

ALARACT 331/2012

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SUBJECT: IMPROVISED/HOMEMADE EXPLOSIVES SAFETY STANDARDS

1. References:

- A. FM 5-19, Composite Risk Management
- B. DA PAM 385-30, Mishap Risk Management
- C. AR 385-10, The Army Safety Program
- D. DA Pam 385-64, Ammunition and Explosives Safety Standards
- E. ALARACT 016/2012, 24 Jan 12, Subject: Army EOD Improvised/Homemade Explosives Training Safety
- F. AR 190-12, Military Working Dog Program
- G. DA PAM 190-12, Military Working Dog Program
- H. AR 385-63, Range Safety
- I. ALARACT 301/2011, 10 Aug 11, Subject: Nonstandard Ammunition and Explosives
- J. AR 75-15, Policy for Explosive Ordnance Disposal

2. General

A. For the purposes of these standards, Improvised Explosives/Homemade Explosives (IE/HME) are defined as finished explosive material that is ready to be utilized in an improvised explosive device (IED). IE/HME includes primary (for example, triacetone triperoxide (TATP), hexamethylene triperoxide diamine (HMTD), methyl ethyl ketone peroxide (MEKP)), secondary (for example, TNT, C4, dynamite) and/or tertiary (for example, ammonium nitrate) explosives created or combined to produce an explosive material that is intended for use in an IED (or to simulate IED components for training purposes). Though commercially produced chemicals and explosives may be used to produce IE/HME, they are not, in and of themselves, considered IE/HME.

B. Operations involving IE/HME will employ Risk Management per references 1.A and 1.B to provide the maximum possible protection to personnel and property. Commanders will ensure that only the minimum number of personnel are exposed to the minimum quantity of explosives for the minimum time, consistent with safe and efficient operations per references 1.C and 1.D.

3. IE/HME incidents and emergencies. The primary focus in an IE/HME incident or emergency is to mitigate the risk of a catastrophic explosive event. All other functions are secondary.

A. When suspected IE/HME is encountered during operations, the responsible commander:

(i) Will use Explosive Ordnance Disposal (EOD) units/assets to the fullest extent possible to assist in the survey, segregation, and disposal of IE/HME.

(ii) Will not allow personnel to handle this material, will ensure that it is secured and will immediately notify the supporting EOD unit to confirm, analyze, collect, transport and/or dispose of the IE/HME. In situations where tactical considerations do not permit such security/notification, only those trained in

identification and/or explosive disposal procedures will interact with bulk IE/HME.

(iii) Will employ the following general safety practices. Additional precautions may be provided by EOD unit personnel, Explosives Safety personnel (i.e., civilian job series 0018 or 0803) and /or Quality Assurance Specialist (Ammunition Surveillance) (QASAS) personnel and will be based on local conditions:

(a) Do not use flame or spark producing devices in the vicinity of IE/HME.

(b) Do not handle, step on, or apply unnecessary pressure to IE/HME.

(c) Limit personnel proximity to the IE/HME to the maximum extent possible.

(d) Limit personnel exposure time in confined areas, as a toxic atmosphere or low oxygen levels may be present.

(e) Prohibit exposure of IE/HME to potential sources of stray electrical current, such as electromagnetic radiation (from devices such as radios or cell phones) and static electricity.

NOTE: Soldiers encountering caches of finished or in-process IE/HME are dealing with unstable, very sensitive, noxious materials that could result in serious injury or death.

B. EOD unit personnel:

(i) May handle, assess, store, transport, render safe or dispose of IE/HME as required, per local EOD unit commanders' operational orders, guidance, or procedure, only when trained and authorized to conduct EOD operations involving IE/HME.

(ii) Will take only a minimal amount of sample material for identification and to support the intelligence cycle, once the tactical situation allows.

(iii) Will assist commanders in assessing the risks posed by IE/HME. Because of the unknown explosive effects of finished IE/HME, the determination of adequate explosives safety separation distances to provide protection to personnel and materiel assets will be difficult to assess. Until positive identification is made, IE/HME should be assumed to be equivalent to the effects of TNT (1 pound of IE/HME = 1 pound of TNT).

C. EOD support to civil authorities

(i) For civil support operations, only EOD unit personnel will be utilized in support of a request from civil authorities to respond to a suspected IE/HME incident/emergency. EOD support will be limited to technical assistance to civil authorities and assistance with rendering-safe and disposal operations.

(ii) Suspected IE/HME will be assumed to be in the most hazardous state or condition until confirmed otherwise by a military or civilian explosives/munitions response authority.

(iii) IE/HME encountered in support of local authorities or on an installation shall be reported as serious incidents per AR 190-45.

(iv) Recovered bulk IE/HME should not be stored on an Army installation (see paragraph 6.B below).

