COUNTERWEIGHT...

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US Army Corps of Engineers

National Crane PDT

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Inside this edition

EM 385-1-1 Update:

Changes to the EM are developed and published on the USACE Publications website periodically and YOU should be aware of what is in them. In addition, you should also be familiar with the CESO website:

http://www.usace.army.mil/CESO/Pages/Home.aspx

This website will keep you informed of EM changes, work involving our high-hazard working groups, free training and other important safety-related information. All USACE employees should have their own EM 385-1-1 to work with. If you need one, contact your local safety office OR visit the CESO website at the link above and it will tell you how to obtain one.

Change #5 was published and is effective 1 Apr 11. This change replaced the entire Section 15, Rigging. A Power Point presentation that details the changes is available on the CESO website.

Change #6 was published and is effective 15 Jul 11. It replaced the entire Section 16, Cranes and Hoisting Equipment. These changes were necessary due to recent OSHA updates.

A Power Point presentation that details the changes made is available on the CESO website. In addition, an itemized summary of changes is provided as well. These tools were developed to assist you with a better understanding of the current requirements and how they affect you.

The Operator Certification/Licensing requirements in Section 16.C. changed with the new OSHA standard published in August 2010. Again, there are basically 4 options through which operators can obtain their training – not all 4 apply to everyone.

In addition, Signal Persons and Riggers are now required to be qualified to perform these duties. Details can be found in 16.B.06 and 15.B and on pages 4-5 of this paper.

USACE has developed a signalperson/rigger training class for our personnel that can be brought to a project site, district or division to accomplish this training.

You will be hearing more about this training in the very near future. The intent is that this be a train-the-trainer type program that brings the materials, curriculum and method of teaching to an area that has a local worker who has experience as, and is qualified to be, a rigger/signalperson. The local individual will team-teach this training with an experienced instructor and will then be able to team-teach it locally with another member of his local staff.

This method of teaching will be cost-effective and will ensure a consistent program is used throughout USACE since the same materials and curriculum will be taught.

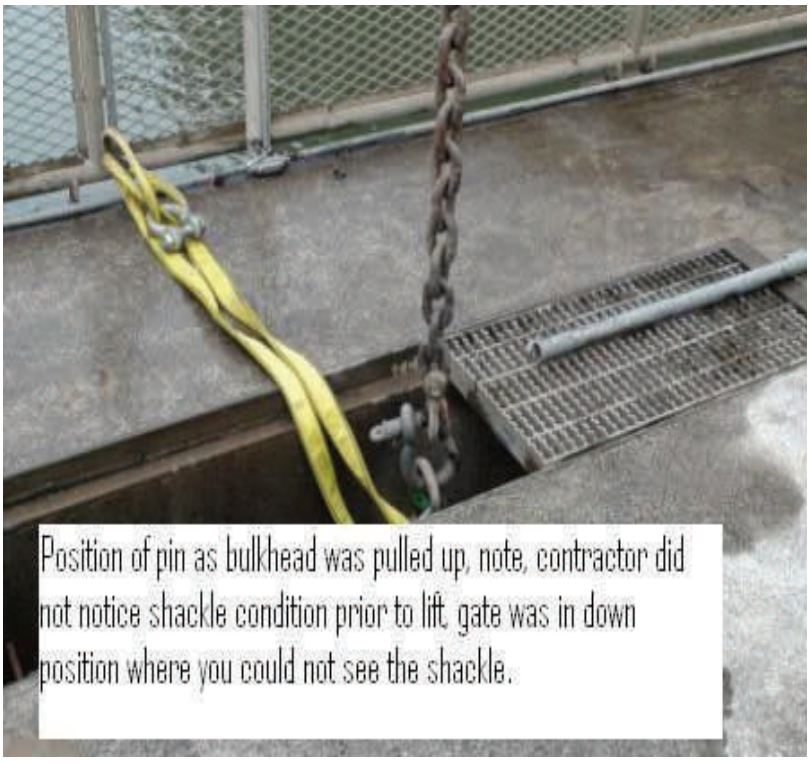
Other significant changes were made to Section 16 as well. Appendix I was deleted. This used to contain some hard-to-understand charts for inspection of cranes and hoisting equipment. This data was simplified and brought forward into Section 16.

