

OPNAVINST 8020.14A
15 Feb 2013

**DEPARTMENT OF THE
NAVY EXPLOSIVES
SAFETY MANAGEMENT
POLICY MANUAL**



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
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N411
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OPNAV INSTRUCTION 8020.14A

From: Chief of Naval Operations

Subj: DEPARTMENT OF THE NAVY EXPLOSIVES SAFETY MANAGEMENT
POLICY MANUAL

Ref: (a) SECNAVINST 5100.10J
(b) DoD 6055.09-M, DoD Ammunition and Explosives Safety Standards, 29 February 2008
(c) DoD Directive 6055.9E of 19 August 2005
(d) DoD Instruction 6055.16 of 29 July 2008
(e) OPNAVINST 5090.1C
(f) MCO P5090.2A
(g) DoD Instruction 4145.26 of 9 April 2005
(h) DoD 4145.26-M, DoD Contractor's Safety Manual for Ammunition and Explosives, 13 March 2008
(i) OPNAVINST 5430.48E
(j) MCO P8020.10B
(k) OPNAVINST 5100.23G
(l) OPNAVINST 5102.1D/MCO P5101.1B
(m) NAVSEAINST 5450.117

1. Purpose. To provide policy and assign responsibilities for managing the Department of the Navy (DON) Explosives Safety Management Program (ESMP) as required by references (a) through (d). The Assistant Commandant of the Marine Corps has determined this instruction is applicable to the United States Marine Corps (USMC) total force. This instruction is a complete revision and should be reviewed in its entirety.

2. Cancellation. OPNAVINST 8020.14/MCO P8020.11.

3. Scope. The policies and processes contained in this instruction are applicable to:

a. All DON commands, ashore and afloat. It implements and amplifies the mandatory ammunition and explosives (AE) safety standards of references (a) through (d) as established by the Secretary of Defense (SECDEF), the Secretary of the Navy

(SECNAV), Department of Defense Explosives Safety Board (DDESB), and the explosives safety elements of the Navy Environmental and Natural Resources Program, and the Marine Corps Environmental Compliance and Protection Program, references (e) and (f) respectively.

b. Tenant commands of other Military Services, government agencies, and contractor operations located on Navy commands and installations.

c. Naval units who are tenants on other Military Service or foreign host nation installations. DON commands that are tenants aboard another Military Service's or foreign host nation installation shall adhere to the Service's or host nation installation's explosives safety criteria when the explosives safety criteria is more restrictive.

d. DON commands operating on foreign soil shall follow policies and procedures established by the combatant commander. In the event an explosives safety process has not been established, DON commands shall adhere to this instruction and other applicable DON explosives safety related instructions, orders, and manuals.

e. All contractors performing functions and operations involving AE material under contractual agreements with the Navy or Marine Corps. These contracts will adhere to guidance provided in references (g) and (h), as well as other criteria provided by the host activity where the contract is to be performed.

f. Conventional components of nuclear weapons systems and warheads, such as rocket motors, separation charges, and igniters as they affect or are affected by storage (i.e., lightning protection, hazards of electromagnetic radiation to ordnance (HERO), hazard compatibility, and explosive safety quantity distance (ESQD) criteria).

4. Responsibilities

a. The Assistant Secretary of the Navy (Energy, Installations, and Environment) (ASN(EI&E)) has the responsibility to ensure that the DON has an ESMP in place, per reference (a). ASN(EI&E) shall:

(1) Designate two qualified voting members (one primary and one alternate) for the Navy to the DDESB.

(2) Designate two qualified voting members (one primary and one alternate) for the Marine Corps to the DDESB.

(3) Issue secretarial exemptions or certifications when operational necessity requires deviations from the requirements of reference (b).

