

**US Army Corps
of Engineers®**

**SAFETY AND HEALTH REQUIREMENTS FOR MUNITIONS AND
EXPLOSIVES OF CONCERN (MEC) OPERATIONS**

ENGINEER REGULATION

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DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, D.C. 20314

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CESO

Regulation
No. 385-1-95

30 March 2007

Safety
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CONCERN (MEC) OPERATIONS**

TABLE OF CONTENTS

PARAGRAPH	PAGE
1. Purpose	1
2. Applicability	1
3. Distribution Statement	1
4. References	1
5. Explanation of Abbreviations and Terms	1
6. Policy	1
7. Responsibilities	2
8. General	8
9. Operations/Activities	9
10. Explosives and Chemical Agent Contaminated Media	9
11. Training (Hazardous Waste Operations and Emergency Response (HAZWOPER))	11
12. Documents	13
13. Accident and Incident Reporting	15
14. Requirements for Government Safety Oversight	15
15. Waivers	16
3 Appendices	
Appendix A – References	A-1
Appendix B – Explanation of Abbreviations and Terms	B-1
Appendix C – Requirements for Government Safety Oversight (GSO)	C-1

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**SAFETY AND HEALTH REQUIREMENTS FOR MUNITIONS AND EXPLOSIVES OF
CONCERN (MEC) OPERATIONS**

1. Purpose. This regulation identifies safety and health requirements and responsibilities for MEC operations, military munitions (MM) response actions and any other ammunition and explosives (AE) activities. The safety and health requirements concerning Hazardous, Toxic, and Radioactive Waste (HTRW) activities are addressed in ER 385-1-92.

2. Applicability.

a. This regulation applies to Headquarters, United States Army Corps of Engineers (HQUSACE) elements, regional business centers (RBC), centers of expertise (CX), and laboratories performing or contracting for MEC operations, MM response actions and any other AE activity.

b. This regulation applies to all programs and projects for which the United States Army Corps of Engineers (USACE) is involved and which may result in encountering MEC during: actions at or below the ground surface, such as formerly used defense sites (FUDS), Base Realignment and Closure (BRAC) activities and installation restoration programs (IRP); construction projects; and support for others (SFO) projects.

3. Distribution Statement. Approved for public release. Distribution is unlimited.

4. References. Required and related publications are listed in Appendix A.

5. Explanation of Abbreviations and Terms. Acronyms and definitions used in this regulation are explained in Appendix B.

6. Policy.

a. MEC safety is critical to the operation of project sites where MEC is known or suspected to be present.

b. All USACE MEC operations shall be planned and conducted in accordance with the requirements of this document, and coordinated with USACE MM Center of Expertise (CX) (per

ER 385-1-95
30 Mar 07

ER 1110-1-8153 and at FUDS ER 200-3-1) located at U.S. Army Engineering and Support Center, Huntsville (USAESCH).

c. Response projects with potential for encountering HTRW, MEC, and Munitions Constituents (MC) require coordination with both the USACE MM CX and the Hazardous Toxic and Radioactive Waste Center of Expertise (HTRW CX). Normal safety hierarchy of cleanup is to perform the removal of conventional MEC, removal of chemical warfare materiel, explosives MC, and removal of HTRW, in that order.

d. Until USACE guidance is published, or if questions arise, specific guidance for biological warfare materiel (BWM) shall be obtained from the MM CX.

e. Only USACE qualified personnel will be utilized in MEC operations (reference Appendix A-1, CEMP-CE Memorandum 13 Oct 2005). Unexploded Ordnance (UXO) personnel qualification requirements are found in Department of Defense Explosive Safety Board (DDESB) Technical Paper 18 and defined in Appendix B of this document.

f. Essential personnel for the project are determined using the procedures identified in EP 1110-1-18.

g. Recovered Chemical Warfare Materiel (RCWM) is a subset of MEC. All USACE RCWM projects will be executed by the RCWM Design Center, located at the Huntsville Engineering and Support Center.