Excavators and forklifts and/or Telehandlers used to hoist loads is fast becoming a common practice on our job sites. This equipment is normally cheaper and more mobile than cranes. The requirements that apply to this equipment however, were generally not understood. New and clarified requirements were added so that we understand what is needed when this equipment is used in this manner.

Correct Selection of Shackles (article courtesy of NWW—Mike Remington)

Recent Event: We recently had one of our spillways modified for a Removable Spillway Weir. This modification forces the spill water to flow more on the surface and creates high turbulence and vibration/pounding of Fish Entrance Gate in the gate slot. The vibration and pounding over the Spring/Summer spill season last year was so great that it caused a screw type shackle pin to break its tie wire and to vibrate loose. Fortunately the pin alone held the gate in place while another shackle was installed to bear the weight.

For permanent installations such as this, the best shackle selection would have been a bolt type shackle pin with a nut and cotter pin. Mousing a screw pin shackle is also an acceptable method, but in this case the vibration was too great and no one would have anticipated the wiring not holding.

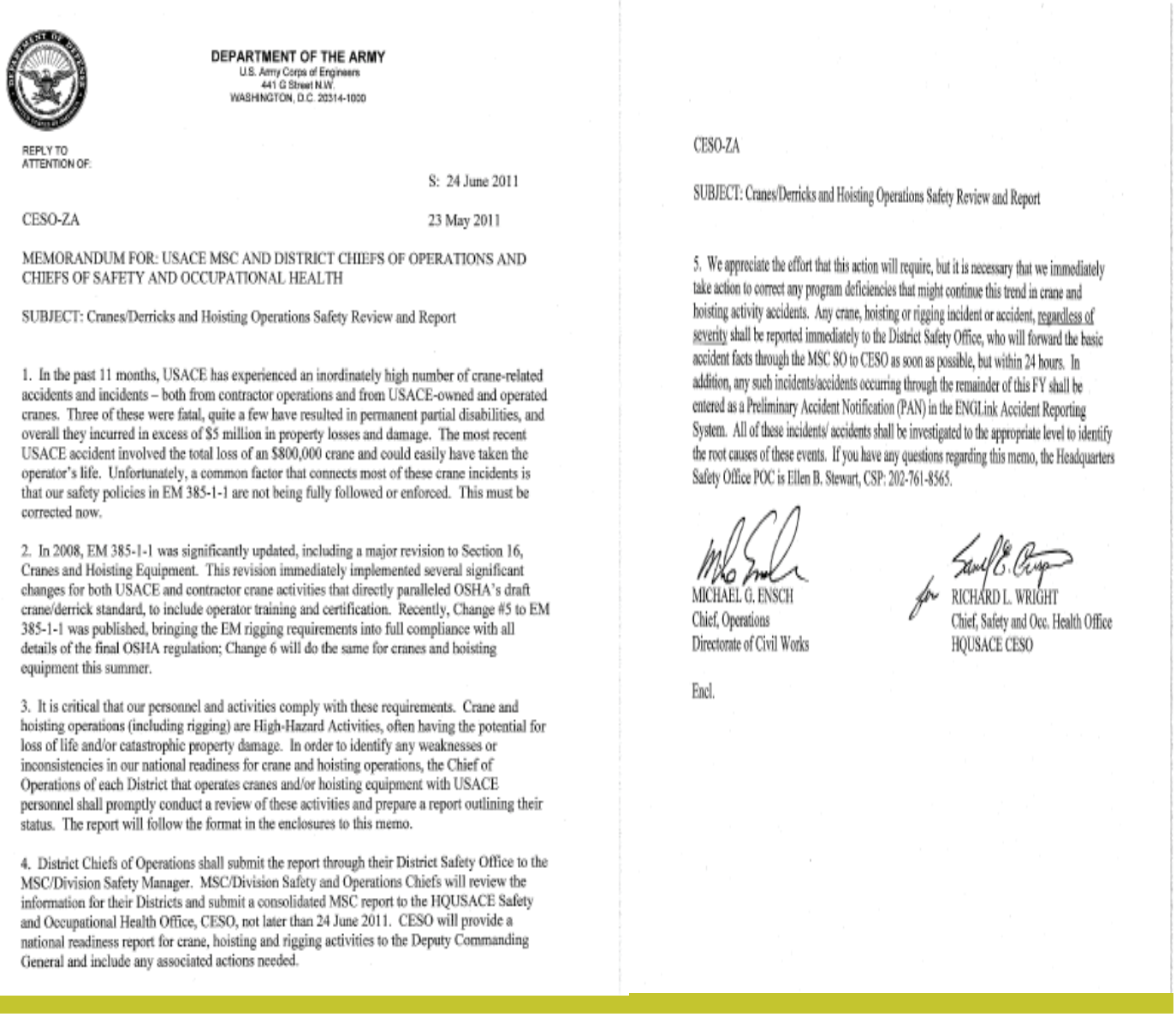


Riggers should be reminded that round pin shackles are not suited for lifting. Screw pin shackles are the best for lifting operations, and bolted type shackles are best for permanent installations.

Also see the McMaster-Carr Web Site on shackles for lifting, and those not intended for lifting.

http://www.mcmaster.com/#shackles/=az1g5r

HQ Safety & Operations issue joint letter to the field asking for review of cranes.



DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
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REPLY TO
ATTENTION OF:

S: 24 June 2011

CESO-ZA

23 May 2011

MEMORANDUM FOR: USACE MSC AND DISTRICT CHIEFS OF OPERATIONS AND CHIEFS OF SAFETY AND OCCUPATIONAL HEALTH

SUBJECT: Cranes/Derricks and Hoisting Operations Safety Review and Report

1. In the past 11 months, USACE has experienced an inordinately high number of crane-related accidents and incidents – both from contractor operations and from USACE-owned and operated cranes. Three of these were fatal, quite a few have resulted in permanent partial disabilities, and overall they incurred in excess of $5 million in property losses and damage. The most recent USACE accident involved the total loss of an $800,000 crane and could easily have taken the operator's life. Unfortunately, a common factor that connects most of these crane incidents is that our safety policies in EM 385-1-1 are not being fully followed or enforced. This must be corrected now.