(4) Delegate authority to the Chief of Naval Operations (CNO) to accept risks for DON activities that need to deviate from explosives safety criteria for a requirement that meets the threshold of being a strategic or compelling operational necessity.

b. Deputy Chief of Naval Operations (Fleet Readiness and Logistics) (CNO (N4)) through the Director, Logistics Programs and Business Operations (OPNAV (N41)) and the Ordnance Programs and Policies Branch (OPNAV N411) shall, per reference (i):

(1) Nominate two qualified individuals to serve as the Navy's voting members (one primary and one alternate) and liaison with the DDESB on all matters affecting the Navy contained in references (b), (c), and (d).

(2) Ensure that a qualified individual is assigned as a Navy liaison officer to the DDESB.

(3) Issue policy and command authority over the application of the DON ESMP.

(4) Administer and provide oversight of the DON ESMP and communicate with the DDESB and other Military Services on matters relevant to the DON ESMP to include the U.S. Coast Guard when under operational control to the Navy.

(5) Provide Navy representation to the DDESB, joint staff, and other joint forums where explosives safety policy is discussed.

(6) Approve, deny, or forward requests for deviations to explosives safety criteria contained in reference (b).

(7) Assign Naval Ordnance Safety and Security Activity (NOSSA), via Commander, Naval Sea Systems Command (COMNAVSEASYSYSCOM), to serve as the DON technical authority for explosives safety and function as the principal authority on all matters related to naval ordnance storage, handling, and transportation safety policy worldwide.

(8) Provide an observer to the Weapon System Explosives Safety Review Board (WSESRB) and Ammunition and Hazardous Materials (AMHAZ) Review Board as required.

c. The Commandant of the Marine Corps (CMC), Safety Division (SD) shall designate the Commander, Marine Corps Systems Command (COMMARCORSYSYSCOM) responsibilities for implementation of the Marine Corps ESMP.

d. COMMARCORSYSYSCOM has designated the Program Management Office, Ammunition (PMM-116) to:

(1) Nominate two qualified individuals to serve as the Marine Corps' voting members (one primary and one alternate) and liaison with the DDESB on all matters affecting the Marine Corps contained in references (b), (c), (d), and (j).

(2) Provide executive agency management and oversight functions to the Marine Corps ESMP.

(3) Provide Marine Corps representation to the DDESB.

(4) Provide Marine Corps representation to the DON ESMP.

(5) Provide a Marine Corps representative to the WSESRB for matters pertinent to ground AE safety.

(6) Provide Marine Corps representation to joint service and multi-national working groups or teams, as appropriate.

(7) Provide Marine Corps point of contact for technical explosives safety matters involving the Military Services, Defense Logistics Agency, U.S. Coast Guard, foreign services, and other appropriate public and private agencies.

(8) In coordination with the CMC, manage all explosives safety and ordnance environmental programs applicable to the Marine Corps.

(9) Establish additional explosives safety requirements, per reference (j), that are unique for Marine Corps commands.

(10) Process for approval or rejection all Marine Corps requests for explosive safety deviations, non-standard munitions storage, and Marine Corps site plans.

(11) Provide explosives safety technical assistance as requested.

(12) Represent CMC during explosives safety evaluations and inspections of Marine Corps commands.

(13) Provide guidance and oversight on Marine Corps munitions response actions and material potentially presenting an explosive hazard (MPPEH) program.

(14) Provide Marine Corps point of contact and oversight for AE personnel qualification and certification requirements.

(15) Participate in changes to applicable explosives safety publications and directives affecting the Marine Corps ESMP.

(16) Communicate with the DDESB regarding explosives safety technical advice, ammunition hazard class division (HC/D), ordnance assessment, electrical safety, insensitive munitions, explosives safety related reports and investigations, explosives safety site plans, explosives safety submissions, environmental issues pertaining to ordnance, and other operational needs for the Marine Corps.

e. Commander, Naval Safety Center (COMNAVSAFECEN) shall:

(1) Provide safety support in establishing policy and naval safety programs for explosives and weapons per references (k) and (l).

(2) Collect mishap reports and analyze data with emphasis on cause and statistical trends.

(3) Collect, store, and disseminate safety information.

(4) Provide membership to the WSESRB.

