DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
INSTALLATIONS AND ENVIRONMENT
110 ARMY PENTAGON
WASHINGTON DC 20310-0110

JUN 28 2004

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Army Safety Policy for Captured Enemy Ammunition

Captured enemy ammunition and explosives (CEA) poses significant threats to our Soldiers. In Operation Iraqi Freedom and Operation Enduring Freedom, coalition forces have experienced 33 accidents involving CEA so far, resulting in 26 fatalities and 70 injuries. While there are many unknowns associated with CEA, such as net explosive weight, hazard compatibility, and fuzing mechanisms, the use of U.S. munitions and explosives safety procedures for CEA handling, transportation, storage, and disposal will significantly enhance the safety of these operations. Therefore, it is Army policy that:

- Units that discover or capture quantities of stored or cached enemy ammunition and explosives during the course of their operations will ensure that this CEA is properly, safely, and securely handled, transported, stored, or destroyed, as necessary, to deny the enemy access to and use of this ammunitions and explosives and to safeguard personnel and assets.

- Operations involving CEA will be assessed using the five-step risk management process to provide the maximum possible protection to personnel and property from the damaging effects of an unintentional detonation and to ensure that only the minimum number of persons are exposed to the minimum quantity of CEA for the minimum time, consistent with safe and efficient operations.

- Personnel conducting CEA-related operations shall be: (1) trained in the characteristics, hazards, and hazard controls of CEA and in safety policy and standards for CEA and CEA operations; (2) qualified for the safe conduct of CEA operations; and (3) briefed on all pertinent procedures for the safe handling and/or destruction of CEA, prior to performing their specific assigned duties.

- Operations involving CEA will follow Department of Defense (DoD) and Army explosives safety standards and procedures, to the maximum extent practicable. If these standards and procedures cannot be met, document the reason they cannot be met, the actions to be taken to mitigate the risks associated with the operation being performed, and the name and rank of the official approving the deviation.

- Wartime operations may necessitate the acceptance of higher risks than would normally be acceptable during other operations. The handling, transportation, storage, and disposal of CEA will be managed differently, as outlined in the attachment, for wartime operations and for stabilization/transition operations.

The chain of command is responsible for continually evaluating compliance with this policy and the attached standards and procedures for safe handling, transportation, storage, and disposal of CEA to ensure the safety of personnel and assets.

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This policy is consistent with DoD 6055.9-STD and will be incorporated into the next change to Army Regulation 385-64 and Department of the Army Pamphlet 385-64. My point of contact on this issue is Mr. Jim Patton, (703) 697-3123 or DSN 227-3123. Technical point of contact is Mr. Ken Williams, U.S. Army Technical Center for Explosives Safety, (918) 420-8756 or DSN 956-8756.

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Standards and Procedures for Safe Handling, Transportation, Storage, and Disposal of Captured Enemy Ammunition (CEA)

A. Wartime and Periods of Active Hostilities

- **Provide the maximum possible protection to personnel and property from the damaging effects of an unintentional detonation.**

- **Ensure that the minimum number of persons will be exposed to the minimum quantity of CEA for the minimum time, consistent with safe and efficient operations.**

1. Discovery, assessment, and disposition.

(a) When CEA is encountered during combat operations, the senior maneuver commander must determine - based on safety, security, and intelligence considerations - whether it will be destroyed, moved, or held in place.

(b) The capturing unit will immediately secure the site and request that qualified personnel (e.g., EOD) inspect the CEA as soon as possible to determine its condition, type, serviceability, caliber, and storage compatibility group (SCG). Sandbag barricades can be built, where practicable and when needed, near (but not touching) the CEA to provide fragment protection in the event of an accidental detonation prior to the arrival of EOD personnel.

(c) Any special or unusual characteristics that may be of interest to technical intelligence personnel should be noted and reported through appropriate channels. Training Circular 20-32-5, Commander's Reference Guide, Land Mine and Explosives Hazards (Iraq), 13 Feb 2003, contains a nine-point format for reporting unexploded ordnance (UXO) that should be adapted and used for reporting CEA. When units are not sure as to the CEA's characteristics, the CEA should not be moved or destroyed because the unknown hazards (e.g., the toxic and fire hazards associated with liquid propellant, radiological hazards, the hazards associated with chemical or biological warfare material, etc.) may result in a catastrophic incident.