2. In 2008, EM 385-1-1 was significantly updated, including a major revision to Section 16, Cranes and Hoisting Equipment. This revision immediately implemented several significant changes for both USACE and contractor crane activities that directly paralleled OSHA's draft crane/derrick standard, to include operator training and certification. Recently, Change #5 to EM 385-1-1 was published, bringing the EM rigging requirements into full compliance with all details of the final OSHA regulation; Change 6 will do the same for cranes and hoisting equipment this summer.

3. It is critical that our personnel and activities comply with these requirements. Crane and hoisting operations (including rigging) are High-Hazard Activities, often having the potential for loss of life and/or catastrophic property damage. In order to identify any weaknesses or inconsistencies in our national readiness for crane and hoisting operations, the Chief of Operations of each District that operates cranes and/or hoisting equipment with USACE personnel shall promptly conduct a review of these activities and prepare a report outlining their status. The report will follow the format in the enclosures to this memo.

4. District Chiefs of Operations shall submit the report through their District Safety Office to the MSC/Division Safety Manager. MSC/Division Safety and Operations Chiefs will review the information for their Districts and submit a consolidated MSC report to the HQUSACE Safety and Occupational Health Office, CESO, not later than 24 June 2011. CESO will provide a national readiness report for crane, hoisting and rigging activities to the Deputy Commanding General and include any associated actions needed.

CESO-ZA

SUBJECT: Cranes/Derricks and Hoisting Operations Safety Review and Report

5. We appreciate the effort that this action will require, but it is necessary that we immediately take action to correct any program deficiencies that might continue this trend in crane and hoisting activity accidents. Any crane, hoisting or rigging incident or accident, regardless of severity shall be reported immediately to the District Safety Office, who will forward the basic accident facts through the MSC SO to CESO as soon as possible, but within 24 hours. In addition, any such incidents/accidents occurring through the remainder of this FY shall be entered as a Preliminary Accident Notification (PAN) in the ENGLink Accident Reporting System. All of these incidents/ accidents shall be investigated to the appropriate level to identify the root causes of these events. If you have any questions regarding this memo, the Headquarters Safety Office POC is Ellen B. Stewart, CSP: 202-761-8565.