(5) Submit explosive mishap report analysis and resolution reports to OPNAV (N411) annually by 31 December for the previous fiscal year.

f. COMNAVSEASYSKOM shall:

(1) Manage and administer the DON ESMP.

(2) Assign NOSSA with the mission, functions and tasks as the technical authority on safety and security for ordnance and explosives. Publish appropriate documents necessary to provide direction and procedures for amplifying DON policy on explosives safety.

g. Commander, Navy Installations Command shall guide and assist Navy regional commands and installation commanders with implementing the policies and procedures contained in this instruction.

h. Commander, Naval Facilities Engineering Command (COMNAVFACENGCOM) shall:

(1) Develop criteria, standards, and regulations for facilities, structures, and ranges designed for AE operations.

(2) Coordinate with NOSSA to ensure compliance of explosives safety site approvals, facility planning, and explosives safety submissions for AE and related facilities or operations in proximity to existing ESQD arcs.

i. Commanders, commanding officers (CO), and officers in charge shall take action to ensure that the policies, guidance, and procedures within this instruction are implemented.

j. NOSSA shall:

(1) Serve as the DON technical authority and hold the DON technical warrant for explosives safety in support of COMNAVSEASYSKOM's responsibilities, per reference (m).

(2) Provide a qualified individual to serve as the Navy's alternate voting member to the DDESB.

(3) Communicate with the DDESB for the Navy with respect to explosives safety technical advice, ammunition hazard classification, ordnance assessment, electrical safety, HERO, insensitive munitions, explosives safety related reports and investigations, explosives safety site plans, explosives safety submissions, environmental issues pertaining to ordnance and other operational needs.

(4) Provide technical expertise and policy interpretation and guidance to the Office of the Chief of Naval Operations (OPNAV), COMMARCORSSYSCOM, and Navy commands on matters involving explosives safety.

(5) Provide representation to joint service and multi-national working groups or teams, as appropriate.

(6) Establish and manage programs as they pertain to AE for explosives safety training, ordnance transportation, shipboard weapons integration explosives safety, HC/D, electromagnetic environmental effects (E3), HERO, and insensitive munitions.

(7) Publish instructions, manuals and other publications that provide technical direction and procedures to amplify Department of Defense (DoD) and DON policy on explosives safety.

(8) Establish and manage the WSESRB to review all DON afloat platforms and weapon system acquisition programs as the Navy's designated authority for weapons system safety.

(9) Provide safety guidance and independent comprehensive reviews on the ability of new acquisition and afloat platform programs to safely handle and stow AE.

(10) Establish criteria for explosives safety ashore and afloat.

(11) Provide the chair and technical representative(s) for the AMHAZ Review Board.

(12) Provide formal technical review of all DON facility site plans (worldwide) where explosives are stored, handled, or maintained prior to forwarding to DDESB for approval.

(13) Serve as DON point of contact for technical explosives safety matters involving other DoD components, Federal agencies, foreign services, and other public and private agencies.

(14) Review requests originating within DON for exemptions and waivers from established explosives safety criteria and advise OPNAV as to the technical validity of such requests.

(15) Manage explosives safety aspects of the Navy munitions response and MPPEH programs.

(16) Provide ordnance environmental technical support to OPNAV and Navy commands.

(17) Provide Navy point of contact and oversight for AE personnel qualification and certification requirements.

(18) Conduct explosives safety inspections (ESI) of all DON shore commands and shipboard explosives safety inspections (SESI) of all Navy ships where AE is handled or stored to validate compliance with appropriate policy and criteria. This will include periodic trend analysis reports to OPNAV (N41).

(19) Establish and manage programs pertinent to quality evaluation, hazard classification, HERO, insensitive munitions and E3.

5. Records Management. Records created as a result of this instruction, regardless of media and format, shall be managed per SECNAV Manual 5210.1 of January 2012.



