also the only program to be recognized by federal OSHA as meeting OSHA and ASME (ANSI) requirements for crane operator competency. The program is unique in that it is: third-party; independent of training; developed and supported by industry; a joint labor/management initiative; psychometrically sound; validated through peer review; and administered on a standardized, secure, nationwide basis.

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# CCO Update



Special Issue

NEWS FROM THE NATIONAL CRANE OPERATOR CERTIFICATION PROGRAM

## OSHA Reaffirms its Agreement with NCCCO to Recognize CCO Crane Operator Certification

The Occupational Safety and Health Administration (OSHA) has reaffirmed its Agreement to recognize the national crane operator certification program of the National Commission for the Certification of Crane Operators (NCCCO) as demonstrating that CCO-certified crane operator meets OSHA requirements for crane operator proficiency.

The Agreement between OSHA and NCCCO is a continuation of the original agreement signed in 1999. It recognizes certification by NCCCO as documentation that an operator meets OSHA's requirements for crane operator training, and provides incentives for employers to have their operators qualified through the NCCCO program.

"The ability of crane operators to safely operate mobile cranes plays a significant role in overall safety on most construction sites," said OSHA Administrator John L. Henshaw. "Therefore, it is very important that these crane operators are well-trained. This certification program provides evidence—in a highly professional and effective manner—that such training has taken place, and that it

will continue to help reduce the number of crane incidents."

Under the agreement, OSHA compliance safety and health officers will recognize NCCCO certification as independent verification that certified crane operators have met OSHA's training requirements. Having NCCCO certified crane operators on a project would be an

indication of the contractor's commitment to an effective safety and health program and contribute to the project's qualification for a "Focused Inspection" by OSHA.

"Three and a half years after the signing of the Agreement recognizing the NCCCO national crane operator certification program, NCCCO is delighted to have this reaffirmation of support by OSHA," said NCCCO President Ronald Schad, President, Essex Crane Rental Corp., Buffalo Grove, Illinois. "This is a tribute to the effectiveness of this national assessment of crane operators that meets OSHA's requirements for crane operator qualifications as well as the ASME B30.5 American National Standard."

Stewart C. Burkhammer, OSHA's Director of the Office of Construction Services within the Directorate of Construction said "a key factor in OSHA's decision to reaffirm the program is that it provides an objective and independent assessment of the skills and knowledge of crane operators." Burkhammer also in-

**"Under the agreement, OSHA compliance safety and health officers recognize NCCCO certification as independent verification that certified crane operators have met OSHA's training requirements."**

*Meeting with OSHA Administrator, John Henshaw (second from left), at the Department of Labor in July were (r to l): Stewart Burkhammer, Director of OSHA's Office of Construction Services; Ronald Schad, President NCCCO, and President Essex Crane Rental Corp., Buffalo Grove, IL; R. Bruce Swanson, Director, OSHA Directorate of Construction; and (far left) Graham Brent, Executive Director, NCCCO.*



## OSHA Representative Elected to NCCCO Commission

The Occupational Safety and Health Administration has announced the appointment of Stewart Burkhammer as OSHA's official representative on the NCCCO Commission.

Stewart Burkhammer is head of OSHA's Office of Construction Services and serves as liaison between OSHA and NCCCO. Prior to coming to OSHA in June 2002, Burkhammer served for 10 years as Principal Vice President & Manager for Corporate Environmental, Safety and Health Services, at the Bechtel Group of Companies.

"I am sure Stew will be an excellent representative for OSHA on NCCCO's Commission," said OSHA Administrator, John L. Henshaw.

Burkhammer has spent 40 years working as an environmental safety and health professional in the private sector. He is a former acting chairman of ACCSH, OSHA's construction advisory

committee, and has a long history of dealing with OSHA and occupational safety and health issues. He possesses a wide range of professional licenses and certifications, and has served in high-ranking capacities with numerous professional organizations, including the Safety Equipment Institute, the Executive Standards Council of the American National Standards Institute, and the Board of Certified Safety Professionals.

As Director of OSHA's Construction Services, Burkhammer oversees an office that provides assistance on safety and health program issues, and manages a comprehensive outreach and training program aimed at increasing safety and health awareness and reducing work-related accidents in the construction industry.

Burkhammer is an elected Fellow of the American Society of Safety Engineers, and a member of the ASSE Board of Directors.



**"A key factor in OSHA's decision to reaffirm the program is that it provides an objective and independent assessment of the skills and knowledge of crane operators."**

**Stewart C. Burkhammer, Director of OSHA's Office of Construction Services**

## OSHA Reaffirms NCCCO Agreement

*(continued from page one)*

indicated that "industry is accepting and acknowledging this third-party certification to a great extent."

"Over the past three-and-a-half years, NCCCO has received many accolades, most notably in the support and endorsement it has received from industry groups such as the American Subcontractors Association (ASA), the Associated General Contractors of America (AGC), the International Union of Operating Engineers (IUOE), the NEA-Association of Union Constructors, the Specialized Carriers & Rigging Association (SC&RA), and the Steel Erectors

**"It is very important that crane operators are well trained. This certification program provides evidence—in a highly professional and effective manner—that such training has taken place, and that it will continue to help reduce the number of crane incidents."**

**John L. Henshaw, OSHA Administrator.**

Association of America (SEAA)," Schad noted.

NCCCO was formed in January 1995 to develop effective performance standards for safe crane operation to assist all segments of general industry and construction. The NCCCO program is accredited by the National Commission for Certifying Agencies (NCCA), the authority on certification standards. NCCA was established in 1977 to develop criteria and standards for certifying agencies. The National Skill Standards Board (NSSB) also formally recognizes NCCCO crane operator certification through its certification recognition program.

Additionally, NCCCO is approved both by the Department of Defense through its DANTEs program to provide certification to serving military personnel, and the Department of Education for reimbursement of certification fees to eligible military personnel under the provisions of the Montgomery G.I. Bill of 2000.





# OSHA Signs Agreement with CCO

## National Crane Operator Certification Program Recognized

WASHINGTON, DC, FEBRUARY 26, 1999 – The Occupational Safety and Health Administration (OSHA) and the National Commission for the Certification of Crane Operators (NCCCO) signed an Agreement today officially recognizing the CCO national crane operator certification program.

The Agreement marks the first time OSHA has recognized a private sector industry group as meeting its requirements for crane operator qualifications, and it provides significant incentives for employers who have their operators certified through the national CCO program. There is currently no federal requirement for crane operators to be licensed.

"From my personal experience, [crane operator certification] is very much needed," said Assistant Secretary of Labor for OSHA, Charles N. Jeffress. "It's very important to make sure that the folks handling this equipment be well trained."

With the development of the CCO national crane operator program, Jeffress said, OSHA was now able to say to contractors "we require your folks be trained and if you can show us that if they have this certification from the Commission then we will accept your word that they are trained."

Jeffress said that OSHA had been striving to find ways to become more aware of training issues. "I want to say how much I appreciate what [CCO] has done. This kind of certification will help us reduce the number of accidents that occur with cranes."

Russell Bruce Swanson, Director of OSHA's Directorate of Construction commented: "The requirement for certification will cause people to get the training that is necessary to make the job sites safer. With our goal to reduce fatalities in the construction industry by 15% by 2002, I would see this Agreement as a real important building block along that road."

One of the strengths of the CCO certification program was that it separated those who had the necessary knowledge and skills from those who

did not. "Frankly, some folks had to swallow real hard with this concept because, when you certify people, not everybody is going to pass the test," Swanson said. "But we have to look beyond that and see that the requirement for certification will cause people to get the training that is necessary to make the job site safer."

The Signing Ceremony, held at the Department of Labor in Washington, DC was witnessed by senior representatives from many sectors of industry in what was described by Swanson as "an impressive show of support." Labor and management, union as well as open shop firms and organizations, and other government departments were equally represented.

"This is a great day for crane safety," said CCO President, Davis J. Lauve, President of Nichols Construction Corporation, Baton Rouge, Louisiana. "OSHA's recognition of the CCO crane operator certification program should have a significant and sustained impact on the safety of all who work with or around cranes."

"The signing of this Agreement is also a tribute to the dedication of the hundreds of volunteers from all sectors of industry who have worked long and hard over the last 12 years to turn the dream of a national crane operator certification program into reality," Lauve added.

General President of the International Union of Operating Engineers, Frank Hanley said: "This will go down as one of the best things we have ever done in the field of safety." Part of its strength he said came from the fact that the CCO program was supported by all sectors of industry. "We wanted this done across the board," he said. "I think you will all be happy that some day you will be able to say, 'I was part of this.'"



Assistant Secretary of Labor for OSHA, Charles N. Jeffress: OSHA is now able to say to contractors "we require your folks be trained and if you can show us that if they have this certification from the Commission then we will accept your word that they are trained."

CCO certification will "reduce the number of accidents that occur with cranes, helping us achieve our overall goal of a 15% reduction in construction industry fatalities by the year 2002." Assistant Secretary of Labor for OSHA, Charles N. Jeffress, signs the OSHA/CCO Agreement while Russell Bruce Swanson, Director of OSHA's Directorate of Construction looks on.



### The Agreement Between OSHA and CCO: What Does it Mean?

The Agreement is "a voluntary cooperative action between representatives of the crane industry and OSHA to recognize crane operator certification issued by the National Commission for the Certification of Crane Operators, NCCCO." The ability of crane operators to safely operate mobile cranes plays a major role in overall safety on most construction sites. The Agreement provides a non-regulatory means of recognizing the CCO program as

validating the competency and certifying the qualifications of crane operators.

#### What benefits does the Agreement provide for employers adopting the CCO program?

- OSHA compliance safety and health officers, when performing inspections or accident investigations, will recognize CCO certification as verification of crane operator qualifications.
- The presence of CCO-certified crane operators on a job site will

be an indicator to compliance officers that the crane is being operated by someone with demonstrated knowledge and ability.

- The requirement for CCO certified crane operators on a project will be an indication of the contractors' commitment to an effective safety and health program, and contribute to the project's qualification for a "Focused Inspection."

#### What were the main factors in OSHA's decision to recognize the CCO program?

- The CCO program meets the qualifications criteria outlined in ANSI/ASME B30.5-3-1-1995, Qualifications for and Conduct of Operators and Operating Practices.
- It is an objective and independent assessment of the skills and knowledge of crane operators.



Russell Bruce Swanson, Director of OSHA's Directorate of Construction: "The requirement for certification will cause people to get the training that is necessary to make the job sites safer."



CCO President, Davis J. Lauve, President of Nichols Construction Corporation, Baton Rouge, Louisiana: "This is a great day for crane safety. OSHA's recognition of the CCO crane operator certification program should have a significant and sustained impact on the safety of all who work with or around cranes."

Carson Huneycutt, Vice President, J.A. Jones Construction Co., who serves as CCO's Immediate Past President, paid tribute to the Specialized Carriers & Rigging Association (SC&RA) for providing support at a critical phase of the program's development. "I want to make sure that SC&RA is recognized as being the parents that brought about this organization and has been supportive of it all along," he said.

CCO Executive Director, Graham Brent, said OSHA had done a tremendous service to the industry by recognizing the CCO program as meeting its requirements for crane operator proficiency. "The net result can only be a reduction in crane deaths, injuries and accidents on construction sites around the country," he said.

A key issue in OSHA's decision to recognize the CCO program was that it is an objective and independent assessment of the skills and knowledge of crane operators. "The fact that CCO is a credentialing agency and provides no crane operator training enhances the value of its competency assessment," said OSHA senior safety specialist, Anthony Brown. A requirement of CCO's accreditation by the National Organization for Competency Assurance (NOCA) was that it do no training, he said.

Brown explained that OSHA would continue to use crane inspection guidelines, but that OSHA compliance safety and health officers, when performing inspections or accident investigations would recognize CCO certification as verification of crane operator qualifications.

A further benefit to employers is that the presence of CCO certified crane operators on a job site will indicate to compliance officers that the cranes are being operated by employees with demonstrated knowledge and ability. The requirement for CCO certified crane operators on a project will also be an indication of the contractors' commitment to an effective safety and health program and will contribute to the project's qualification for a focused inspection.

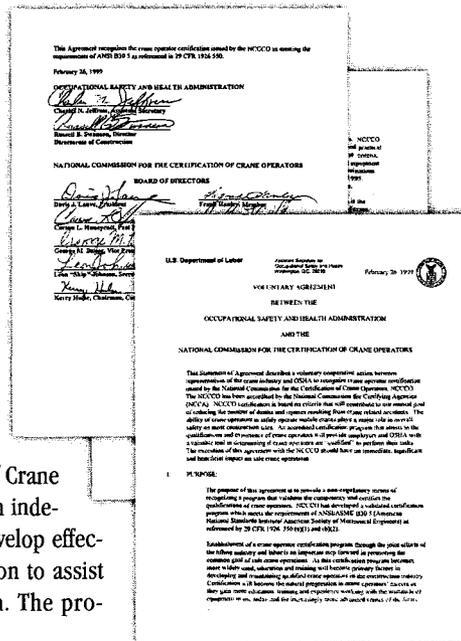
The National Commission for the Certification of Crane Operators (CCO) was formed in January 1995 as an independent, not-for-profit, 501(c)6 organization to develop effective performance standards for safe crane operation to assist all segments of general industry and construction. The pro-

gram is accredited by the National Commission for Certifying Agencies (NCCA), the premier authority on certification standards.

Among NCCA's exacting requirements for accreditation are that the certifying organization: is third-party, independent of training; has been established and supported by industry; is a joint labor/management initiative; and administers tests that are psychometrically sound, validated through peer review, administered on a standardized basis, and maintained under strict security.



Pictured at the OSHA/CCO Agreement Signing Ceremony are (seated left to right): Assistant Secretary of Labor for OSHA, Charles N. Jeffress; and CCO President, Davis J. Lauve, President of Nichols Construction Corporation, Baton Rouge, LA. Also in attendance are (standing, left to right): Anthony Brown, OSHA Senior Safety Specialist; Russell Bruce Swanson, Director of OSHA's Directorate of Construction; Frank Hanley, General President of the International Union of Operating Engineers; Glen R. Riechmann, SC&RA President and President, Riechmann Transport, Granite City, IL; Graham Brent, CCO Executive Director; Carson Huneycutt, CCO Immediate Past President and Vice President, J.A. Jones Construction Co., Charlotte, NC.



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- An applicant's certification is based on his/her performance on both the written and practical tests.
  - It has been developed through the joint efforts of the lifting industry and labor to promote the common goal of safe crane operations.
- Why did OSHA recognize CCO?**
- CCO is a recognized independent not-for-profit organization formed and established for the sole purpose of administer-

- ing a certification program that measures the knowledge and proficiency required for safe crane operations.
- CCO is a credentialing agency and provides no crane operator training itself.
- CCO has received accreditation from the National Commission for Certifying Agencies (NCCA), which accredits organizations that issue technical and professional certifications

**How does OSHA view the role of training?**  
As the CCO certification program becomes more widely used, OSHA believes education and training will become primary factors in developing and maintaining qualified crane operators in the construction industry. Certification will become the natural progression in crane operators' careers as they gain more education, training and experience working with the multitude of equipment in use

today and the increasingly more advanced cranes of the future.  
**What's the "bottom line"?**  
OSHA states that CCO certification is based on criteria that will contribute to "our mutual goal of reducing the number of deaths and injuries resulting from crane related accidents. The execution of this agreement with CCO should have an immediate, significant and beneficial impact on safe crane operations."

# Operator testing in practice

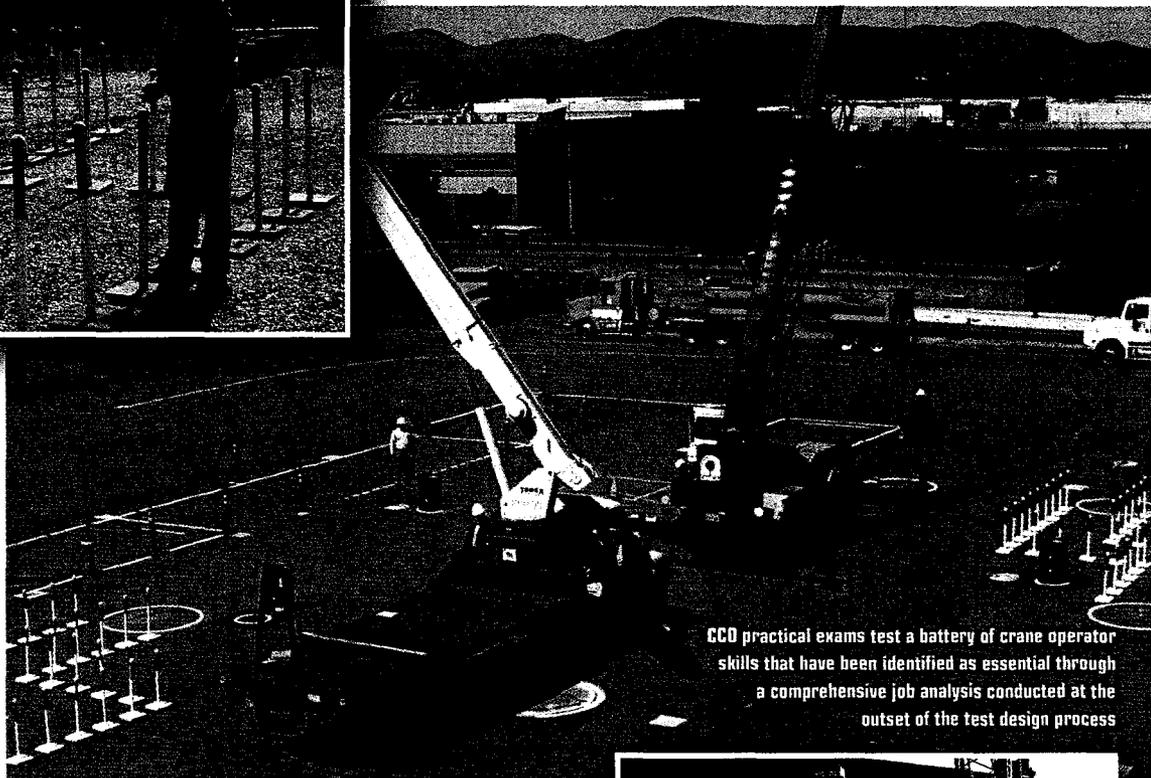


Prior to testing, practical examiners ensure the test course is laid out precisely according to the CAD drawings developed by NCCCO

In its first nine years, the NCCCO national crane operator certification program, developed and administered by the National Commission for the Certification of Crane Operators (NCCCO), has administered almost 200,000 tests to more than 40,000 operators in all 50 states. All operators certified through the program demonstrate their competency through a written examination, practical exam and meet medical requirements. The program has been recognized through two formal agreements with the Occupational Safety & Health Administration as meeting OSHA's requirements for crane operator competency.

A practical, hands-on examination was part of the original blueprint of the NCCCO National Crane Operator Certification Program from the outset; the ANSI/ASME B30.5 mobile crane standard requires it, and its incorporation by OSHA's 29 CFR 1926.550 adds the full weight of law. NCCCO's original job analysis also confirmed it would be an essential part of the certification process.

NCCCO's philosophy in the development of a practical exam as a critical third component in its national certification program was simple: whatever skills that could be tested through the



NCCCO practical exams test a battery of crane operator skills that have been identified as essential through a comprehensive job analysis conducted at the outset of the test design process

**Graham Brent**, executive director of the National Commission for the Certification of Crane Operators, outlines the steps that led to the development of the "hands-on" assessment, and what candidates are expected to accomplish

written exam should be tested in this way. Only those items that do not lend themselves to examination through a paper-and-pencil exercise should be evaluated through a hands-on test.

It was also considered critical that, as with the written exam, all aspects of the practical exam should follow established psychometric standards and, to ensure this, NCCCO secured

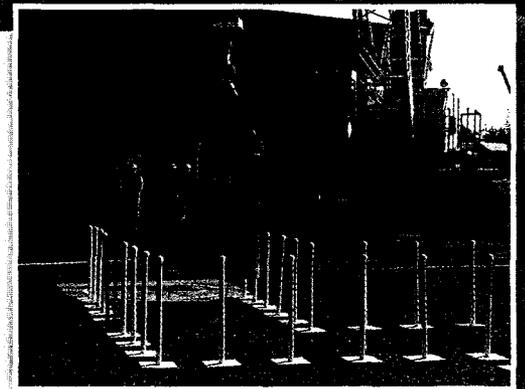
the services of professional exam development specialists.

Following its first meeting in September 1996, the Practical Exam Task Force, which carried out most of the preliminary work prior to the formation of the Practical Exam Management Committee, established various work groups to focus simultaneously on the principal lines of inquiry, namely: the

tasks to be included, test site design, crane parameters, scoring criteria and the selection and assessment criteria for examiners who would ultimately administer the practical exam.

## Four main tasks

The practical exam comprises four main tasks which test essential skills for crane operators, namely: hoisting, booming, swinging, following hand



signals, and combination (multi-function) operations. Operation is required with load and without load. A candidate may lose points through performance errors and/or exceeding the optimum time allotted.

Exams for the mobile crane program have been tailored to three specific categories of equipment: lattice boom cranes; "fixed cab" telescopic boom cranes of 17.5 tons capacity and below; and "swing cab" telescopic boom cranes above 17.5 tons. Similar exams have been developed for tower cranes and overhead cranes.

NCCCO certification is designed to provide an employer, or a contractor considering the use of hired-in crane services, with a baseline evaluation of an operator's practical operating ability. In this way, any time an operator presents a valid NCCCO certification card, the employer can be assured that the holder of the card has demonstrated competency for crane operation according to established written, practical and medical criteria.

### Test site design

Since the practical exam is given at various employer, union and other sites across the country, it is critical that the set-up of the test site accommodate different sizes, makes and models of equipment, and "level the playing field" for candidates. To that end, the generic site design established by NCCCO's Practical Exam Management Committee is tailored by NCCCO for each test administration, taking into account differences in crane types. Precise instructions on where to position the



Ensuring test conditions, such as wind speed, remain within predetermined limits is critical to the fairness and validity of CCO practical exams

crane and how to lay out the site are provided to each test site coordinator and practical examiner for each test, along with CAD drawings.

In this way, candidates are assured of fair, standardized and "equivalent" tests, even though they may be examined on different cranes within each of the three testing categories. A similar process has been established for the configuration of the cranes (boom length, line pull, overhaul ball, test load weight, etc.).

Recognizing that evaluation of candidates on a practical exam might be subject to the bias of the examiner, NCCCO has developed a four-part program designed, as far as possible, to remove any subjectivity, whereby:

1. Practical examiners record the performance of candidates, rather than evaluate them.
2. Scoring is done offsite; candidates

are informed of their results by mail.

3. Practical examiners must be trained and accredited by NCCCO before being approved to conduct examinations.
4. Practical examiners' records, as well as practical test sites, are subject to routine audit for fairness.

According to J. Chris Ryan, chairman of NCCCO's Practical Exam Management Committee, a large part of the exam's two-year development period was devoted to designing this bias-free scoring system.

"For a hands-on test to be fair and objective on a wide variety of equipment at different locations around the country, it was essential to remove, as far as possible, all subjectivity by the examiner," he says. Standardization of the various tasks had also been a major challenge, one that has been overcome through diligent attention to crane and test site set-up procedures.

Key to the effectiveness of this strategy was the creation of sound measuring "instruments" (scoring forms, test site checklists, etc.), as well as full documentation, including instruction manuals for candidates and test site coordinators.

Validation of the tasks and scoring procedure was established through a two-phase pilot program conducted by volunteers at sites around the country. An initial "dry

**GRAHAM BRENT**, executive director of the NCCCO, regularly covers certification news for ACT.

run" of the tasks was followed up by psychometric analysis of the data collected from more than 250 separate trials of operators with varying degrees of experience.

### Practical Examiner Accreditation

Individuals who wish to administer the NCCCO practical exam must successfully complete a three-day Practical Examiner Accreditation Workshop. Practical examiners must also pass both the written and practical exams and meet NCCCO physical requirements.

The requirements to be a NCCCO-accredited practical examiner are to:

- meet the requirements of and pass the written examination for the specialty in which accreditation is desired
- meet the requirements of and pass the practical examination for the specialty in which accreditation is desired
- meet the requirements of and attend a NCCCO Practical Examiner Accreditation Workshop
- pass a NCCCO Practical Examiner Accreditation written examination.

NCCCO Practical Examiner Accreditation is valid for five years. However, examiners must administer at least one practical test in any 12-month period in order to avoid a mandatory refresher course. Accreditation is withdrawn from any examiner who fails to meet these in-service criteria.

"With all three essential components, NCCCO's certification program represents a comprehensive examination of a crane operator's basic skills," said Kerry Hulse, commission chairman. "The volunteers who have constructed this program can feel justly proud of the system they have helped put in place for the benefit of all who work in and around cranes. US industry is a safer place to work in because of their efforts."

**act**

### **i** NCCCO mobile crane practical exam tasks

Following a pre-test briefing and a familiarization period to allow the candidate to get the feel of the crane, the candidate must perform to an acceptable standard on each of the following four main tasks:

#### ➤ TASK 1: PLACING THE BALL

The candidate must swing the crane in order to bring the overhaul (headache) ball from a testing point to a target point.

#### ➤ TASK 2: HAND SIGNALS

The candidate must respond to the examiner's standard B30.5 hand signals.

#### ➤ TASK 3: BALL IN BARREL

The candidate must place the overhaul ball into each of two barrels in turn without overturning the drums.