MICHAEL G. ENSCH
Chief, Operations
Directorate of Civil Works

for RICHARD L. WRIGHT
Chief, Safety and Occ. Health Office
HQUSACE CESO

Encl.

In 2008, EM 385-1-1 was significantly updated to parallel OSHA's draft crane/derrick standard, to include operator training and certification. More recently, Changes#5 and #6 to EM 385-1-1 were published that will bring the EM into full compliance with all details of the final OSHA regulation. It is imperative that our personnel and activities comply with these requirements. Crane and hoisting operations (including rigging) are High-Hazard Activities, often having the potential for serious injury, loss of life and/or catastrophic property damage.

The memo (see above) and survey form enlists E&C , Operations and Safety staff to help to identify any weaknesses or inconsistencies in our Corps-wide crane and hoisting operations. It is important that you help your command realize that this should be a "snapshot" view of actual conditions currently, so we know where to appropriately focus effort and resources.

OSHA® FactSheet

Subpart CC – Cranes and Derricks in Construction: Qualified Rigger

This fact sheet describes the qualified rigger requirements of subpart CC – Cranes and Derricks in Construction, as specified in 29 CFR 1926.1401, 1926.1404, and 1926.1425. These provisions are effective November 8, 2010.

When is a *qualified rigger* required?

Employers must use *qualified riggers* during hoisting activities for assembly and disassembly work (1926.1404(r)(1)). Additionally, *qualified riggers* are required whenever workers are within the fall zone and hooking, unhooking, or guiding a load, or doing the initial connection of a load to a component or structure (1926.1425(c)).

Who can be a *qualified rigger*?

A *qualified rigger* is a rigger who meets the criteria for a qualified person. Employers must determine whether a person is qualified to perform specific rigging tasks. Each *qualified rigger* may have different credentials or experience. A *qualified rigger* is a person that:

- possesses a recognized degree, certificate, or professional standing, or
- has extensive knowledge, training, and experience, and
- can successfully demonstrate the ability to solve problems related to rigging loads.

The person designated as the *qualified rigger* must have the ability to properly rig the load for a particular job. It does not mean that a rigger must be qualified to do every type of rigging job.

Each load that requires rigging has unique properties that can range from the simple to the complex. For example, a rigger may have extensive experience in rigging structural components and other equipment to support specific construction activities. Such experience may have been gained over many years. However, this experience does not automatically qualify the rigger to rig unstable, unusually heavy, or eccentric loads that may require a tandem lift, multiple-lifts, or use of custom rigging equipment. In essence, employers must make sure the person can do the rigging work needed for the exact types of loads and lifts for a particular job with the equipment and rigging that will be used for that job.

Do *qualified riggers* have to be trained or certified by an accredited organization or assessed by a third party?

No. Riggers do not have to be certified by an accredited organization or assessed by a third party. Employers may choose to use a third party entity to assess the qualifications of the rigger candidate, but they are not required to do so.

Does a certified operator also meet the requirements of a *qualified rigger*?

A certified operator does not necessarily meet the requirements of a *qualified rigger*. Determining whether a person is a *qualified rigger* is based on the nature of the load, lift, and equipment used to hoist that load plus that person's knowledge and experience. A certified/qualified operator may meet the requirements of a *qualified rigger*, depending on the operator's knowledge and experience with rigging.

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

For more complete information:

OSHA® Occupational Safety and Health Administration

U.S. Department of Labor

www.osha.gov

(800) 321-OSHA

DOC 10/2010

OSHA® FactSheet

Subpart CC – Cranes and Derricks in Construction: Signal Person Qualification

This fact sheet describes the signal person qualification requirements of subpart CC – Cranes and Derricks in Construction, as specified in 29 CFR 1926.1419 and 1926.1428. Other requirements related to signal persons can be found at 29 CFR 1926.1404, 1926.1430, 1926.1431, and 1926.1441. These provisions are effective November 8, 2010.

