

EM 385-1-1, 2013 Significant Changes

USACE-SO

EM 385-1-1 Rewrite PDT

Samuel E. Crispin

Construction, Operations & Training PM

PM for Diving Safety

202-761-8567

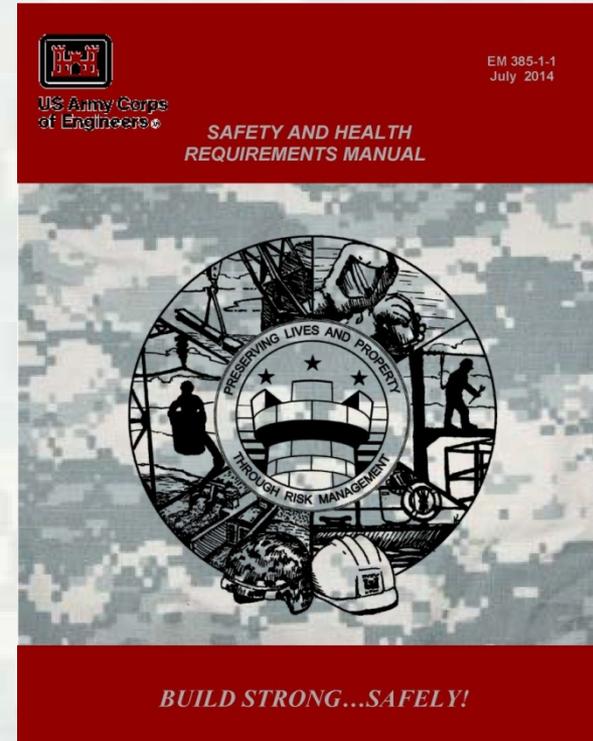
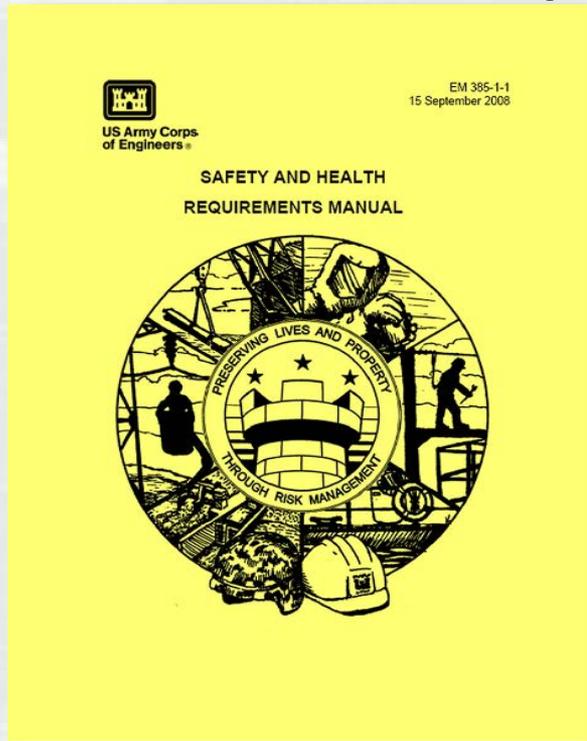


US Army Corps of Engineers
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EM 385 1-1 Safety & Health Requirements Manual 15 September 2008



*Currently Under Revision
Publication late FY-14*



Section 1.A.12 – Accident Prevention Plans

- 01.A.12 Accident Prevention Plans (APP) for Contract Work.
- a.(1) The Contractor shall identify each major phase of work that will be performed on this contract. Within each major phase, all activities, tasks or Definable Features of Work (DFOWs) shall be identified **that will require an AHA.** > *See Section 01.A.14.*
- *Rationale: AHA's will NOT be turned in with the APP. This has become a paperwork exercise that defeats the true intent/value of the AHA process.*



Section 1.A.14 – Contractor RM Process/AHAs

- 01.A.14 Contractor Risk Management Process (AHAs)
- b. Before beginning each work activity, task or (DFOW), the ***Contractor performing that work activity*** shall prepare the initial AHA. A Risk Assessment Code (RAC) is assigned to each step, to the risk that remains after controls have been applied (residual risk).
- **Rationale:** AHAs shall be prepared by the persons with the knowledge of that activity (not necessarily the GC). AHAs are submitted just prior to that work being performed instead of when APP is submitted.



01.A.20 Fatigue Management Plan

- b. The FMP shall address the following conditions for operator work hour limitations:
- Floating Plant – (moved from Section 19). All floating plant personnel shall be scheduled to receive a minimum of 8-hours rest in any 24-hour period, except:
 - When quarters are provided immediately adjacent to, or aboard the work site, these hours of rest may be divided into no more than 2 periods, one of which must be at least 6 continuous hours in length.
 - Rest periods may be interrupted in case of emergency, drill, or other overriding operational necessity.