7. Responsibilities.

a. HQUSACE.

(1) The Director, Environmental Division, HQUSACE (CEMP-R) shall be responsible for overall Defense Environmental Restoration Program (DERP) management, policy, and technical direction.

(2) The Chief, Safety and Occupational Health Office, Headquarters USACE (CESO) shall:

(a) Designate a Safety Program Manager to manage and support the USACE explosives safety program.

(b) Develop and approve USACE explosives safety and health policy and procedures.

(c) Provide guidance on explosives safety and health issues within the framework of the overall USACE safety and health policy.

(d) Coordinate with higher headquarters and elements within the Headquarters, USACE, on explosives safety and health issues.

(e) Take the lead on explosives safety issues requiring conflict resolution within USACE, and higher Headquarters and other customers. Conduct periodic safety reviews to ensure program compliance with established requirements.

(f) Act as the Direct Reporting Unit (DRU) safety office responsible for conducting pre-operational surveys for RCWM projects. The lead for pre-operational surveys has been delegated to the MM CX.

(3) Chief, Engineering and Construction Division, HQUSACE will;

(a) Serve as the USACE engineer and construction manager, with responsibility for ensuring that explosives safety and health criteria and procedures are incorporated into the design and carried-out during construction on projects where MEC is known or suspected to be present.

(b) Comply with DA safety requirement for the design and construction or modification/repair of explosives-type facilities (e.g., manufacturing, handling, transporting, storing and demilitarization facilities).

b. Regional Business Centers (RBC). RBCs will provide safety and health oversight, through the Safety and Occupational Health Office (SOHO), to ensure activities and responsibilities are in compliance with USACE and Army policy and procedures. Additionally, they will collaborate and share health and safety Staff resources located at the districts and/or request assistance from the CEHNC-OE-S to assure Project Delivery Teams (PDT) for the MM program are appropriately staffed. RBCs will conduct annual MM safety self-management evaluations of the district's MM program.

c. MM Remedial/Removal Action Districts. Districts authorized (reference paragraph 6.e) to perform MM work include: Baltimore, Fort Worth, Honolulu, Huntsville, Los Angeles, Louisville, Mobile, Omaha, and Savannah (see Table 2-2, ER 200-3-1). Their responsibilities are:

(1) Coordinate with the MM CX for review and/or monitoring of project documents, as required and on all HTRW and construction activities in areas where MEC is known or suspected to be present (e.g., dredging operations, range construction activities).

(2) Provide properly trained personnel to conduct explosives safety and health functions and advice district personnel involved in MMRP projects.

(3) Ensure activities are conducted in compliance with USACE, Army, and Department of Defense (DoD) explosives safety and health policies and procedures.

(4) Ensure safety and occupational health and explosives safety criteria are incorporated into the basic contract solicitation.

(5) Ensure review of task orders, scopes of work, work plans (WPs), Preliminary Assessments (PAs) for properties with potential munitions response projects, Engineering Evaluation/Cost Analysis (EE/CA), and Remedial Investigation/Feasibility Studies (RI/FS), and Explosives Safety Submissions (ESS)/Chemical Safety Submissions (CSS), Explosive Site Plans (ESP)/Chemical Site Plan (CSP) to identify and address safety and health concerns. Other historical data, such as Topographical Engineering Center (TEC) historical analysis may be used, if available.

(6) Ensure that submittals, including the WP, Accident Prevention Plan (APP)/Site Safety and Health Plan (SSHP), ESP, and ESS/CSS are reviewed, accepted and approved, as applicable by designated authorities before work begins (reference ER 1110-1-8153, ER 200-3-1, EP 385-1-95b , EP 75-1-3, appropriate Army regulations, and appropriate DoD publications).

(7) Ensure, during field operations, contractor compliance with safety and health aspects of the approved WP, ESP, and approved ESS/CSS via on-site inspections. The project Quality Assurance Surveillance Plan will specify the frequency and technical disciplines required for these inspections. Authorized visitors will be escorted by a UXO qualified individual during all visits to the exclusion zone.