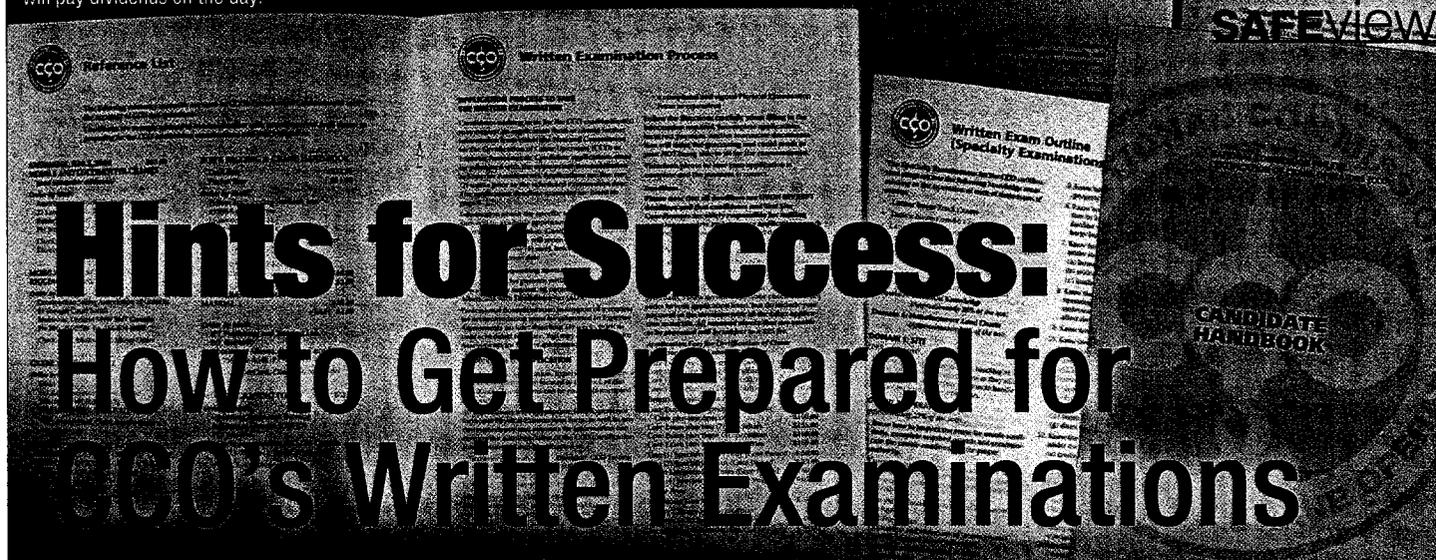
#### ➤ TASK 4: ZIGZAG CORRIDOR

The candidate must lift a load of predetermined size and weight into the air and swing, boom up/down, hoist up/down as he/she judges necessary to guide the load through a "zigzag" corridor without leaving the corridor. The candidate enters the corridor with the load at the farthest point from the crane and guides it through the corridor to the point nearest the crane. The candidate then retraces his/her steps.



For information on the National Commission for the Certification of Crane Operators (NCCCO) go to: [www.nccco.org](http://www.nccco.org)

Preparing well for any test will pay dividends on the day.



# Hints for Success: How to Get Prepared for CCO's Written Examinations

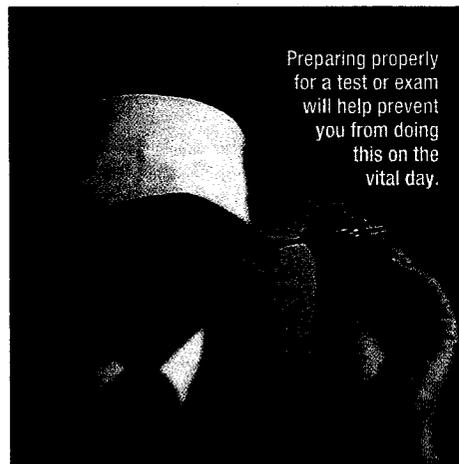
Testing and certification is now an everyday part of business for those in the crane industry.

Graham Brent, *IC* correspondent and executive director of the National Commission for the Certification of Crane Operators (CCO), offers some tips on studying for and taking exams.

**F**or many crane operators, the training and examination process can be a confusing and even threatening experience. A lot of the tension can be defused, however, by guidance given during training and prior to the test day. Below we provide some proven advice for trainees and test-takers alike:

#### Develop a positive attitude:

- Consider the exam an opportunity to demonstrate your knowledge and abilities.
- Know the subject matter, which is basic for any evaluation.
- Build confidence through effective study and exam practice.



Preparing properly for a test or exam will help prevent you from doing this on the vital day.

#### Study during training:

- Study regularly on a daily basis and do not cram for the exam.
- Review the Written Exam Outline in the *Candidate Handbook*.
- Organise similar topics into manageable sub-groups to study.
- Over-study topics, especially those you find difficult.
- Determine which areas are challenging and emphasise those topics.
- Utilise recommended reference materials and any other related information resources.
- Review any available previous exams and questions.
- Understand in advance any exam directions and instructions.
- Become extremely familiar with the question format.
- Practice with sample questions on the same exam topics.

#### Before taking the exam:

- Conduct a final review of all materials the night before the exam.
- Know in advance the exam location.
- Be ready to start the exam in a restful condition, alert, ready and confident.

#### On exam day:

- Arrive early in the building and become comfortable in the exam room.
- Immediately identify to the proctor any inappropriate conditions.
- Follow all instructions and do not engage in any behaviour that might disqualify you.

#### At the start of the exam:

- Read all the procedural directions and exam questions carefully.
- Scan the entire exam to get a feel for the task before you.
- Compartmentalise the questions into manageable blocks of time.
- Identify and answer all easier and understandable questions first.
- Do not spend too much time on any one specific difficult question.

#### During the exam:

- If you don't know the answer to a question, leave it and move to the next.
- Mark questions you are unsure of and return to them later.
- Underline important words and key concepts in the questions.
- Apply practical reasoning to determine the correct answers.
- Divide the question into manageable and understandable parts.

#### Remember:

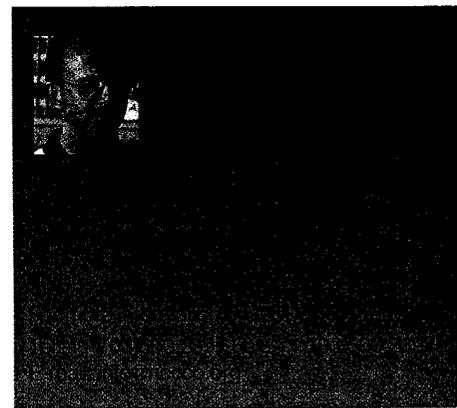
- Keep the intent of the question and basic subject matter in mind.
- Don't read too much into questions and over-anticipate the answers.
- Answer what is asked for and not what you feel should be asked.

#### Before the end of the exam:

- Complete all questions – you won't lose points for incorrect answers.
- Return to previously marked difficult questions to select an option.
- Review all answers for possible errors.
- Plan time effectively, and know exactly when the exam is finished.

#### At the end of the exam:

- Return all materials, and be courteous to proctors and participants.
- Leave the exam room knowing you have done your best.



# CCO Update

SUMMER 2004



NEWS FROM THE NATIONAL CRANE OPERATOR CERTIFICATION PROGRAM

## NCCCO Introduces Tower Crane Operator Certification Program

The National Commission for the Certification of Crane Operators (NCCCO) has announced the introduction of a new certification program for operators of tower cranes.

NCCCO has modeled the new tower crane program on its existing mobile crane operator certification program. Certification requirements include: a written examination, a practical examination, physical (medical) requirements, and a recertification examination.

"All elements of the new program have been developed according to the strict psychometric standards that have been a hallmark of the mobile crane operator program since its inception," said Dr. Anthony Mitchell, President of International Assessment Institute (IAI), NCCCO's test development and psychometric services provider.

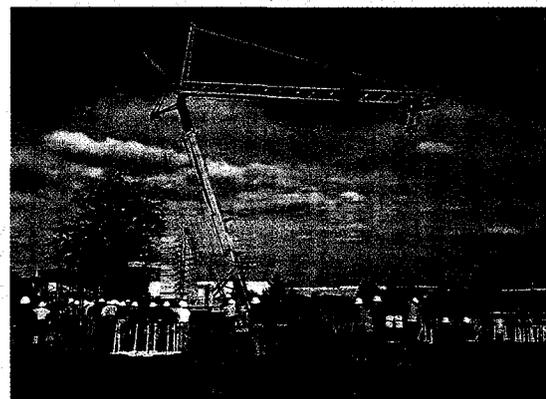
"This ensures the certification process is fair, valid, reliable, and legally defensible," he added.

A keystone of exam development activities, noted Phillip Kinser, NCCCO's Manager of Program Development, was the professional Job Task Analysis that IAI conducted over an eight-month period. Input from several hundred crane operators helped validate the work of the Task Force in establishing the content of both the written and practical examinations, he said.

Commission Chairman, Kerry Hulse, recognized the invaluable contribution played by the four firms that had underwritten the cost of development. "Without the financial assistance of Liebherr Tower Cranes, Manitowoc Crane Group, Morrow Equipment Company, and Terex Cranes,

*continued on next page*

*Task Force members watch a Liebherr 32TT self-erecting crane put through its paces on the CCO tower crane practical test course at the Salem, OR headquarters of Morrow Equipment Co.*



## NCCCO Accredited for Further 5 Years

The National Commission for the Certification of Crane Operators (NCCCO) has been awarded a further five-year accreditation from the National Commission for Certifying Agencies (NCCA).

Accreditation by NCCA is the most prestigious recognition available to organizations that certify personnel. Only a small number of certification programs are able to meet NCCA's exacting standards, and even fewer are granted accreditation for the full five-year period, the maximum NCCA awards.

"This award is coveted by the certification industry for a good reason," said NCCCO President, Ronald Schad. "It demonstrates to employers, as well as the public at large, that an operator certified through the CCO program has met industry-developed standards and has the knowledge and skill necessary for safe crane operations."

That was why, Schad said, all state-mandated operator certification in the last five years (including California and Hawaii)

has required certifying bodies to be accredited, and was the reason OSHA was looking at a similar requirement on a federal level.

"Re-accreditation by NCCA is a validation of the efforts of the hundreds of individuals from all industries who have donated their time and expertise over the last decade to develop this program and to impact safety at construction and industrial sites nationwide," Kerry Hulse, Chairman of the Commissioners said.

To qualify for NCCA accreditation, NCCCO had to demonstrate, among other requirements, that it operated independently of training; that its program had been developed and supported by industry; that its tests were psychometrically sound and validated through peer review; and that test administrations were conducted on a standardized, nationwide basis, under strict security.

**The National Commission for Certifying Agencies (NCCA) was created in 1987 to establish accreditation standards, evaluate compliance with these standards, and to recognize organizations and programs which demonstrate compliance. NCCA was set up by the National Organization for Competency Assurance (NOCA) to promote excellence in competency assurance for practitioners in all occupations and professions.**



## Swinerton Hosts Spring Commission Meetings

NCCCO held its spring meetings in Concord, California, April 26-29, courtesy of hosts, Swinerton, Inc., and SI Equipment Services. In addition to meetings of the Commissioners and Exam Management Committees, the Tower Crane and Overhead Crane Task Forces continued their work on the expansion of the CCO program. By the end of the meeting, the Tower Crane Task Force had sought, and received, approval for its new program by the Commissioners. The program was finally ratified by the Board of Directors with a roll-out date of July 2004.

At the meeting the following Commissioners were elected to a five-year term: Tom Broderick, Construction Safety Councils, Hillside, IL; Donald Frantz, Ohio Operating Engineers, Apprenticeship and Training Fund, Cygnet, OH; Kerry Hulse, Deep South Crane & Rigging, Houston, TX; Ronald Kohner, Landmark Engineering, Roseville, MN; Anthony Lusi, Jr., IUOE Local 542 JATC, Aldan, PA; Gene Owens, Granite Construction, Watsonville, CA; Carl Springfels, Florida International University, Miami Shores, FL; William Stramer, Link-Belt Construction Equipment, Lexington, KY; J.R. Williams, Texas Crane Academy, La Porte, TX; and Paul Zorich, RZP International, Berkeley Springs, WV.

In addition, Commissioners received approval for the appointment of the following alternates: Stephen Cloutier, OSHA Directorate of Construction, Washington, DC; Peter Juhren, Morrow Equipment Co., Salem, OR; Brian Newsom, IUOE Local 324 JATF, Howell, MI; Jack Pletcher, IUOE Local 66, New Alexandria, PA; John Rahilly, Construction Safety Council, Hillside, IL; and John Teller, IUOE Local 3, Rancho Murieta, CA.

## Tower Crane Program

*continued from front page*

this program would not have been possible," he said. These companies have our sincere gratitude for stepping forward in this way. They are to be congratulated for their contribution to crane safety."

The firms and organizations that hosted the meetings also deserved commending for their generous donations of facilities and hospitality, Hulse added. Hosts included: IUOE Local 825, New Jersey; SI Equipment Services and Swinerton, Inc., California; McGriff, Seibels & Williams, Alabama; Morrow Equipment Company, Oregon; Ohio Operating Engineers, Ohio; and Terex Cranes, North Carolina.

NCCCO outlined its plans for the new program in March last year. Drawing on support in three main areas — subject matter expertise, psychometric guidance, and financial contributions — NCCCO developed an aggressive development schedule with the aim of making the first certification examinations available by mid-2004. "That goal was achieved," said NCCCO President, Ronald Schad, "and in record time for a certification program of this quality."

Paying tribute to the dedication of the 22 subject matter experts responsible for development of the content of the new program, Tower Crane Task Force chairman, David Ritchie, St. Paul Travelers, noted that their commitment also extended to participation in six (6) meetings across the nation. Considerable research was also conducted by Task Force members between meetings. "We met approximately every other month for 12 months," said Ritchie. "What really impressed me, beyond the extraordinary knowledge of these experts, was their unflinching dedication to the project at hand."

The introduction of CCO tower crane certification marks the first expansion of the program since NCCCO was formed in January 1995. Full program information, including Candidate Handbook and Application Forms, is available from the NCCCO web site, said NCCCO Executive Director, Graham Brent.



## CCO Practical Examiner Workshop

J.F. Shea Co., Redding, California, was the host for a CCO Practical Examiner Workshop earlier this year. More than 20 candidates came from as far afield as Texas, Florida and New Jersey to train during the three-day event in the expectations of being accredited by NCCCO to conduct CCO practical exams. Almost half were from the home state of California, no doubt encouraged by the prospect of mandatory certification that will affect most operators of tower and mobile cranes in the state beginning June 2005.



## CCO FLASHBACK

When NCCCO first received its accreditation from NCCA in 1998, just 5,000 operators had been tested through 170 separate test administrations in 30 states. Today, more than 25,000 operators have been tested, and the number of test administrations has increased almost 10-fold in all 50 states. More than 100,000 separate examinations have been administered. Developments during that time also include the introduction of a practical examination, a program of re-certification, and an accreditation program for practical examiners. Tower crane operator certification was introduced mid-2004, to be followed by a program of overhead crane operator certification in early 2005.

The magazine for the crane, lifting and transport industry



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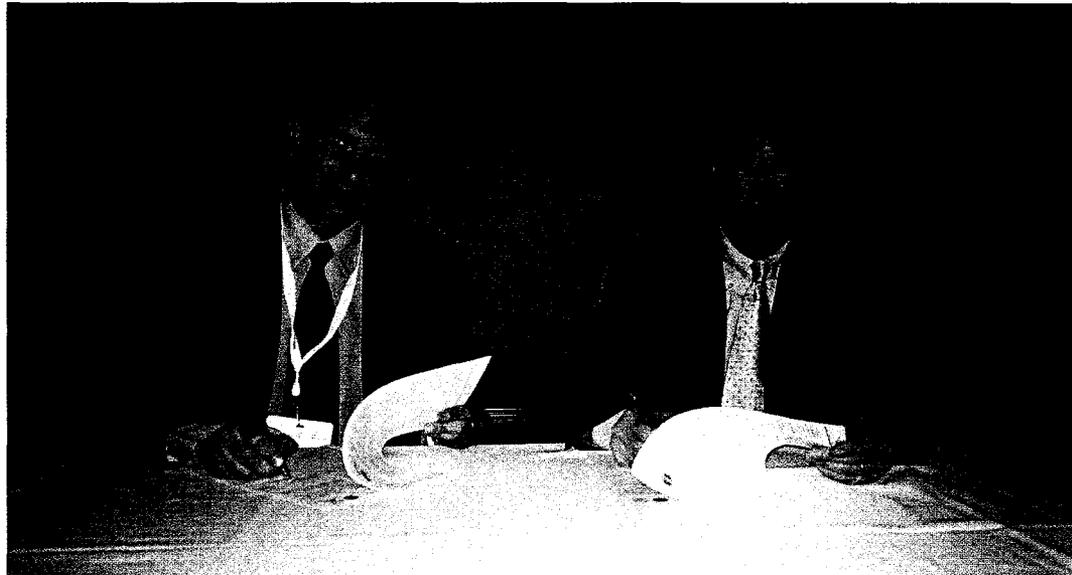


# NCCCO and the Construction Institute team to promote crane certification

The Construction Institute (CI) of the American Society of Civil Engineers (ASCE) has entered into a collaborative agreement with the National Commission for the Certification of Crane Operators (NCCCO) aimed at promoting the benefits of crane operator certification.

The agreement, signed in late January in New York, provides a broad framework for cooperation between the two organizations in striving to promote the certification of crane operators as an effective means of improving job site safety.

NCCCO president John Kennedy noted that both organizations had a goal to improve crane safety in



Pictured at the signing of the NCCCO and CI agreement are (from left): Richard MacDonald, president of the Construction Institute and who is also vice president of Weeks Marine; and John Kennedy, president of NCCCO and sales director at Manitowoc Crane Group.

“We are delighted to be entering into cooperation with the Construction Institute of the American Society of Civil Engineers with whom we share the common goal of saving lives and reducing the impact of improper crane operation on life and property.”

**John Kennedy, president, National Commission for the Certification of Crane Operators (NCCCO).**

construction. “NCCCO’s mission from the outset has been to provide an effective means of risk management through an independent assessment of a crane operator’s knowledge and skill,” Kennedy said. “We are delighted to be entering into cooperation with the Construction Institute of the American Society of Civil Engineers with whom we share the common goal of saving lives and reducing the impact of improper crane operation on life and property.”

In addition to participation in each others’ events and projects, NCCCO will work with CI’s Crane Safety Committee to assist in the revision of its *Crane Safety on Construction Sites* publication.

Committee chairman Harlan Fair of Harlan Fair & Associates was a principal architect of the CI/NCCCO agreement.

The Construction Institute was created in 2000 as a semi-autonomous organization within

the American Society of Civil Engineers through a merger of its construction division, materials division, and Construction Standards Council. CI has more

than 16,000 individual and corporate members in a variety of construction-related fields.

As part of its mission to advance the knowledge and practice

of construction, CI develops guidelines, codes and standards, and provides continuing education opportunities for construction industry personnel.

## ISO accreditation standard adopted by ANSI

The international standard used by the American National Standards Institute (ANSI) to accredit certification organizations, ISO 17024, has been adopted as an American national standard.

The adoption of ISO 17024 (General Requirements for Bodies Operating Certification Systems of Persons) by ASTM International means that employers, associations, and organizations such as the NCCCO that become accredited under the ISO 17024 will now also meet the new ANSI standard.

NCCCO plans to seek accreditation from ANSI this year. NCCCO’s national crane operator certification program was recently re-accredited by the National Commission for Certifying Agencies (NCCA) for another five years. The CCO program was first accredited in 1998.

“A variety of professionals across a wide range of occupations are now required to pursue certification as a means of demonstrating that they have the necessary knowledge, skills and abilities to perform their work,” said Lane Hallenbeck, ANSI vice president for conformity

assessment. The new standard was “an exemplary basis for assessing and recognizing the competence of the bodies offering such certification,” he added.

Adoption of the standard by ASTM International, an ANSI-accredited standards developer, is geared toward providing an additional level of credibility and ease of use for state and federal regulatory agencies and other stakeholder groups that require a domestic standard for implementation purposes.

By voting for adoption of the ISO standard, ASTM decided not to develop a similar standard that could lead to duplication and possible confusion in the marketplace, noted Steve Mawn, ASTM staff manager.



**NCCCO publishes four-step guide to use of its trademarks**

The National Commission for the Certification of Crane Operators (NCCCO) has published a Four-Step Guide to the correct use of its logo and acronyms, "CCO" and "NCCCO."

Although NCCCO encourages the correct use of its logo and acronyms, it reminds would-be and current users that these are registered trademarks and that their use is subject to prior written approval from NCCCO.

The four steps are:

**Step 1:** The organization or company

wishing to use the copyrighted NCCCO/CCO acronyms and/or logo must first submit a Use of the NCCCO Logo form [downloadable from [www.nccco.org/downloads/useoflogopolicy.pdf](http://www.nccco.org/downloads/useoflogopolicy.pdf)]

**Step 2:** Following review of this form, NCCCO will email the NCCCO logo files for use by the requesting organization or company in developing proofs of the marketing material or web pages that include the NCCCO/CCO acronym and/or logo.

**Step 3:** The requesting organization or

company must then submit a draft of the materials containing a reference to NCCCO/CCO acronyms and/or logo to NCCCO prior to printing.

**Step 4:** Following review of this draft, NCCCO either mails an approval letter or contacts the requestor with any questions.

NCCCO stresses that use of the acronyms and/or logo in any form (printed or electronic) must not take place until approval has been received for each separate use of its

copyrighted marks.

Firms or organizations currently using the NCCCO/CCO acronyms and/or logo in their printed materials or on their web site without the necessary approvals are asked to download a Use of the Logo form from the NCCCO web site, and submit any current uses of the logo and/or acronyms for review.

All questions regarding this policy should be directed to Tara Whittington at (703) 568-2391 or [twhittington@nccco.org](mailto:twhittington@nccco.org)

**OSHA asks for feedback from Florida crane owners**

The tangible return to employers by investing in the training and certification of their crane operators was attested to by representatives of industry and government at the Florida Crane Owners Council (FCOC) first-quarter 2006 meeting in January.

"Statistics show that a crane operator certified through the CCO program is a safer operator and has fewer accidents than operators who are not CCO certified," said Kevin Cunningham, president and CEO of Special Risk Services (SRS), Chicago, IL.

Working through Lloyd's of London, Special Risk Services (SRS) provides specific line item premium credits for crane/contractor accounts that can validate that their operators have CCO certification. Cunningham noted that SRS underwriters can apply up to a 10 % rate credit for employers of CCO certified crane operators, for each of three lines of insurance; equipment insurance, riggers liability insurance, and general liability insurance.

To be considered for the discount insured companies need to be able to supply copies of their operators' CCO certification cards. Contractors with only a portion of their overall operators certified may qualify for a pro rata percentage credit on base premium rates, he said.

Cunningham also noted that his firm was working with federal

OSHA to quantify this benefit through the sharing of accident data.

Commenting on OSHA's ongoing efforts to revise the cranes and derricks standard, Bill Smith, senior safety and health inspector of OSHA's directorate of construction, stated that publication of a proposed rule was about a year away. At that time there would be plenty of time for public comment, following which a final rule would be prepared.

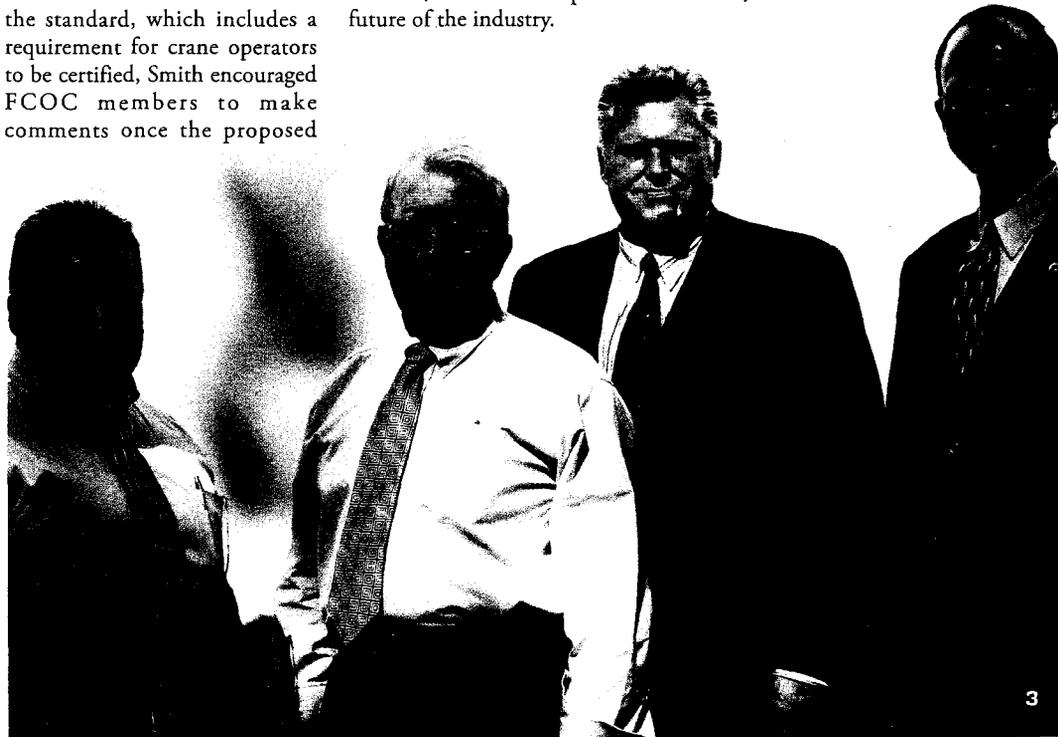
Noting that the Cranes and Derricks Advisory Committee (CDAC) had produced a "good piece of work" during the 12 months it had labored to revise the standard, which includes a requirement for crane operators to be certified, Smith encouraged FCOC members to make comments once the proposed

standard was published. "Many people feel they only have to comment when they don't like something," he said. "But it's just as important for you to comment if you are particularly in favor of some of the new provisions. That's the only way OSHA is going to get balanced feedback."