When is a signal person required?

A signal person is required when:

- The point of operation is not in full view of the operator (1926.1419(a)).
- The operator's view is obstructed in the direction the equipment is traveling.
- Either the operator or the person handling the load determines that a signal person is needed because of site-specific safety concerns.

What does a signal person need to know?

The signal person is considered qualified if he or she:

- Knows and understands the type of signals used at the worksite.
- Is competent in using these signals.
- Understands the operations and limitations of the equipment, including the crane dynamics involved in swinging, raising, lowering and stopping loads and in boom deflection from hoisting loads.
- Knows and understands the relevant signal person qualification requirements specified in subpart CC (1926.1419-1926.1422; 1926.1428).
- Passes an oral or written test and a practical test.

How does a signal person become qualified?

Employers must use one of the following options to ensure that a signal person is qualified (see 1926.1428).

1. *Third party qualified evaluator.* The signal person has documentation from a third party qualified evaluator showing that he or she meets the qualification requirements.
2. *Employer's qualified evaluator* (not a third party). The *employer's qualified evaluator* assesses the individual, determines the individual meets the qualification requirements, and provides documentation of that determination. This assessment may not be relied on by other employers.

Refer to 1926.1401 for definitions of qualified evaluators.

How will an employer show that a signal person is appropriately qualified?

Employers must make the documentation of the signal person's qualifications available at the worksite, either in paper form or electronically. The documentation must specify each type of signaling (e.g., hand signals, radio signals, etc.) for which the signal person is qualified under the requirements of the standard.

When are signal persons required to be qualified?

The qualification requirements for signal persons go into effect on November 8, 2010.

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

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DOC 10/2010

"WHAT'S UP WITH THAT" question in the last edition was….

In the article, "Cranes on the Columbia", Art Kunigel stated..."**When things go in the wrong direction they multiple fast and you can't go back, so always use the 6 P's**".

What ARE those 6 P's with respects to crane planning ?

ANSWER:

Prior Planning Prevents P__ Poor Performance

A mug to Wes Schmultzer, a contractor who works for Treviicos in the Jacksonville District.

INTERESTING CRANE LINKS..

From time to time, you see videos and links that simply defy logic, let alone...common sense. Take a look:

- **Crane Crushes House**

http://www.youtube.com/watch?v=-7MfHsLT9hY&feature=email

- **Restored (?) Navy fighter…**

http://www.kron4.com/Article.aspx?ArticleID=1301

Navy Shore Weight Handling Safety Brief!

Title: Rigging Gear Selection and Use

Target Audience: Riggers, operators, engineers, and personnel who use rigging gear

- Selection and proper use of rigging gear is an essential part of every crane and rigging evolution. If the wrong rigging gear is used, or gear is used improperly, the consequences can be disastrous.
- This fiscal year (FY11) 12 crane accidents have been reported where rigging gear was overloaded or damaged (8 rigging gear overloads and 4 damaged rigging gear events).
- In 3 of the 4 damaged rigging gear events; improper, inadequate, or no chafing material was used, resulting in sling damage.
- Listed below are several rigging gear selection and use requirements:
  - The load weight must be determined prior to lifting and rigging gear properly sized to carry the load.
  - In a 2, 3, or 4 point lift, size slings such that 2 legs have adequate capacity to lift the entire load weight, including considerations for sling angle deductions.
  - Use rigging gear per OEM requirements.
  - Ensure rigging gear remains clear of the load and does not snag on the load and/or other equipment during removal.
  - Use adequate chafing material to protect slings and the load from damage due to sharp edges, or configurations that could cause damage.
- Remember, prior to lifting a load, the weight and stress in rigging gear (at angle of use) must be determined and the rigging gear must be sized to carry the load weight. Always use adequate chafing material to protect the rigging and load when rigging gear is subjected to hazards.

14 April 2011

SAFETY

Navy Crane Center 11-S-04

COUNTERWEIGHT

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