(d) CEA that has been determined to be hazardous should be separated from serviceable CEA and disposed of as soon as possible. CEA determined to be unsafe for handling and/or transport will normally be immediately destroyed in place or in the general vicinity of discovery by EOD personnel who will ensure that adequate protective measures (e.g., separation distances, use of barricades) are taken.

(e) The senior maneuver commander is responsible for the security of the CEA until final disposition.

2. Training and qualification.

(a) Only those personnel trained and authorized to conduct CEA operations may handle, assess, store, transport, demilitarize or dispose of CEA. Furthermore, personnel conducting CEA operations shall be under the direct supervision of explosives safety qualified personnel (e.g., Explosive Ordnance Disposal (EOD) or Quality Assurance Specialist

Ammunition Surveillance (QASAS)) unless explosives safety qualified personnel have determined and documented that the risk associated with the CEA operation is acceptable. When EOD or QASAS personnel are not available, Special Operations Forces (SOF) Commanders (O-5 and above) may authorize SOF engineer sergeants (PMOS 18C) to survey and segregate CEA, until EOD or QASAS become available. The authorization may include the destruction of CEA.

(b) Theater EOD assets will be used to the fullest extent possible to assist in the survey, segregation, and destruction of CEA. Maximum use of EOD and familiarity training about foreign munitions (i.e., ammunition and explosives) should be made to familiarize theater forces with specific types and aspects of foreign munitions in their areas of operation.

3. Transportation, holding, and storage of CEA.

(a) When CEA is to be transported or placed in holding or storage, the five-step risk management process will be used to identify and mitigate associated risks to provide the maximum possible protection to personnel and property from the damaging effects of an unintentional detonation of CEA.

(b) CEA should be assessed to determine, if possible, the SCG. Some SCG present an increased hazard when stored together or incorrectly transported. Such SCG must be segregated from conventional high explosive (HE) munitions and from each other. At least two explosives accidents in Iraq occurred due to ignition of white phosphorus (WP) that led to the detonation of HE and other munitions stored with it. Munitions and SCG requiring segregation from HE and each other are:

(1) Munitions that contain WP or other compounds that ignite spontaneously when exposed to air (e.g., examples include Yugoslav 60mm Mortar, WP and USSR 82mm Mortar, WP, and 122mm Projectile, WP). Such munitions would be designated SCG - H.

(2) Munitions that contain flammable liquid or gel fill (e.g., USSR, 80mm, fuel air explosives or FAE rocket, Egyptian FAE bomb). Such munitions would be designated SCG - J.

(3) Munitions that contain toxic chemical agent fill. Such munitions would be designated SCG - K.

(4) Unique, damaged or suspect munitions (e.g., SA-2, Ground to Air Missiles, ground to ground rockets or similar items that have liquid fuel rocket motors). Such munitions would be designated SCG - L.

(c) When transporting CEA other than small arms ammunition (.50 cal and below), the CEA should be placed in an unoccupied conveyance (generally a trailer). Consideration should be given to using an armored vehicle to tow the trailer to provide additional protection to personnel. If a trailer is unavailable, consult with higher command for guidance to minimize exposure.

(d) CEA must be secured, in some manner, to prevent both movement and its impact with other CEA during transport (e.g., placing CEA on a bed of sand, inside wooden boxes and then securing the boxes in the transport conveyance with strapping or dunnage). Consideration must be given to protecting exposed fuzes, primers, initiators and safety devices.

(e) Following transport of CEA, any change noted in the condition of CEA (e.g., the discovery of a missing safety pin, explosives filler exudation, or other unusual conditions) will be reported to EOD personnel for a new assessment.

(f) The application of adequate explosive safety separation distances to CEA provides protection to personnel and materiel assets and helps commanders ensure that their combat capabilities are maintained. CEA will be separated from personnel and assets by distances prescribed in Army explosives safety standards (DA Pam 385-64, Chapter 5 or Chapter 14) to protect personnel and assets from blast and fragments from an accidental detonation. A pictorial illustration of these distances and their effects are provided in Attachment 1. Quality Assurance Specialist Ammunition Surveillance (QASAS) personnel or explosives safety specialists are a good source in determining the required distances.