The Florida Crane Owners Council (FCOC) is a membership organization affiliated with the Associated Builders & Contractors (ABC). Its mission is to collectively address the issues and concerns of Florida-owned crane companies, and to develop and monitor laws, regulations and standards for the safe, efficient and profitable future of the industry.

**ff** SRS underwriters have the authority to apply a 10% rate credit for employers of CCO-certified crane operators, for each of three lines of insurance.

**ff** Pictured at the Florida Crane Owners Council meeting in January are (from left): Bill Smith, senior safety and health inspector, OSHA Directorate of Construction; Bruce Swanson, director of OSHA's directorate of construction; Kevin Cunningham, president and CEO, SRS Special Risk Services; and Graham Brent, NCCCO executive director.



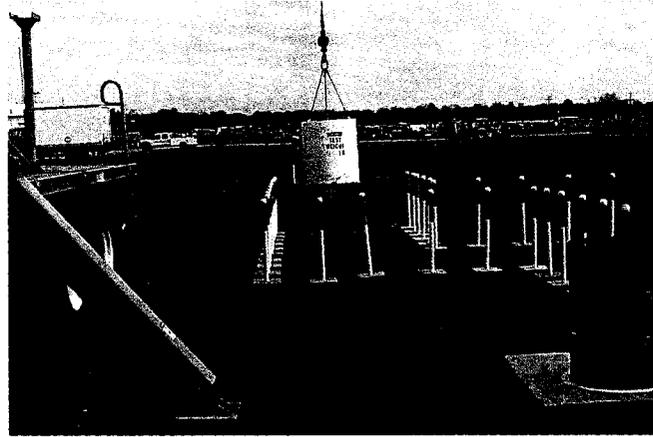
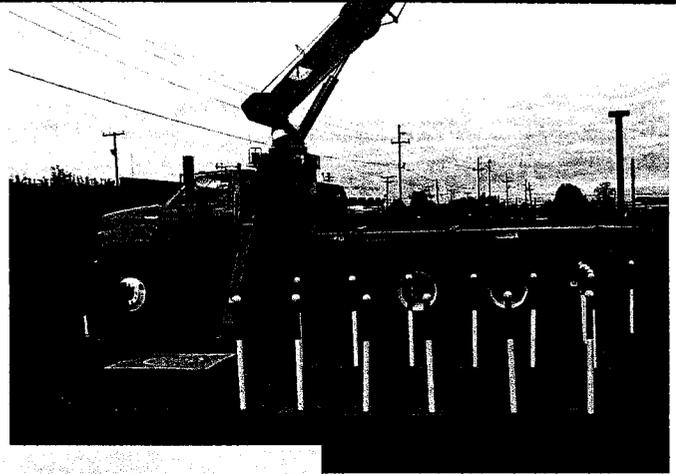
# South Carolina DOT mandates CCO certification

South Carolina Department of Transportation (SCDOT) recently conducted its first NCCCO practical exams at its Columbia, SC site.

Michael Phillips Sr. of SCDOT's Specialized Bridge Division tested 34 candidates in preparation for meeting the SCDOT mandatory requirement for CCO crane operators that became effective in January 2006. SCDOT now requires crane operators for all critical lifts during land, barge and multi-crane operations to be CCO-certified. A CCO requirement for non-critical lifts is being phased in over a three-year period.

Phillips received training as an NCCCO accredited Practical Examiner at the Spring Hope,

NC site of Edwards, Inc. A National 10 ton boom truck, a Telelect 22 ton boom truck, and a Link-Belt LS138 II lattice boom crane were used for testing in the



small telescopic boom crane, large telescopic boom crane, and lattice boom crane categories, respectively.

Phillips stated: "This has been a good experience for us at SCDOT." He noted that the testing process has also helped to identify SCDOT's specific training needs.

SCDOT mobilized a National 10 ton boom truck for use in the small crane category of the CCO practical exam.

# Crane Rental hosts second NCCCO examiner workshop

Crane Rental Corporation, Orlando, FL, hosted its second NCCCO Practical Examiners Workshop, February 10-12. Eighteen participants from as far away as Alaska attended the event.

"It's all part of our safety team's overall strategy," said Crane Rental owner Alan Ashlock. "Our company has strongly supported NCCCO for many years and sponsored our first workshop in 2000."

Gary Campbell, the company's general manager, indicated that 80% of the firm's crane operators were already CCO-certified.

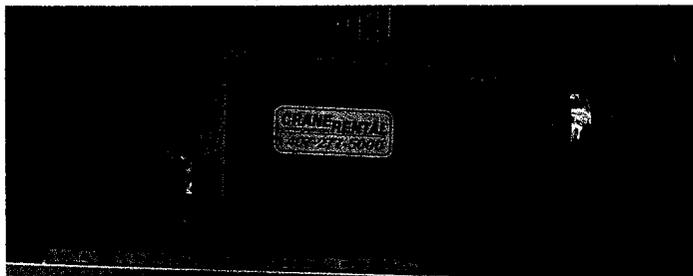
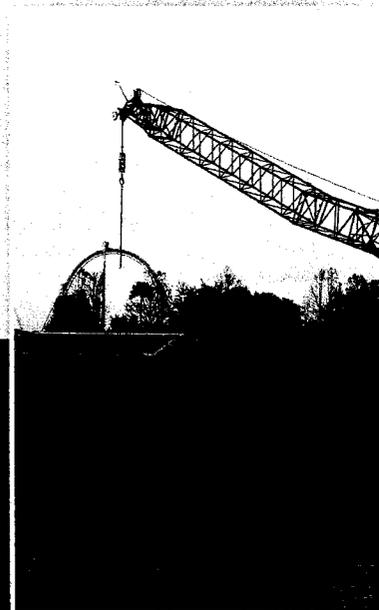
"With seven practical examiners on staff," Campbell said, "our goal is to reach 100% certified."

Crane Rental, which has been in business for over 45 years, operates 65 cranes, up to a 550 ton model. "Often we are

involved in high exposure critical lifts," Campbell said. "Qualified and certified crane operators are paramount for our operations."

The firm recently rolled a 300

ton Manitowoc 2250 into place as part of NASA's "Return to Flight" program. Maintenance and refurbishment was provided to the Space Shuttle Launch Tower



Crane Rental Corporation hosted its second CCO Practical Examiner Workshop in February bringing its CCO-Accredited Practical Examiners up to seven, and the Orlando, FL-based firm nearer its goal of being "100% CCO-certified."

**CRANE RENTAL CORPORATION**  
**Class of 2006**  
 crane-rental.com

**new cranes featured on CCO written exams**

The National Commission for the Certification of Crane Operators (NCCCO) is preparing to offer revised crane choices for its written specialty exams for its mobile crane program.

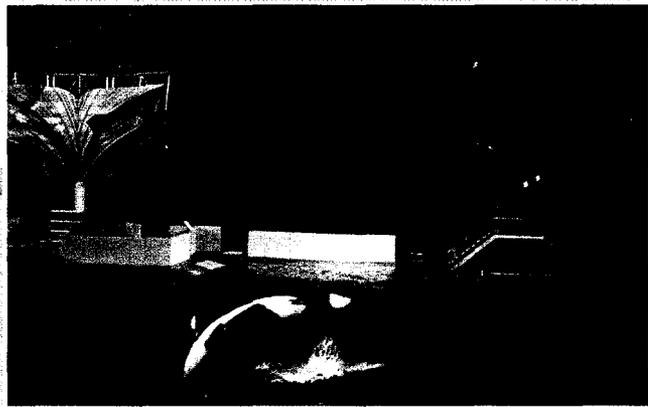
Replacing the American 5300 on the lattice boom crawler crane exam is the American HC80, while the Broderson RT300 2B0 replaces the Grove RT59S on the small telescopic crane exam. The changes are effective July 1, 2006, and tests scheduled after that date will feature the new exams.

From that date, the complete list of options available to candidates taking CCO written exams will be: the Manitex 1768 and Broderson RT300 2B0 in the small telescopic crane (TSS) category; the Link Belt RTC 8050 and Grove TMS 750B in

the large telescopic crane (TLL) category; the Manitowoc 777T and Link Belt HC238H in the lattice boom truck crane (LBT) category; and the Manitowoc 888 and American HC80 in the lattice boom crawler cranes (LBC) category.

Also, for the first time, CCO recertification exams will offer a choice of cranes in each category. The new options available to recertifying candidates will reflect the changes made on the main exams used for initial certification.

Candidate application forms for the written exams are being updated now and will be available in the next revision of the Candidate Handbook and the Test Site Coordinator Handbook for the mobile crane program.



Crane Rental Corp. readies a telescopic truck crane in preparation for the 5,000lb lift of a whale (inset) about to begin a long journey to Spain.

provided the lift at Sea World for the transfer of a 5,000 pound whale on its way to Spain, along with other ongoing projects at the park. Other past and present lifts include work at other Florida theme parks, as well as industrial projects all over the Southeast.

Company safety director Mike Smith explained that CCO-certified crane operators were "all part of our company's safety culture."

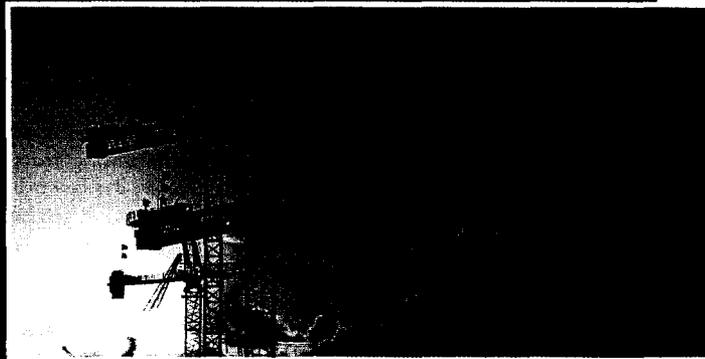
"High exposure, critical lifts, and NCCCO all go together as part of Crane Rental Corporation's commitment to job site safety and health," he said.

at Kennedy Space Center. Also provided at the center was a new 415 Peiner tower crane erected at 600 feet, one of the tallest ever utilized in the United States. The tower helped in the re-roofing of one of America's largest buildings, the Vehicle Assembly Building at the Kennedy Space Center.

Crane Rental also recently



**Tower crane Q&A**



The CCO Tower Crane Operator certification program was introduced last year. Here are answers to frequent questions from candidates.

**If I'm already certified in mobile cranes, will I get a separate card for tower crane operator certification?**

**No.** The same certification card is used for operators who are certified in mobiles and in towers. If you are already certified in mobiles, and you become certified in towers, you may request an updated card showing that you are also certified in tower crane operation.

**Are the tower crane written examinations offered at the same sites and times as the mobile crane exams?**

**Yes,** an examination site can request that candidates who want to be certified in tower cranes also take the examination at the same time as candidates certifying in mobile cranes.

**Will the same practical examination test sites that administer mobile crane practical exams also administer tower crane practical exams?**

**It depends on the equipment available.** In some cases a test site will offer practical exams in all mobile and tower crane types, while other sites may only offer exams in one or two. If you have difficulty locating a test site for your choice of practical exam please contact CCO.

**If I am currently certified as a mobile crane operator, will I have to send in a physical (medical) form to take my tower crane exam?**

**No.** Candidates no longer need to provide the physical (medical) form, but keep in mind that one of the conditions of certification is that you continue to comply with B30 medical requirements throughout your certification period.

**What are the candidate fees for the tower crane certification exams?**

**The fee for the tower crane written exam is \$165 and for the practical exam it is \$60.** If, however, you are already certified as a mobile crane operator the fee for the written exam is \$75, and \$50 for the practical exam. Note that if you do not want to have an updated card reflecting both your mobile crane and tower crane certifications, the fee for the written exam is just \$50.

**Also, if you are applying to take both the mobile and written exams at the same time, you pay only \$50 for the written and \$50 for the practical examination.**

**Do I have to get training before I sit the exams?**

**CCO exams are designed for crane operators who have received training.** While you are not required to go through a formal training program before you sit the exams, CCO strongly recommends you do. To give an independent assessment of crane operator knowledge and skill, CCO does not provide training directly, but does maintain a list of training firms that have indicated they will provide preparatory training for the CCO examinations.

# Energy giant finds success with CCO certification

**E**xelon Nuclear and Exelon Power jointly hosted two CCO Practical Examiner Accreditation Workshops for mobile and overhead crane operators in May. A mobile crane workshop was held at Exelon's Peach Bottom Atomic Power Station near Delta, PA, while the overhead program was conducted at Eddystone Generating Station, a fossil fueled facility, in Eddystone, PA. The workshops were attended by 18 participants from Pennsylvania, New Jersey and Maryland.

Exelon's involvement with CCO certification goes back 10 years, almost to the very beginning of the program. In June 2000 the company hosted its first practical examiner workshop. Wayne Emberger, company outage services supervisor, coordinated the most recent workshops. "Our overhead crane operators

are faced with critical lifts with tight tolerances during reactor assembly and disassembly operations," he said. "Operators lift critical equipment in tight places, such as turbines, valves, pumps, motors and generator rotors weighing as much as 200 tons. In addition, hydraulic crane operators make interim spent fuel storage installation lifts, and all operators must comply with special NRC rigging and lifting requirements."

Noting that Exelon operates literally hundreds of overhead and mobile cranes, Emberger said, "We have found great success with the CCO programs. In particular, CCO written and practical examinations have helped us improve our company's preparatory crane training." And with possible new state and federal requirements pending, Exelon's involvement

with NCCCO has become even more important and valuable, Emberger said.

Exelon Corp., headquartered in Chicago, IL, is one of the nation's largest electric utilities with more than \$15 billion in annual revenues and approximately 17,000 employees. It distributes electricity to approximately 5.2 million customers in Illinois and Pennsylvania, and gas to 460,000 customers in the Philadelphia area.

Exelon operates the largest nuclear fleet in the United States, and the third largest commercial nuclear fleet in the world. The current fleet of fossil and hydroelectric generation, operated by Exelon Power, is composed of 109 units that provide approximately 8,000 megawatts (MW) of generating capacity using a variety of fuels. **act**

## WMATA Transit authority requires CCO certification

Washington Metropolitan Area Transit Authority (WMATA) selected CCO certification as a requirement for crane operators working on a design-build contract drawn up in December.

The requirement, that "all crane operators shall be certified to operate the type of crane used by the National Commission for the Certification of Crane Operators..." is contained in a list of risk management requirements drawn up by WMATA. Six copies of the operators' CCO certification cards must be submitted to the authority representative before an operator is allowed to work on the site.

Other safety provisions include the requirement for cranes to be equipped with load moment indicating devices or rated capacity indicators, and for load charts to be de-rated by 30% when structural elements are being picked. A lift plan, showing all pertinent information demonstrating that the total load does not exceed 70% of the maximum, must be submitted before the crane is delivered to the project site.

# Morrow Equipment hosts NCCCO spring meetings

**P**ortland, OR was the venue for the 2006 spring meetings of the NCCCO Commission in April. Morrow Equipment Co., headquartered in Salem, OR, was the generous host for the four-day event.

Morrow president Christian Chalupny noted that his company had been an enthusiastic supporter of the NCCCO program from the outset, but that it was not until three years ago that the company became directly

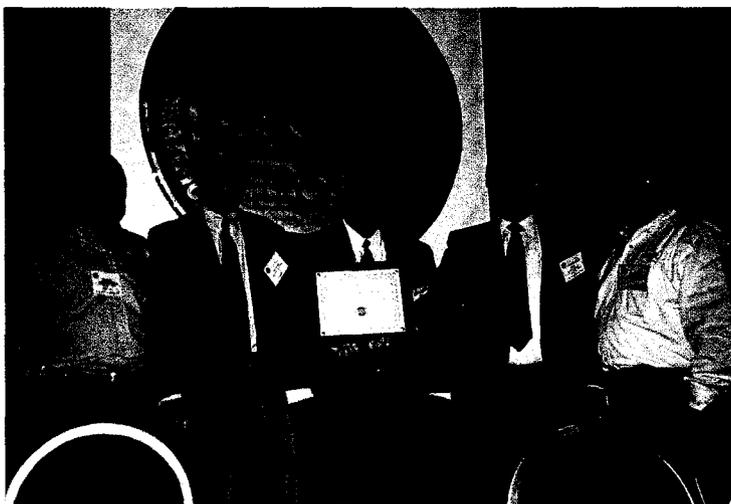
involved as a major sponsor of the CCO tower crane certification program. "We felt strongly that tower crane operators should reap the same benefits of certification that their mobile crane counterparts had enjoyed since 1996," Chalupny said. "We were delighted NCCCO decided to expand in this way and are proud to have been a significant supporter of the tower crane program."

Chalupny, who attended part of the NCCCO Commission meeting along with Morrow chairman John Morrow and vice chairman Richard Morrow,

also noted that Peter Juhren, a 26-year Morrow veteran who has served as the company's national service manager for the last 12 years, had served on the original NCCCO Tower Crane Task Force, and was now a member of the Tower Crane Management Committee, as well as an alternate commissioner. In addition to serving on the ASME B30 Committee, Juhren is chairman of the B30.3 Sub-Committee for Construction Tower Cranes, and a member of the ASME B30.4 Sub-Committee for Portal, Tower and Pedestal Cranes.

Morrow Equipment Co. is the exclusive distributor for Liebherr tower cranes in the US, Canada, Mexico, Australia and New Zealand. The company also owns and operates the largest fleet of tower cranes in North America. **act**

Morrow Equipment Co. was represented at the NCCCO spring meetings that the company hosted in Portland, OR by (l to r): Peter Juhren, Christian Chalupny, and Rick and John Morrow. At right is NCCCO Commission Chairman, Kerry Hulse, Deep South Crane & Rigging



# NCCCO registers 1,000th practical examination site

Last month the Salt Lake City office of the National Commission for the Certification of Crane Operators (NCCCO) celebrated the registration of the 1,000th CCO Practical Exam site.

The 1,000 registered sites include 962 mobile crane sites, 34 tower crane sites, and seven overhead crane sites. Practical exam sites have been registered in 47 states including Hawaii and Alaska. California leads the way with 440 sites, including 12 tower crane sites.

Even more remarkable, perhaps, is the fact that no fewer than 3,159 cranes have been approved for use at those sites, every one of which has had a CAD drawing generated by NCCCO's Salt Lake City office for use in CCO practical exams.

The practical exam as a required component of operator certification was introduced

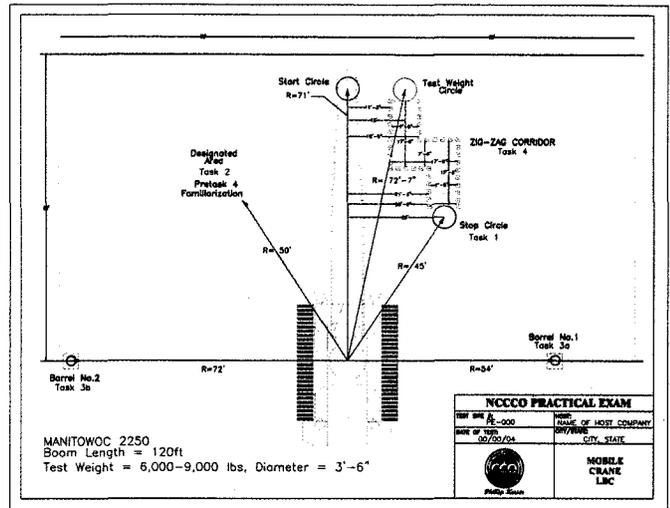
in 1998 to demonstrate proficiency in satisfactorily completing an "operation test" as defined in the ASME B30.5 standard. NCCCO began registering sites and their machines in 1999 in order to

**“** The registration of the 1,000th CCO Practical Exam site is a milestone that clearly indicates the overall acceptance of operator certification in general, and of the CCO Practical Examination process in particular.

**Phillip Kinser, NCCCO manager of program development**

provide standardized exam layouts based on established criteria so candidates would be assessed through a valid and reliable process.

"The 47 states where CCO



**A CAD practical test site layout is developed for every crane used for CCO practical exams**

Phillip Kinser, NCCCO manager of program development and manager of the Salt Lake City office.

**”** While recognizing that providing cranes, test site equipment, and authorized practical examiners can challenge the resources of companies and organizations, Kinser noted, "The registration of the 1,000th CCO Practical Exam site is a milestone that clearly indicates the overall acceptance of operator certification in general, and of the CCO practical examination process in particular," as crane operators seek certification in meeting individual goals and company and state requirements. **act**

Practical Exam sites are located represent an enormous effort on the part of construction companies, organizations and training firms to provide access to the CCO Practical Exam," said

## Essex Liebherr crawler selected for CCO practical exam

CCO Practical Exam candidates were in for a treat when they signed up to take their hands-on exam with East Texas Crane Academy in April.

Chosen as the practical test crane for the lattice boom crane exam was a brand new Liebherr LR

1200 SX, one of a dozen bought by Essex Crane Rental, and never before used for CCO practical exam testing. Essex also provided the Arcola, TX test site for the CCO exams.

The 275 ton capacity machines, built by Liebherr in Nenzing, Austria, feature boom configurations and options reportedly available exclusively to Essex. Essex expects them to be particularly useful for application in the wind turbine industry.

According to CCO accredited practical examiner, Joe Bob Williams, president, East Texas Crane Academy, the LR 1200 SX was a hit with all the 25 candidates that tested on it. "It's really state-of-the-art," he said. "The radius indicator was precise to the inch."



Shown during a break between exams are (l to r): Joe Bob Williams, East Texas Crane Academy, Travis Moon (in the cab), and Bruce Reinstadler, Essex Crane Houston branch manager.



# Operating Engineers host CCO workshops

Western States Operating Engineers Training Institute Local 370 and Operating Engineers Regional Training Program Local 302/612 provided cranes and classroom facilities for CCO overhead crane and tower crane workshops, November 7 through 11.

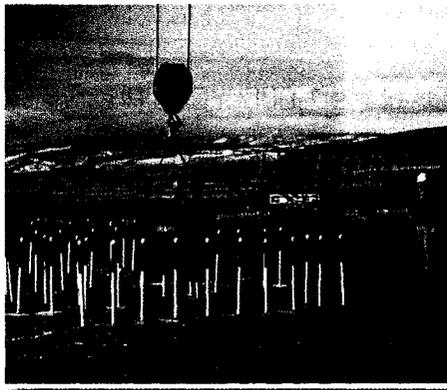
Western States Engineers Training Institute is 16 miles south of Spokane in Spangle, WA. Mark Wagar, Local 370's training director, provided classroom facilities and a 7-ton, top running, single girder Washington overhead crane for the workshop. Candidates came from Alaska, Arizona, and Washington State to participate in the two day event.

The 60 acre Spangle site has dormitory space for 30 students and a 7,000 square foot maintenance and training building. The Western States Engineers Training Institute is licensed as an interstate college and provides training for supervisory personnel and for equipment operators.

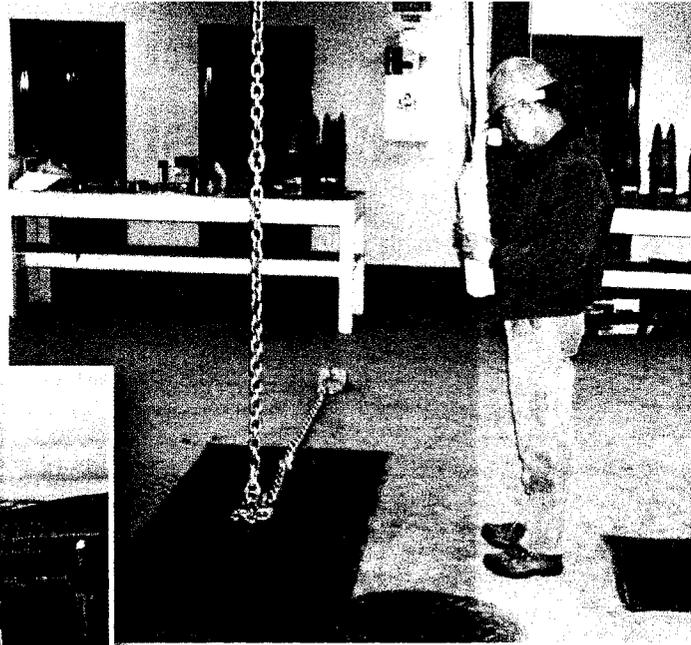
The tower crane Practical Examiner training was conducted

on a Liebherr 132 HC with a 115 foot jib and 99 foot tower at the IUOE Local 302/612 site outside Ellensburg, WA. Workshop candidates came from Arizona, Kansas, Missouri and Washington State to participate in the three-day event.

Jim Agnew, director of training at the Ellensburg site and a member of NCCCO's Tower Crane Development Task Force,



provided the tower crane, training facilities, and lunch. Completed in 2004, the 1,600 acre Ellensburg training site has new offices, classroom facilities and a



Completed in 2004, IUOE Local 302/612's 1,600-acre Ellensburg training site that hosted a CCO Practical Examiner Training Workshop in November, boasts new offices, classroom facilities and a 9,600 square foot maintenance and training building.

9,600 square foot maintenance and training building.

The site houses six mobile cranes, one tower crane and more than 50 pieces of earthmoving

equipment. Approximately 200 journeyman and apprentices are trained each year, and the site caters for the western and central Washington areas. **act**

## Lang Exploratory Drilling hosts workshop

Lang Exploratory Drilling, a division of Boart Longyear, hosted a CCO Mobile Crane Practical Examiners Accreditation Program workshop at its Salt Lake City, UT facility October 18 through 20.