(8) Ensure that all safety and health related documentation is maintained in the appropriate file, i.e., administrative record file or permanent project file in accordance with EP 1110-3-8. NOTE: Only documents that were used in the remedy selection process are filed in the Administrative Record.

(9) Understand the potential explosives safety impacts of selected geophysical techniques used at projects. If uncertain, consult with the MM CX.

(10) Coordinate with the MM CX on chemical agent contaminated materiel (CACM) projects and ensure the MM CX performs review and provides concurrence on safety and health documents, and WPs.

(11) Coordinate with the MM CX on all potential chemical warfare materiel project locations that require a Probability Assessment in accordance with CESO-E memorandum, Applicability of Biological Warfare Materiel and Non-Stockpile Chemical Warfare Response Activity Interim Guidance, dated 13 April 1998.

(12) Ensure that HTRW aspects of projects containing MEC, MC, and HTRW are performed in accordance with ER 385-1-92, EP 1110-1-18, EP 75-1-2, and this regulation.

(13) Ensure discoveries of RCWM on USACE projects are reported to the RCWM Design Center in accordance with CEMP-CE memorandum, Interim Guidance – Notification Procedures for Discovery of Recovered Chemical Warfare Materiel (RCWM) During USACE Projects, 23 April 2004.

d. MM Design Centers. These Design Centers are the only USACE Centers authorized (reference paragraph 6.e) to perform MM work: Baltimore, Huntsville, Omaha and SPD Range Support Center (see Table 2-2, ER 200-3-1). These centers will, in addition to the above requirements:

(1) Design and execute all MEC/MC projects in support of USACE and other agencies, in accordance with (IAW) ER 1110-1-8153, EP 75-1-2, and at FUDS ER 200-3-1.

(2) Ensure full and proper integration of safety and health requirements into all activities and operations.

(3) Ensure timely submittal of waivers (including Improved Conventional Munitions (ICM) waivers), ESPs and ESSs, through the MM CX, for DRU approval, before sending them up the chain of command for review and approval, as appropriate.

(4) Ensure through periodic inspections, that contractor operations comply with explosives safety requirements.

(5) Determine that the geophysical investigation techniques selected for the project are safe.

e. RCWM Design Center. Located at USAESCH, this is the only USACE command authorized (reference paragraph 6.e) to design and execute RCWM projects. It will do the following:

(1) Design and execute all RCWM projects in support of USACE and other agencies, IAW ER 1110-1-8153, EP 75-1-3 and at FUDS ER 200-3-1.

(2) Ensure timely submittals of the CSS through the MM CX, to the established review and approval chain IAW ER 1110-1-8153, EP 75-1-3 and at FUDS ER 200-3-1..

(3) Ensure timely submittal of WPs to the MM CX for approval, IAW ER 1110-1-8153, and at FUDS ER 200-3-1.

(4) Ensure full and proper integration of safety and health requirements throughout all RCWM activities and operations.

(5) Ensure, throughout any RCWM operation, contractor compliance with their quality control (QC) program and government quality assurance (QA) standards.

(6) Ensures discoveries of RCWM on USACE projects are reported in accordance with CEMP-CE memorandum, Interim Guidance – Notification Procedures for Discovery of Recovered Chemical Warfare Materiel (RCWM) During USACE Projects, 23 April 2004. Additional reporting requirements are identified in the Chemical and Biological Emergency Reporting System (CBERS) program. The RCWM Design Center will report those events for USACE.

f. The USACE Engineer Research and Development Center (ERDC) will comply with RBC's responsibilities and will meet training requirement in paragraph 11, develop Standard Operating Procedures (SOPs) for the R&D work, WPs, ESP, APP/SSHP, and ESS for the required MEC research and development work, as applicable, and submit the documents requiring approval from U.S. Army Technical Center for Explosives Safety (USATCES) through CEHNC-ED-CS-S located at USAESCH for DRU review and approval.

g. MM CX. This group will do the following (reference paragraph 6.e):

(1) Adopt and maintain state-of-the-art MEC expertise and technology for MEC activities. Engineering controls (EC) that are proposed for use on MEC projects must have DDESB approval before use. It is preferable to submit the technical data package for those types of EC through the MM CX to USATCES for approval before the safety submission is submitted to ensure a programmatic approval rather than a site approval for the EC package.