P. H. CULLOM
Vice Admiral, U.S. Navy
Deputy Chief of Naval Operations
(Fleet Readiness and Logistics)

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CHAPTER 1

EXPLOSIVES SAFETY MANAGEMENT AND OVERSIGHT

- Ref: (a) DoD Instruction 6055.16 of 29 July 2008
(b) DoD Directive 6055.9E of 19 August 2005
(c) DoD 6055.09-M, DoD Ammunition and Explosives Safety Standards, 29 February 2008
(d) MCO P8020.10B
(e) NAVSEA OP 4 of 1 Apr 2012
(f) OPNAVINST 5100.23G
(g) NAVSEA OP 5, Volume 1, of 1 Jul 2011
(h) OPNAVINST 5090.1C
(i) CNO ltr Ser N457F/452-98 of 27 Jul 98 (NOTAL)

1. Purpose. To establish DON explosives safety policy and assign management oversight responsibilities as required by references (a) through (c).

2. Background

a. The SECDEF established basic explosives safety standards and minimum ESQD criteria to be observed by DoD components in the performance of operations involving AE. These standards and criteria apply to U.S. military and civilian personnel, contractors involved in management, and operations involving the manufacturing, assembly, testing, ordnance assessment, siting, handling, transportation, and storage of DoD AE. The policy herein also applies to the handling, storage, and use of commercial and foreign AE when in custody of a DON activity or property.

b. The goal within DON is to minimize risk of incidents that might severely impact the operational readiness and capabilities of the fleet and supporting infrastructure. Lessons learned from past AE incidents suggest that most may have been avoided if personnel recognized and stopped the unsafe situation before any harm to personnel or assets occurred.

3. Policy

a. Per reference (a), the DON shall establish and maintain a viable ESMP.

b. NOSSA, as the DON technical authority for explosives safety, shall establish and implement guidance, processes, and procedures as necessary to support the DON ESMP.

c. COMMARCORSYSCOM, with technical assistance from NOSSA, shall provide policy and guidance for implementing the DON ESMP within the Marine Corps per reference (d).

d. Reference (e) amplifies this DON policy and provides mandatory technical direction and procedures, including ship design requirements and standards, for the safe handling, stowage and use of all AE afloat.

e. Each activity entrusted with the use or responsibility to manufacture, maintain, store and stow, handle, or transport AE shall establish and maintain a viable ESMP.

f. Per reference (f), the installation CO is responsible for explosives safety to include all tenant activities and personnel.

g. Every shore installation responsible for manufacturing, assembling, disassembling, handling, storing, or transporting AE shall appoint an explosives safety officer (ESO) per reference (g). The ESO shall serve as the primary point of contact for all aspects of the DON ESMP on the installation. If the ESO designated for the installation is employed by a tenant or other DON organization, the ESO must maintain direct access to the installation CO.

(1) When tenant command ESOs are present at locations where there is an installation ESO, the installation ESO shall oversee compliance of the tenant command's ESMP.

(2) The installation ESO shall have full access and authority necessary to implement and enforce the installation's ESMP, to include tenant operations and facilities, as the representative of the installation CO.

(3) The ESO shall have access to the installation and tenant command leadership (CO, executive officer, chief of staff) in order to advise them of problems and issues affecting explosives safety.

(4) Personnel assigned as an installation ESO shall not be burdened with collateral duties that may interfere with performing the primary purpose for enforcing explosives safety. The duty of an ESO is recognized as an inherently governmental position unless a deviation to this policy is approved in writing for an operational necessity by COMMARCORSYSCOM (PMM-116) for Marine Corps installations, fleet commanders (FLTCDR), or OPNAV (N411) for Navy installations.

(5) The ESO will not serve in a subordinate capacity to the installation or command ordnance and weapons department officer in order to preserve explosives safety oversight integrity.

(6) Reference (g) provides specific responsibilities and duties of regional, installation, and command ESOs. Installations may delegate ESO responsibilities to tenant commands; however, the installation CO must acknowledge the risk of delegation in formal documentation, per references (f) and (g), and retain ultimate responsibility for the overall safety of the installation.