Transportation of recovered bulk IE/HME is only authorized to local disposal areas and will be in accordance with local, state and federal standards. Laboratory quantities of recovered IE/HME may be temporarily stored on an Army installation for confirmation/testing and will be stored and handled per reference 1.C and ACOM/ASCC/DRU/installation policy.

D. Special operations. When EOD unit personnel are not available in combat or in support of Army Special Forces Operational Detachments Alpha, Special Operations Forces (SOF) commanders (O-5 and above) may authorize SOF engineer sergeants (PMOS 18C) to survey, segregate and destroy IE/HME.

E. Military Working Dog (MWD) operations. MWD operations will comply with references 1.F and 1.G.

4. Research Development Test & Evaluation (RDTE) operations. RDTE operations involving IE/HME and/or precursor materials will comply with applicable safety standards per reference 1.C and ACOM/ASCC/DRU policy.

5. Qualification and Training. IE/HME training venues will keep only the minimum amount of finished IE/HME required to execute training and will comply with reference 1.H.

A. Personnel conducting IE/HME identification, analysis, collection, render-safe, transportation, storage, disposal and/or training shall be:

- (i) Trained in the characteristics, hazard controls, safety policy and standards for IE/HME operations;
- (ii) Qualified for the safe conduct of IE/HME operations per occupational specialty or ACOM/ASCC/DRU standards;
- (iii) Briefed on all pertinent procedures for the safe handling and/or destruction of IE/HME and constituent materials, prior to performing their specific assigned duties.

B. IE/HME Familiarization Training

- (i) In addition to the limitation established for EOD Soldiers by reference 1.E, Army personnel will not attend training in which students synthesize primary IE/HME. The significant hazards and high risks associated with this task are not outweighed by the benefits of this type of training.
- (ii) Army personnel will participate in HQDA-approved IE/HME familiarization training courses only. A list of approved courses is available on Army Knowledge Online at <https://www.us.army.mil/suite/doc/37690025>. Requests for approval for personnel to utilize other government or contracted IE/HME familiarization training courses not on this list will be submitted to the Army IE/HME Safety Working Group at [usarmy.pentagon.hqda-aso.mbx.iehme@mail.mil](mailto:usarmy.pentagon.hqda-aso.mbx.iehme@mail.mil). Requests will be submitted as early as possible, and no later than 90 days prior to the training start date to allow sufficient time to review course material.

C. IE/HME Military Working Dog (MWD) Imprinting Training

- (i) MWD imprinting and training will be conducted in accordance with references 1.F, 1.G and 1.D (see chapter 13 of DA Pam 385-64) and when possible, will utilize non-energetic compounds.
- (ii) Storage and use of IE/HME used for MWD imprinting and training will comply with paragraph 6 below.

6. Storage and Transportation

A. IE/HME used for training is considered nonstandard ammunition per reference 1.H. Storage and transportation of IE/HME used for training will comply with reference 1.I.

B. When circumstances require the storage of recovered IE/HME or precursor material:

- (i) Qualified explosives safety personnel (such as, Explosives Safety, QASAS, Ammunition Logistics Assistance Representatives (LARS), ammunition warrant officers, or supporting EOD unit personnel) will provide safety guidance in establishing IE/HME holding areas.
- (ii) Fire prevention measures (such as, separation from flammable/combustible material and use of firefighting equipment, informing the Fire Department of hazards) will be employed and inspected on a regular basis.
- (iii) IE/HME will be stored in sited and/or licensed locations per DA Pam 385-64.
- (iv) The senior commander and affected EOD and explosive safety personnel will be informed of any

safety considerations specific to the IE/HME.

C. The emergency transport of bulk quantities of IE/HME should be avoided. Transportation of recovered bulk IE/HME, when required, will not be conducted until IE/HME has been positively identified and is only authorized to local disposal areas.

D. Recovered bulk IE/HME encountered by EOD unit personnel in support of civil support operations will not be transported on or disposed of on an Army installation. See paragraph 3.C.(iv) above. The exception is laboratory quantities of IE/HME used for analysis.

E. Movement and transfer of IE/HME must comply with national, international, and host nation specific transportation laws and regulations.

Note: IE/HME precursors may be classified as explosives and/or hazardous material. Storage and transportation requirements are dependent on this classification (see reference 1.C and 49 CFR).

7. Army will incorporate the enclosed standards in DA PAM 385-64, Ammunition and Explosives Safety Standards, and AR 75-15, Policy for Explosive Ordnance Disposal, when they are next revised.

8. Questions regarding this message may be sent to Mr. Graham Walker at the Office of the Director of Army Safety, 703-697-1322, [graham.k.walker.civ@mail.mil](mailto:graham.k.walker.civ@mail.mil).

9. This message expires 1 December 2014.