01.D Mishap Reporting and Investigation

- 01.D.05 ANY mishap in one of 5 HH areas shall be reported immediately to GDA/CESO
 - Arc Flash
 - LHE/Rigging
 - Fall-from-Height
 - Uncontrolled Release of Energy (LOTO)
 - Underwater Diving
- Note: The reporting and associated investigation of these mishaps is considered a leading indicator. As such, this information is to be used for data collection, data trending and correction of hazards or program deficiencies before they result in an accident. To encourage reporting of these mishaps, for the betterment of all, this data is NOT to be used for any other reason.



Section 5 - Personal Protective and Safety Equipment

- 05.D.02 Allows for stickers on hard hats provided they do not interfere with the ability to properly inspect it.
- 05.D.02 All protective headgear shall meet the requirements of ANSI Z89.1.
- a. No modification (i.e. paint) to the shell or suspension is allowed except when such changes are applied or approved by the manufacturer. Stickers are allowed on the hard hat provided they do not interfere with the ability to properly inspect it. > See 05.D.03.



Section 5 - Personal Protective and Safety Equipment

- **Para. 05.H Moved FP harness standards to Section 21.**
- **Added a new paragraph on Hand Protection. The paragraph requires proper selection, training, and inspection of hand protection and provides a table on the suggested types of hand protection.**
- Para. 05.H.01 Employers shall select and require employees to use appropriate hand protection when employees' hands are exposed to hazards such as skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns, harmful temperature extremes, high hand vibration and sharp objects.



Section 15 – Rigging

General. 15.A.01 Inspection and use.

- a. Rigging equipment shall be inspected as specified by the manufacturer, by a Competent Person (CP), before use on each shift as necessary during its use to ensure that it is safe. The CP must have training and experience equivalent to, or be under the supervision of a Qualified Rigger (QR) as defined in Appendix Q.
- b. Defective rigging shall be removed from service.
- c. The use and maintenance of rigging equipment shall be in accordance with the rigging and equipment manufacturer. Rigging equipment shall not be loaded in excess of its working load limit (WLL).
- d. Rigging equipment, when not in use, shall be removed from the immediate work area and properly stored and maintained in a safe condition.

Competent Person: one who can identify existing and predictable hazards in the working environment or working conditions that are dangerous to personnel and who has authorization to take prompt corrective measures to eliminate them



Section 15.A General

15.A.05 Custom fabricated grabs, hooks, clamps, or other lifting accessories (e.g., equalizing beams, lifting or spreader beams, etc.) for such units as modular panels, prefabricated structures, and similar materials shall be designed by an Registered Professional Engineer (RPE), marked to indicate the WLL and shall be proof-tested before initial use, to 125% of their WLL.



15.B PERSONNEL QUALIFICATIONS

15.B.01 - Any worker engaged in the duties and the performance of rigging shall be a Qualified Rigger (QR). Employers must determine and designate in writing the QRs and the specific rigging tasks for which they are qualified and provide to the GDA for acceptance.

Note: The term “rigger” or “Qualified Rigger (QR)” in this manual refers to the function performed, and in no way relates to the worker’s job classification or position.



15.B PERSONNEL QUALIFICATIONS

a. Each QR may have different credentials or experience. A QR is a person that:

- (1) Has extensive knowledge, training and experience sufficient to calculate loads, load weights, safe capacities and apply other safe rigging principles and procedures;
- (2) Demonstrates the ability to utilize rigging materials and principles and;
- (3) Is capable of safely inspecting and performing rigging operations.

Rationale: Clearly defines the competencies/skills of a QR. ANYONE that performs any rigging task, must be trained appropriately.



16.B.02 – Crane Operator Requirements

16.B.02.a (1) Certification for all crane/hoist operators shall be achieved by successful completion of written and operational testing.

(2) Qualification of all crane/hoist operators shall be made by the employer after a review of the certification documents and an assurance that the operator(s) is familiar with the equipment to be operated (has adequate knowledge of USACE and OSHA crane safety requirements and manufacturer recommendations provided in the crane operator's manual). The employer then designates the operator(s) in writing for the equipment to be operated.



16.B.03 – Crane Operators

16.B.03 Crane Operator Certification, Qualification and Designation.

a. Option 1. Current certification by a Nationally Accredited Crane Operator Testing Organization.

(1) The operator's certificate must identify the type of equipment on which the operator was certified. Once the operator has obtained the certification, the employer must insure that the operator is qualified to operate a particular piece of equipment for that type and capacity and must designate this in writing.