Several employees from Utah, as well as candidates from Alaska, British Columbia, Hawaii, Nevada, and Oklahoma, received practical examiner training that authorizes them to administer CCO practical exams developed by NCCCO.

Lang Exploratory Drilling has 31 drilling rigs in 11 western states, as well as Alaska, Canada, and Peru. Lang uses QMC cranes that fall within the NCCCO small and large telescopic categories.

Scott Crowder of Lang Exploratory Drilling indicated that CCO crane operator certification forms a part of the overall training that Lang employees must receive, and believes the overall benefit of CCO certification will serve the

company well as more states in which the company operates adopt it as a requirement.



For information on the National Commission for the Certification of Crane Operators (NCCCO) go to: [www.nccco.org](http://www.nccco.org)



# State of Minnesota gets serious about certification

**ff** We take crane operator certification extremely seriously, and we plan on being effective in policing this new rule.

**ROSLYN WADE**, assistant commissioner of Minnesota's Department of Labor and Industry, in October, in reference to recently passed legislation that will require crane operators in the state to be certified by July 2007

**W**ade was speaking at the fall 2005 meetings of the National Commission for the Certification of Crane Operators, held at the Eagan, MN headquarters of Truck Crane Service Company. "The Department's core mission is to provide a safe workplace for employees," said Wade, noting that existing inspection staff would be used to enforce the new rule. "Wherever cranes are being used on a worksite, we will be ensuring that the operator is certified."

Wade was accompanied at the NCCCO meeting by Jeff Isakson, director of OSHA compliance at the state Occupational Safety and Health Division.

Recognizing that it may take time for some employers to comply with the rule, Wade

stated that the first official communication would be released by the department in January 2006, followed by reminders and updates at six-month intervals.

Wade, who headed the original task force that gathered much of the information necessary to make an informed decision about the risk management benefits of nationally accredited crane operator certification for the state, noted that there had been "lively discussion" about the issue over several years, and that she was gratified by the outcome. "The contributions of stakeholder groups, including the Associated General Contractors of America, the International Union of Operating Engineers, and the National Commission for the Certification of Crane



Roslyn Wade discusses a point with NCCCO executive director, Graham Brent, along with Kerry Hulse, NCCCO Commission chairman (back to camera) and Paul Doran, president Truck Crane Service Company

Operators, were all extraordinarily helpful, and much appreciated," Wade said.

The new regulation states that no individual may operate a crane of 5 tons or more on a construction site unless that person has a valid crane operator certificate issued by a "nationally recognized and accredited certification program," such as NCCCO. Recertification is required every five years.

Trainees and apprentices may operate a crane so long as they are under the direct supervision of a certified crane operator. **act**

## Oklahoma trainer makes CCO history

It's not unusual for the host of a CCO Practical Examiner Workshop to be signed up to also participate in the examiner training. But when Safety Resources Unlimited of Oklahoma City decided to host the event, it made a little piece of CCO history. For the candidate representing Safety Resources was also the owner of the training firm, and that meant, on her successful completion of the program, that CCO had its first female practical examiner.

Jennifer Sale, president of the six-year old company, was one of 13 candidates that registered for the three-day workshop, some of whom traveled from as far away as South Carolina and California to participate. The event also attracted eight "refresher" candidates keen to maintain compliance with program requirements by attending a one-day training session before their 5-year examiner accreditation expired.

Sale formed Safety Resources Unlimited (SRU) in 1999 to provide annual mobile crane inspections and customized mobile crane training programs for companies employing multiple operators and inspectors. Today, operating out of its two-year old purpose-built training center, SRU runs training classes three weeks out of the month, and has a team of instructors that conducts "on-site training" for a variety of industries.

SRU conducts CCO preparatory training on a monthly basis, and offers practical testing for small and large telescopic cranes on demand. Long time business associate, Joe Bob Williams, president of Houston-area training firm, East Texas Crane Academy, provides practical testing on lattice boom cranes quarterly. SRU also offers training for mobile and overhead



More than 20 candidates traveled from across the country to attend a CCO Practical Examiner Accreditation Workshop hosted by Safety Resources Unlimited in Oklahoma City, OK

# NCCCO renaming small and large telescopic categories

OLD NAME	NEW NAME
Small Telescopic, Less Than 17.5 Tons Capacity (TSS)	Small Telescopic, Fixed Cab (TSS)
Large Telescopic, More Than 17.5 Tons Capacity (TLL)	Large Telescopic, Swing Cab (TLL)

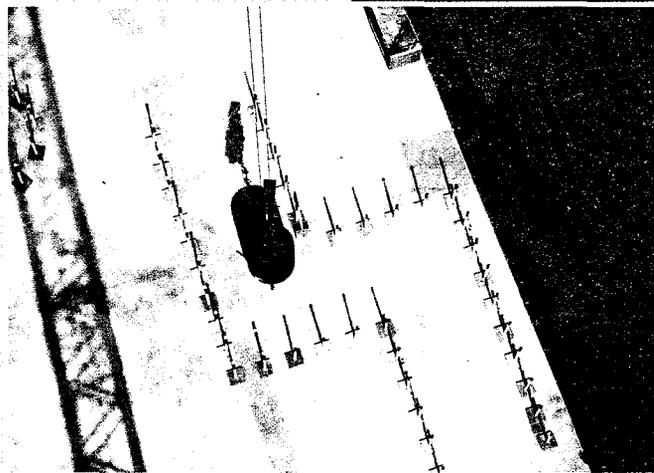
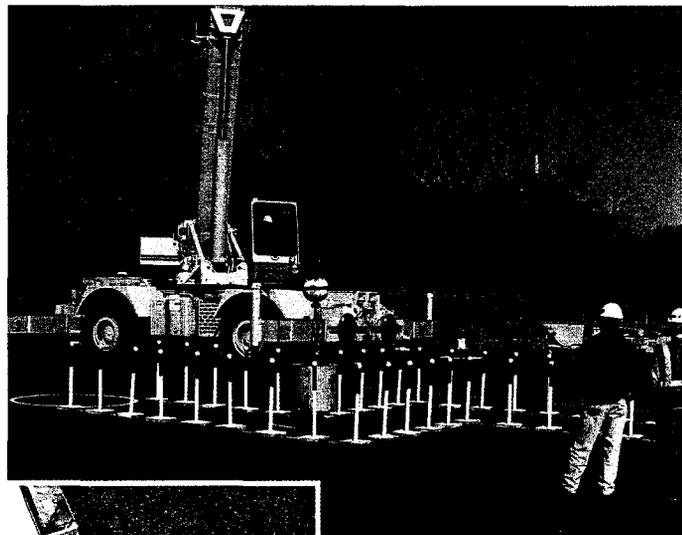
The National Commission for the Certification of Crane Operators (NCCCO) is renaming its large and small telescopic mobile crane categories. The "Small Telescopic, less than 17.5 tons capacity" category will be known as the "Small Telescopic, fixed cab" category, while the "Large Telescopic, more than 17.5 tons capacity" will become the "Large Telescopic, swing cab" category.

"The 17.5 tons capacity was a threshold established in the very early days of the CCO program as a means of distinguishing between mobile cranes with fixed control stations, such as cab-down machines and many boom trucks and those equipped with rotating or swing cabs,"

A bird's eye view of Heede Southeast's North Carolina tower crane practical test course shows the zigzag corridor that candidates must navigate.

said NCCCO executive director, Graham Brent.

As with many areas of technology, cranes have evolved over the last decade to the point where manufacturers now regularly produce fixed cab cranes with a capacity far greater than 17.5 tons. Realigning the



NCCCO crane categories have been renamed according to the type of controls they are equipped with, fixed cab or (as shown here) swing cab

two categories by type of control system rather than by capacity will eliminate the confusion sometimes caused when a particular model of crane seems to fit both categories, Brent said, while continuing to distinguish between the skills required for operating each type.

The certification codes, TSS and TLL, denoting small telescopic crane and large telescopic crane, respectively, will remain unchanged. The name changes will have no effect on the Practical Exam testing process, which has distinguished between fixed and swing cab for some time, noted Phillip Kinser, NCCCO's manager, program development. "And the cranes selected for the Written Specialty Exams already correspond with the appropriate control type within the respective TSS and TLL crane categories."

Changes to CCO program literature, including tests and correspondence issued by International Assessment Institute (IAI), will begin immediately, with completion expected by fall 2006.

## Tower Crane recertification now available

The National Commission for the Certification of Crane Operators (NCCCO) has announced the availability of its CCO Tower Crane recertification written examination.

With the introduction of the new exam, crane operators who have been certified in tower crane operation can now make preparations to requalify in this category.

Since the CCO tower crane certification program was introduced in late 2004, more than 1,500 operators have sat for the written examination, and close to 1,000 for the practical, reported David Ritchie, chairman of the Tower Crane Management committee. Ritchie is St. Paul Travelers' risk control specialist, cranes and rigging.

Certificants who have maintained 1,000 hours of crane-related experience in the last five years, and have a current, completed CCO Physical Examination form or a current DOT medical certificate, do not need to retake the tower crane practical examination to recertify.

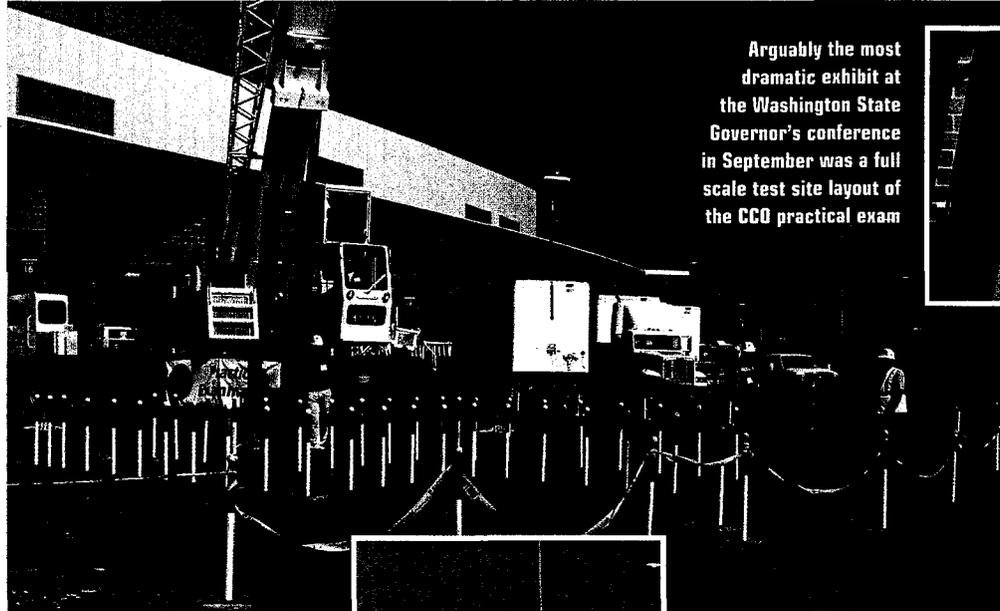
"Although none of the tower crane certifications

issued has yet expired (certification is valid for five years), operators who need to recertify in mobile cranes can now also take the tower crane recertification written exam at the same time and thereby maintain their tower crane credential," Ritchie said. This has the added advantage that CCO-certified operators have only one common expiration date for all the categories of crane they may be certified to operate. That not only aids accurate record keeping, added Ritchie, but also serves to clarify the certification process.

All tower crane operators in the state of California must be certified by an accredited, third-party certification organization, such as NCCCO. Many major employers throughout the US also require tower crane operators to be CCO-certified as a risk management measure, Ritchie noted.

Further information on the NCCCO Tower Crane recertification written examination is available from NCCCO at (703) 560-2391 or info@nccco.org

# CCO practical exam starts at Governor's Conference



Arguably the most dramatic exhibit at the Washington State Governor's conference in September was a full scale test site layout of the CCO practical exam

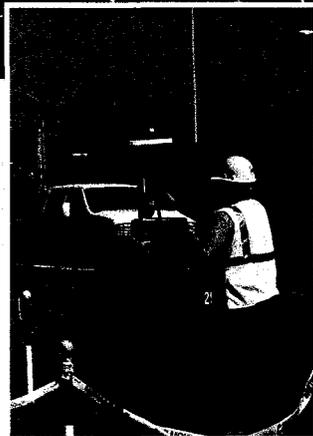


Hite crane operator, John Sandberg, is a picture of concentration as he negotiates the CCO practical exam course

Crane operator skills were much in evidence at Washington State's 55th Annual Governor's Industrial Safety and Health Conference. This year's event, held September 27-28 in the recently completed Spokane Convention Center, was attended by thousands of safety and health professionals from across the Pacific Northwest.

Among the 70 or so exhibits were two provided by the National Commission for the Certification of Crane Operators (NCCCO), including arguably the most dramatic, a full scale test site layout of the CCO practical exam. Hite Crane & Rigging, Inc., of Spokane, WA provided a Grove TM 650 hydraulic mobile crane. The crane was set up both days of the conference to demonstrate the CCO practical examination for large hydraulic telescopic mobile cranes.

Western States Engineers Training Institute provided official CCO testing equipment and an accredited practical examiner and proctor for both days of the outdoor demonstrations. John Sandberg, a crane operator at Hite Crane & Rigging, had



observers transfixed as he used his skills to negotiate the tasks of the CCO practical examination. Mark Wagar and Jim Arnett, representing Operating Engineers Local 370, conducted the examination, as NCCCO's Danny Thiemens narrated the event to dozens of observers, among them, representatives from the Occupational Safety and Health Administration (OSHA) and the

Washington State Department of Labor and Industries.

"We felt it was critically important that safety and health professionals witnessed this demonstration," said Gary Hite, owner of Hite Crane & Rigging. "The examination simulates the actual skills a crane operator must use every day on an actual job site. The CCO certification process helps employers identify safe and qualified personnel to operate our cranes critical to our company's operations."

Next year's Washington State's Safety and Health Conference is scheduled for September in Tacoma, WA. **act**

## NCCCO reviews operator code of ethics

Recognizing that safe and professional behavior should be demonstrated by crane operators at all times, the National Commission for the Certification of Crane Operators (NCCCO) is drafting an expanded code of ethics that would apply to all CCO-certified operators.

The code would cover a range of ethical issues, such as the requirement to "place the safety and welfare of people, the protection of the environment and the protection of property above all other interests" and to "demonstrate integrity, honesty and fairness in all activities and strive for excellence in all matters of ethical conduct."

The requirement to maintain professional competence in all areas of work-related responsibilities, and to undertake assignments only when qualified by training or experience in the specific operations, is also being considered. The code would also seek protection for NCCCO's intellectual property, such as its exams and logo.

"All professional crane operators recognize that the CCO certification is a privilege that must be earned and maintained," said Graham Brent, NCCCO executive director. "The code of ethics under consideration identifies the main elements of professional conduct that should be observed and upheld by all CCO-certified crane operators."

CCO-certified crane operators who intentionally or knowingly violate any provision of the code of ethics would be subject to action by a peer review panel, which may result in suspension or revocation of certification, Brent added.

Procedures for investigating complaints against CCO-certified operators would also be delineated. "While NCCCO does not expect, invite, solicit or encourage complaints, these procedures are necessary to protect the reputation of the profession and to ensure a fair investigation of complaints," Brent said.

# Minnesota contractors gear up for licensing

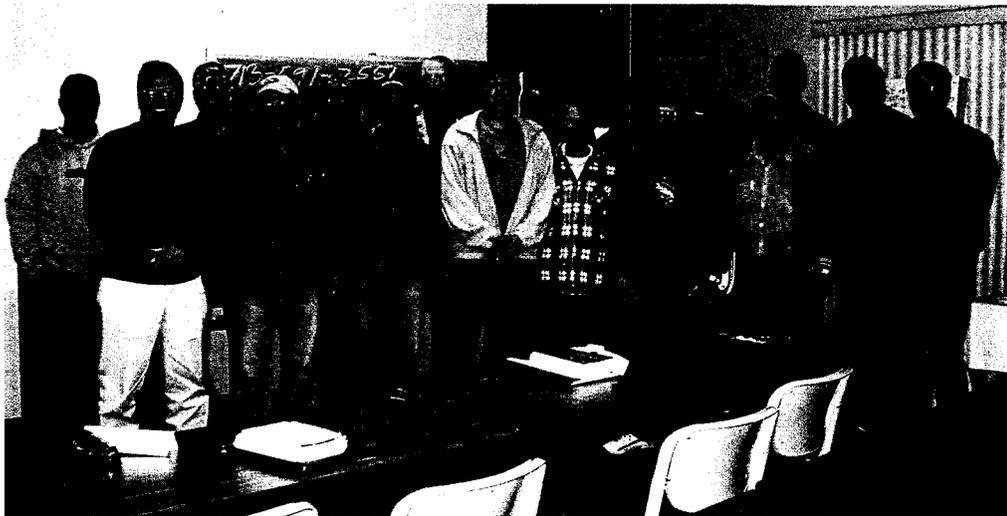
**A** construction training partnership has taken an early lead in meeting Minnesota's 2007 state requirement for crane operator certification.

Ridgewater College, Wilmar, MN, has partnered with a consortium of construction companies throughout the state to offer training and CCO certification examinations.

In the first class, held in March, 17 operators from nine companies completed four days of training. The program finished up with a CCO written test administration featuring lattice boom, large hydraulic, and small hydraulic examinations.

A couple of weeks later, students took their CCO practical exams on a lattice boom crane provided by Duininck Bros. and a large telescopic crane provided by Willmar Crane Service.

Among the companies represented in the first class were Breitbach Construction, Central Specialties, Duininck Bros, Kraus Anderson, K & S Millwrights, Marcus Construction, Mathiowetz Construction,



**ABOVE:** Minnesota contractors are to participate in training courses offered by Ridgewater College in Wilmar, MN

Midwest Contractors, and Willmar Crane Service.

Instructor for the first class was Don Jordan of CICB, shown (second from left) with class participants.

Future training classes are scheduled for September and December 2006, and March and June 2007.



## NCCCCO announces 2006 board of directors

The National Commission for the Certification of Crane Operators (NCCCCO) has announced the officers and directors who will serve on the board of directors during 2006.

Re-elected as president is John Kennedy, Manitowoc Crane Group. Vice president is Garry Higdem, CH2M Hill. Secretary and treasurer is J. Chris Ryan, Boh Bros Construction. Ronald Schad, Essex Crane, continues as immediate past president. Kerry Nulse, Deep South Crane & Rigging, continues to serve the board in his capacity as chairman of the commission.

Re-elected to a second three-year term is Dale Daul, St. Paul Travelers. Also continuing to serve on the board are: Stephen Brown, International Union of Operating Engineers (IUOE); Gene Owens, Granite Construction; and Robert Steiner, Kelley Equipment Co. of Florida.

## Lang Exploratory set for multi-state CCO testing

**I**n hosting its second NCCCCO Practical Examiners Accreditation Workshop in less than a year, Lang Exploratory Drilling, Salt Lake City, UT demonstrated its commitment to maintaining a team of accredited CCO practical examiners available for the practical testing of its employees throughout the western United States.

Lang employees can now satisfy current or pending legislative requirements for crane operator licensing in several western states including Utah, Nevada, New Mexico, Montana, and California.

Bob Johnson, training supervisor

for Lang was the test site coordinator for the workshop, held in June, as well as a practical

examiner candidate. Two other Lang employees from Nevada, as well as candidates from

California, New Jersey, Tennessee, Kansas, Nebraska, Texas, and Wisconsin, received training in critical test design, as well as validity and reliability in practical examinations.

In addition to practical examiner training, candidates receive instruction on the test site application process and crane and test course layout procedures, all of which form an integral part of NCCCCO's third-party accreditation process.

Lang Exploratory Drilling uses telescopic cranes in NCCCCO's swing and fixed cab categories for supporting drilling operations in 11 western states, as well as Alaska and Canada.



**Bob Johnson, training supervisor for Lang Exploratory Drilling, and Phillip Kinser, workshop instructor and NCCCCO manager of program development**



Lampson lent its signature blue cranes of various shapes and sizes to this year's Tri-Cities Water Follies Atomic Cup, an event held each July in Kennewick, WA, home to the international lifting specialist. The Lampson cranes were used to lift the so-called Unlimited hydroplanes, some of the world's fastest race boats, into and out of the water during the three-day competition



# A Lampson tradition

With one of the largest fleets of conventional construction cranes, Lampson International embraces a safety philosophy.

Visitors to the Tri-City area of Washington state in late July stood a good chance of witnessing a long line-up of blue crane booms lifting hydroplanes into the Columbia River. The annual event is the Water Follies Atomic Cup, and the booms belong to Lampson International. Donating cranes to this community event has been a tradition for over 40 years for Lampson and 2006 was no exception.

Lampson International maintains one of the world's largest fleets of lattice boom construction cranes. This fleet consists predominantly of Manitowoc cranes ranging from the 2900 truck crane to the 18000 crawler complete with luffing jib and MAX-ER attachments. Interspersed are

3900, 4000, 4100, 999, 4600 and 2250 crawler cranes, many of which can be outfitted with ringer and tower attachments for specialized lifts.

The Lampson Transi-Lift crane is manufactured by Lampson in models ranging from 350 to 2,600 ton capacities. Hydraulic self-propelled and towable platform trailers and crawler transporters are also part of the fleet.

When Neil F. Lampson started his small crane company in 1946, in rural southwestern Washington, he may have never envisioned his company would grow into one of the world leaders. But, his son and company president, Bill Lampson, says, he laid a solid foundation of business dealing that persists today.

"When my Dad gave his word

it was written in stone, and our clients valued the honesty and integrity with which he spoke," explains Bill Lampson. "We've come a long way since my dad did business with a simple handshake, but one thing is for certain, we'll continue to build from that foundation he laid so many years ago," Lampson adds.

Part of building on that foundation is Lampson's commitment to the CCO crane operator certification program. "NCCCO is the trend of the industry," says Bill Lampson and CCO certification is now clearly part of this company's strong commitment to corporate safety and health. "Crane safety is critical for us since we are currently operating in 35 different states."

As testimony to the firm's dedication to safe crane operator practices, Lampson's Pacific Northwest headquarters is now home to one of the newest mobile and overhead crane sites for exams administered by the National Commission for the Certification of Crane Operators (NCCCO). In addition, the

company is planning on hosting its first CCO overhead and practical examiner workshops later this year, establishing Lampson with its own accredited NCCCO practical examiners.

Lampson has conducted business in Canada for over 30 years and Australia for 15 years, as well as 35 other countries. "The safety and health of our workforce is very important to us, some of which are second and third family generation employees," Lampson says. The privately owned company has offices across the US, in Canada and Australia.

Bill Lampson speaks passionately about the company's involvement in the community. The YMCA, Second Harvest Food Bank, American Red Cross, American Cancer Society, March of Dimes, the United Way – the list of the organizations the company supports is extensive by any standard. But it's all just part, Lampson says, of his philosophy of "giving back" to an area that has been home to Lampson – company and family – for more than 100 years.

act

"I am committed to getting the cranes and derrick standard through before the end of this administration." So stated Ed Foulke, OSHA chief, at a meeting October 11, of the Advisory Committee on Construction Safety and Health (ACCSH) in Washington, DC.

Foulke, who was appointed Assistant Secretary of Labor for Occupational Safety and Health in April this year, acknowledged that OSHA had not moved as quickly as it might since the Cranes and Derricks Advisory Committee (CDAC) completed its work on the revision of Subpart N (1926.550) of Chapter 29 of the Code of Federal Regulations over two years ago.

While his goal of seeing the standard published on his watch would "take some doing," he told the committee, "Whatever I have control over and I can push along, you have my word I am

# OSHA Chief commits to publishing crane standard revision

**ff** Employers who snub their noses at us . . . are going to get to know us upfront and



personal. **Ed Foulke, OSHA chief**

going to do that."

The revised standard, which includes a requirement for crane operators to be certified, would be helpful to industry and would save lives, Foulke said. "This is an opportunity we have and we're going to take it."

He noted that, in this 35th anniversary year of the founding of OSHA, workplace deaths had dropped to one-third of their 1971 level, while the US workforce had doubled during the same period. "However, one

fatality is one fatality too many," Foulke said, "and our goal has to be zero." Of the 5,700 fatalities recorded in 2005, over 20% occurred in construction. One-third of these were the result of falls, many of them in residential construction, "one of the hardest areas" to get access to, said Foulke.

While underlining the resources that OSHA would continue to make available to employers, Foulke had a stern warning for any employer that sought to shirk their responsibilities. "Those employers who snub their noses at us when we have our hand out to help them are going to get to know us upfront and personal," he said. "I have a little over two years, and my goal is to make OSHA the best it can be." **act**

## CCO certification key to Hite crane safety plan

"Cranes are our tools - people are our most valuable resource," says Gary Hite, president of Hite Crane and Rigging of Spokane, WA. "That's why safety and health are a vital part of our organization." Hite's safety plan requires his company's crane operators to become CCO certified. "Training and certification is what has kept our company's industrial insurance incident rating low," says Hite, "and has instilled craftsmanship and pride within our workforce."