(2) Provide mandatory review and comment as well as written concurrence or non-concurrence of MEC safety and health documents and work plans required by ER 1110-1-8153 and at FUDS ER 200-3-1.

(3) Review, approve and transmit waivers, ESP/CSP, and ESS/CSS to USATCES for approval, as appropriate, or return to the district for projects where the ESS/CSS is returned to the customer for submission through their chain of command (e.g., Base Realignment and Closure (BRAC) and active installations). The MM CX has been delegated authority to provide DRU approval for all waivers, ESP/CSP, and ESS/CSS for HQUSACE.

(4) Provide technical safety and health support (e.g., guidance documents, incident investigation, committee participation) as requested by CESO.

(5) Develop explosives safety awareness training as needed to support USACE mission needs, and provide instructors as required.

(6) Provide specific guidance for operations where conventional MEC, MC, RCWM, Chemical Agent Contaminated Media (CACM), or BWM are encountered.

(7) Support on-site personnel in the proper Department of Transportation (DOT) classification of explosives and chemical materiel.

(8) Provide “Safety Alerts and Advisories,” notifying Ordnance and Explosives (OE) safety specialists and UXO contractors of problems or potential problems concerning safety and health. These “Safety Alerts and Advisories” require immediate attention and will be distributed to all involved in operations. The alerts and advisories will be provided to the MM CX by the appropriate safety office for distribution within USACE.

(9) Prepare and conduct the DRU Pre-Operational Survey required by Department of the Army Pamphlet (DA PAM) 385-61 for all USACE RCWM projects. This authority has been delegated to the MM CX by HQUSACE, CESO.

h. HTRW CX. This group will provide technical review and assistance on HTRW aspects in accordance with ER 385-1-92.

i. OE Safety Specialists (OESS). These personnel shall do the following.

(1) Provide government safety oversight (GSO) for the safety and health activities within the project location and ensure compliance with the approved WP, APP/SSHP, ESP/CSP, ESS/CSS (as applicable) and other applicable DoD or Army policies and regulations.

(2) Perform quality assurance inspections as identified in the Quality Assurance Surveillance Plan (QASP).

(3) Ensure only qualified personnel (see DDESB TP 18) perform UXO operations/activities/procedures. Appendix B in this document has a definition of UXO operations/activities/procedures.

(4) Advise the USACE Resident/Area Engineer or Site Project Manager and/or the Site Safety and Health Officer (SSHO) on explosive safety issues.

(5) Facilitate military Explosives Ordnance Disposal (EOD) and Technical Escort Unit (TEU) response when needed.

(6) Conduct government QA inspections of completed MEC specific tasks. A safety and health specialist may conduct QA inspections; reference Paragraph 7.b, this document.

(7) Identify MEC for DOT classification purposes.

(8) Act as a liaison with the MM CX.

(9) Meet the training and experience requirements established by EP 1110-1-18.

(10) Generally, will provide the reporting information for discoveries of RCWM on USACE projects to the RCWM Design Center.

(11) Report MEC mishaps as specified in paragraph 13 of this document.

8. General.

a. During surface or intrusive activities, access to the exclusion zone will be restricted to essential personnel and authorized visitors escorted by UXO personnel. Positive controls [e.g., signs (multilingual, as appropriate), fencing, guards], appropriate to the project, shall be used to prohibit entry of unauthorized personnel.

b. Anytime MEC will be handled, stored or disposed of at a USACE project, a work plan must be prepared and approved in accordance with ER 1110-1-8153 and at FUDS ER 200-3-1. An AAP/SSHP and an ESP/CSP are integral parts of the WP.

c. All personnel working at, or visiting, a munitions response project site shall comply with all applicable health and safety requirements.

d. Engineering controls, as defined in Appendix B, may be used to reduce minimum separation distance (MSD) for MEC activities and operations.