(7) A host installation CO, with the exception of Strategic Weapons Facility, Pacific; and Strategic Weapons Facility, Atlantic; is responsible for establishing formal documentation of explosives safety roles and responsibilities as defined in reference (g) for tenants that manage AE.

h. Afloat units shall designate in writing a command explosives safety representative who shall be responsible for performing explosives safety related duties and ensuring compliance with reference (e).

i. DON personnel must ensure awareness and compliance with the additional applicable environmental requirements pertaining to AE by Federal, State, and local governments per references (h) and (i).

j. In the event of conflicting requirements between Navy and Marine Corps regulations, DoD component-specific requirements shall apply to the host installation for inspection and operational purposes and shall be identified to NOSSA, OPNAV(N411), and COMMARCORSYSCOM (PMM-116) for resolution.

CHAPTER 2

DEPARTMENT OF DEFENSE EXPLOSIVES SAFETY BOARD (DDESB)

- Ref: (a) DoD Directive 6055.9E of 19 August 2005
(b) DoD 6055.09-M, DoD Ammunition and Explosives Safety Standards, 29 February 2008
(c) DoD Instruction 6055.16 of 29 July 2008
(d) MCO P8020.10B
(e) NAVSEA OP 5, Volume 1, of 1 Jul 2011
(f) DDESB Technical Paper 23 of 31 Jul 2009 (NOTAL)

1. Purpose. To provide guidance and policy for supporting and communicating with the DDESB.

2. Background. Per reference (a), the mission of the DDESB is to provide SECDEF and the Service Secretaries objective advice on matters concerning explosives safety in an effort to prevent hazardous conditions to life and property on and off DoD installations from the explosives and environmental effects of DoD munitions. The DDESB explosives safety standard, reference (b), is binding upon the DON and is subject to periodic review by the DDESB and DON. The five primary responsibilities of the DDESB related to this instruction are to:

- a. Establish AE safety standards for all DoD components ashore by providing guidance for AE manufacturing, testing, handling, maintenance, developing, demilitarization, disposal, transportation, and storage.
- b. Implement and monitor AE explosives safety standards, outlined in reference (b) through periodic on-site evaluations.
- c. Review and site approve potential explosion sites (PES) and exposed sites (ES) of facilities used to manufacture, store, handle, maintain, or dispose of AE material.
- d. Review and analyze reports stemming from major mishaps.
- e. Review and approve explosives safety submissions for the execution of munitions responses for munitions and explosives of concern potentially belonging to or used by DoD components on all sites, whether on or off DoD property.

3. Policy

a. Assessment. The DDESB conducts evaluations to assess the DoD components' ESMP in compliance with reference (c). OPNAV (N411) and COMMARCORSYSCOM (PMM-116) shall liaison with the DDESB to determine which DON commands will be evaluated. When notified of a DDESB evaluation, commanders of DON commands (or the senior DON representative) shall facilitate arrangements with DDESB representatives and follow evaluation procedures as defined in reference (c).

b. Site Plan Review and Approval

(1) All DON projects requiring DDESB approval shall be forwarded to the DDESB, via NOSSA. Marine Corps projects utilizing the safety assessment for explosive risk (SAFER) model or munitions response explosives safety submission are exempt. These projects will be forwarded directly to DDESB by COMMARCORSYSCOM (PMM-116) per reference (d). In some cases, such as with a SAFER site approval request, an OPNAV endorsement may be required prior to submitting a site approval to the DDESB. Submission procedures are defined in reference (e) and chapter 10 of this instruction.

(2) Neither waivers nor exemptions shall be issued as part of the site approval process. However, NOSSA may determine that a hybrid safety submission can be submitted to the DDESB under the parameters of reference (f).

c. Communicating with the DDESB

(1) All Navy official correspondence intended for the DDESB shall be routed via the appropriate chain of command and NOSSA to OPNAV (N411). USMC correspondence must be routed via COMMARCORSYSCOM (PMM-116). Direct correspondence with the DDESB is not authorized unless directed or approved by OPNAV (N411) or COMMARCORSYSCOM (PMM-116). Written communication initiated by the DDESB, except explosives safety site evaluation notifications citing OPNAV or COMMARCORSYSCOM as "copy to" addressees, and addressed to any DON command, shall be immediately re-addressed to OPNAV (N411) or COMMARCORSYSCOM (PMM-116), as appropriate.

