

Appendix B

Explanation of Abbreviations and Terms

B-1. Acronyms

AE	Ammunition and Explosives
AEC	Army Environmental Center
AAPP	Abbreviated Accident Prevention Plan
AC	Hydrogen Cyanide
APP	Accident Prevention Plan
ASR	Archive Search Report
ASSHP	Abbreviated Site Safety and Health Plan
BRAC	Base Realignment and Closure
BWM	Biological Warfare Materiel
CA	Chemical Agent
CACM	Chemical Agent Contaminated Media
CBERS	Chemical and Biological Emergency Reporting System
CDR	Commander
CESO	Chief, Safety and Occupational Health Office
CG	Phosgene
CEMP	Corps of Engineers Military Programs
CK	Cyanogen Chloride
CSP	Chemical Site Plan
CRZ	Contamination Reduction Zone
CSS	Chemical Safety Submission
CWM	Chemical Warfare Materiel
CX	Center of Expertise
DA PAM	Department of the Army Pamphlet
DASA(ESOH)	Deputy Assistant Secretary Of Army (Environmental Safety and Occupational Health)
DDESB	Department of Defense Explosives Safety Board
DMM	Discarded Military Munitions
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
DOT	Department of Transportation
DRU	Direct Reporting Unit
EE/CA	Engineering Evaluation/Cost Analysis
EOD	Explosives Ordnance Disposal
ERDC	Engineer Research and Development Center
ESP	Explosives Site Plan
ESS	Explosive Safety Submission
EZ	Exclusion zone
FUDS	Formerly Used Defense Sites
HAZWOPER	Hazardous Waste Operations and Emergency Response
HQUSACE	Headquarters, United States Army Corps of Engineers
HTRW	Hazardous, Toxic, and Radioactive Waste

IAW	in accordance with
ICM	Improved Conventional Munitions
INPR	Inventory Project Report
IRP	Installation Restoration Program
LUC	Land Use Controls
MC	Munitions Constituents
MCE	Maximum Credible Event
MEC	Munitions and Explosives of Concern
MM	Military Munitions
MPPEH	Material Presenting a Potential Explosive Hazard
MRA	Munitions Response Area
MRS	Munitions Response Site
MSC	Major Subordinate Command
MSD	Minimum Separation Distance
NOSE	No Significant Effects
NTCRA	Non-Time-Critical Removal Action
OE	Ordnance and Explosives
OESS	Ordnance and Explosives Safety Specialist
OTM	Other Than Munition
PA	Preliminary Assessment
PM	Project Manager
PPE	Personnel Protective Equipment
QA	Quality Assurance
QASP	Quality Assurance Surveillance Plan
QC	Quality Control
Q-D	Quantity-Distance
RBC	Regional Business Center
RCWM	Recovered Chemical Warfare Materiel
RDTE	Research, Development, Test, and Evaluation
RI/FS	Remedial Investigation/Feasibility Study
SFO	Support for Others
SOHO	Safety and Occupational Health Office
SOP	Standing Operating Procedures
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
TCRA	Time-Critical Removal Action
TEC	Topographic Engineering Center
TEU	Technical Escort Unit
USACE	U. S. Army Corps of Engineers
USAESCH	U.S Army Engineering and Support Center, Huntsville
USATCES	U.S. Army Technical Center for Explosives Safety
UXO	Unexploded Ordnance
UXOSO	UXO Safety Officer
WP	Work Plan

B-2. Definitions

a. Accident Prevention Plan/Site Safety and Health Plan (APP/SSHP). Reference EM 385-1-1 and ER 385-1-92.

b. Administrative Record. The body of documents that “forms the basis” for the selection of a particular response at the project. These are relevant documents that were relied upon in selecting the response action as well as relevant documents that were considered but ultimately rejected.

c. Anomaly Avoidance. Techniques employed on property known or suspected to contain UXO, other munitions that may have experienced abnormal environments (e.g., Discarded Military Munitions (DMM)), Munitions Constituents (MC) in high enough concentrations to pose an explosive hazard, or chemical agent (CA), regardless of configuration, to avoid contact with potential surface or subsurface explosives or CA hazards, to allow entry into the area for the performance of the required operations.

d. Archives Search Report. A detailed investigation to report on past MEC activities conducted on an installation; includes an MEC-specific project inspection and historical records searches.