(1) Department of Defense Explosives Safety Board (DDESB), approved engineering controls may be used as needed at any USACE project. The MM CX will review any application of an approved engineering control to assure proper utilization at the specific project. This project-specific application will be described in the WP and ESS/CSS.

(2) In some cases, the MM CX, or Design Center will not have submitted an ESS or gained DDESB approval of an ESS for an engineering control. In these cases, the design, testing, and capabilities of the control will be submitted with the ESS/CSS, but will only be approved for that specific project and application described in the ESS/CSS.

(3) "DDESB Approved" as used herein means a separate (not project-specific) technical data report, describing the design, testing, and capabilities of an engineering control, was developed, sent through explosives safety channels for review and concurrence, and ultimately approved by DDESB for general application.

e. Requirements for determining when safety oversight by government personnel (OESS) is required are identified in Appendix C of this document.

9. Operations/Activities.

a. Operations and activities include all work performed at MEC projects, i.e., response actions, construction activities, or others.

b. Operations will be planned and conducted in accordance with EP 1110-1-18, EP 385-1-95a/b, EP 75-1-2 and EP 75-1-3, and other applicable guidance.

c. Intrusive investigation is not authorized during anomaly avoidance operations. Anomaly avoidance procedures will be documented in the appropriate WP.

d. Improved Conventional Munitions (ICMs) must be identified as early in the project, as possible, due to the length of time required for obtaining approval of the waiver.

(1) For FUDS projects, the ICM waiver will be provided to the MM CX for forwarding to the approval authority (USATCES for Army). The MM CX will provide an information copy to HQUSACE (CESO); the required content of an ICM waiver is contained in DA PAM 385-63.

(2) An ICM waiver for projects under control of agencies (e.g., Army Environmental Center (AEC), Army BRAC, other DoD service, work for others) other than USACE will be coordinated by that agency. USACE may assist the agency in the preparation of the waiver, however the waiver must be processed thru those agencies approval channels.

e. For operations/activities involving chemical agents that can also be classified as industrial chemicals, project managers (PMs) will follow the more stringent of applicable Army or industry safety and health standards. If the industrial chemicals are weaponized (see Appendix B), the procedures applicable to RCWM must be observed.

f. Visitors requesting access to the contamination reduction zone (CRZ) or the exclusion zone (EZ) will be processed in accordance with the procedures in EPs 385-1-95a and 1110-1-18.

g. All USACE RCWM project teams will be required to successfully complete a DRU Pre-Operational Survey in accordance with DA PAM 385-61. HQUSACE has delegated this responsibility to the MM CX.

10. Explosives and Chemical Agent Contaminated Media.

a. General.

(1) Overall, the requirements of ER 1110-1-8153, apply. Additional specific guidance is provided below.

(2) All operations involving contaminated media will require an approved/accepted WP. An ESP/ESS may be required if the explosives contaminated media is of a high enough concentration to be explosive. No work involving handling or disposing of contaminated media will begin until the WP and ESP/ESS (if required) receive appropriate approval/acceptance.

(3) Before performing initial sampling of any location suspected of having contaminated media, a WP and sampling plan will be prepared and approved/accepted.

(4) Support will be provided by UXO personnel, who meet the qualifications specified in DDESB TP 18, during sampling at any location where the potential for MEC exists. Refer to EP 75-1-2 for requirements for UXO support during HTRW and construction activities.

b. Primary Explosives. For media known or suspect to be contaminated with any primary explosives, the following will apply.

(1) Any media containing a concentration of primary explosives of 2% or greater by weight is considered explosive. For media containing less than 2% concentration of primary explosives, it will be considered non-explosive MC and the requirements of this ER do not apply. See ER 385-1-92 for HTRW safety concerns.