(g) U.S. Army units will only retain CEA for security, intelligence, RDT&E, training, demilitarization or other purposes when authorized by the headquarters exercising overall operational control of the discovering unit's operations. Such CEA shall be clearly indicated as "Serviceable." Serviceable CEA will be stored in a separate area from U.S. ammunition and per DA PAM 385-64, Table 15-2. CEA will not be stored closer than public traffic route (PTR) distance.

(h) In the event of a lightning storm, personnel will evacuate to at least inhabited building distance (IBD) from the CEA. In the event of a fire or explosion at a CEA storage area, personnel will evacuate to an area not closer than 4,000 feet but as far away as possible. Personnel will not re-enter the evacuation zone until EOD personnel have surveyed the area and declared it safe for re-entry.

B. Contingence, Combat Operations, and Military Operations Other Than War

In addition to the Wartime and Periods of Active Hostilities CEA guidance in Section A above, the following additional control measures apply:

1. Assessment.

(a) QASAS or other trained and certified explosives safety personnel (e.g., UXO qualified personnel employed by or under contract with the U.S. Army) will inspect CEA as soon as possible at designated storage sites to determine its condition, type, and caliber. If EOD has not already assessed the safety of the item or if damage appears to have occurred in transit, an assessment of the safety of the CEA must be made prior to it being placed in storage.

(b) The net explosives weight (NEW) of CEA will be calculated using Service publications on foreign munitions or by using the NEW of similar type and caliber munitions (DoD or foreign). For unknown munitions, the entire (gross) weight of the munition will be used as the item NEW. (Note: For foreign munitions, EOD personnel are normally the best source of NEW information. A non-classified source of NEW is the Iraq Ordnance Identification Guide prepared by the Naval EOD Technical Center, Indianhead, MD.)

(c) The NEW will be used to calculate separation distance for storage and disposal operations.

2. Holding and Storage Areas.

(a) Qualified explosives safety personnel (e.g., explosives safety specialists, QASAS, Ammunition Logistics Assistance Representatives (LARS), or EOD personnel) will provide safety guidance in establishing CEA storage and holding areas.

(b) Explosives licenses will be developed to establish allowable explosives limits prior to movement of CEA to a holding or storage area.

(c) If space is available, store CEA in multiple small stacks, properly segregated and separated. Such storage is preferable over a few large stacks.

(d) Fire prevention measures (separation from flammable and combustible material and use of fire fighting equipment), which will be inspected on a regular basis, will be employed.

(e) The process used to calculate safe separation distances is found in DA PAM 385-64.

(f) CEA will be controlled and safeguarded in the same manner as that prescribed for DoD munitions of similar hazard classification and storage compatibility group, security classification, and caliber or type (e.g., CAT-I-like CEA will be handled as CAT I).

(g) When unserviceable CEA must be stored in the same storage facility as either serviceable CEA or DoD munitions, it will be clearly indicated as "Serviceable" and physically separated (e.g., in a sandbagged or other barricaded area).

3. Demilitarization and Disposal.

(a) Only EOD or UXO qualified personnel employed by or under contract with the U.S. Army will be used to demilitarize or dispose of CEA.

(b) Destruction sites for CEA will be separated from other locations by intentional detonation distances specified in DoD 6055.9-STD. Separation from the destruction point to storage locations of CEA awaiting destruction will be a minimum of unbarricaded intraline (IL) distance, preferably public traffic route distance.

4. Site Planning.

Locations used for storage or demolition of CEA where operations are expected to exceed 12 months require a DoD Explosives Safety Board (DDESB) approved site plan. Those facilities where operations are not expected to continue for more than 12 months require a risk assessment, which weighs the need for the facility against the potential effects of a mishap (e.g., mission impact, loss of resources, turnaround times, etc.), approved at the appropriate level
(see AR 385-64) in the chain of command.

C. Deviation from Standards and Procedures.

When the tactical situation dictates deviation from these standards and procedures, the senior maneuver commander will apply the five-step risk management process and protect personnel and assets to the maximum degree possible.