e. Authorized Visitors. DoD, DA, USACE, or other personnel (MM CX, Department of Defense Explosives Safety Board , HQ Safety, etc.) conducting project or mission related functions, e.g., Quality Assurance Representatives (QAR's), safety and quality inspectors (including geophysicists performing quality assurance functions), and project management. Authorized visitors must be escorted while in the EZ and be approved for entry into the EZ in accordance with this guidance. No more than 2 authorized visitors will be permitted in the EZ at any given time.

f. Biological Warfare Materiel (BWM). An item configured as a munition containing an etiologic agent that is intended to kill, seriously injure, or incapacitate a person through its physiological effects. BWM can also include etiologic agents that are designed to damage or destroy crops that are intended for human consumption.

g. Chemical Agent. A chemical compound (to include experimental compounds) that, through its chemical properties, produces lethal or other damaging effects on human beings, is intended for use in military operations to kill, seriously injure, or incapacitate persons through its physiological effects. Excluded are research, development, testing, and evaluation (RDTE) solutions; riot control agents; chemical defoliants and herbicides; smoke and other obscuration materials; flame and incendiary materials; and industrial chemicals.

h. Chemical Agent Contaminated Media (CACM). Any mixture of detectable concentrations of chemical agents with soil, water, debris, or other solid or liquid media.

i. Chemical Event Report. A report that documents chemical accidents, incidents, and other circumstances where there is a confirmed or likely release to the environment, exposure of personnel, threat to the security of chemical agent materiel, or any incident of concern to the local commander (AR 50-6). Additional notification procedures for USACE RCWM projects are identified in CEMP-CE Memorandum Interim Guidance – Notification Procedures for Discovery of Recovered Chemical Warfare Materiel (RCWM) During USACE Projects.

j. Chemical Safety Submission (CSS). A document that serves as the instrument to describe planned chemical and explosives safety actions to the appropriate approval authority.

k. Chemical Warfare Materiel (CWM). Items generally configured as a munition containing a chemical compound that is intended to kill, seriously injure, or incapacitate a person through its physiological effects. CWM includes V- and G-series nerve agents or H-series (mustard) and L-series (lewisite) blister agents in other-than-munition configurations; and certain industrial chemicals (e.g., hydrogen cyanide (AC), cyanogen chloride (CK), or carbonyl dichloride (called phosgene or CG)) configured as a military munition. Due to their hazards, prevalence, and military-unique application, chemical agent identification sets (CAIS) are also considered CWM. CWM does not include: riot control devices; chemical herbicides; industrial chemicals (e.g., AC, CK, or CG) not configured as a munition; smoke and flame producing items; or soil, water, debris or other media contaminated with low concentrations of chemical warfare agents where no CA hazards exist.

l. Construction Support. Assistance provided by DoD EOD or UXO-qualified personnel and/or by personnel trained and qualified for operations involving CA, regardless of configuration, during intrusive construction activities on property known or suspected to contain UXO, other munitions that may have experienced abnormal environments (e.g., DMM), munitions constituents in high enough concentrations to pose an explosive hazard, or CA, regardless of configuration, to ensure the safety of personnel or resources from any potential explosive or CA hazards.

m. Discarded Military Munitions (DMM). Military munitions that have been abandoned without proper disposal or removed from storage in a military magazine or other storage area for the purpose of disposal. The term does not include unexploded ordnance (UXO), military munitions that are being held for future use or planned disposal, or military munitions that have been properly disposed of, consistent with applicable environmental laws and regulations. (10 U.S.C. 2710(e)(2))

n. Engineering Controls. Any process or device designed to mitigate explosion effects (e.g., blast overpressure, fragmentation, fire) or to contain vapor releases from RCWM.

o. Essential Personnel. USACE and contractor project personnel necessary for the safe and efficient completion of field operations conducted in an EZ. This is limited to: contractor work team members including the Unexploded Ordnance (UXO) Safety Officer (UXOSO), UXO Quality Control Specialist, Senior UXO Supervisor, and a USACE Ordnance and Explosives (OE) Safety Specialist.