(2) Direct communication by telephone, facsimile or e-mail with DDESB staff members is not authorized unless initiated by a DDESB staff member; or approved by the Navy or Marine Corps member or alternate member to the DDESB. No DON presentation is to be made to the chairperson or staff members of the DDESB without prior approval of the DDESB Navy or Marine Corps member or alternate member. All such presentations will be attended by one of these officials unless attendance is specifically declined.

CHAPTER 3

WEAPON SYSTEM EXPLOSIVES SAFETY REVIEW BOARD (WSESRB)

Ref: (a) DoD Directive 5000.01 of 12 May 2003
(b) DoD Instruction 5000.02 of 8 December 2008
(c) SECNAVINST 5000.2E
(d) NAVSEAINST 8020.6E

1. Purpose. To define the responsibilities of the DON WSESRB with respect to the introduction of new or modified weapons and weapon systems into service, per references (a) through (c).

2. Background. CNO established the WSESRB to ensure that required explosives safety criteria are incorporated in the design of weapon systems or explosive systems.

3. Policy

a. The WSESRB is the DON designated independent authority on weapon systems safety. Its members are representatives of the systems commands. The chairperson and permanent secretariat are from NOSSA. WSESRB members may seek assistance in technical documentation review and may request attendance of technical experts at WSESRB meetings as deemed appropriate. CNO and CMC may provide ex officio members as desired. Procedures for conducting a WSESRB will be developed and issued by COMNAVSEASYSKOM.

b. WSESRB safety oversight responsibility includes energetic systems, weapons to include user aspects of non-lethal weapons, directed energy weapons, weapon devices, and those systems (software, firmware, or hardware) that manage and control weapons used, handled, stored or tested on or by a naval unit regardless of origin of the item.

c. All program executive offices (PEO), program managers (PM), weapon system designers, producers, processors, packaging designers or users of AE or weapon systems shall be accountable and responsible for explosives safety per references (a) through (d). All weapon system programs, regardless of acquisition category (ACAT) status or source, shall conduct an appropriate WSESRB before proceeding to low rate initial production,

deployment, or fielding. WSESRB approval is required for any shipboard testing of developmental weapons or weapon systems.

d. Systems commands shall obtain a WSESRB recommendation for any changes, alterations, product improvements, engineering change proposals, ordnance alterations, or ship change documents to previously approved weapon systems (including software or firmware) that can affect the safety of the platform, AE, weapon, combat system, or other related systems. This requirement includes non-developmental and non-ACAT programs.

e. The milestone decision authority, PEO, and PM shall obtain WSESRB recommendation and concurrence during system safety plan development and implementation as one of the exit criteria for a program completing an acquisition phase and advancing to the next acquisition phase or cycle.

f. All non-developmental or commercially available ordnance items, weapons, or control systems, to include foreign weapons, shall satisfy the same weapon system safety and weapon-related environmental requirements as developmental items. This includes all interface elements required to adapt the items for DON use.

CHAPTER 4

AMMUNITION AND HAZARDOUS MATERIALS (AMHAZ) REVIEW BOARD

Ref: (a) NOSSAINST 8020.20 (NOTAL)
(b) NAVSEA OP 5, Volume 1, of 1 Jul 2011

1. Purpose. To provide policy, procedural guidance and assignment of responsibilities for the AMHAZ Review Board.

2. Background

a. The DON ESMP focuses on three core component areas that are aimed toward maintaining a safe ordnance environment:

- (1) criteria development,
- (2) assessments, and
- (3) compliance.