D. Definitions.

1. Ammunition Logistics Assistance Representatives - ammunition logisticians, generally working within the AMC Logistics Assistance Office, who provide conventional ammunition logistical support to the warfighter and Unified Combatant Commands.

2. Captured enemy ammunition (CEA) - all ammunition products and components produced for or used by a foreign force that is hostile to the United States [that is or was engaged in combat against the United States] in the custody of a U.S. military force or under the control of a DoD Component. 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 of the above. CEA can also include NATO or U.S. manufactured munitions that may not have been under U.S. custody or control.

3. Explosive Ordnance Disposal (EOD) Personnel - military personnel who have graduated from the Naval School, Explosive Ordnance Disposal; are assigned to a military unit with a Service-defined EOD mission; and meet Service and assigned unit requirements to perform EOD duties. EOD personnel have received specialized training to address explosive and certain chemical agent hazards during both peacetime and wartime. EOD personnel are trained and equipped to perform Render Safe Procedures (RSP) on nuclear, biological, chemical, and conventional munitions, and on improvised explosive devices.

4. Explosives Safety Specialist - a U.S. Government Civilian in a safety career field with specialized training and background in DoD and DoD Component explosives safety standards and procedures.

5. Holding Area - a temporary location used to store ammunition and explosives until it can be safely moved to a permanent storage area.

6. Inhabited building distance (IBD) – at this distance personnel are not expected to be killed or seriously injured. Vehicles and aircraft will be serviceable without damage from blast, but may be struck by fragments. Unstrengthened structures, tents, thin-skinned aluminum or sheet metal, modular offices, will sustain superficial damage. This distance is required to all inhabited structures and critical mission assets.

7. Intraline distance (IL) – at this distance personnel will sustain serious injury or even death. Vehicles and aircraft will be extensively damaged or a total loss. Unstrengthened buildings will receive extensive damage. Ammunition supplies will survive but may be damaged beyond use.

8. Public traffic route distance (PTR) – at this distance personnel may be injured due to fragments and debris. They may sustain temporary hearing loss. Vehicles and aircraft may receive fragment damage but with minor repair will be operational. Unstrengthened buildings are likely to receive moderate damage. Ammunition supplies should be useable following an explosives event.

9. Serviceability – new, used, repaired, or reconditioned ammunition, explosives, or components which are serviceable and issueable to all customers for its intended purpose. Some items may be serviceable but could have use restrictions such as limited to firing from a specific model of weapon.

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

11. Stabilization/Transition operations – the period between active wartime operations and peacetime operations.

12. Storage area – a permanent or semi-permanent location used for storage, maintenance, renovation, and/or disposal of ammunition and explosives. The location may be for unit level storage or depot operations.

13. Unexploded ordnance (UXO) - military munitions that (A) have been primed, fuzed, armed, or otherwise prepared for action; (B) have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material; and (C) remain unexploded either by malfunction, design, or any other cause.

14. UXO-qualified personnel - Personnel who have performed successfully in military EOD positions, or are qualified to perform in the following Department of Labor, Service Contract Act, Directory of Occupations, contractor positions: UXO Technician II, UXO Technician III, UXO Safety Officer, UXO Quality Control Specialist, or Senior UXO Supervisor.

E. Sources of information.

Situations that are not detailed here should be communicated to higher headquarters for guidance, or contact the USATCES at (918) 420-8919, DSN 956-8919, or sjmac-es@dac.army.mil. Additional information can be found in the following references:

1. AR 385-64, U.S. Army Explosives Safety Program, 28 November 1997, and Change 1, 1 February 2000.

2. DA PAM 385-64, Ammunition and Explosives Safety Standards, 28 November 1997, and Change 1, 15 December 1999.

3. DoD 6055.9-STD, DoD Ammunition and Explosives Safety Standards, July 1999.

4. TC 20-32-5, Commander's Reference Guide, Land Mine and Explosives Hazards (Iraq), 13 Feb 2003,

5. Unnumbered, Operational Support Guide for Joint Service EOD, Iraq Area of Operation, November 2002.

6. Unnumbered, Operational Support Guide for Joint Service EOD, Afghanistan Area of Operation, April 2002.

7. U.S. Army Technical Center for Explosives Safety website, www.dac.army.mil