(2) Close coordination between the appropriate design centers and remedial/removal action districts is recommended during WP and ESS preparation to ensure effective coverage of safety and health issues and efficient processing.

c. Secondary Explosives, Nitroglycerine, Nitrocellulose, or Nitro-guanidine. For media known or suspected to be contaminated with these materials, the following will apply.

(1) Any media containing a concentration of secondary explosives, nitroglycerine, nitrocellulose, or nitro-guanidine of 10% or greater by weight is considered explosive. For media containing less than a 10% concentration of secondary explosives, nitroglycerine, nitrocellulose, and nitro-guanidine, it will be considered non-explosive MC and the provisions of this ER do not apply. See ER 385-1-92 for HTRW safety concerns. Care must be taken when applying this threshold rule to nitroglycerine in less permeable soils, such as clay, that may cause nitroglycerine to pond, rather than be absorbed.

(2) Close coordination between the appropriate design centers and remedial/removal action districts is recommended during WP and ESS preparation to ensure effective coverage of safety and health issues and efficient processing.

d. Other Energetic Materials (e.g. propellants). The potential explosive hazard of such mixtures in soil may be unknown and may require testing. If the hazard is unknown, manage soil mixtures containing only propellants as secondary explosives, and all other soil mixtures containing energetics as primary explosives.

e. Chemical Agent Contaminated Media (CACM). This is addressed in EP 75-1-3.

f. Explosives Contaminated Buildings and Structures. This will be addressed in future USACE guidance documents.

11. Training (Hazardous Waste Operations and Emergency Response (HAZWOPER)).

a. General.

(1) The minimum requirements for training applicable to RCWM operations are stated below and shall comply with 29 CFR 1910.120, 29 CFR 1910.134, 29 CFR 1926.65, 49 CFR 173.50, and 49 CFR 177.835(g). AR 385-61, DA PAM 385-61, DA PAM 40-173, and DA PAM 40-8 also apply for RCWM/CACM activities. Further guidance can be found in EP 385-1-95a, and EP 75-1-3.

(2) Workers are to be trained to competently execute the tasks required by their job functions and responsibilities. What is of importance here is not the training time but the clear intent of the training standards or what is covered on the training curriculum. The training must address the safety and health hazards present at the project and the related procedures and controls necessary for worker protection.

(3) All workers shall be able to read and understand the approved plans for the specific tasks in which they are involved. All persons working with explosives shall be in good physical condition and shall be able to understand and give written and verbal orders. Supervisors will provide initial training for, and periodically review requirements with employees.

b. MEC projects.

(1) Workers and visitors in the EZ shall receive on-site safety and health training provided by the UXO Safety Officer (UXOSO). The training shall be commensurate with the degree of hazard to which they may be exposed.

(2) Workers performing direct work in the EZ shall have a minimum of 40 hours of off-site instruction, and 3 days of actual field experience under the direct supervision of a trained, experienced supervisor.

(3) Managers and supervisors, directly responsible for, or who supervise employees engaged in hazardous operations, are responsible for their training and shall receive 40 hours initial training, 3 days of supervised field experience, and 8 additional hours of specialized supervisor's training. At the time of job assignment, training on such topics as the WP (APP/SSHP), ESP/CSP/ESS/CSS, and areas identified below will be required.

- (a) The employer's safety and health program.
- (b) Personal protective equipment program.
- (c) Spill containment program.
- (d) Health hazard monitoring procedures and techniques
- (e) Hazardous Communications Program (29 CFR 1910.1200).
- (4) All workers are required to complete:
 - (a) A 40-hour HAZWOPER training course IAW 29 CFR 1910.120.
 - (b) An 8-hour annual refresher course in accordance with 29 CFR 1910.120 and 29 CFR 1926.65.
 - (c) A daily safety briefing before beginning work.
 - (d) A safety briefing by team supervisory personnel for the task/activity being performed.
- (5) In accordance with 29 CFR 1910.120, workers may be allowed on MEC projects with no known or suspected RCWM/CACM, HTRW, or MC contamination, for a specific limited task provided the employer can demonstrate that the operation does not involve employee exposure or the reasonable possibility for employee exposure to safety or health hazards. These workers will not exceed the project personnel exposure limits. These workers, (e.g., a part-time surveyor or biologist), shall receive training equal to the degree of exposure, as established by their managers and supervisors and will include, as applicable, the following:
 - (a) A thorough review of all sections of the WP and ESS/CSS.
 - (b) Safety, health, and other hazards present on the project.
 - (c) Identification of the potential hazards on the project.
 - (d) Emergency response procedures and names of personnel and alternates responsible for project safety and health.
 - (e) Safe use of engineering controls and equipment on the project.
 - (f) Work practices by which the employee can minimize risk from hazards.