b. The AMHAZ Review Board functions as an advisory group within the core component area of compliance. The AMHAZ Review Board will consist of senior military officers or civilians knowledgeable in explosives safety. The Board will consist of representatives from: NOSSA (chair and a safety engineer), OPNAV (N411) as an observer, a cognizant FLTCDR, the regional installation command, regional COMNAVFACENGCOM, and COMMARCORSYSCOM (for USMC activities). On occasion, the Board may be augmented by personnel who are knowledgeable in ordnance environmental issues or other personnel at the request of the board chair. The Board will review factors pertinent to:

- (1) the safe storage and handling of AE;
- (2) the review of current and planned construction;
- (3) the evaluation of existing and proposed future explosives safety deviations (waiver, exemption, and secretarial certification);
- (4) the identification of corrections to mitigate any existing or foreseeable violation to explosives safety criteria; and

(5) assisting local commands in the completion of planned actions through applicable chains-of-command.

3. Policy. All DON activities ashore and afloat will be provided with the opportunity for an AMHAZ Review Board assist. The following procedures apply:

a. OPNAV (N41) shall issue an annual schedule that identifies the reviews for the next 2 years. The schedule will address geographic regions rather than specific commands. Continental United States regions and Hawaii will be scheduled every 2 years and outside continental United States commands on a 4-year basis.

b. Based on the OPNAV (N41) schedule, NOSSA will issue notifications to all commands in the geographic region 90 days prior to the scheduled review, identifying those scheduled for on-site reviews and those only required to provide briefings at a central location. Commands having no significant explosives operations, explosives safety facility siting issues, or waivers or exemptions may request exclusion from a regional AMHAZ review from the board chairperson, via the regional commander and COMMARCORSYSCOM for Marine Corps installations.

c. NOSSA will issue a convening order 30 days prior to the review providing a final schedule and requesting input on significant issues.

d. NOSSA will coordinate all AMHAZ board reviews, provide a board chair, and maintain an instruction, reference (a), on the conduct of the AMHAZ review. The board chair will provide OPNAV (N411) and major commands involved with a final summary report following the completion of each review.

e. Regional commanders will serve as the local coordinator for reviews and site visits, where applicable. Typically, the regional ESO is the coordinator for the regional commander.

f. The Board will provide recommendations on all existing or proposed waivers, exemptions, and significant problem areas presented by the commands. The Board will certify that the conditions of each secretarial certification remain compliant and that continuation is required.

g. Site approvals issued for exposure of on-base roads at less than public traffic route distance, or by a SAFER submission will be evaluated by the AMHAZ Review Board for compliance of the site approval and continuation.

h. The scheduled reviews will be coordinated with the regional commander or ESO to occur approximately 6 months prior to the activity's explosives safety deviation expiration dates.

i. Commands not participating in an AMHAZ review must ensure timely submission of their waiver or exemption renewal requests per reference (b).

j. Detailed procedures for responding to AMHAZ notifications, submitting advance packages, and submitting final waiver or exemption approval request packages are provided in reference (b).

CHAPTER 5

EXPLOSIVES SAFETY COMPLIANCE MANAGEMENT

- Ref: (a) DoD Instruction 6055.16 of 29 July 2008
(b) DoD Directive 6055.9E of 19 August 2005
(c) DoD 6055.09-M, DoD Ammunition and Explosives Safety Standards, 29 February 2008
(d) NOSSAINST 8020.14E (NOTAL)
(e) NOSSAINST 8023.12B (NOTAL)
(f) NAVSEA OP 5, Volume 1, of 1 Jul 2011
(g) MCO P8020.10B
(h) NAVSEA OP 4 of 1 Apr 2012
(i) OPNAVINST 8020.15A

1. Purpose. To define policy, assign responsibilities, and provide guidance for maintaining DON explosives safety compliance through the utilization of technical assistance, inspections, self-assessments, and periodic reviews.