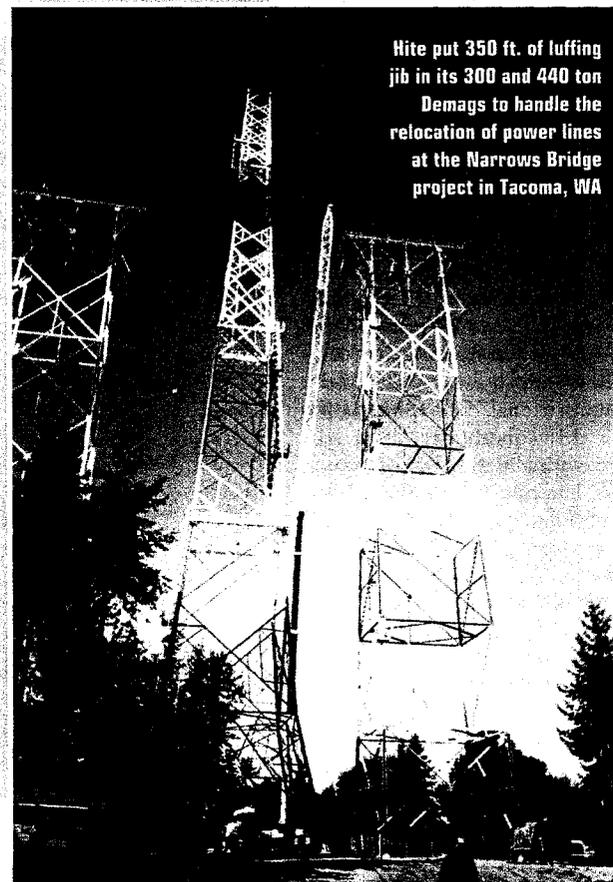
Hite, a long-time supporter of crane operator certification, sets a strong example for his employees. Not only is he a CCO-certified crane operator, he is also a CCO-accredited practical examiner for fixed cab and swing cab telescopic cranes, as well as lattice boom cranes. Recently he added overhead crane accreditation to the list.

"Our work includes pre-cast concrete, steel erection, pile driving, industrial machinery and bridge building operations," adds Hite. "Often we perform work at industrial hydroelectric projects where we have found the CCO overhead certification program invaluable. There's no question that a well-trained certified workforce helps lower our risk factors."

Hite Crane & Rigging was founded by Everett Hite 37 years ago. In the early years, his wife, Bobbie Hite, took care of the books while Everett bid the work. "We started with three old 22B 25 ton Bucyrus Erie Cranes," explains Gary. "I had just finished college as a structural engineer. I helped operate the cranes and performed maintenance evenings and weekends." Hite's father retired in 1976, when Gary took over operations.

Today the company's fleet has grown to 24 cranes, including carrydecks, rough terrain, conventional lattice boom and hydraulic truck cranes ranging from 8 to 440 ton capacity. Heavy hauling service is also provided with up to 200 ton capacity. Hite Crane and Rigging, with over 70 employees, regularly provides lifting and rigging services in Washington, Idaho, Oregon, and Montana, as well as Canada.

Recent work included relocation of power lines at the Narrows Bridge project in Tacoma, WA. The power line relocation included work on the longest single span of over a mile of power line in the United States. "The operation required two of our largest cranes," said Hite. "We placed our 300 and 440 ton Demags on opposite sides of the Puget Sound Narrows. The project required 350 feet of luffing jib in each crane." The job, Hite explained, was difficult, and required highly skilled crane operators. "It's at times like these that a good safety plan, training and CCO certified crane operators in the seat really pay off - and help me rest a little easier at night!"



Hite put 350 ft. of luffing jib in its 300 and 440 ton Demags to handle the relocation of power lines at the Narrows Bridge project in Tacoma, WA

# California firefighters seek CCO certification

Firefighters from Task Force 3 Urban Search and Rescue Team (CATF3) in Menlo Park, CA are receiving crane operator training in preparation for the CCO certification exams.

Cooper Crane and Rigging of Mare Island is providing the firefighters with training and CCO certification testing on three types of cranes: small telescopic with less than 17.5 ton capacity, large telescopic with greater than 17.5 ton capacity, and lattice boom truck cranes.

The firefighter training and testing serves



to satisfy the California Title 8 rule requiring operators of cranes to be qualified and certified, as well as meeting the demands of special condition rescue operations during emergency response situations. Howard Cooper, of Cooper Crane and Rigging, noted that approximately nine firefighters are undergoing the specialized training and testing. Hurricane Katrina, and the subsequent deployment of the task force to the New Orleans area, has interrupted the training schedule, but Cooper said he was confident that the remaining training and certification would continue in the fall.

Training is a principal part of the Homeland Security Act and Federal Emergency Management Administration (FEMA)

Crane operators from six states attended a Practical Examiner Accreditation Workshop hosted by Cooper Crane & Rigging at Mare Island, CA in August. A Grove TMS 300 from Task Force 3 Urban Search and Rescue Team was one of three cranes used to train the candidates in the CCO Practical Examination process

requirement for emergency response teams. Official mission of Task Force 3 is "lifesaving extrication of victims trapped by structural collapse during earthquakes, hurricanes, tornados, floods, acts of terrorism and other disasters."

Task Force 3 is one of 28 National Federal Emergency Management Agency Teams, and one of two Collapse Structure Rescue Teams in the San Francisco Bay area.

Cooper, who conducts the firefighter training, noted that the need for firefighter crane operator training became apparent after the Oklahoma City bombing in April 1995 when regular crane operators were not prepared to work in the disaster environment that contained airborne pathogens. Major disasters, such as the Oklahoma City bombing, the World Trade Center and Pentagon 9/11 terrorist attacks, and Hurricane Katrina, illustrate the importance of having firefighters who are trained and qualified in crane operations.

The size and weight of rubble and building components place demands on the capabilities of cranes for rescue operations, and underlies the importance of qualified people directing and participating in those operations. **act**

## ExxonMobil requires CCO certification

Contractors working at ExxonMobil refining and chemical manufacturing facilities had until the end of September 2005 to have their crane operators certified through the CCO certification program.

Compliance with ExxonMobil's revised craft skill qualification requirements is a condition of remaining on the company's approved contractor list. According to a memorandum issued to ExxonMobil service providers in May, the revised requirements are aimed at promoting a safe work environment and at verifying that contract and subcontract personnel are qualified to safely perform the tasks to which they are assigned.

Proof of CCO certification will be required at ExxonMobil manufacturing facilities in Baytown and Beaumont, Texas; Baton Rouge and Chalmette, Louisiana; Billings, Montana; Joliet, Illinois; and Torrance, California.

**? Overhead crane Q&A**

The CCO Overhead Crane Operator certification program was introduced earlier this year. Here are answers to frequent questions from candidates.

**What do I have to do to become certified as an overhead crane operator?**

You need to pass the overhead crane written examination, pass the overhead crane practical examination, and meet medical (physical) requirements as outlined in the candidate handbook (overhead cranes).

**Is the overhead crane examination another specialty exam similar to**

the CCO large telescopic and small telescopic mobile crane examinations? No, the overhead crane examination is a stand-alone examination. You are not required to take the core exam for mobile crane operators unless you wish to certify in mobile cranes.

**If I am already certified as a mobile or tower crane operator, can I become certified as an overhead crane operator?**

Yes, you would just follow the same procedures outlined above.

**If I am already certified for other categories (mobile or tower) will I**

have a different expiration date for overhead cranes?

No. A CCO-certified operator can only have one expiration date; an individual cannot have different expiration dates or separate certification cards for different categories of certification.

**If I am already certified in mobile or tower cranes when I certify in overhead cranes, do I have to recertify on overhead cranes when my mobile or tower crane operator certification comes up?**

It depends on how much time you had remaining on your certification when you took the overhead crane

examination. If you become certified in overhead cranes within 24 months of your current expiration date, you do not have to take the overhead crane recertification examination when you recertify in mobile or tower cranes.

**What if I have more than 24 months remaining on my existing certification when I certify on overhead cranes?**

If there is more than 24 months remaining in your mobile or tower crane certification period when you certify in overhead cranes, you will be need to take the overhead crane recertification examination when you recertify in mobile or tower cranes.



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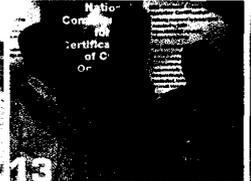
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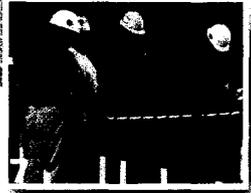
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# Operator Certification: This year's hot topic

**A**re you ready to take a New Year's Quiz? What do Nevada, Minnesota and Utah all have in common? Answer: They will all make crane operator certification mandatory this year.

The certification program offered by the National Commission for the Certification of Crane Operators (NCCCO) meets the different requirements for all three states.

Nevada's new requirement, which was effective January 1, 2007, affects all tower crane and mobile cranes with a boom length of at least 25 feet or a rated load capacity of 15,000 pounds or more. Crane operator trainees holding a provisional certificate

may operate a crane only under the direct supervision of a certified crane operator. Utility companies and companies doing utility work are exempt from the regulations.

On July 1, Minnesota's new law will take effect, requiring certification from a nationally recognized and accredited program, such as the National Commission for Certifying Agencies (NCCA). All mobile crane operators on a construction site operating a crane with a capacity of 5 tons or more will be required to have certification. Once certified, the operator must recertify every five years. There is also a provision in the regulation allowing trainees

to operate a crane under the direct supervision of a certified operator. Some exemptions apply, such as railroads, public utilities, mines, agriculture, military personnel and those operating a crane on their own property for personal use.

Also as of July 1, all mobile crane operators in Utah must be certified for excavation, demolition work, or construction of commercial construction projects and residential projects of greater than two stories above ground. Certification must be from the National Commission for the Certification of Crane Operators (NCCCO) or an equivalent organization accredited by NCCA. Crane

**ff** NCCCO has created a *Certification 2007* information center on its web site to provide further details of new states' requirements.

operations for single-family detached housing and multi-family housing, up to and including a four-plex, do not require a certified crane operator.

Any person found violating this requirement in Utah will be guilty of a Class A misdemeanor. The law does not apply to digger derrick trucks, knuckle-boom cranes or crane operations in the petroleum refining industry.

The NCCCO has a *Certification 2007* information center on its web site to provide further details of these states' requirements, and to act as a clearing house for information on implementation of the new rules as it becomes available. See [www.nccco.org](http://www.nccco.org) or e-mail NCCCO at [twhittington@nccco.org](mailto:twhittington@nccco.org)

## CCO certification is the "right thing to do" for Zachry

"There's no reason everyone shouldn't aim to be 100% safe." That's the opinion of David Zachry, president and chief operating officer of Zachry Construction Corp.

David Zachry is speaking as the honored guest at the meeting last fall of the National Commission for the Certification of Crane Operators (NCCCO). It was the second time in five years his firm had hosted the four-day event. "We have been delighted to support the CCO program, and will continue to do so," he said.

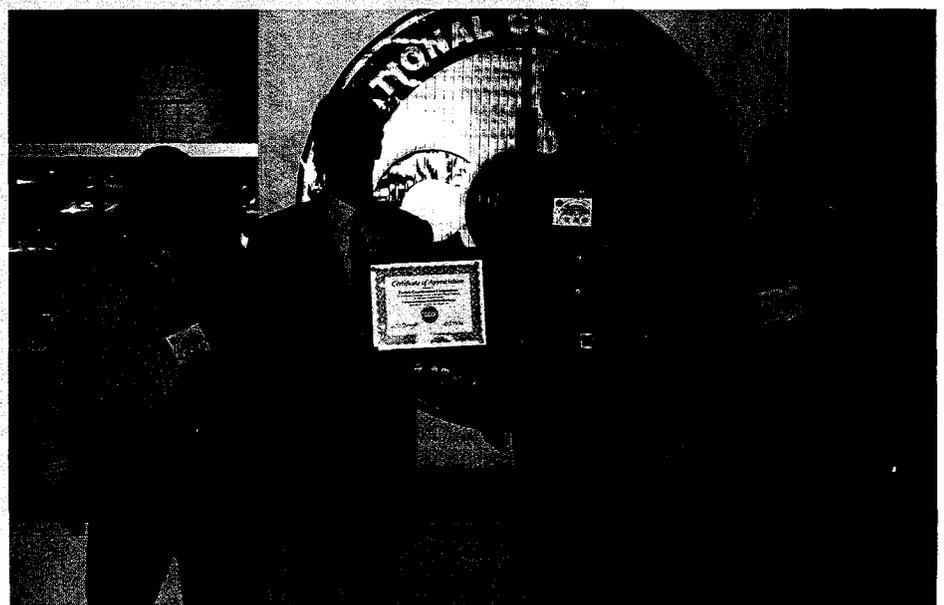
Along with his brother and CEO John, David Zachry is a third-generation owner of the firm his grandfather, H.B. "Pat" Zachry, founded in Laredo, TX in 1924. It has since grown to be a major player in highway and infrastructure projects, powerplant construction, and industrial process plant development, and is active in more than 25 states. Zachry's international division was established in 1968.

Zachry, one of the world's largest contractor employers of crane operators, with upwards of 600 crane operators in its employ, adopted the CCO certification program for its mobile crane operators several years ago as a risk management initiative.

Joe Collins, Zachry crane department supervisor, noted that his firm had also adopted CCO's overhead crane operator certification program as part of its participation in OSHA's Voluntary Protection Program (VPP). "In 2005, we were recognized as a Super Star site for excellence in safety," Collins said. "We are reviewed annually by OSHA and must show continuous improvement in safe practices." Participation in the CCO program is one important way that improvement can be measured, he added.

Collins, who was recruited by OSHA in 2004 to serve on the CDAC committee that revised the federal standard for cranes and derricks, has been a commissioner for NCCCO for two years.

David Zachry, President and COO Zachry Construction Corp., with NCCCO Exam Management Committee chairmen, J. Chris Ryan (far left) and J.R. Williams (far right), and NCCCO executive director Graham Brent, at the fall 2006 NCCCO meetings hosted by Zachry



Cover photo courtesy of Morrow Construction

# Riggers, Signalpersons to be Certified

New certification programs are being developed by the NCCCO that has named task forces to work on specifics.

## ACT reports

The National Commission for the Certification of Crane Operators (NCCCO) has announced plans for the development of two new certification programs. The new programs will address riggers and signalpersons.

"The success of NCCCO's certification programs for mobile, tower and overhead crane operators has led to industry requests for similar programs to address other personnel that are involved in the lifting process," said NCCCO President John Kennedy, Manitowoc Crane Group, Manitowoc, WI.

"Given the widespread adoption of its crane programs, and the endorsements they have garnered, the industry clearly believes that NCCCO is the appropriate entity to develop and administer

these new programs," Kennedy added.

NCCCO Commission Chairman Kerry Hulse, operations manager at Deep South Crane & Rigging, Houston, TX, said that the new programs would draw on three major resources: industry support, subject matter expertise, and psychometric guidance. "All elements of the new programs will be developed according to the strict psychometric standards that have been a hallmark of NCCCO's crane operator programs since their inception," he said. "The resulting certification process will be valid, reliable, and legally defensible."

Hulse noted that NCCCO would be seeking accreditation for the new programs once completed, such as it had achieved for its crane operator certifications. "Accreditation from a national personnel certification accreditation body such as NCCA or ANSI is an indicator of a level of quality that is simply not available from every testing program that aspires to 'certify' individuals."

Also like the existing programs, Hulse added, the new rigger and signalperson certifications would meet all prevailing ANSI and OSHA standards. "We'll have the draft proposed rule that OSHA is preparing based on the C-DAC report very much in mind," said Hulse. "Employers can be confident that CCO certification will comply with all current and future state and federal requirements."

NCCCO executive director Graham Brent said, "Employers and candidates have a right to expect that the exams they or their employees are taking are fair and accurate, and that they

have been developed to the very highest professional standards of test construction and administration."

Experts staff task forces

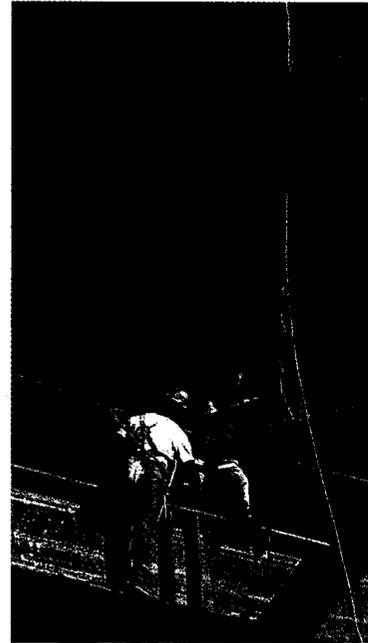
NCCCO will model the development of the new programs on its existing crane operator certification programs. "Among the certification requirements that will be considered are written examinations, practical examinations, and a recertification requirement," said Brent.

To optimize resources, NCCCO plans to double-track development of both programs through two task forces, one each for riggers and signalpersons. Don Jordan, technical lifting authority, BP America, Houston, TX, has been appointed chair of the Rigger Certification Task Force, Hulse announced. The Signalperson Task Force is chaired by Kenneth Shinn, president, K.J. Shinn Inc., Lake Como, NJ.

Experts in their respective fields will staff the task forces, and will be guided by psychometric consultants from International Assessment Institute (IAI), the testing services company that has provided exam development and administration services to NCCCO since 1999. Other experts will serve as item writers. As with the current programs, a professional Job Task Analysis will be conducted to serve as the foundation for exam development activities.

NCCCO manager of program development Phillip Kinser said that development would begin in the second quarter of 2007 and continue throughout the year. "We have developed an aggressive schedule, with five subject matter expert meetings anticipated this year alone, beginning in early spring," he said. "However, if we maintain good progress, development of the signalperson program could be largely complete by the first quarter of 2008, with rigger certification close behind."

The National Commission



for the Certification of Crane Operators (NCCCO) is a non-profit industry organization formed in January 1995 to develop effective performance standards for safe crane operation to assist all segments of construction and general industry. Since NCCCO began testing in April 1996, more than 300,000 written and practical exams have been administered to over 55,000 crane operators in all 50 states. Two-thirds of the states that have requirements for crane operators require or recognize CCO certification.

CCO certification has been nationally accredited by the National Commission for Certifying Agencies (NCCA) since 1998. The NCCCO crane operator certification program is also the only program to be recognized by federal OSHA as meeting OSHA and ASME (ANSI) requirements for crane operator competency. The program is unique in that it is: third-party; independent of training; developed and supported by industry; a joint labor/management initiative; psychometrically sound; validated through peer review; and administered on a standardized, secure, nationwide basis. **act**

“All elements of the new programs will be developed according to the strict psychometric standards that have been a hallmark of NCCCO's crane operator programs since their inception. The resulting certification process will be valid, reliable, and legally defensible.”

Kerry Hulse, Deep South Crane & Rigging, NCCCO commission chairman

# NCCCO awarded ANSI accreditation

The National Commission for the Certification of Crane Operators (NCCCO) has been awarded accreditation by the American National Standards Institute (ANSI).

All three CCO crane operator certification programs – Mobile Crane Operator, Tower Crane Operator and Overhead Crane Operator – are now accredited by ANSI to the ISO/IEC 17024 International Standard for organizations that certify personnel.

The decision of ANSI's Professional Certification Accreditation Committee to award its prestigious accreditation came after rigorous onsite and field audits by ANSI assessors of NCCCO's management systems and psychometric procedures.

## Exams Commended

Singled out for particular mention by ANSI was NCCCO's practical exam program. ANSI Assessors commended NCCCO and International Assessment Institute (IAI), the firm that provides test processing and development services to NCCCO, for the "preparation, administration and execution of the practical exam."

In particular, ANSI applauded the manner in which the tasks for the practical exam had been selected, the objectivity and clarity of the criteria that had been established for practical examiner observations, and the systematic way examiner observations had been integrated into the scoring process.

"Accreditation by ANSI of the CCO crane operator certification program is a remarkable validation of the vision, determination and dedication of the hundreds of volunteers



**ANSI Accredited Program  
PERSONNEL CERTIFICATION  
#0756**

from across the country who worked tirelessly to establish this national program of crane operator proficiency and who, over the last 10 years, have strived to maintain it," said John Kennedy, NCCCO president.

"Candidates and employers alike can now be assured that, with ANSI's independent verification of NCCCO's policies and

procedures, CCO certification meets the highest professional standards of examination development and administration," Kennedy continued. "They can be confident that each and every CCO Certification card is backed by the ANSI guarantee of program excellence unequaled in this industry," Kennedy added.

"As someone who was involved in the development of the CCO program from the outset," said Kerry Hulse, NCCCO Commission chairman, "and who remembers the passion for improving crane safety among members of the very first task forces that began meeting almost two decades ago, this a remarkable vindication of their vision, determination and sheer hard work. I can't think of a more appropriate validation of their efforts than for the organization they helped to create receiving this affirmation from ANSI, the nation's pre-eminent standards-setting body."

Roy Swift, PhD, ANSI program director, said, "Achieving ANSI accreditation is a major undertaking and NCCCO can be very

## NCCCO trains IUOE members to offer New Jersey state exam

International Union of Operating Engineers (IUOE) Local 825 hosted an NCCCO Mobile and Tower Crane Practical Examiner Workshop in September, in Dayton, NJ.

The 30 participants came from several states, the majority from New Jersey, Texas, Indiana and Louisiana. Others represented included Nevada, Illinois, Rhode Island, Michigan, and Colorado.

The International Union of Operating Engineers (IUOE) Local has nearly 8,000 members in New Jersey and New York. At its Dayton training center, candidates participated in both tower and mobile crane programs, with a majority already qualified to administer CCO practical exams, taking the course as a refresher.

The State of New Jersey requires crane operators who operate mobile cranes with a maximum capacity of 10 tons or more to hold a New Jersey Crane Operators License. To apply for the license, crane operators must receive operator certification from the National Commission for the Certification of Crane Operators (NCCCO).

Larry DeMark, director of training at Local 825, commented, "We now have 11 examiners who are always available for CCO testing, and we keep them very busy."

The training site at Local 825 has many cranes that are used for training, but three specific cranes are generally used for the CCO mobile testing program. The Manitowoc 222 lattice boom crawler crane can be used for either the CCO Lattice Boom Crawler or Lattice Boom Truck specialty category. A Grove RT 528C serves as the testing crane for the large telescopic swing cab crane category, and the JLG 1500 boom truck serves to meet the small fixed cab telescopic crane category.

The site also has a Liebherr 132 HC tower crane that is used for training and testing.



**“** Achieving ANSI accreditation is a major undertaking, and NCCCO can be very proud of this accomplishment. Crane operators holding any of the three CCO certifications can be assured they meet the American National Standard, as well as ISO's international requirements for ANSI/ISO/IEC 17024.

Roy Swift, PhD, ANSI program director

proud of this accomplishment. Crane operators holding any of the three CCO certifications can be assured they meet the American National Standard, as well as ISO's international requirements for ANSI/ISO/IEC 17024.

### State Requirements

Accreditation of certifying bodies is increasingly being required by state regulators in their attempts to ensure the quality of the certifications issued, on which many state licenses are based, noted Graham Brent, NCCCO executive director. Fully two-thirds of the states that have requirements for crane operators now require or recognize CCO certification.

"While NCCCO has received numerous industry accolades, as well as recognition by state and federal agencies in its 11-year history, and has been nationally accredited by the National Commission for Certifying Agencies (NCCA) since 1998, accreditation of CCO certification by ANSI is clearly a major milestone in the history of this organization," Brent said.

"A central part of NCCCO's goal since its inception has been to establish a national testing program that is fair to all candidates, while at the same time is both a valid and a reliable assessment of essential crane operator knowledge and skill," he added. "ANSI's accreditation of all three CCO certification programs is clear testimony that this goal has been achieved." **act**



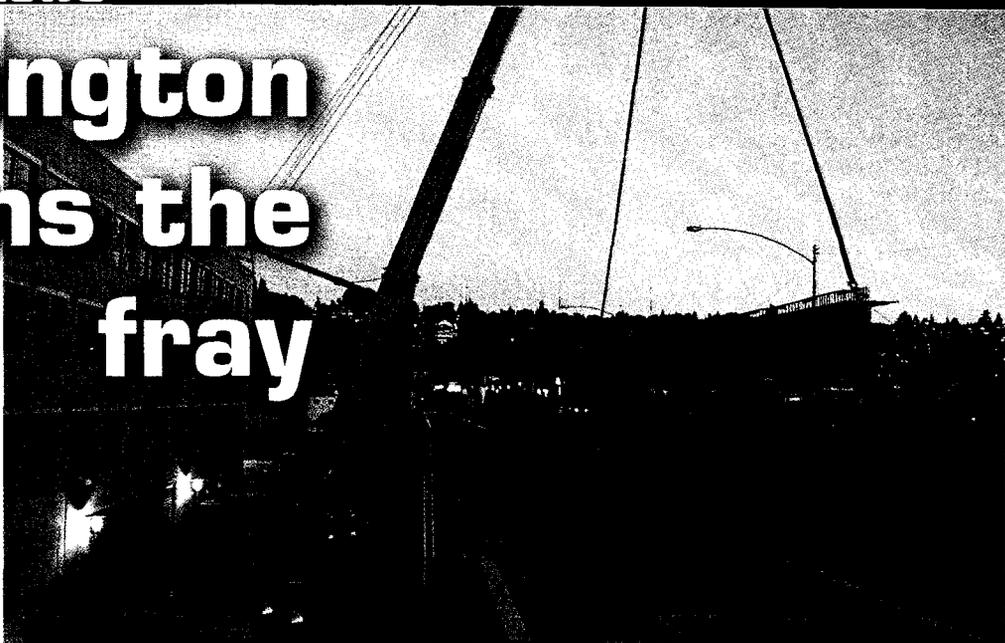
**NCCCO Commissioners and members of the National Commission for the Certification of Crane Operators (NCCCO) Committees and Task forces, traveled from all parts of the nation in October 2007 for their bi-annual series of meetings hosted in Houston, TX by BP America. In addition to the regular meetings of NCCCO exam management committees, the two task forces established earlier in the year to develop programs, respectively, for rigger certification and signalperson certification convened meetings to coincide with the event. Shown accepting a recognition plaque from Kerry Hulse, NCCCO Commission chairman, in appreciation of BP America's generosity, is Don Jordan, who also serves on NCCCO's Commission. A celebratory fish fry, at which NCCCO's recent accreditation by the American National Standards Institute (ANSI) was celebrated, was sponsored by Haag Engineering at the firm's Sugar Land office. Haag's Jim Wiethorn, second row, third from the left, serves on NCCCO's Tower Crane Management Committee.**



### highlight

The National Commission for the Certification of Crane Operators (NCCCO) announces the election of two commissioners: Bo Collier, Crane Tech, Tampa, FL; and Mike Wood, Manitowoc Crane Group. Each will serve five-year terms on the commission. Collier and Wood also serve on NCCCO's Written Exam Management Committee. NCCCO has also announced the election of two Alternate Commissioners: Don Jordan, BP America; and Bill Smith, NationsBuilders Insurance Services (NBIS).