- (g) Use of personal protective equipment.
- (h) Medical surveillance requirements.

12. Documents.

a. General.

(1) Abbreviated Accident Prevention Plan (AAPP). When USACE personnel conduct preliminary project activities of a non-intrusive nature (i.e., initial site visits, pre-work plan visits, and public affairs visits) on potential MEC project sites prior to a WP being approved/accepted, an AAPP shall be developed and approved in accordance with EM 385-1-1 and EP 385-1-95a.

(2) APP/SSHP. All munitions project activities require a WP (APP/SSHP). The APP/SSHP, prepared in accordance with EM 385-1-1 and EP 385-1-95a, shall be developed for all tasks on a munitions project. This plan must be approved/accepted by the appropriate authority prior to implementation. The plan shall address all safety and occupational health hazards associated with the MEC operation. There are overlapping elements in these plans; elements are not to be duplicated providing they are addressed fully. The SSHP is an Appendix to the APP.

(3) ESS/ESP. An ESS/ESP is required for MEC projects as described in EP 385-1-95b, Explosive Safety Submission. The ESS/ESP must be approved before actual surface or intrusive removal can be initiated on the project.

(4) CSS/CSP. A CSS/CSP is required for all RCWM response actions. The CSS shall be submitted and formatted in accordance with EP 75-1-3. Typically, the CSS is developed using information from the WP and Supplemental Plans (transportation, disposal, TEU operation orders, and others). As such, those plans should be completed prior to the preparation of the CSS. The CSS must be approved by the Department of Army Safety Office, and/or DDESB, as appropriate before the DRU pre-operational survey can be initiated and actual field work with RCWM may begin.

(5) Changes to ESP/CSP/ESS/CSS. There are two basic types of changes that might be made to these existing, approved documents: an amendment or a correction.

(a) Amendments are changes regarding the assumed or known RCWM or explosive hazards, or any proposed changes in work activities or safety controls, that potentially affect workers or public safety. Examples include changes in future land use, land use restrictions, quantity-distance (Q-D) arcs (i.e., project EZ, or other safe separation distances), and type of RCWM or munitions suspected; CRZ, or 1% Lethality Distance; the scope of work or recovery techniques; and for a CSS the number or composition of the characterization teams, clearance teams, or

ER 385-1-95
30 Mar 07

EOD, TEU, or contractor support. Normally, amendments will not be implemented until fully approved. However, removal/remediation may continue provided:

(1) The amendment pertains to an MRS for which an ESS or CSS has already been approved.

(2) On-site project personnel institute protective measures (e.g., increased ESQD, use of DDESB-approved EC) to address any explosive or chemical agent (CA) hazard.

(3) The DRU accepts the possibility that the DDESB approval process may impose different, or additional, explosives or CA safety requirements.

(b) Corrections are changes that do not have the potential for affecting worker or public safety. Corrections are, typically, administrative changes. Corrections will be initiated by the agency with overall responsibility for the project site. A copy of the approved correction will be provided for information to all support agencies, USATCES, and DDESB. Once the MM CX concurs with, or approves, a correction, routing to higher-level offices is for information only.

(c) If uncertain whether or not the change is an amendment or correction, contact the MM CX for clarification.