Options 2-4 are same.

Option 2 "Audited Employer Program" – deadline extended 3 yrs by OSHA until 14 Nov 2017



CCO Certification Card FACT SHEET

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

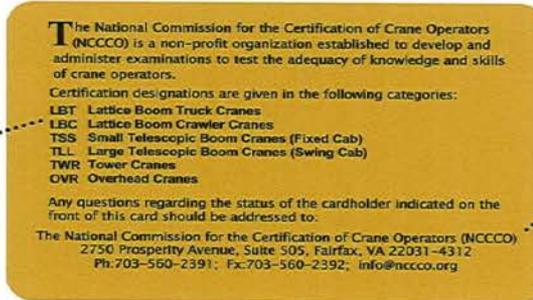


Certification Designations:
This area specifies what categories of crane the individual is certified in

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

IMPORTANT

- 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!



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Should you check these?

16.C.04 – Class I training:

16.C.04 Class I Training:

- (a) Initial: A minimum of 24-hour training with successful completion (passed) written and practical/operational examinations;
 - (b) Biennial (every 24 months) Refresher: A minimum of 8-hour refresher training, with successful completion (passed) of written and practical/operational examination.
- NOTE: Grace Period - refresher training is intended to be obtained every 24 months. Understanding that emergencies and other unplanned events can occur that may interrupt the normal scheduling of this training, a 60-day grace period is permitted IF necessary and is dependent upon supervisory approval.
 - Rationale: Understanding schedule and fiscal constraints, allowances have been made for a grace period and also refresher period was extended to every 2 years.



16.C.05 – Class II

16.C.05 Class II crane/hoist types:

- All hard-wired, pendant-mounted operated overhead, bridge and gantry LHE;
- Remote-operated overhead, bridge, gantry, under hung and monorail LHE 30 T capacity or less;
- Under hung;
- Monorail;
- Pedestal;
- Wall-mounted jib LHE.



16.C.07 – Class II Training

- 16.C.07 Class II training must be:
 - (a) Initial: A minimum of 2-hour training with successful completion (passed) of written and practical/operational examinations;
 - (b) Biennial (every 24 months) Refresher: A minimum of 1-hour refresher training with successful completion (passed) of written and practical/operational examination.
- Note 1: Grace Period - Refresher training is intended to be obtained every 24 months. Understanding that emergencies and other unplanned events can occur that may interrupt the normal scheduling of this training, a 60-day grace period is permitted IF necessary and is dependent upon supervisory approval.



16.C.07 – Class II Training

Note 2: Exemption of equipment with a maximum manufacturer-rated hoisting/lifting capacity of 2,000 pounds or less (exempt from the requirements in 16.B.02 through 16.B.06 only), See Paragraph 16.A.01.h. It is anticipated that operator of this equipment will review manufacturer's instructions for proper operation however. This equipment shall not be used for hoisting personnel.

Note 3: Operators of Class II LHE/hoisting equipment are exempt from 16.B.05, Physical Examination requirements UNLESS this equipment is used to hoist/lift personnel. See also 16.A.01.i, 16.B.05 and Section 16.U. This activity is considered a Critical Lift and requires a physical examination for the operator. In addition, All Class II operators that will be hoisting personnel shall be trained at a minimum, in the requirements listed in 16.T, 16. U or other applicable equipment-related section. See also 16.C.01, Note 2 and Section 16.U.



16.L Floating Cranes/Derricks, Crane Barges, and Auxiliary Shipboard Mounted Cranes.

- 16.L.01 The requirements in this Section are supplemental requirements for floating LHE, pile drivers, drill rigs, and land LHE on barges, pontoons, vessels or other means of flotation and auxiliary shipboard mounted cranes, unless otherwise specified.

Added pile drivers and drill rigs to this section – floating equipment.

- 16.L.04 Land LHE/derricks mounted on barges, pontoons or other means of flotation.
 - Naval Architectural Analysis (NAA) Procedures. A NAA shall be performed to determine the allowable loads and radii for floating cranes/derricks, and shipboard cranes.
 - (1) The load rating developed in the NAA shall match the maximum working loads at various radii (as determined by the manufacturer or QP) to the list and trim that the floating platform will experience during lift operations.
 - (2) The analysis shall also consider the structural competence of the crane, rope strength, hoist capacity, structural attachment to the floating platform, ~~and the stability, list and trim and freeboard of the floating platform.~~



16.L.04 Land LHE/derricks mounted on barges, pontoons or other means of flotation.

- b. Deck Loads. When deck loads are to be carried while lifting, the NAA shall incorporate the deck loading to develop modified lift ratings for use with the deck load aboard.
- c. Wind Speed. The NAA shall take into consideration a minimum wind speed of 40 mph (18 m/s)



16.L.04 Land LHE/derricks mounted on barges, pontoons or other means of flotation.