# Washington joins the fray



Sicklesteel drew on the lifting power of some of its larger hydraulic cranes to set the girders for Seattle's Fremont Bridge retrofit project

**W**hile the revised federal requirement for crane operators continues its administrative journey through the corridors of federal OSHA, attempts in the "other" Washington to implement a similar law came to fruition in early April.

Washington state Governor Chris Gregoire signed into law HB 2171 on April 10, 2007, and in doing so, made her state the 15th in the nation to require crane operators to be certified. Effective January 1, 2010, no employer or contractor may permit a crane operator engaged in construction work to operate a crane unless the crane operator is qualified. The new law also requires cranes to be certified at least annually by a certified crane inspector.

Washington's Department of Labor and Industries (L&I) has been given the responsibility of establishing the requirements for a qualified crane operator, but they must include, at a minimum, a provision for crane operators to have a valid certificate for the type of crane they operate. The certificate must be issued by a crane operator testing organization that is accredited by a nationally recognized accrediting agency. The National Commission for the Certification of Crane Operators (NCCCO) has been accredited by the National Commission for Certifying Agencies (NCCA) since 1998.

The new law also requires the accredited certifying organization to administer written and practical examinations and have procedures for the recertification of crane operators at least every five years. In addition to being certified, the new law also requires crane operators to have up to 2,000 hours of documented crane experience that meets experience levels to be established by L&I. There are provisions for an apprentice or trainee operator to operate cranes under the "direct and continuous supervision" of a qualified crane operator. They must also pass a substance abuse test conducted by a recognized laboratory service.

The new law covers mobile, tower and overhead (gantry) cranes when used in construction work. Knuckleboom cranes, piledrivers and locomotive cranes are also included. Specifically excluded are electrical line trucks, mechanics' trucks, hydraulic jacking systems and aerial lifts.

The enactment of the law, whose passage is one of the swiftest of its kind ever, comes less than five months after the fatal Bellevue, WA tower crane collapse in which a Microsoft attorney was killed in his condominium, and three buildings were damaged. The investigation into that accident, which sparked a state-wide inspection of tower cranes and resulted in a number being shut down, is continuing. **act**

## Sicklesteel provides muscle for historic project

When the City of Seattle recently made the decision to update some of its historic infrastructure, it called on Sicklesteel Cranes to do the job.

The Fremont Bridge, which opened on July 4, 1917, required seismic retrofitting and upgrading, including the replacement of the existing approaches. The work was no easy matter: As one of only six Lake Washington ship canal bridges linking the northern end of Seattle to downtown, the Fremont bridge, standing just 30 feet above the water, rises for marine traffic on an average of 35 times per day, making it one of the busiest bascule drawbridges in the world.

In explaining the choice of the Seattle-based crane company for the demanding job, Meredith Daniels, Fremont Bridge project manager for Mowat Construction, explained, "Sicklesteel continues to lead the industry by providing experienced lift coordinators, talented and certified crane operators, professional engineering staff, and the broadest range of equipment available in the Pacific Northwest."

Indeed, since the inception of CCO crane operator certification, Sicklesteel Cranes, under the leadership of company president Thom Sicklesteel, has been a strong supporter of the program developed and administered by the National Commission for the Certification of Crane Operators (NCCCO). Sicklesteel operators began taking the CCO written examinations in 1996. For two years CCO certification has been a requirement for crane operators and mechanics.

Sicklesteel has more than 80 workers in Washington, Oregon and Idaho. The company, which has been providing professional lifting assistance in the Pacific Northwest since 1937, offers lifting capabilities up to 650 tons using a broad range of equipment.

Due to the complexity of the Fremont Bridge project, and the tight clearances on both approaches, Sicklesteel provided a lift coordinator to assist the primary contractor on the project from the planning stages through the implementation of the lift plan. The development of the lift plan took into consideration the restricted access and crane sizing by manipulating the sequence to provide maximize utilization and minimize cost while keeping safety a priority and allowing the operation of the bridge to continue.

Sicklesteel drew on the lifting power of some of its larger hydraulic cranes to set the girders that weighed more than 190,000 pounds. Cranes used in the operation included a 650 ton capacity Demag AC 1600, a 500 ton capacity Demag AC 1300, a 450 ton capacity Demag AC 1020, and a 280 ton capacity Demag 6155. The cranes provided both multiple and single crane lifts during this complex project, and helped the company complete each phase ahead of schedule and under budget.

# CCO overhead program gathers pace

Crane Tech of Tampa, FL spoke volumes to the overhead crane industry recently when its entire company team of field consultants were accredited by NCCCO as overhead crane operator practical examiners.

Crane Tech President Bo Collier said it best when he stated: "The industry has started to realize the operation of overhead cranes and hoists is more than pushing a button or pulling a lever. The responsibilities of safe operation and competent inspection may only be correctly performed through proper instruction and hands-on training, followed by CCO certification."

Collier noted that training and certification can go a long way towards eliminating poor load handling techniques and needless damage to equipment. "Competent CCO-certified operators can recognize mechanical, electrical and hoisting conditions that may result in equipment damage

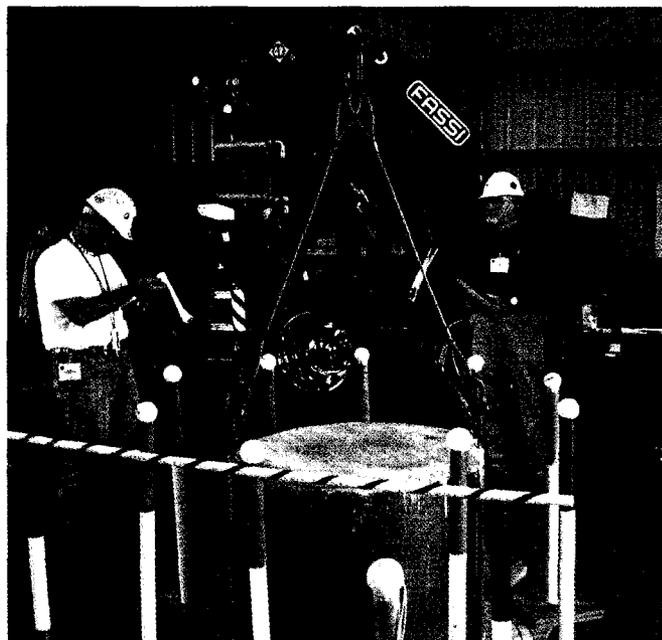
**Right: An NCCCO-accredited practical examiner reads instructions for the task to be performed to a candidate during the practical exam.**

or loss of load. In this regard, training and certification provide immediate and measurable results."

Founded in 1977, Crane Tech provides a wide range of training services from its state-of-the-art facility in the heart of Tampa Bay, FL. Regularly scheduled open-enrollment seminars cover subjects such as mobile crane operation and inspection, overhead cranes, rigging, safety



**Above: NCCCO Practical Exam accreditation candidates learn to set up the practical test site according to test site layout plans**



“Competent CCO-certified operators can recognize mechanical, electrical and hoisting conditions that may result in equipment damage or loss of load”

## NCCCO appoints chairmen

The National Commission for the Certification of Crane Operators (NCCCO) has appointed chairmen to two NCCCO Committees.

Ron Kohner, Landmark Engineering Services, has been appointed chairman of the Ethics and Discipline Committee, and Larry DeMark, IUOE Local 825, has been appointed chairman of the Appeals Committee.

"Both committees are at the center of NCCCO's standard policy of investigating alleged cases of inappropriate behavior by certified individuals, and of providing for appeal of any decisions reached," said Graham Brent, NCCCO executive director.

"NCCCO is proud and privileged to be able to call on the professional expertise of these industry experts," said John Kennedy, NCCCO president. "The work of these committees underpins the twin concepts of fairness and due process that have been a hallmark of CCO certification since its inception. It is vital they are led by individuals that have established an industry-wide reputation of the depth that Messrs Kohner and DeMark certainly have."

Kohner and DeMark already serve on other NCCCO committees and both are serving five-year terms as commissioners.

management, and scaffold erection, along with train-the-trainer courses on forklifts and aerial lifts. Off-site training is also provided for both large and small groups that have been recognized by many major US government agencies.

The Overhead Crane Practical Examiner Accreditation Workshop, instructed by NCCCO staff July 7-8, was preceded by a day of overhead crane written tests administered by chief examiners from International Assessment Institute, (IAI), which provides testing services for NCCCO.

The entire team of Crane Tech professionals attended

the workshop, and they passed the Overhead Crane Practical Examiner and written accreditation workshop exams. With this achievement behind them, Collier stated that his firm had reached another important milestone with the ability to provide access to CCO overhead crane operator certification to Crane Tech's training clients.

Collier has been active in NCCCO for several years. He was a member of the Overhead Crane Task Force during the development of the program, and continues to serve on the Exam Management Committee that oversees its administration and ongoing development. Collier also serves as an NCCCO Commissioner. **act**

# Washington Gears Up

**W**hen a tower crane collapsed in downtown Bellevue, WA in November 2006, killing one person and causing millions of dollars in damage and project delays, Washington State's Department of Occupational Safety and Health (DOSH) lost no time in developing corrective measures. Within days of the accident, DOSH officials had conducted conference calls with crane industry leaders statewide, scheduled meetings with elected state representatives, and helped to energize the state's crane community.

Using federal Occupational Safety and Health Administration's (OSHA's) new Crane and Derricks Advisory Committee (C-DAC) consensus document as a guide, Washington State's crane industry came together in a remarkable display of unity to draft what arguably may be the nation's most extensive crane regulation.

The bill reached the House Commerce Committee with unprecedented momentum, led by 62 co-sponsors, on February 12, 2007. Soon after, the bill was passed with 97 yeas and no negative votes. The Senate received the proposal and passed the bill with 39 yeas and only 8 nays. On April 10, not quite two months since the House first considered the bill, and not

five months since the accident which prompted it, Governor Christine Gregoire officially signed Washington's new crane legislation into law. The new requirement takes effect on January 1, 2010.

The Washington Crane Safety Association (WCSA) followed up this remarkable achievement by formulating a program of training and certification to help ready the state for its new crane safety requirements. Central to this program is a series of training and certification initiatives that began in 2007 and will continue state-wide during 2008 and 2009.

Washington's new law requires crane operators to be certified by a nationally recognized organization, a primary reason that the CCO written and practical examinations, developed and administered by the National Commission for the Certification of Crane Operators (NCCCO), have been scheduled after each WCSA safety and training program.

Graduates of this program will earn valuable credentials that are accepted across the state, are portable from employer to employer, and are valid in many other states. By virtue of NCCCO's accreditation by the American National Standards Institute (ANSI) to the ISO 17024 standard, CCO

Washington State takes an innovative approach to implementing certification requirements. **Danny Thiemens** reports

certification now also provides international recognition.

WCSA President Thom Sickelsteel, Sickelsteel Cranes of Seattle, WA, observed that the training and certification project was open to the entire crane industry. "We have already witnessed crane operators sharing classrooms with company safety personnel and supervisors. A true cross-section of the entire industry is cooperating in this initiative."

"What is particularly exciting is seeing so many Washington State DOSH compliance and consultation officers participating in our project," said Gary Hite, WCSA board member and president of Hite Crane & Rigging, of Spokane, WA. "You have to be impressed not only to see so many DOSH personnel involved, but to see them writing the CCO written examinations."

"Washington may well be the first state to have a team of governmental safety professionals that has actually been trained in the principles of crane safety, and then tested by NCCCO," Hite added. "When our law becomes fully effective

in 2010, DOSH officials will be able to hit the ground running."

Hite also noted that DOSH will likely have the respect of the crane industry for its willingness to take part in the NCCCO examination process.

Lampson International's Bruce Stemp was equally enthusiastic. "I hope this starts a national trend with all state DOSH and company safety personnel," said Stemp, whose company is headquartered in Kennewick, WA. "This is a great way to demonstrate that government personnel and company safety experts are truly knowledgeable of the crane industry they are protecting."

"The Washington State Department of Labor and Industries is extremely excited about our new crane safety program," stated Chuck Lemon, DOSH Crane Specialist. The new rule is a combined effort between labor, management, and the department, he noted.

"It is truly a blessing to see all of the enthusiasm in developing a crane safety rule for the construction industry," Lemon said. "The WCSA and NCCCO have been exceptional in assisting our staff with training and providing the opportunity to participate in CCO examinations."

Lemon noted that DOSH also wanted new crane safety compliance officers to take the same examinations that crane certifiers and operators are administered before they can inspect and operate cranes in the state. "This type of training and certification will help ensure our staff will have the credibility and talent to perform their mission," Lemon added.

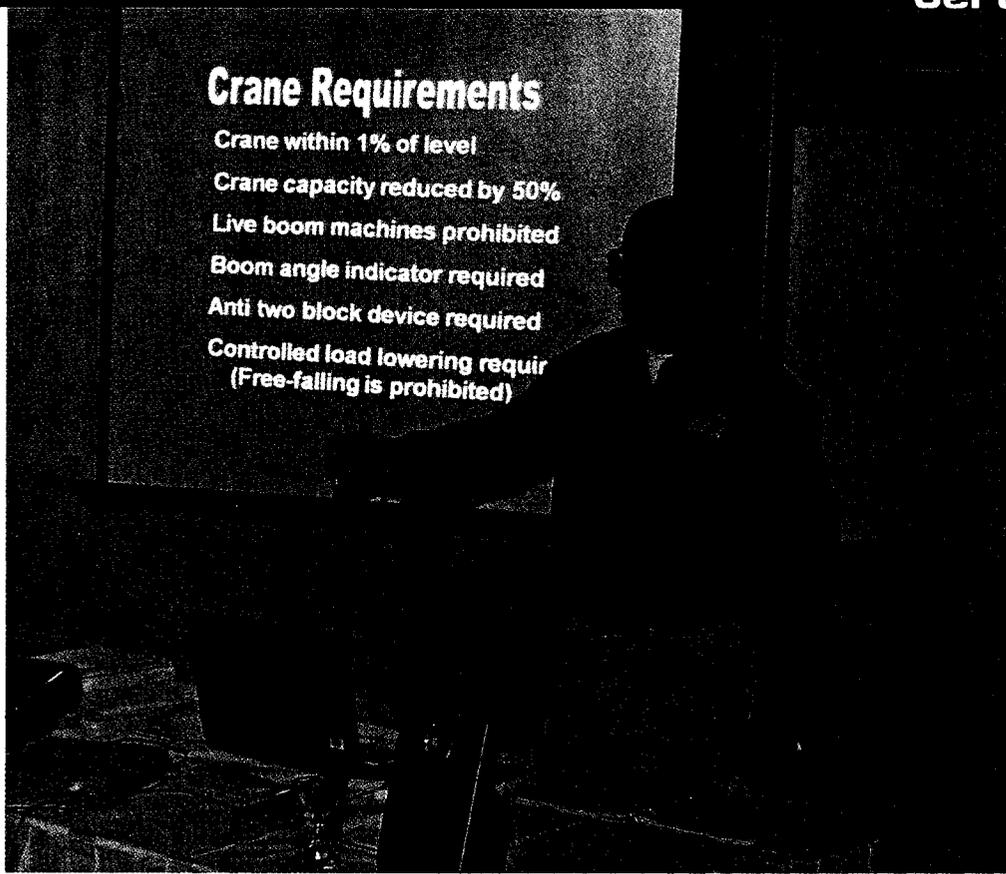
WCSA's series of training and certification initiatives kicked



**WCSA's series of training and certification for Washington Crane Safety Compliance Officers kicked off in Seattle in November with a two-day tower crane theory course followed by a four-day mobile crane theory course**

## Crane Requirements

- Crane within 1% of level
- Crane capacity reduced by 50%
- Live boom machines prohibited
- Boom angle indicator required
- Anti two block device required
- Controlled load lowering required  
(Free-falling is prohibited)



Class candidates completed CCO written examinations following each training session by Ron Cowper of Toronto, Canada (pictured above).

off in Seattle, WA, in November with a two-day tower crane theory course followed by a four-day mobile crane theory course. Class candidates completed CCO written examinations following each training session.

Training components for the tower crane and mobile crane

theory courses were instructed by Ron Cowper of Toronto, Canada. "Mr. Cowper is one of North America's most respected crane theory experts," said WCSA President, Thom Sickelsteel. "It was important for us to select an instructor who could professionally relate

to a broad mix of all those involved in the crane industry, and to be able to provide in-depth and dynamic instruction critical for our candidates to be ready for CCO written examinations."

The project is scheduled to continue with CCO practical examinations scheduled throughout the state beginning in February. Mobile and tower crane theory courses are already scheduled to continue during March and April in both Spokane and Kennewick, WA. Overhead crane theory courses, and a mobile crane inspection course, are slated to join the series of training initiatives and CCO certification components later in the year.

"We're not about to forget about crane safety below the hook either," said Hite. "We are watching and waiting for the new NCCCO Rigging and Signal Person Certification Program, and hope to be the first in the nation to provide that important credential for our project participants as well."

"Cooperation throughout the industry is the key to crane safety," added Hite. "And that is why our state will be ready for our new law before it becomes a requirement." **act**

## CCO certification card targets employers

In an effort to avert an incidence of forged or "doctored" certification credentials, the National Commission for the Certification of Crane Operators (NCCCO) has begun a campaign aimed at familiarizing employers with the principal details of the CCO certification card. Central to this effort is the development of a pictorial "CCO Certification Card Fact Sheet" identifying the key features of the CCO certification card.

"It's a trickle, not a flood, at this point," said NCCCO executive director Graham Brent. "But we don't want this to get out of hand, and we believe that education of those reviewing the CCO credential is an effective means of ensuring it does not."

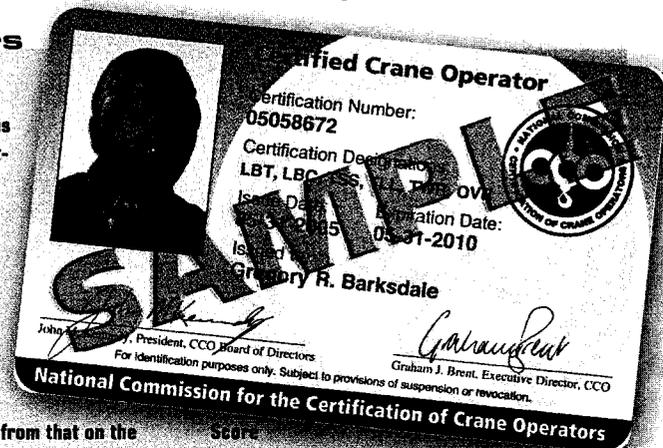
The fact sheet includes enlarged views of the front and back of the CCO certification card, and an explanation of the types of certification now available from NCCCO, along with their three-letter identification codes.

Brent warned employers not to accept photocopies of cards, nor any card that appears to have been tampered with. "The CCO certification card is, in fact, rather difficult to

forge," Brent said, "since the individual's photograph along with the certification categories and expiration date are all heat-sealed into the plastic card when it is first issued."

Brent emphasized, however, that employers should be particularly vigilant about certification category codes that appear to have been added after the card was printed, or any lettering that appears in a different typeface from that on the rest of the card.

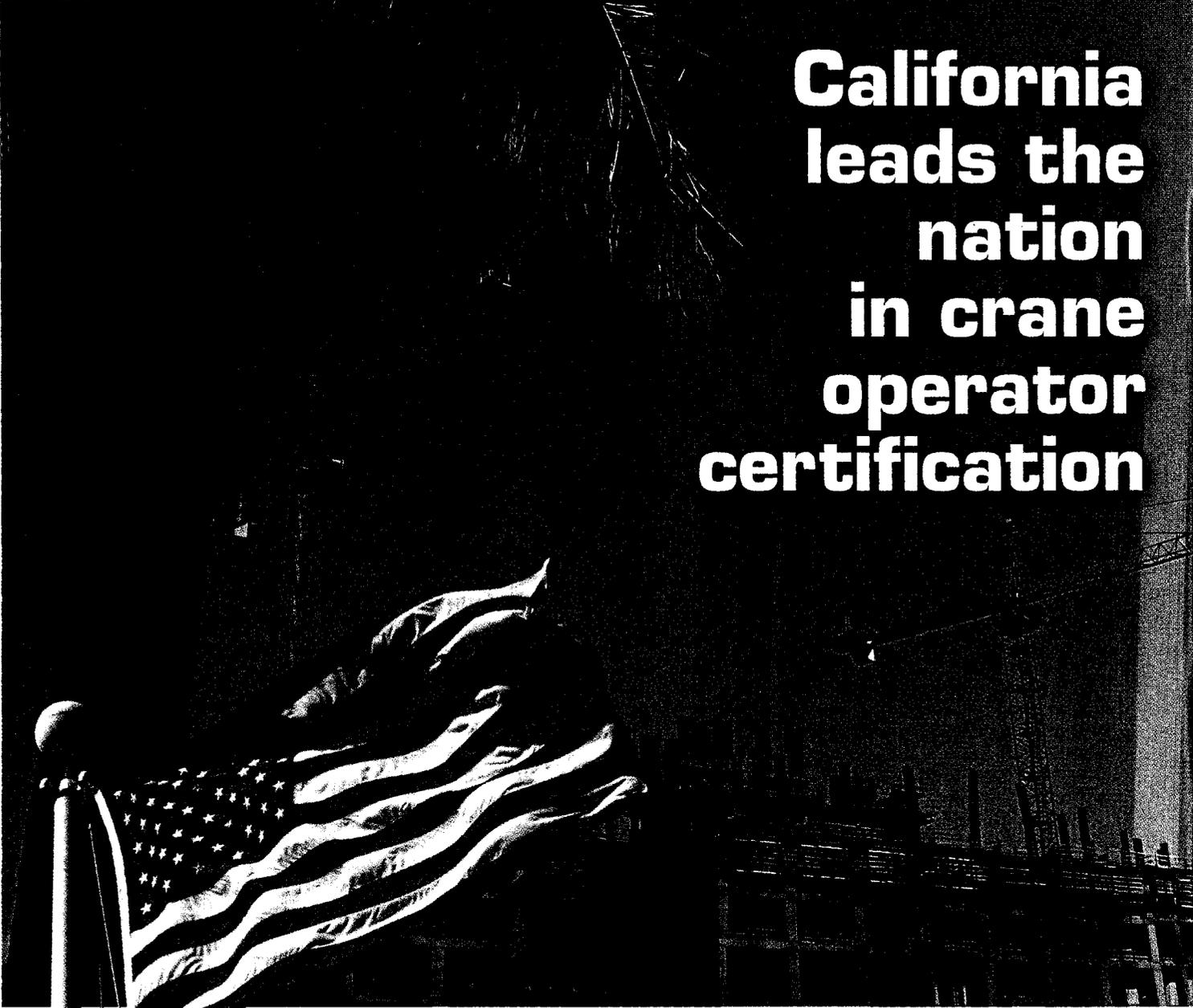
"Score report letters should not be accepted in lieu of certification cards," says Brent, "since they attest only to an individual's performance on either the written or practical test, and not as to whether he or she has completed the certification process." And, unlike certification cards, there is no picture ID on a score report letter to verify identity.



Score letters were also easier to forge or tamper with, Brent added, noting that several cases had come to light where scores had been "adjusted" by the candidate to appear he had performed better than, in fact, he had.

The CCO Certification Card Fact Sheet is posted on NCCCO's web site at [www.nccco.org](http://www.nccco.org). Further information is available from Tara Whittington at 703 560-2391 extension 204; [twhittington@nccco.org](mailto:twhittington@nccco.org)

# California leads the nation in crane operator certification



**A**s the second anniversary of California's crane operator certification requirement approaches, employer groups, unions and Cal-OSHA are assessing the impact of the most extensive regulation of this type in any state in the nation.

The revision to Section 5006.1 of California's Title 8 was published mid-2003 after almost three years of industry debate through committee discussion led by California's Division of Occupational Safety and Health. It became effective June 1, 2005. With very few exceptions, operators of mobile cranes and tower cranes in the state must be certified by a certification entity accredited by the National Commission for

Certifying Agencies (NCCA). The requirement applies to cranes in general industry as well as construction.

In testimony before the Cal-OSHA Standards Board last month, Graham Brent, executive director of the National Commission for the Certification of Crane Operators (NCCCO), noted that his organization had administered almost 60,000 written and practical mobile crane exams in the three-year period, 2004-2006. "Most candidates in California have taken the written core exam and one specialty exam," said Brent, "and have gone on to take one practical exam" to achieve their certification. Most popular category by far, he said, had been



## California Central is information nexus

the small, fixed cab telescopic boom crane type.

That testing activity had resulted in 7,350 certifications being issued between 2004 and 2006. Crane operators continued to complete the requirements for certification in the first quarter of 2007, he said, and this, together with candidates who entered the program prior to 2004, pushed the total number of CCO-certified operators in California to over 8,000, more than in any other state.

"To have reached that level in under two years is quite remarkable, and a credit to the vision and tenacity of Cal-OSHA officials and safety-minded employers across the state in bringing this requirement into law," Brent said, noting that, realistically, a federal requirement was at least a half-dozen years away. While the vast majority of certifications had been in mobile cranes, tower crane certification had also proved extremely popular.