p. Exclusion Zone (EZ). A safety zone established around a MEC-related operation work area. Only essential project personnel and authorized, escorted visitors are allowed within the exclusion zone. Examples of EZs are safety zones around MEC intrusive activities and safety zones where MEC is intentionally contacted or detonated. For RCWM project sites, it is the area within the No Significant Effects (NOSE) zone.

q. Explosives Site Plan. An explosives site plan is required for munitions response site (MRS) investigations or characterizations of an MRS that involve intentional physical contact with MEC (e.g., surface and intrusive sampling during an EE/CA or RI/FS). The explosives site plan will be used to provide explosives safety criteria for planning the siting of explosives operations for Munitions Response or other MEC-related projects (e.g., on-site construction support involving a MEC removal). Such site plans will address areas (e.g., magazines) used for the storage of commercial and/or military demolition explosives or MEC, planned or established demolition or disposal areas for MEC found during the investigation; and the boundary of the munitions response area to be investigated. The explosives site plan will address the explosives safety quantity-distances for each of the potential explosion sites (e.g., magazines, demolition areas, munitions response areas, collection points), the location of exposed sites (e.g., inhabited buildings, public traffic routes), and engineering controls to be used.

r. Explosives Safety Submission (ESS). The Explosives Safety Submission (ESS) will be used to provide munitions response action explosives safety criteria for approval by DDESB. The ESS for TCRA will provide the information required in the explosives site plan plus a short introduction concerning site history and any other pertinent details, the reason why MEC exists on the MRS, the amount and type of MEC expected, the selected munitions response action (e.g., surface removal, removal to depth of detection), the start date for the munitions response action. The ESS for NTCRA will include all of the above plus the following: possible MEC migration mechanisms, the techniques to be used to detect, recover, and destroy MEC, alternate MEC disposal techniques (if any) to be used either on-site or off-site, technical support (e.g., contractor, USACE, EOD, TEU), land use restrictions, public involvement, recurring reviews, MEC education, and any contingencies.

s. Explosive Media. Mixtures of explosives in soil, sand, clay, or other solid media at concentrations such that the mixture itself is explosive.

t. Formerly Used Defense Sites (FUDS). A facility or project (property) that was under the jurisdiction of the Secretary of Defense and owned by, leased to, or otherwise possessed by the United States at the time of actions leading to contamination by hazardous substances. By the Defense Environmental Restoration Program (DERP) policy, the FUDS program is limited to those properties that were transferred from DoD control prior to 17 Oct 1986. FUDS properties can be located within the 50 States, District of Columbia, Territories, Commonwealths and possessions of the US.

u. Geophysical Techniques. Techniques for the detection and measurement of buried anomalies (e.g., ferromagnetic indicators and ground penetrating radar) to investigate the presence of munitions.

v. Hazardous, Toxic, and Radioactive Waste (HTRW) Activities. See definition in ER 385-1-92.

w. Improved Conventional Munitions (ICM). Munitions characterized by the delivery of two or more anti-personnel, anti-material, or anti-armor submunitions by a parent munition.

x. Industrial Chemical. A chemical developed or manufactured for use in industrial operations or research, by industry, government, or academia. Previously identified as chemical warfare agents: hydrogen cyanide (AC), cyanogen chloride (CK), phosgene (CG), methylphosphonic difluoride (DF), O-ethyl (2-isopropyl aminoethyl) methylphosphonite (QL), and chloropicrin (PS) are now considered industrial chemicals. If these chemicals are weaponized, consider them to be RCWM. Weaponized means these chemicals were placed into ammunition containers; e.g., projectiles, mines, bombs, etc..

y. Intrusive Activity. An activity, which involves, or results in, the penetration of the ground surface at an area known or suspected to contain MEC or RCWM in other than munitions (OTM) configurations. Intrusive activities can be of an investigative or removal action nature.

z. Material Potentially Presenting an Explosive Hazard (MPPEH). Material potentially containing explosives or munitions (e.g., munitions containers and packaging material; munitions debris remaining after munitions use; demilitarization, or disposal; and range-related debris); or material potentially containing a high enough concentration of explosives such that the material presents an explosive hazard (e.g., equipment, drainage systems, holding tanks, piping, or ventilation ducts that were associated with munitions production, demilitarization or disposal operations). Excluded from MPPEH are munitions within DoD's established munitions management system and other hazardous items that may present explosion hazards (e.g., gasoline cans, compressed gas cylinders) that are not munitions and are not intended for use as munitions.

