

**U.S. Army Corps of Engineers Answers
Your EM 385-1-1 Questions**

**Ellen Stewart, CSP
U.S. Army Corps of Engineers
Washington, D.C**

**Marjorie McDonald
U.S. Army Corps of Engineers
Sacramento, CA**

**Mitchell W. Robinson
U.S. Army Corps of Engineers
Millington, TN**

**Matthew R. Scott, OHST
U.S. Army Corps of Engineers
Mobile, AL**

Introduction

There have been many sessions at ASSE PDCs in the past discussing the U.S. Army Corps of Engineer's Safety and Health Requirements Manual (EM 385-1-1). The purpose of this session is to give the Safety and Health community at ASSE the opportunity to meet and discuss the United States Army Corps of Engineers (USACE) Engineering Manual (EM) 385-1-1, Safety and Health Requirements Manual with Safety and Occupational Health Professionals from the USACE.

Ellen Stewart, Safety Engineer at USACE Headquarters, Marjorie McDonald Chief, Safety and Occupational Health at USACE Sacramento District and Matthew Scott Industrial Hygienist at USACE Mobile District have joined together to bring ASSE attendees a look into USACE Safety and Occupational Health and to afford an opportunity a public opportunity for you to ask any questions you or your contactors might have.

History of EM 385-1-1

Currently, the mission of the USACE Safety and Occupational Health Office is to provide policy, programs, technical services, oversight and outreach related to safety and occupational health matters in support of USACE missions worldwide. A major means to accomplishing this mission has been to oversee the development, implementation and updating of EM 385-1-1, Safety and Health Requirements Manual.

The Corps of Engineers was established on March 16, 1802 but it was not until March 1, 1941 that the first USACE safety manual was published. This manual was titled the “USACE Safety Requirements”, brown in color, and originally intended to be a “pocket guide” hence the 5”x8” size of the manual today. The first revision of the Corps safety manual occurred on September 15, 1941 and since the original publication, the manual has been revised a total of thirteen times. The next revision is scheduled to occur in 2012 with anticipated publication in 2013. The revisions are open to participation from the general public, contractors and USACE employees, but much of the input comes from safety professionals throughout the Corps. The name of the manual has also changed multiple times since the original publication: March 13, 1958- “General Safety Requirements”, June 1, 1977- “General Safety Requirements Manual” and finally April 1, 1981 to “Safety and Health Requirements Manual”, which remains the name of the EM today.

Arrangement of the Manual

The EM is arranged in such a manner that allows a reader to easily reference a specific topic within the manual. It is comprised of an introductory letter, a table of contents, thirty-four sections, twelve appendices, thirty-eight figures, fifty-two tables and an index. The introductory letter is signed by the USACE Chief of Staff, for the Commanding General. It addresses overall mission applicability, references, and information such as periodic changes to the manual, and how to obtain interpretations, variances, and waivers.

While all sections of the manual contain pertinent safety information, the following sections contain critical information regarding the five most hazardous operations within the USACE: Electrical (Section 11), Control of Hazardous Energy (Section 12), Rigging (Section 15), Cranes and Hoisting Equipment (Section 16), and Diving Operations (Section 30). Due to the hazardous nature of these operations the following five high hazard working groups have been identified by the CESO: Crane/Rigging, Fall Protection, Control of Hazardous Energy, Arc Flash, and Underwater Diving.

Sections of the manual can be easily referenced within the table of contents or index making it very user-friendly. The .pdf version, found on the CESO website, is equipped with a keyword search, which users can find to be very helpful when searching for specific standards.

Many sections have corresponding appendices where the user can find important tools such as example forms and tables. For example, Section 1 discusses the requirement for

Contractors to submit an Accident Prevention Plan (APP) to be accepted by the government designated authority prior to the initiation of work. Appendix A outlines the specific requirements that must be included within an APP. Other examples include; Appendix B, which provides guidance on emergency operations and Appendix Q, which provides the user with definitions of many of the terms found in the EM. Although the information contained within the manual is relevant to many other industries, it has been written specifically for USACE projects and activities.

Content Changes

a. Variances and Waivers to the EM 385-1-1.

In the introductory letter to the EM 385-1-1, signed by the USACE Chief of Staff, for the Commanding General, paragraph 4.e discusses variances and waivers. Variances and waivers must provide an equal or greater level of protection, shall be substantiated with a hazard analysis of the activity and shall be documented and forwarded through proper channels to the Chief of Safety and Occupational Health at Headquarters for review and approval/non-approval. In addition, Appendix N provides specific details for submitting the request. Generally, variances and waivers are applicable only to a specific contract/job, for a specific activity or period of time. If a waiver were applicable “universally”, a change to the EM would normally be the response to that situation.