### Initial response slow

However, it was by no means always clear that the state's employers would respond in such numbers. Indeed, Brent noted that the industry had initially been slow to respond to the need to meet the new requirements. Of the approximately 150 written test administrations NCCCO scheduled in 2004, almost one-third had to be canceled due to no candidates registering for the examinations, he reminded the board. "Compare that with the fact that, one year later, more than 850 test administrations were held, and a further 300 in 2006, and it's clear that there has been an exponential growth in the rate of testing in the state," he said.

Peak period for CCO testing had been the second quarter of 2005 as the June deadline loomed. "While the pace has slackened off since then," Brent said, "both written and practical testing continues at a robust pace."

NCCCO is the largest certification body recognized by the state to issue crane operator certifications, and the only one

**NCCCO's Web site is a primary access point for information about testing and training opportunities in California. In addition to the full text of the state requirement, an explanatory "Q&A", information on CCO-accredited practical examiners, and links to independent firms that provide training, NCCCO's dedicated "California Central" area also provides a direct link to Cal-OSHA for those seeking interpretations or clarifications on exemptions and variances.**  
[www.nccco.org/CaliforniaCentral.htm](http://www.nccco.org/CaliforniaCentral.htm)

testing both union and non-union operators. The nonprofit organization has been issuing certifications in California since 1997.

CCO written examinations are administered under secure conditions by a chief examiner hired to proctor the exams. NCCCO chief examiners are independent from any of the individuals or companies being tested. This third-party test administration is an important element in maintaining the integrity of the program.

CCO practical examinations are administered by practical examiners trained and accredited by NCCCO. The accreditation requires that an examiner be a certified crane operator, successfully complete a three-day workshop to be trained in practical examination administration, and pass a written test at that workshop.

### Practical Examiner Workshops

"We believe that three days is the absolute minimum needed to train a certified operator to administer practical exams," said Phillip Kinser, workshop senior instructor and manager of program development. "Examiners need to know so much more than just the mechanics of ensuring a test site is set up correctly or how to fill out a candidate score sheet — as vitally important as these tasks are." Equally critical, Kinser said, was an understanding of how the concepts of inter-rater reliability, and the validity and fairness of the test underpinned the integrity of the assessment process, as required under the terms of its accreditation by NCCA and, as applied for, by ANSI. "You just can't do that in a one-day seminar,"

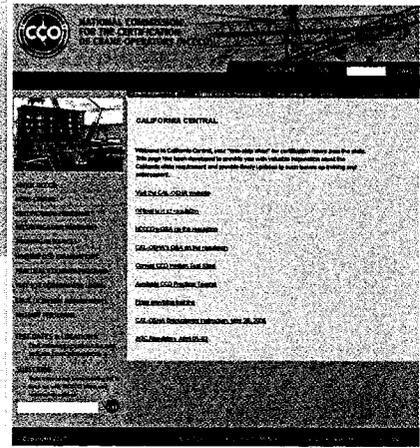
he said.

There are over a hundred CCO-accredited practical examiners in California, Brent noted; more than 40 are "for hire," that is they are available to be hired by employers to administer CCO practical exams. In addition, practical examiners from other states regularly provide practical examination services in the state. Since 2004, NCCCO has conducted more than a dozen Practical Examiner Accreditation Workshops in California, and more are planned.

Multiple options are available to candidates for testing. Written and practical examinations are offered on demand at NCCCO-approved sites that are hosted by employers, industry associations or training firms. In addition, employees may register for the practical examination at any one of 11 permanent practical exam sites now established in California; even where candidates may not have access through their employer, union or other organization at their place of employment, no candidate should be more than a short drive from a practical test site where tests are given on demand, by appointment.

### Training opportunities

Firms across the state now offer a multitude of training options for employers and candidates alike. To preserve its third-party independent status, NCCCO does not conduct any training itself. However, as a public service, it does list on its Web site firms that have indicated they will provide training in preparation for CCO certification exams. While NCCCO offers no opinion on the quality or content of the programs offered, more than 30 firms active in California



are listed.

In his concluding remarks to the Standards Board, Brent acknowledged that the past two years had been challenging, both for NCCCO and its test services contractor, International Assessment Institute (IAI), as they had responded to the unprecedented demand for certification testing from employers across California. "However, through the implementation of a number of measures, including in-house sponsored test administrations, expedited test site scheduling, and accelerated scoring procedures, we believe we have largely kept pace with this demand and resolved issues as they have arisen," Brent said.

Employers could expect additional program improvements in the months to come, he added, that were aimed at streamlining the test delivery and reporting process. In development were online applications, computer-based testing and reduced paperwork requirements.

"We look forward to continued cooperation with Cal-OSHA, employers and industry organizations as we work towards bringing the remaining affected parties into compliance with the certification standard," Brent added. Demand was also expected shortly, he said, from operators keen to take advantage of the recertification process for which they become eligible 12 months prior to their expiration date.

**act**

# A CLEAR path for NCCCO

The Council on Licensure, Enforcement and Regulation (CLEAR) has announced that Robert Hornauer, manager of test integrity for the National Commission for the Certification of Crane Operators' (NCCCO) crane operator certification program, has completed the program requirements of its National Certified Investigator program.

This specialized program, developed and administered

by CLEAR, an affiliate of the Council of State Governments, recognizes individuals who have demonstrated excellence in certification program investigation. To qualify, Hornauer had to successfully complete several days of training, as well as pass written examinations in advanced investigative analysis, advanced investigative report development and advanced interviewing.

"This is a significant

accomplishment and one of which Bob, and NCCCO, can feel proud," says NCCCO executive director Graham Brent. "The CCO program strives to maintain the highest standards of exam development and administration, and Bob's achievement will ensure that the quality of CCO certification is maintained for the long term."

Since joining NCCCO one year ago, Hornauer has conducted numerous audits of

test sites and training programs, and investigated cases of misrepresentation of credentials by candidates. "Such policing of the program is essential to ensure the integrity of the CCO program is maintained," Brent adds. "And employers and candidates alike need to know that, when it issues a certification, NCCCO is making a commitment to support the credential throughout its five-year term." **act**

## CICB hosts Texas CCO workshop

Crane Inspection and Certification Bureau (CICB) hosted an NCCCO Mobile Crane Practical Examiners

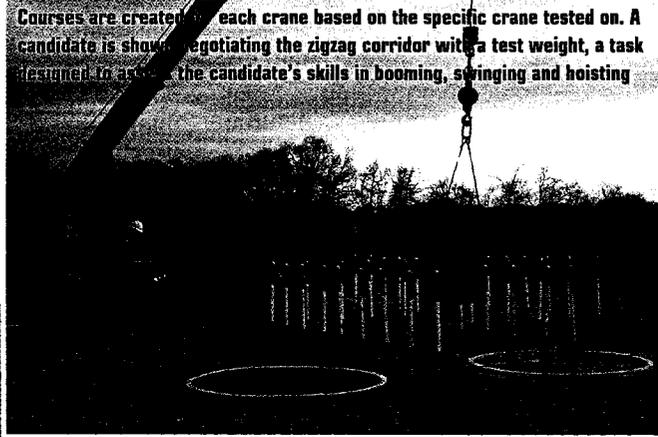
### Shell requires CCO certification

CCO certification, required or recognized by hundreds of employers nationwide, has received further endorsement from the petrochemical industry.

Effective September 1, 2007, qualified operators of mobile cranes working for Shell Exploration and Production Company (SEPCO) must hold CCO certification from the National Commission for the Certification of Crane Operators (NCCCO). In addition, LLFPs (Local Lifting Focal Points) or dedicated individuals in the field, on onshore facilities, must have undergone either a CCO preparatory class or approved ASME training. The new requirements are contained in SEPCO's latest revision of its OPS0055 Lifting and Hoisting Standard.

SEPCO developed the standard with the aim of preventing incidents associated with lifting and hoisting. The document establishes the company's requirements for the operation, maintenance, testing, certification, inspection, and design of lifting equipment, as well as the competency and qualifications of individuals involved with these operations.

Accreditation Program workshop at its Pearland, TX facility in January. Several CICB employees, as well as other candidates from Arizona, California, Florida, Georgia, Hawaii, Minnesota, North Dakota, Oklahoma, Tennessee, and Texas, received training in administering CCO practical exams.



Courses are created for each crane based on the specific crane tested on. A candidate is shown negotiating the zigzag corridor with a test weight, a task designed to assess the candidate's skills in booming, swinging and hoisting

An NCCCO-Accredited Practical Examiner reads instructions for the task to be performed to a candidate during the Practical Exam. Examiners-in-training role play (as examiners, candidates, and proctors) during the workshop to reinforce the classroom training

### CCO certification recognized by CSP

The Board of Certified Safety Professionals (BCSP) has recognized the CCO crane operator certification program as meeting its requirements for Continuance of Certification (COC).

BCSP, which operates the Certified Safety Professional (CSP) certification program, has authorized credit of five COC points for any individual certified by CCO as a crane operator in any of its three programs (mobile, tower and overhead crane). CSP-certified individuals need to accumulate 25 points during their five-year certification to achieve recertification.

The decision by BCSP came after the Savoy, IL-headquartered certification organization evaluated CCO certification on the basis of both the relevancy of the examination content and the quality of the program. Like the CSP program, CCO is accredited by the National Commission for Certifying Agencies (NCCA) and formally recognized by federal OSHA.

The three-day workshop prepares candidates for conducting NCCCO Practical Examinations, including the practical site and exam application procedures, through final notification of candidate's successful completion. The workshop also includes hands-on examiner training for the practical exam, timeline application and submittal processes, candidate scoring procedures, fee payment requirements, and the theoretical and practical applications of test validity and reliability in critical test design. **act**

Chairmen of the rigger and signalperson task forces, respectively, Don Jordan (center) and Kenny Shinn (inset), met with NCCCO's manager of program development, Phillip Kinser, and IAI president Anthony Mitchell, PhD, at the inaugural meeting in April.



# Rigger, signalperson certification off to good start

“We are all here today with the same goal in mind,” said Kerry Hulse, commission chairman of the National Commission for the Certification of Crane Operators (NCCCO). “To improve safety in the workplace, to raise awareness of lifting equipment hazards, and to find the most effective ways of addressing them.”

Hulse was speaking at the inaugural meeting of NCCCO's rigging and signalperson task forces held in Lake Tahoe, NV in April. More than 50 subject matter experts (SMEs) from more than 20 states gathered over the course of the two-day event to begin work on crafting new certification programs. Among those represented were contractors, steel erectors, crane rental companies, rigging gear manufacturers, petrochemical, insurance firms, energy providers, and training companies, as well as the operating engineers and ironworkers labor unions.

Hulse paid tribute to those who, more than a dozen years ago, had the vision to lay the foundation stones of what has since become the established industry benchmark for the certification of crane operators. “It seemed a Herculean task at the time,” he said, “but when you can reflect, as NCCCO can, on the administration of more than a quarter of a million tests to over 50,000 operators, there is every reason to believe these new programs will have an equal, if not greater, impact on the safety of all those whose work brings them into contact with cranes and rigging gear.”

The task forces were set up by the National Commission for the Certification of Crane Operators with the aim of developing certification programs for site personnel who rig loads, or who are responsible for signaling the crane operator during the lift. NCCCO announced its plans in February and issued a call for volunteers the following month.

“The response for experts to serve on the task forces has been outstanding,” said NCCCO manager of program development

Phillip Kinser. “In addition to the quality of those volunteering, we have been impressed with the breadth of the industry sectors represented.”

At its first meeting, task force members made significant progress in a number of areas, said Kinser, including defining the essential knowledge and skills that riggers and signalpersons need to possess, and identifying standards and other reference materials to be used in the development of test questions. In conjunction

with exam development specialist International Assessment Institute (IAI), NCCCO provided SMEs with a thorough briefing in certification program development, job (task) analysis, and item (question) development designed to meet NCCA and ANSI accreditation criteria.

The next meeting of the task force is scheduled for June, and at two-monthly intervals thereafter with the aim of meeting a 2008 program completion deadline. **act**

## All Crane Training USA hosts Overhead Crane Practical Examiner Workshop

All Crane Training USA hosted a NCCCO Overhead Crane Practical Examiner Workshop towards the end of March at its headquarters in Oakland, CA. The event was attended by examiner applicants from across the US.

All Crane Training has been providing mobile and tower crane training programs, as well as NCCCO written and practical examinations, since 2002. Company president Don “Doc” Bailey said he expects an increasing number of firms will seek overhead crane training and CCD overhead crane operator certification as they begin to appreciate the dividends that accrue from professional training and assessment. “We can all work together to save lives and lower accidents,” Bailey said. “CCO certification just makes good financial sense.”

All Crane Training USA is a full-scale training facility that offers classroom and practical training, as well as CCD certification, all in one location near the Oakland Airport. With more than 20 years industry experience, Bailey provides instruction utilizing his own training manual, with a down-to-earth instruction style that has gained him a reputation for creating a stimulating learning environment for crane operators.

Bailey is certified in all CCD certification categories: mobile, tower and overhead crane operator. He is also an accredited practical examiner for all NCCCO crane programs. “I’ve realized the importance of offering overhead crane training and CCD overhead crane operator certification,” said Bailey. “That’s why I wanted our company to host an NCCCO Overhead Crane Workshop.”

He believes the industry is beginning to recognize the risks associated with overhead crane operations. Bailey quotes a National Institute of Occupational Safety and Health (NIOSH) report that stated 136 workers died in the US between 1992 and 2004 due to accidents associated with overhead cranes. “Not only is this number likely highly conservative, but it ignores the equally significant lost time accidents and long term disabilities that go widely unreported,” Bailey said.





International Operating Engineers Local 3 JAC, Rancho Murrieta, CA, hosted the spring 2007 meetings of the National Commission for the Certification of Crane Operators (NCCCO) in Lake Tahoe, Nevada, in April. Pictured left to right are Tammy Castillo, director of apprenticeships, John Teller, director of training, and Kerry Hulse, NCCCO Commission chairman. IUOE Local 3 JAC also hosted the inaugural meeting of the NCCCO Rigger and Signalperson Task Forces.

## NCCCO elects 2008 directors, officers

The board of directors of the National Commission for the Certification of Crane Operators (NCCCO) has announced its 2008 directors and officers.

Elected president for a fourth, one-year, term is John Kennedy, Manitowoc Crane Group. Prior to being elected president in 2005, Kennedy served two terms

as secretary/treasurer.

Ronald Schad, Essex Crane Rental, Buffalo Grove, IL, continues as immediate past president. Schad served the board as president from 2002 to 2004.

J. Chris Ryan, Boh Bros. Construction, Baton Rouge, LA has been elected as secretary/treasurer. Ryan has been a member of the board since

2003. This is his fourth term as secretary/treasurer.

Elected to a one-year term as vice president is Garry Higdem, CH2M Hill, Englewood, CO. Higdem has been a member of the board since 1999 and has served as vice president since 2002.

Kerry Hulse, Deep South Crane & Rigging, Houston, TX

continues to serve the board as chairman, commissioners.

Other members of the board are: Stephen Brown, International Union of Operating Engineers; Dale Daul, McGough Construction; Robert Steiner, Kelley Equipment Co. of Florida; and Gene Owens, Granite Construction, Watsonville, CA. **act**

## Crane operator Code of Ethics adopted

### **i** NCCCO's Code of Ethics

As a CCO-certified crane operator, I will perform my work in a manner:

- 1 free of bias with regard to religion, ethnicity, gender, age, national origin and disability.
  - 2 so as to place the safety and welfare of workers associated with the lifting operation above all other considerations.
  - 3 so as to protect nearby general public, property and the environment.
- In addition, I will:
- 4 make my management aware if I have safety concerns relating to the lifting operations which I am performing.
  - 5 not knowingly violate safety related regulations, warnings or instructions set forth by OSHA, recognized safety standards, or the crane manufacturer.
  - 6 not misrepresent or knowingly deceive others concerning my experience or the capabilities of myself or the crane I am operating.
  - 7 not misrepresent or misuse my certification card or the NCCCO logo, which are the property of NCCCO, and I understand that I must return the card to NCCCO immediately if required to do so.

The National Commission for the Certification of Crane Operators (NCCCO) has adopted a Code of Ethics that exemplifies the professional conduct that is expected of CCO-certified operators.

Candidates sign an attestation statement on the new candidate application form indicating their agreement to comply with the Code of Ethics throughout their certification period. The new application attestation states in part:

"I understand and agree that my failure to provide accurate and complete information or abide by NCCCO's policies and procedures, including the Code of Ethics, shall constitute grounds for the rejection of my application or denial or revocation of my certification."

"All professional crane operators recognize that CCO certification is a privilege that must be earned and maintained," said NCCCO Executive Director, Graham Brent. "The Code of Ethics identifies the main elements of professional conduct that should

be observed and upheld by all CCO-certified crane operators. Most professions require their practitioners to abide by industry-established standards of conduct. It is entirely appropriate that crane operator certification should carry with it a responsibility to carry out lifting duties in a safe and ethical manner."

CCO-certified crane operators who intentionally or knowingly violate any provision of the Code of Ethics will be subject to action by a peer review panel (NCCCO's Ethics and Discipline Committee), which may result in suspension or revocation of certification, he added.

Procedures for investigating complaints against CCO-certified operators are also delineated in a new disciplinary and appeals process.

"While NCCCO does not expect, invite, solicit or encourage complaints, these procedures are necessary to protect the reputation of the profession and to ensure a fair investigation of complaints," Brent said. **act**

# Certification program modifications announced

The National Commission for the Certification of Crane Operators (NCCCO) has announced a series of modifications to the CCO crane operator certification program aimed at streamlining the application process and broadening the scope of the program.

NCCCO no longer requires the submission of the DOT-CDL or NCCCO physical exam forms as part of the candidate application. However, candidates must still comply with ASME B30 physical requirements in order to receive and maintain their CCO certification, and they must attest to compliance with these requirements when making their application.

These changes are reflected in

the new revision of the CCO Candidate Handbooks and in the attestation statement on the new Candidate Application form which supersedes all previous versions.

The policy change is aimed at streamlining the CCO application process without diminishing program requirements.

"Clearly, it is vitally important that CCO-certified crane operators are physically and mentally able to operate cranes safely," said NCCCO Executive Director Graham Brent.

"This change in NCCCO administrative procedures is geared simply to reducing the paperwork burden on candidates, one which we believe they, and the industry, will welcome. In

no way does this new procedure affect NCCCO's position on the need for operators to be physically qualified, in accordance with the provisions of the ASME B30 standard," he said.

The 20 pounds of barrel ballast (weight) that is used in Task 3: Ball in Barrels has been removed for the small and large telescopic crane practical exams. The lattice boom crane practical exams (crawler or truck) will continue to use the 20 pounds of ballast for each barrel. A revised Mobile Crane Site Report is available on the NCCCO website at [www.nccco.org](http://www.nccco.org).

The decision to remove the ballast was made after a detailed analysis of test statistics over a

multi-year period as well as field reports from practical examiners. It was determined that, in some cases, instead of controlling the headache ball movement with appropriate control techniques (catching the load), candidates might use the weighted barrels inappropriately as a means to stop the headache ball from swinging.

NCCCO is now processing Practical Exam site requests for short boom configurations. Previously, all lattice boom cranes used for practical tests were required to have a boom of at least 120 feet plus or minus the shortest section (80 feet plus or minus the shortest section for cranes with capacities of 50 tons and below).

act

## Nevada School of Construction hosts CCO workshop

The largest CCO Practical Examiner Accreditation workshop ever held by the National Commission for the Certification of Crane Operators (NCCCO) was hosted May 22-24 by the Nevada School of Construction (NSOC) in Las Vegas, NV.

A total of 30 candidates from 17 states attended the mobile crane workshop, which included first time student examiners, as well as refresher and re-accrediting examiners.

As sponsor of this event, NSOC provided the location, cranes and meals for the 3-day workshop. "Crane operators are in high demand," said Debra Forbush, NSOC campus president. "One national company has hired about 15 of our graduates and one of the largest national mining companies is also a client."

NSOC, a member of the National Association of Heavy Equipment Training Schools (NAHETS), was established in 1959, and has been operating in Las Vegas for the past three years preparing students for jobs in heavy construction, including crane operation. The school boasts over 250 years of collective experience among the instructors, and claims a national reputation for graduating operators in the construction industry.

Forbush said the crane operator training program had been a positive addition for the school and its students. "We stress safety, safety, safety!" she says, and claims safety and attitude are the two contributors to success — a belief reflected in a sign on her office wall which states, "Attitude is everything; pick a good one!"

Since January this year, Nevada has required crane operators to be certified. CCO certification



Practical Examiner students receive instruction on CCO course layout requirements at a Workshop hosted by NSOC in Las Vegas in May. Students are instructed in measurement and layout of the test course according to a test layout plan.

is a part of the NSOC graduation requirements. Forbush noted that, with the new legislation in effect, emphasis on becoming certified had intensified. "Employers use our school as a resource to locate new talent, and our graduates use our school as a springboard to find employment nationwide," stated Forbush.

The NSOC facility comprises a training site as well as classroom space. For hands-on training, NSOC has a Link-Belt RTC-8030 mobile crane on site in addition to other heavy construction equipment. A small telescopic crane (boom truck) was rented for the workshop so the students would have an opportunity to meet the small telescopic hydraulic crane type requirement.

Feedback from the NCCCO Workshop had been very positive, Forbush said, and she noted that she has already had several inquiries from potential examiner candidates for a repeat event.

The expanding Las Vegas skyline is currently dotted with a veritable forest of booms and jibs representing multiple crane types, working on the latest construction projects.

Forbush said NSOC was a good choice for the workshop, since Las Vegas will clearly need more certified crane operators as growth continues and the demand for crane operators rises. "People stop on the freeway and take pictures of our city because of the unique construction scenes," she noted.

# CCO Rigger Certification CCO Signalperson Certification

## ? your questions answered

**Why is NCCCO developing these new programs?**  
The role of the crane operator, and the need for him (or her) to be qualified, is well understood. The new certifications are geared towards ensuring that crane operators are given safely rigged loads to lift in the first place, along with accurate visible or audible directions on where to place them. It's a way of "closing the loop" with regard to crane safety on construction sites.

**What type of tests will there be?**  
Both programs will consist of a written and a practical examination. There will also be a recertification requirement. Development is being "double-tracked" to speed things along and provide for optimum synergy between the two Task Forces that have been set up by NCCCO to develop them.

**Who is on the Task Forces?**  
The Task forces are made up of some 60 volunteers, representing all facets of the industries that use cranes in construction, and all of them are active in their field. Identified as subject matter experts (SMEs) and trained by NCCCO in program development, they have been meeting approximately every six weeks since the Task Forces were established in April 2007.

**How have the new programs been developed?**  
The new programs have drawn on three major resources: industry support, subject matter expertise, and psychometric guidance. All elements of the new programs are being developed according to the strict psychometric standards that are a hallmark of NCCCO's crane

operator programs. In this way we can ensure the tests are fair, valid, reliable, and legally defensible.

**Who decides what is tested on the exams?**  
All the knowledge statements the Task Forces have selected for the five content domains have been identified as being critical to the tasks involved either in rigging or signaling. SMEs in each Task Force have identified the necessary knowledge and skills for each activity, and grouped them into content areas.

**What will the tests cover?**  
For riggers, the tests focus on the scope of the rigging activity, planning the rigging, selection of rigging components, inspection of rigging, and finally the execution of the rigging activity. For signalpersons the areas are: knowing and understanding hand signals and voice communications, having a basic knowledge of crane operations, understanding specific considerations concerning the construction site ("situational awareness"), and knowing applicable safety standards and regulations.

**Who has been providing test-development expertise?**  
Task Force experts have been guided by psychometric consultants from International Assessment Institute (IAI), the testing services company that has provided exam development and administration services to NCCCO since 1998. As with its existing programs, NCCCO has conducted a professional Job Task Analysis to serve as the foundation for exam development activities.

**Will everyone have to be certified?**  
Although there are currently no state or federal requirements either for riggers or signalpersons to be certified, all construction personnel must be qualified. CCO certification is a federally recognized means of ensuring this is the case, which is why so many employers, federal agencies, states, labor unions, industry organizations, and insurance firms have come to recognize or require CCO crane operator certification. Also, the Federal Proposed Rule that would revise OSHA's construction crane standards contains specific qualification requirements for both signalers and riggers. NCCCO's programs would meet or exceed these requirements.

**Will training be required?**  
Because of the need to provide a complete, independent, third-party certification process, NCCCO does not offer training. However, encouraging the use of professionally developed training is one of NCCCO's primary goals, and we strongly encourage all candidates to attend suitable classes before applying to take the exams.

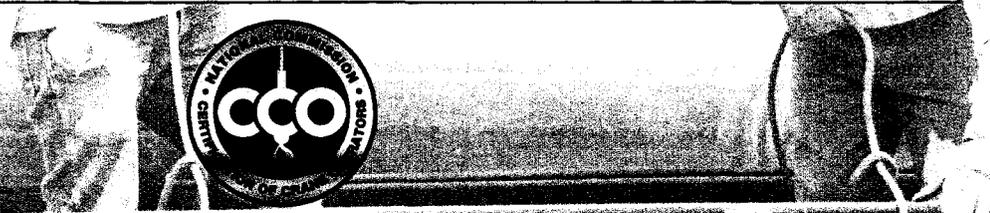
**Will the new programs be accredited?**  
NCCCO will seek accreditation for the new programs once they are completed, just as it has successfully for all three of its crane operator certifications. Accreditation from a national personnel certification accreditation body such as the National Commission for Certifying Agencies (NCCA) or the American National Standards Institute (ANSI)

is an indicator of a level of quality that candidates and employers alike have a right to expect from a nationally recognized and administered program.

**When will the programs be available?**  
On current schedule, signalperson certification should be available by mid-2008, with rigger certification following closely behind. Updates are available from NCCCO's web site at [www.nccco.org](http://www.nccco.org) as information becomes available.