aa. Minimum Separation Distance (MSD). MSD is the distance at which personnel in the open must be from an intentional or unintentional detonation.

bb. Munitions Constituents (MC). Any materials originating from unexploded ordnance, discarded military munitions, or other military munitions, including explosive and non-explosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions. (10 U.S.C. 2710(e)(3)).

cc. Munitions Debris. Remnants of munitions (e.g., fragments, penetrators, projectiles, shell casings, links, fins) remaining after munitions use, demilitarization, or disposal.

dd. Munition with the Greatest Fragmentation Distance (MGFD). The munition with the greatest fragmentation distance that is reasonably expected (based on research or characterization) to be encountered in any particular area.

ee. Maximum Credible Event (MCE). In hazards evaluations, the MCE, from a hypothesized accidental explosion, fire, or toxic chemical agent release (with explosives

contribution) is the worst single event that is likely to occur from a given quantity and disposition of ammunition and explosives (AE). The event must be realistic with a reasonable probability of occurrence considering the explosion propagation, burning rate characteristics, and physical protection given to the items involved. The MCE evaluated on this basis may then be used as a basis for effects calculations and casualty predictions.

ff. MEC-Related Operations. Any operations conducted by UXO Technicians/Qualified personnel with the purpose of intentional physical contact with MEC.

gg. Munitions and Explosives of Concern (MEC). This term, which distinguishes specific categories of military munitions that may pose unique explosives safety risks means: (A) Unexploded ordnance (UXO), as defined in 10 U.S.C. 101(e)(5)(A) through (C); (B) Discarded military munitions (DMM), as defined in 10 U.S.C. 2710(e)(2); or (C) Munitions constituents (e.g., TNT, RDX), as defined in 10 U.S.C. 2710(e)(3), present in high enough concentrations to pose an explosive hazard.

hh. Military Munitions. Military munitions means all ammunition products and components produced for or used by the armed forces for national defense and security, including ammunition products or components under the control of the Department of Defense, the Coast Guard, the Department of Energy, and the National Guard. The term includes confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices and components thereof. The term does not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components, except that the term does include non-nuclear components of nuclear devices that are managed under the nuclear weapons program of the Department of Energy after all required sanitization operations under the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.) have been completed. (10 U.S.C. 101(e)(4)(A) through (C)).

ii. Munitions Response Area. Any area on a formerly used defense site that is known or suspected to contain UXO, DMM, or MC. Examples include former ranges and munitions burial areas. A munitions response area is comprised of one or more munitions response sites.

jj. Munitions Response Site. A discrete location within an MRA that is known to require a munitions response.

kk. No Significant Effects (NOSE) Distance. The distance at which the general population (to include more susceptible subpopulations) would not experience any significant effects from exposure of chemical agents.

ll. OE Safety Specialist. A USACE employee who is qualified through experience and completion of the U.S. Army Bomb Disposal School, Aberdeen Proving Ground, Maryland, or U.S. Naval EOD School, Indian Head, Maryland, or Eglin AFB, Florida, and is classified in the

GS-0018 job series (CP-12 career series). Performs safety and occupational health support and oversight of projects involving MEC/RCWM.

mm. Primary Explosives. Primary explosives are highly sensitive compounds that are typically used in detonators and primers. A reaction is easily triggered by heat, spark, impact or friction. Examples of primary explosives are lead azide and mercury fulminate.

nn. Recovered Chemical Warfare Materiel (RCWM). CWM used for its intended purpose or previously disposed of as waste, which has been discovered during a CWM response or by chance (e.g., accidental discovery by a member of the public), that DoD has either secured in place or placed under DoD control, normally in a DDESB-approved storage location or interim holding facility, pending final disposition.

oo. RCWM Pre-operational Survey. An exercise by the DRU or designee performed at the beginning of chemical cleanup operations to determine the readiness of personnel to start those operations, and ensure compliance with all provisions of the site plan and safety submission and Army regulations.

pp. Real Property. Land, buildings, and bodies of water. Examples of such property include pads, pits, basins, ponds, streams, impact areas, maneuver areas, training areas, burial sites, and buildings used for ammunition or explosives operations.