A “variance” is a form of relief that is granted when the application of the regulations results in “peculiar or unusual practical difficulties” to the requester. An example: on a construction site, the haul road is required to be no more than 10% grade. Due to the configuration of the site and the existing topography, a 10% grade is impossible to achieve so a 14% grade is requested. However, the contractor will only allow certain types of equipment to run the haul road and will implement other safety precautions that causes that portion of the work to be equally safe.

A waiver is an exemption from the requirement. An example: There was an older requirement that all crane operators be required to have a physical examination every 2 years. One of the USACE districts requested a waiver from this requirement for all their operators of overhead cranes, 10T or less, that were pendant controlled.

d. Revising the EM 385-1-1. The EM 385-1-1 is typically revised and re-published every 4 years. Interim changes are published in-between these editions as needed. The EM is posted on the USACE publications website, as are all interim changes. Per the introductory letter, paragraph 4.b, contractors “shall comply with the latest version of the EM 385-1-1 (including interim changes) that is in effect on the date of solicitation. Prior to making an offer, bidders should check the USACE publications website. The website is available to the public and can be located at this link: <http://publications.usace.army.mil/publications/>

The EM 385-1-1 is being revised in 2012 and re-published in 2013. Everyone can have input. The public can go to the USACE Safety and Health website and use the form there for suggested input. USACE wants the EM 385-1-1 to be the best it can be, we appreciate the public's input.

Frequently Asked Questions.

Many questions are posed concerning the EM 385-1-1 and the USACE's safety and health program. Some are presented here:

1. Is the EM 385-1-1 required on all contracts?
 - a. See introductory letter, paragraph 4.b. It applies to construction contract work under the provisions of FAR Clause 52.236-13.
 - b. In addition, service supply and R&D contract actions, it applies UNLESS a technical representative (in coordination with the local safety and health professionals) advise that special precautions are not appropriate due to extremely limited scope of services or similar. Sometimes the EM 385-1-1 is too complex for the type of work being performed under these contracts. There is a limited scope Accident prevention Plan (APP) in Appendix A that can be followed.
 - c. It is applicable for HTRW contract work.
2. I am a Small Business Contractor. Do I have to comply with all of it?
 - a. All sections APPLICABLE to the work being performed must be complied with.
3. The EM 385-1-1 is HUGE. WHERE do I start?
 - a. Start with the introductory letter, Section 1 and Appendix A. These are program-based. All other sections are technically-based. If the work being performed doesn't include the type of technical work addressed by a section, the requirements in that section don't apply.
4. How do I get copies of the EM 385-1-1?
 - a. On the CESO website, there are instructions. If you've been awarded a USACE/Navy/AF contract, you should be provided a hard copy (or several) by the awarding office. Otherwise it is available electronically on the USACE publications website. You can request up to 2 hard copies from our depot. AGC makes it available for sale as well. While it is a public document, certain requirements must be met in order to print it (i.e., NO changes can be made (content-wise), no additions can be made, etc).
5. Why does the USACE maintain the EM? Why don't we just follow OSHA?
 - a. The EM 385-1-1 was developed/published long before OSHA and because the EM can be revised and republished when USACE deems appropriate, it is kept more current than OSHA requirements. OSHA requirements are not updated frequently. The EM is updated typically every 4 years to

reflect accident experience target areas, changes in ANSI/ASME/NFPA and other industry standards and best practices.

6. Can the EM be more stringent than OSHA?
 - a. Yes, but it cannot be less stringent than Federal requirements. If there is a requirement in the EM that is less stringent, please notify us. However, the introductory letter states that the more stringent requirement applies.

Conclusion

Safety and Occupational Health is a very important part of the U.S. Army Corps of Engineers culture and business process, we strive to be Great! in Safety as we do in all aspects of USCE business. EM 385-1-1 is revised and updated frequently and all members of the public and of the safety and occupational health community can influence what is written in this Engineering Manual and influence how the U.S. Army Corps of Engineers shapes their Safety and Health Manual for future civil works and military projects.

Unfortunately, as our time is limited, the USACE presenters cannot answer every question about EM385-1-1 in one presentation setting. We will be attempting to answer common questions and issues that are presented to us and will also provide contact information for all future inquiries.

Individuals having questions about the EM or need to obtain a copy, may contact their local USACE Field Office, District Safety Office, or consult the CESO website. Interpretations to the requirements contained within the EM shall be executed in accordance with the processes contained in Appendix M. Interpretations will apply only to the specific situation in question and may not be used as a precedent to determine the meaning of a requirement as it may apply to another circumstance.

References

The information contained within the EM is derived through lessons learned from previous accidents, best management practices, safety organizations, and various federal regulations. A list of references can be found in the introductory letter to the EM in paragraph 3. The provisions of the EM implement and supplement the safety and health standards and requirements referenced in this paragraph. Where more stringent safety and occupational health standards are set forth in those requirements and regulations, the more stringent standard shall apply. Other important references and resources can be found in Appendix S of the EM.