**Who is NCCCO?**  
The National Commission for the Certification of Crane Operators (NCCCO) is a non-profit industry organization formed in January 1995 to develop effective performance standards for safe crane operation to assist all segments of construction and general industry. Since NCCCO began testing in April 1996, more than 32,000 written and practical exams have been administered to over 80,000 crane operators in all 50 states, two-thirds of the states, and the requirements for crane operators, riggers, and signalers or recognized CCO certification.

**What recognizes CCO certification programs?**  
CCO certification has been nationally accredited by the National Commission for Certifying Agencies (NCCA) since 1998, and by the American National Standards Institute (ANSI) since 2007. The NCCCO crane operator certification program is also the only program to be recognized by federal OSHA as meeting OSHA and ASME (ANSI) requirements for crane operator competency.



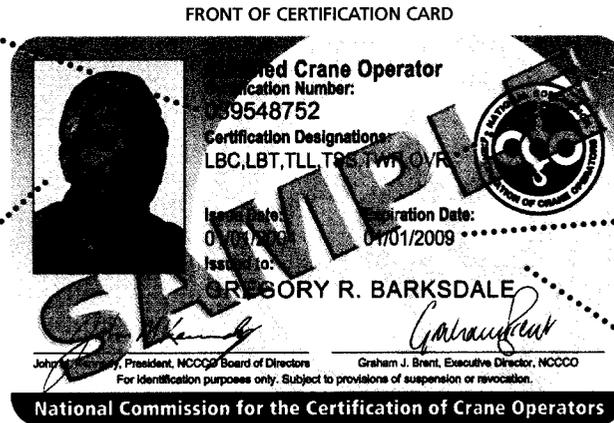
2750 Prosperity Avenue, Suite 300, Fairfax, VA 22031  
Tel: 703-560-2391 Fax: 703-560-2392 E-mail: [info@nccco.org](mailto:info@nccco.org)

# CCO Certification Card FACT SHEET

## IMPORTANT

**Certification Number:**  
The eight (8) to nine (9) digit Certification Number appears in bold type and begins with a zero

**Color Photo:**  
Look for photo embedded in laminated card

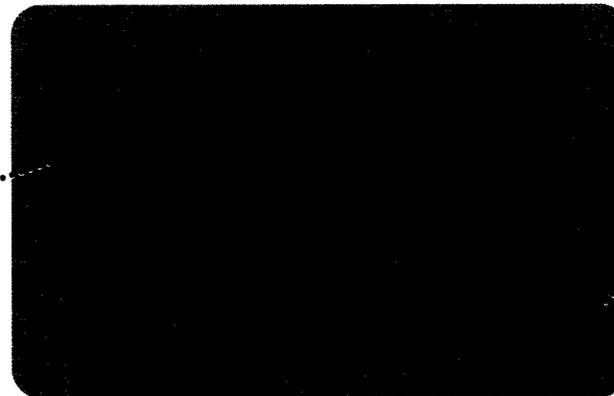


**Certification Designations:**  
This area specifies what categories of crane the individual is certified in

**Issue and Expiration Dates:**  
These dates tell you if the certification card is valid

**NCCCO Logo:**  
Look for the ghosted logo and shading on the card

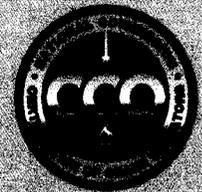
BACK OF CERTIFICATION CARD



**Certification Code:**  
On the back of the card is an explanation of each certification category code

**Verification:**  
If you have questions regarding the status of a candidate, please verify with our office using the contact info here

- **NCCCO Certification Card is valid only in conjunction with a current DOT or NCCCO Medical Certificate**
- **Verify certification is current and in the appropriate crane categories**
- **Check card for irregularities**
- **Never accept a photocopy of a CCO card as proof of certification**
- **Contact NCCCO if in doubt!**



**NATIONAL COMMISSION FOR THE CERTIFICATION OF CRANE OPERATORS**

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Equipco Sales & Rental Corporation  
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Hawthorne Machinery Company  
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Honnen Equipment Company  
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Kirby-Smith Machinery, Inc.  
Kirkpatrick & O'Donnell  
Kridler Equipment Company, Inc.  
L.B. Smith Educational Foundation, Inc.  
Martin Equipment Company  
Morris Material Handling  
Nixon-Egli Equipment Company  
North Central Crane & Excavator  
OMI Hoist & Crane

OTEC  
PAT Equipment Corporation, Inc.  
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Power Equipment Company  
Reco Crane Company, LLC  
Rexco Equipment, Inc.  
Ringhaver  
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## **Crane-Related Deaths in Construction and Recommendations for Their Prevention**

### **Introduction**

The deaths of six construction workers and a bystander, along with injuries to 24 construction workers and first responders in a New York City crane collapse March 15, 2008, set off an alarm within the construction community and city dwellers living in the shadow of large scale projects. Just 10 days later, a 20-foot crane section in Miami fell 30 stories, killing two construction workers and injuring five. New Yorkers, already jittery from the first crane collapse, saw another crane fall in their city May 30, which killed two construction workers and injured one worker and one bystander.

The first New York crane collapse garnered much media attention because of the scale of the event – a high death toll among workers and a visitor killed when the crane’s boom crushed a residential building. But injury and death to bystanders is not a first-time occurrence. Selected examples of crane-related bystander deaths collected from news reports are included in Table 1.

In 2003, OSHA formed a Crane and Derrick Negotiated Rulemaking Advisory Committee (C-DAC) of representatives from industry, labor and government to develop a new safety standard for the construction industry to aid in reducing the number of fatalities. The committee first met in July 2003, and reached a consensus on regulatory language for the new standard on July 9, 2004. In May 2008, OSHA published its semiannual agenda and announced that the proposed crane standard will be published for public comment in the Federal Register in August 2008.

In light of the large number of recent fatalities, CPWR examined the data from the Bureau of Labor Statistics (BLS) to evaluate trends over time and propose recommendations to prevent future injury and death.

### ***Report Authors***

Michael McCann, PhD, CIH, is director of safety research at CPWR – The Center for Construction Research and Training, the research, development, and training arm of the Building and Construction Trades Department, AFL-CIO.

Janie Gittleman, PhD, MRP, is associate director of safety and health research for CPWR – The Center for Construction Research and Training.

Mary Watters is communications director for CPWR – The Center for Construction Research and Training.

## **Methods**

Construction industry fatality data for the 2-digit BLS Standardized Industrial Classification (SIC) Codes 15, 16 and 17 for 1992 through 2002 were identified in the Census of Fatal Occupational Injuries (CFOI) database. For 2003-2007, the 2002 North American Industry Code System (NAICS) codes 236-238 were used. The resulting data were entered into a Microsoft Excel 2003 database for analysis.

Construction worker deaths related to cranes were identified by selecting all records with the source code 34\* (Cranes). (This does not include non-construction crane-related deaths from maritime, mining and general industry.) Records involving aerial lifts, and scissor lifts were excluded, but crane man baskets were included.

The CFOI narratives including event, occupation and establishment codes of the crane-related deaths were used to classify deaths by cause, occupation and establishment size. This report identifies the main causes of death, the types of cranes involved in fatal incidents, the trades of those who died, and the size of the employer experiencing the greatest number of fatalities.

## **Results**

A total of 323 construction worker deaths involving 307 crane incidents were identified from 1992-2006, an average of 22 construction worker deaths per year. Figure 1 shows the number of deaths by year. There were 12 multiple-death incidents in this time period, resulting in a total of 28 deaths.

Four main types of cranes have been associated with crane-related fatalities. Of the 307 fatal crane incidents, 216 (71%) involved mobile or truck cranes. Sixteen of the fatal incidents involved tower cranes (5%), 13 involved floating or barge cranes (4%), and 12 involved overhead cranes (4%). The remaining 66 reports were not sufficiently detailed to determine the type of crane involved or do not meet BLS publication requirements.

### ***Causes of death***

Of the total 323 crane-related deaths, 102 were caused by overhead power line electrocutions (32%), 68 deaths were associated with crane collapses (21%), and 59 deaths involved a construction worker being struck by a crane boom/jib (18%). (See Table 2.)

Half of all electrocutions, the leading cause of death, were associated with the crane boom or a crane cable contacting an overhead power line. The rest involved contact of an overhead power line with unspecified parts of the crane. Mobile cranes were involved in 80 of the 95 overhead power line fatal incidents. Table 3 describes worker activities leading to electrocutions. Those activities involved workers on foot touching or guiding

the crane load or cables, workers operating the crane – including several operators who were electrocuted after jumping from the crane, and workers on foot touching the crane.

Crane collapses were the second leading cause of death. An unstable, uneven or icy surface on which the crane was sitting accounted for 12 fatalities (20%). Overloading the crane accounted for another 10 deaths (16%). In five cases (8%), the crane load or boom shifted. In 56% percent of the reported cases, there was no information provided as to the cause in the CFOI narrative. Of the 59 crane collapses, 37 involved mobile cranes.

The third leading cause of crane-related deaths is struck by the crane boom or jib. Fifty-two of the 59 struck-by crane booms or jib deaths were caused by a falling boom or jib. Almost half of these deaths (48%) occurred while workers were dismantling the boom. In most of these cases, the pins holding the boom sections together were removed without adequate support to prevent the sections from falling. In 12% of these cases, the deaths occurred while lengthening the boom. The remaining seven workers were struck by swinging booms in an unspecified manner. Of the 59 struck by boom/jib fatalities, a minimum of 35 deaths were caused by mobile cranes.

### ***Trades Involved***

Construction laborers experienced the greatest number of crane-related deaths between 1992 and 2006 (total of 96 or 30%), followed by heavy equipment operators (74 deaths or 23%), which included 50 crane and tower operators. In addition, 40 supervisors/managers/administrators died in crane-related incidents (12%), as did 18 ironworkers (6%), and 17 mechanics (5%). Other trades with fewer numbers of deaths included electrical workers, truck drivers, welders and carpenters (totaling 24%).

Overall, 103 of the 323 construction workers were employed by subcontractors with fewer than 10 employees. Fifty-one individuals worked for employers with over 100 employees. Twenty of the construction workers who died on the job were self-employed.

### **Conclusions and Recommendations**

The findings of this analysis indicate the number of crane-related deaths reported by CFOI is significant. The main causes of worker deaths were electrocution, collapse, or struck by crane parts or crane loads. More than half of the deaths were among construction laborers and heavy equipment operators. Employees working for small contractors represent a large portion (about one-third) of the total number of deaths. Most crane-related deaths involved mobile cranes.

Possible explanations for these findings are a lack of worker and supervisor training, lack of jobsite safety plans, lack of adequate crane inspections, and lack of proper investigation and reporting of crane accidents and fatalities.

Specific recommendations to reduce and prevent future injuries and fatalities are as follows:

First, crane operators should be certified by a nationally accredited crane operator testing organization, such as the National Commission for the Certification of Crane Operators (NCCCO)\*. Presently only 15 states and a few cities<sup>k</sup> (including New York City) require certification or licensing of crane operators, and some have their own certification program. We recommend that states and cities should require certification by a national certification organization for reasons of standardization of qualifications and to promote the transfer of credentials between states.

Second, riggers who attach the load to the crane and signalpersons who visibly or audibly direct the crane operator on where to place the load should be certified. NCCCO will in the future offer certifications for these types of workers.

Third, crane inspectors should also be certified. OSHA requires that employers designate a competent person<sup>l</sup> to inspect machinery and equipment prior to each use, and during use, to make sure it is in safe operating condition [29 CFR 1926.550(a)(5)]. OSHA also requires annual inspections. For some work activities, such as use of cranes for maritime activities and work at nuclear plants, OSHA may require a higher degree of inspection. However, since inadequate inspections have been implicated in work-related crane deaths, we recommend that crane inspectors should have the same degree of qualification as crane operators.

Fourth, in addition to other mandated inspections, cranes must be inspected thoroughly by a certified crane inspector after being assembled or modified, such as the “jumping” of a tower crane.

Fifth, according to the proposed OSHA consensus standards on cranes, only trained workers should assemble, modify or disassemble cranes, and they should always be under the supervision of a person meeting both the definition of qualified person<sup>m</sup> and competent person specified in the standard. In many instances, especially with rented cranes, there are no trained personnel present when cranes are set up and dismantled. This issue must also be addressed.

Sixth, crane loads should not be allowed to pass over street traffic. If rerouting is not possible, then streets should be closed off when loads pass over streets and pedestrian walkways.

Seventh, more complete reporting of data, particularly after a crane collapse, is necessary. OSHA should conduct more thorough investigations of crane-related fatalities and capture more complete data in its reporting system.

Eighth, after OSHA publishes the proposed crane and derrick safety construction standard in August 2008 for public comment, all efforts should be made to speed up the adoption of the C-DAC consensus standard and the additional recommendations provided in this report.

\* Such certification organizations should be accredited by a nationally recognized accrediting organization such as the American National Standards Institute (ANSI), should administer written and practical tests to determine the knowledge and skills of the applicant, and meet other standard accreditation criteria.

<sup>6</sup> California, Hawaii, Minnesota, Montana, Nevada, New Jersey, New Mexico, Utah, Washington (as of 2010), and West Virginia require or recognize NCCCO certification of crane operators as part of their state licensing program. Connecticut, Massachusetts, New York, Oregon, and Rhode Island have their own licensing programs. Among cities, New Orleans and Omaha require or recognize NCCCO certification of crane operators; Chicago, Los Angeles, New York City, and Washington, D.C., have their own licensing program.

<sup>7</sup> A competent person, according to OSHA, is one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees, and *who has authority to take prompt corrective measures* [italics added for emphasis] to eliminate them. [29 CFR 1926.32(f)]

\*\* A qualified person means a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated the ability to solve/resolve problems relating to the subject matter, the work, or the project.

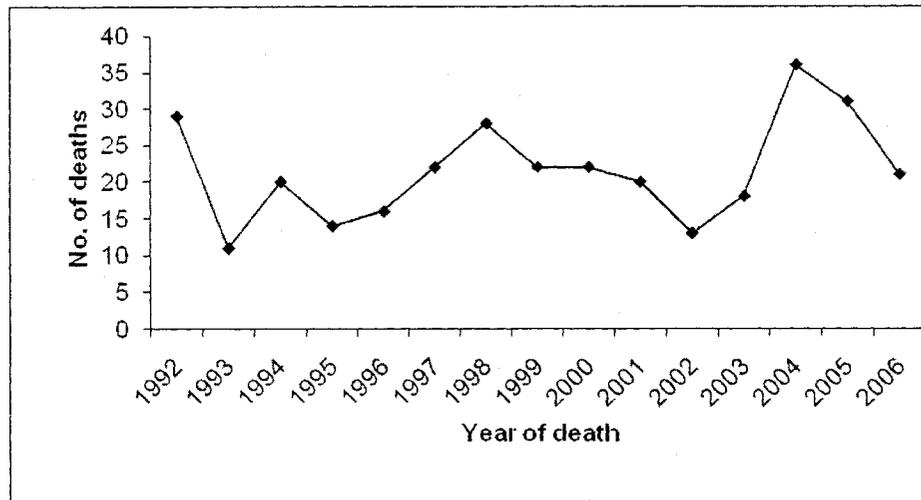
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**Table 1. Examples of Fatal Crane Incidents**

<u>Date</u>	<u>Location</u>	<u>Description</u>
4/27/78	Willow Island, WV	Crane lifting bucket of cement collapsed onto scaffold inside cooling tower. Construction workers: 51 dead Source: [Ward, 2008]
11/29/89	San Francisco, CA	Tower crane fell 16 stories while being jumped. Construction workers: 4 dead Bystanders: 1 dead; 22 injured Source: [Kilborn, 1989]
11/14/99	Milwaukee, WI	“Big Blue” tower crane collapsed at stadium and struck three workers in a crane basket. Winds 25-30 mph. Construction workers: 3 dead Source: [LaBar, 1999]
9/29/06	New York, NY	4-ton chunk of steel fell from crane crushing a taxi. Bystanders: 5 injured Source: [Kates, 2008]
11/16/06	Bellevue, WA	Crane collapsed on a condo. Construction workers: 1 injured Bystanders: 1 dead Source: [Jamieson, 2006].
3/15/08	New York, NY	Tower crane collapsed while being jumped, damaging several buildings. Construction workers: 6 dead, 13 injured Bystanders: 1 dead, 11 first responders injured Source: [Ware, 2008]
3/25/08	Miami, FL	20-foot section crane fell 30 stories while jumping the crane. Construction workers: 2 dead, 5 injured Source: [Walter, 2008]
5/30/08	New York, NY	Crane cab, boom, and machine deck separated from the tower mast and collapsed onto the street Construction workers: 2 dead, 1 injured Bystanders: 1 injured Source: [MSNBC staff, 2008]

**Figure 1. Crane-Related Deaths in Construction by Year, 1992-2006\***



\* Data from 2006 are preliminary; data from 1992-2005 are revised and final.  
 Source: U.S. Bureau of Labor Statistics Census of Fatal Occupational Injuries Research File

**Table 2. Causes of crane-related deaths in construction, 1992-2006**

<i>Cause of death</i>	<i># deaths</i>	<i>%</i>
Overhead power line electrocutions	102	32%
Crane collapses	68	21%
Struck by crane booms/jibs*	59	18%
Struck by crane loads	24	7%
Caught in/between	21	7%
Struck by cranes**	18	6%
Other causes***	31	10%
Total	323	****

\* 52 of 59 struck by crane booms/jibs were due to falling booms/jibs

\*\* Includes 10 run over by mobile cranes

\*\*\* Other causes includes 14 struck by other crane parts and 9 highway incidents

\*\*\*\* Does not add to 100 due to rounding.

Source: U.S. Bureau of Labor Statistics Census of Fatal Occupational Injuries Research File

**Table 3. Activity of construction workers electrocuted by overhead power lines, 1992-2006**

<i>Contact with overhead power lines</i>	#	%
Worker on foot touching/guiding load or cables	40	39%
Operating crane*	32	31%
Worker on foot touching crane	19	19%
Other**	11	11%
Total	102	100%

\* Includes 7 deaths of operators who jumped from crane

\*\* Includes 6 deaths of workers on foot near crane

*Source: U.S. Bureau of Labor Statistics Census of Fatal Occupational Injuries Research File*

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CPWR – The Center for Construction Research and Training is a 501-c-3 organization affiliated with the Building and Construction Trades Council, AFL-CIO, and serves as the research arm of the BCTD. CPWR provides safety and health research and information for the construction trades and industry. For more information, visit [www.cpwr.com](http://www.cpwr.com).



who's who at the **SC&RA**  
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comment



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As the association that represents companies that specialize in moving and lifting oversize/overweight loads, SC&RA stays keenly aware of the dangers lurking on America's construction sites and roadways

# Advocating safety

**T**here were 42,642 fatalities on our nation's roadways in 2006, the most recent year for which statistics are available. Last year, there were 176 deaths due to crane accidents. So, for every crane-related death, there are about 242 traffic fatalities.

Of the crane-related fatalities, a mere 4.1 percent were attributed to tower crane incidents over a recent seven-year period, according to a recent study conducted by the University of Tennessee and partially funded by the Occupational Safety and Health Administration (OSHA).

Although tower cranes accidents are very low in frequency, they tend to be high in severity. They also draw considerable attention from the media and the public, largely because they have such a high profile — both literally and figuratively.

After two construction workers were killed and another was seriously injured when a tower crane collapsed in Manhattan on May 30, the news appeared prominently on national print and broadcast media. This accident commanded even more attention because it followed an incident in March in which seven people were killed and 24 more were wounded when a 300-foot-tall crane collapsed in New York City.

SC&RA quickly took the lead in assembling important trade organizations representing various aspects of the tower-crane segment of our industry. To counter the negative publicity and to amplify our collective voice, we held a joint news conference at the National Press Club in Washington, DC on June 5.

Joining SC&RA were Graham Brent, executive director of the National Commission for the Certification of Crane Operators; Nick Yaksich, vice president of Global Public Policy for the Association of Equipment Manufacturers; Bill Smith, president of Claims and Risk Management Services for Nations Builders Insurance Services; and Frank Bardono, president of AmQuip Crane Rental and chair of the SC&RA Tower Crane Task Force. Together, we announced our full support for enhanced training and rigorous new standards for safe crane construction, operation and maintenance.

In SC&RA's statement, I pointed out that an SC&RA representative was among 23 individuals appointed by OSHA in July 2003 to develop a recommended proposal for the Cranes and Derricks Construction Standard. This advisory committee, known as C-DAC, worked together to negotiate all aspects of a new standard and submitted its recommendations to OSHA in July of 2004. SC&RA's dedication to this issue led another member of the committee to join our association.

Although the promulgation process subsequently languished within the Department of Labor, SC&RA remained committed to the establishment of nationwide operator certification and standards. In February of this year, SC&RA wrote to Labor Secretary Elaine Chao to express our concern about the lack of progress in adoption of the standard and the resulting disservice to our industry, workers and the general public.

Less than a day before the press conference, SC&RA learned that the draft standard had moved from OSHA to a peer review panel. It will then move to the Office of Management & Budget, where it is expected to be subject to review for 30 to 90 days.

In addition to a couple of high-profile accidents, we like to think that our news conference played a role in OSHA's decision to get the rulemaking back on track. Just before the news conference we also learned New York Senator Hillary Clinton recently wrote to Edwin G. Foulke, OSHA's Assistant Secretary of Labor for Occupational Safety and Health, calling for a "long overdue" safety standard for cranes and derricks and an explanation of the agency's failure to act until now.

SC&RA believes wholeheartedly that the new safety standards can greatly reduce the risk of fatalities, injuries and property damage. Further delays are unacceptable.

Joel Dandrea, executive vice president



highlights

Belden Inc., headquartered in St. Louis, MO has consolidated its affiliated Belden Europe (Venlo, The Netherlands), HEW-Kabel (Wipperfurth, Germany), Hirschmann Automation and Control (Neckartenzlingen, Germany) and Lumberg Automation (Schalksmühle, Germany) companies into the newly formed business unit of Belden EMEA. Its operational headquarters will be located in the greater area of Stuttgart, Germany. Dr. Wolfgang Babel, who already headed Hirschmann and Lumberg Automation, was named president of Belden EMEA. Together, with more than 2,200 employees worldwide, the four companies combine comprehensive expertise in the field of data transmission. Belden EMEA forms the umbrella for five operating divisions: Industrial Networking, Industrial Connecting Solutions, Electronic Control Systems, Cable Infrastructure, and Cable Specialty.

On May 1, 2008, Lifting Gear Hire opened its 10th warehouse in the US in Kansas City, MO. The 6,400-square-foot building houses an inventory valued at \$1 million. The new facility has the capability to test hoists with a capacity up to 25 tons. While Lifting Gear Hire has existing warehouses in St. Louis, MO and Dallas, TX, the new facility will reduce delivery time and transportation costs and will expand its rental capabilities in Arkansas, Oklahoma, Nebraska, and western Kansas, according to the company. Founded in 1970, Lifting Gear Hire is among the world's largest companies involved in the rental, sale and service of lifting, winching and material handling equipment.

# Tower Crane Taskforce tackles safety issues

On any given day approximately 1,500 tower cranes are working at jobsites throughout the US – almost double the amount of tower cranes working just a decade ago, it has been estimated.

The SC&RA recently assembled a taskforce to review and make recommendations regarding a number of safety and “best practice” issues regarding tower crane operation. Chaired by AmQuip President Frank Bardonaro, the SC&RA Tower Crane Taskforce brings together



Photograph courtesy of AmQuip Corp.

Six tower cranes working on a massive construction site on the East Coast

We are taking a look at recent tower crane accidents and we will conduct a root cause analysis that will enable us to put together for the first time a set of industry ‘best practices’ to prevent accidents and injuries in the future.

Frank Bardonaro, president, AmQuip Corp.

“a group of people who have more knowledge and expertise than ever seen and gathered in one setting in the tower crane industry,” said Bardonaro.

The goal of the taskforce is multi-faceted. Bardonaro explained: “We are taking a look at recent tower crane accidents and we will conduct a root cause analysis that will enable us to put together for the first time a set of industry ‘best practices’ to prevent accidents and injuries in the future. We are working with rigging professionals and unions throughout the country to help determine the best way to put together lift plans and pre-job meeting plans that address tower crane erection and rigging procedures that should take place during erection, climbing and dismantling.”

Additionally, the taskforce

is working on a campaign to effectively communicate that recent accidents were due to rigging procedures and rigging equipment failures rather than crane collapse or crane failure. “We want to make the public aware that this equipment and technology is extremely safe but some of the workforce doing the actual climbing and dismantlement may need additional training on specific types of equipment in the best and safest ways to complete these procedures,” Bardonaro continued.

Other issues the taskforce will take on pertain to local governments taking tower crane regulations into their own hands in an effort to assure a safer worksite. “Cities are passing laws about tower crane operations without talking to anyone in the crane industry until after the law was

passed,” he said. “These new laws often don’t address any of the things related to accident prevention or safety.”

Bardonaro says the taskforce is willing to help municipalities and even state governments formulate legislation that is meaningful and will improve jobsite safety. “We are rising up to take this head on, to make the public aware of the real problems of safety,” he explained.

Comprised of tower crane professionals across the country, the taskforce is ultimately trying to improve safety and awareness of proper tower crane operation. “We’re all competitors but for this cause we are trying to improve the situation by sharing all our problems and productively trying to come up with solutions to correct them,” said Bardonaro.

Forthcoming from the taskforce is a fact sheet to assist tower crane owners when speaking to the media regarding tower crane operator and safety.

He said the taskforce is dedicated to increasing training, certification, and assuring the expertise of workers involved in tower crane erection, climbs, and other operations.