qq. Removal Action. The cleanup or removal of released hazardous substances from the environment. Such actions may be taken in the event of the threat of release of hazardous substances into the environment, such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances, the disposal of removed material, or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release. The term includes, in addition, without being limited to, security fencing or other measures to limit access, provision of alternative water supplies, temporary evacuation and housing of threatened individuals not otherwise provided for, action taken under section 9604(b), and any emergency assistance which may be provided under the *Disaster Relief and Emergency Assistance Act* [42 USC 5121 et seq.] The requirements for removal actions are addressed in 40 CFR §§300.410 and 300.415. The three types of removals are emergency, time-critical, and non-time-critical removals. (*DoD Management Guidance for the DERP*)

rr. Response Action. A CERCLA-authorized action involving either a short-term removal action or a long-term removal response. This may include, but is not limited to, removing hazardous materials, containing or treating the waste on-site, and identifying and removing the sources of ground water contamination and halting further migration of contaminants.

ss. Secondary Explosives. Secondary explosives are generally less sensitive to initiation than primary explosives and are typically used in booster and main charge applications. A severe shock is usually required to trigger a reaction. Examples are TNT, cyclo-1,3,5-trimethylene-2-4-6-trinitramine (RDX or cyclonite), HMX, and tetryl.

tt. Site Investigation. Activities undertaken to determine the presence, type, distribution, density, and location of MEC. Includes physical detection and identification of MEC as well as chemical sampling and monitoring.

uu. Site Visit. Any visit to an MEC, or suspected MEC contaminated, site prior to any MEC operation.

vv. Small arms ammunition. Ammunition without projectiles that contain explosives (other than tracers), that is .50 caliber or smaller, or for shotguns.

ww. Stakeholder. Federal, state and local officials; community organizations; property owners and others having a personal interest or involvement, or having a monetary or commercial involvement in the property, which is to undergo MEC operations/activities.

xx. Time-Critical Removal Action. Removal actions where, based on the project evaluation, a determination is made that a removal is appropriate, and that less than 6 months exists before on-site removal activity must begin (40 CFR 300.5).

yy. Unexploded Ordnance (UXO). Military munitions that have been primed, fuzed, armed, or otherwise prepared for action, and have been fired, dropped, launched, projected or placed in such a manner as to constitute a hazard to operations, installation, properties (FUDS sites), personnel, or material and remain unexploded either by malfunction, design, or any other cause (10 U.S.C. 101(e)(5)(A) through (C)).

zz. UXO and UXO-Related Operations/Activities/Procedures. See MEC-Related Operations.

aaa. UXO Qualified Personnel. Personnel who meet the training requirements for UXO personnel and have performed successfully in military EOD positions or are qualified to perform in the following service contract act contractor positions: UXO Technician II, UXO Technician III, UXO Safety Officer, UXO Quality Control Specialist, and Senior UXO Supervisor. Refer to DDESB TP 18 for detailed information for approved contract titles and qualifications.

bbb. UXO Sweep Personnel (UXOSP). UXO sweep personnel assist UXO Technicians and UXO Qualified personnel in the performance of UXO-related activities. UXOSP do not have to be a UXO Technician, however they shall be provided job and site specific training. This training is identified in TP 18. UXOSP are not involved in the execution of explosives operations and shall not have intentional physical contact with MEC.

ccc. UXO Technicians. Personnel who are qualified for (as defined by DoD) and filling Department of Labor, Service Contract Act, Directory of Occupations contractor positions of UXO Technician I, UXO Technician II and UXO Technician III. Refer to DDESB TP 18 for detailed information for approved contract titles and qualifications.

ddd. Venting. Exposing any internal cavities of MPPEH, to include training or practice munitions (e.g., concrete bombs), using DDESB- or DoD component-approved procedures, to confirm that an explosive hazard is not present.

eee. Weaponized. This term is used to denote the type of carrier used for chemical agent. If the carrier is a munition shell with a burster and fuze, the agent is said to be weaponized. If this is the case, and the filler is an industrial chemical (e.g., CG, AC, CK) the munition is to be treated and handled as RCWM.

fff. Waiver. A written authority that permits a temporary, short term (5 years or less) deviation from a mandatory requirement of U.S. Army ammunitions and explosives safety standards.

ggg. Work Plan. Describes procedures, goals, methods, and personnel used for MEC field activities, see EM 1110-1-4009.