(6) Execution of the Selected MEC Response. The final ESS should be submitted to the MM CX at least 90 days prior to a planned response action. The MM CX is the USACE DRU approval authority for an ESS. For projects under control of AEC, Army BRAC, and other DoD agencies, the ESS will be approved by that agency, and routed through their command approval structure, unless they request it to be done by the MM CX. All ESS must be given final approval by DDESB. Typically, removal actions and ESS/CSS/ESP/CSPs will be designed around the Decision Document. (See ER 200-3-1 for full description of the requirements for a Decision Documents)

(7) Personal Protective Equipment (PPE). Generic approvals for some PPE ensembles are included in EP 75-1-2 and EP 75-1-3. For those ensembles for RCWM operations, not included in the generic approval, PMs must submit proposed PPE ensemble matrices for RCWM operations in accordance with EP 75-1-3 for approval.

(8) Proposed Engineering Controls. These are submitted in accordance with the guidance in EP 385-1-95b or EP 75-1-3. The approval of the use of these engineering controls is given with the approval of the ESS/CSS.

(9) Pre-operational Survey Requests. The PM will establish a pre-operational survey date as part of project scheduling, and submit to the MM CX a request for a pre-operational survey of the RCWM project 6 weeks prior to the scheduled date of the survey.

b. Chemical Agent Contaminated Media (CACM). Requires an APP/SSHP IAW paragraph 12(a) (1), this document. PMs will ensure that appropriate safety measures (i.e., air monitoring, PPE) are in place for the type of chemical agent that may be encountered at the project. PMs shall coordinate with the MM CX to determine the necessary safety and health precautions and controls for any project with CACM concerns. If unexpected chemical agents are encountered, work will cease, and the project will be secured and evacuated until safety measures are taken, and procedures are updated and briefed to workers. Agent contaminated media is not RCWM.

13. Accident/Incident Reporting.

a. All explosives accidents/incidents shall be investigated to determine the cause and controls shall be developed to prevent recurrence.

b. Notification and reporting of explosives accidents/incidents shall be in accordance with AR 385-40, USACE Supplement to AR 385-40, EM 385-1-1, current guidance for 29 CFR Part 1960, Recordkeeping and Reporting Requirements and DACS-SF, 13 Jan 1998, Notification of DDESB for Explosives and Chemical Agent Mishaps. Accident data will be collected in accordance with this guidance. Accidents, on MEC project locations, shall be reported immediately to Government Designated Authority (GDA) at the District Safety Office with an information copy to the MM CX.

c. Chemical event reports shall be submitted IAW CEMP-CE memorandum, Interim Guidance – Notification Procedures for Discovery of Recovered Chemical Warfare Materiel (RCWM) During USACE Projects, 23 April 2004. These reports will normally be submitted by the RCWM Design Center for HQUSACE. Additional reporting requirements are identified in the Chemical and Biological Emergency Reporting System (CBERS) program.

d. Contractor fatality shall be reported to DDESB thru USATCES, reference DACS-SF Memorandum Jan 1998.

14. Requirements for Government Safety Oversight.

a. Not all MM response actions require on-site government safety oversight and those that do, do not always require that presence 100% of the time.

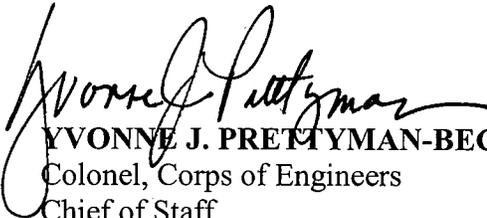
b. The process used to make that determination is outlined in Appendix C of this ER.

ER 385-1-95
30 Mar 07

c. This determination is a “safety-based” risk assessment determination, not a “project management” determination and will be made by the appropriate safety office.

15. Waivers. Waivers shall be processed in accordance with AR 385-64 and CESO-E, 25 March 2003 memorandum, subject: HQUSACE Delegation of Authority.

FOR THE COMMANDER:



YVONNE J. PRETTYMAN-BECK
Colonel, Corps of Engineers
Chief of Staff