- d. NAA Results. The NAA shall specifically identify: Design Standard, load, height and radius; machine trim; machine list, and anticipated dynamic/environmental loadings for the operation of the floating crane/derrick or shipboard crane.

- e. Floating Service Load Chart. The NAA shall be used to develop the Floating Service Load Chart. A Naval Architect, Marine Engineer or RPE familiar with floating crane/derrick design shall certify that the Floating Service Load Chart contains the information required by Section 16.L.05. The certification may be a certified floating service load chart or a separate attached document which shall be submitted to the GDA for acceptance prior to start of work.



16.L.08 Anchor handling barge/vessel.

- a. A-Frame Non-Slewing anchor handling barge/vessels may be used for anchor handling, low lifting of loads such as anchor buoys/weights, dredge pipe, submerged pipeline and pontoons.

NOTE: If used for any other lifting application, the work platform will be considered a floating derrick and all other requirements of Section 16 apply.



16.L.15 – Standard Lift Plan

16.L.15 Standard Lift Plan. All lifts must be planned to avoid procedures that could result in configurations where the operator cannot maintain safe control of the lift. In addition to the requirements and criteria to be considered in Section 16.A.02 for a written Standard Lift Plan (SLP), the SLP for LHE on floating plant must also consider the following (The non- mandatory Standard Pre-Lift Plan/Checklist, Form 16-1 may be used)



Section 19 – Floating Plant and Marine Activities

- 19.A.07 – Safe Practices.
- d. Swimming and/or diving shall be prohibited for all personnel, except certified divers in the performance of their duties, unless necessary to prevent injury or loss of life.
- e. Wading is permitted only when there are no severe underwater hazards such as sudden drop-offs, heavy surf above 3 ft (1 m), dangerous aquatic life, etc. Personnel wading shall wear an approved PFD and shall be monitored by personnel who are nearby and equipped to conduct a rescue if needed. Wading shall be discontinued when the person's feet cannot easily touch bottom, regardless of depth.
- Rationale: To prevent diving other than by certified divers. To provide requirements to safe-side this hazardous operation that is being performed.



Section 19.G - Dredging

- 19.G.03. Added paragraph:
- c. Pipelines shall be marked with the owner's name for positive identification in the event of loss (adrift) or damage to vessels operating in the area.
- Rationale: Positively identifies the owner.
- Added additional requirements to 19.G.09 Dredge disposal sites based on mishaps that have been incurred.
- d. Amphibious excavators will only be operated in accordance with the manufacturer's operating instructions. A copy of the operator's manual will be readily available on the equipment.
- e. Lighting. Lighting shall be provided as required by Section 7 of this manual. The minimum lighting level in the vicinity of the disposal site shelter (dump shack) shall be 5 foot-candles.



Section 19.G.09 – Dredge Disposal Sites

- Added additional requirements to 19.G.09 Dredge disposal sites based on mishaps that have been incurred.
- f. Disposal site shelters (Dump Shacks).
- (1) Disposal site shelters (dump shacks) shall be provided as a means of protecting personnel from inclement weather and environmental hazards. The shelter shall be of a size to accommodate a minimum of four workers. The shelter shall have adequate seating for the workers, heating equipment, water cooler, and space to store all hands tools and personal protective equipment. The shelter shall be weather tight with operable windows and screens for ventilation.
- (2) All electrical systems shall comply with the NFPA 70. All flexible electrical cords shall be hard usage or extra-hard usage. All frayed, patched, oil-soaked or worn shall be taken out of service.



Section 19.G.09 – Dredge Disposal Sites

- Added additional requirements to 19.G.09 Dredge disposal sites based on mishaps that have been incurred.
- f. Disposal site shelters (Dump Shacks).
- (3) Portable generators for lighting shall comply with the requirements of Section 11 of this manual and shall be located downwind of shelters.
- (4) Fossil fuel heating is prohibited.
- (5) All rigid insulation shall be covered with a non-combustible material to prevent accidental ignition.
- (6) All shelters shall be equipped with a minimum of one multi-purpose fire extinguisher.
- Rationale: Make these sites safer than they have been to insure worker SOH...based on mishap investigations and recommendations/corrective actions.



Section 30 – Diving Operations

- 30.A.02 Diving shall not be used as a work method if the work objective can be more safely and efficiently accomplished by another means, including but not limited to, using Remotely Operated Vehicles (ROV's), and/or camera systems, or by dewatering the work area so work may be accomplished in the dry.
- Putting personnel in the water is a last resort – as far as feasibility or if the other methods create a hazardous situation.