2. Background. Investigative reports from mishaps involving AE provide possible methods of interrupting the chain of events which led to the explosive incident. Most reports identify that the root cause of the incident could have been avoided had the activity or individuals involved been effectively trained, inspected, supervised, or followed prescribed procedures on their operations. Per reference (a), the DON must implement DoD component-level explosives safety standards consistent with references (b) and (c) to ensure effective explosives safety management while meeting mission requirements. Accordingly, references (d) through (h) and this instruction serve as a means to ensure that commands are aware of explosives safety criteria, apply lessons learned, transfer information, communicate problem areas to higher authority, and determine the root causes leading up to any explosives-related incident or mishap. Having trained and experienced ordnance personnel in pertinent key staff positions is critical to interrupting event chains which could lead to explosive incidents.

3. Policy

a. The DON shall establish and maintain an effective method to validate explosives safety compliance per the requirements of references (a), (b), and (c). This will include a means to

inspect and to review and assess installations, naval vessels, commands, and DON contractors providing AE-related products and services.

b. All DON commands shall be visited periodically per reference (d) for shore commands or reference (e) for afloat commands. NOSSA, as DON technical authority for explosives safety, has responsibility for conducting ESIs and SESIs.

c. DON shore and afloat commands shall conduct periodic self-assessments of their ESMPs to evaluate and ensure references (f) through (h) are being complied with.

d. Marine Corps commands shall comply with applicable portions of references (d), (f), (g) and this instruction.

e. A SESI must be conducted at least once per Fleet Response Plan (FRP) cycle. SESIs are conducted to validate that an established and effective ESMP is in place and to provide an objective third party review of compliance with references (e) and (h) and other applicable explosives safety related criteria. Type commander (TYCOM) assessments and training certification visits shall not be conducted within 90 days of a scheduled SESI. Military Sealift Command (MSC) shall schedule a SESI for vessels assigned to the Naval Fleet Auxiliary Force at least once between mandated regular overhaul cycles.

f. Base and facility closings or transfers:

(1) Explosives storage facilities being transferred from DON control will have a closeout ESI. For facilities being removed from DoD control, a closeout ESI will be included as part of the explosives safety site approval cancellation request submitted to the DDESB.

(2) The host ESO can inspect and request removal of ESQD arcs for facilities where AE was once used and stored prior to that facility being used for a different purpose.

(3) NOSSA is to be notified when a former AE facility is planned for demolition per reference (i).

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g. Staffs at all levels will ensure adequate explosives safety experienced and qualified personnel are assigned to oversee all management aspects of their ESMP.

CHAPTER 6

ELECTRICAL SAFETY PROGRAMS ASSOCIATED WITH ORDNANCE AND AE OPERATIONS

Ref: (a) DoD Directive 3222.3 of 8 September 2004
(b) DoD Instruction 5000.02 of 8 December 2008
(c) NAVSEA OP 5, Volume 1, of 1 Jul 2011
(d) NAVSEA OP 3565/NAVAIR 16-1-529 Volume 2, Rev. 18, Apr 2011
(e) NAVSEAINST 8020.7D
(f) NAVSEA OP 4 of 1 Apr 2012
(g) NAVSEAINST 8020.19

1. Purpose. To provide policy and assign responsibilities for protecting AE from E3.

2. Background. Electromagnetic radiation (EMR) from radio and radar transmitting equipment, static electricity, and lightning pose a significant threat to people, fuel, and ordnance.

3. Policy

a. Per reference (a), all electrical and electronic systems, subsystems and equipment, including ordnance, ordnance systems, ordnance support equipment and material containing electrically initiated devices (EID), shall be compatible in their intended electromagnetic environment without causing or suffering unacceptable mission degradation. Further, reference (a) states hazards of electromagnetic radiation to personnel (HERP), hazards of electromagnetic radiation to fuel (HERF), and HERO shall be mitigated prior to conducting any military exercises and operations. Radiation hazard (RADHAZ) program activities shall include the characterization of the operational electromagnetic environment, ordnance and munition system testing, and the retention of susceptibility data.

b. Per reference (b), any AE item containing an electro-explosive device (EED) or EID shall be evaluated and certified for HERO and electrostatic discharge (ESD) prior to deployment or release for service use.

c. All DON ashore and afloat commands responsible for handling, storing and stowing, transporting, assembly and disassembly, or manufacturing AE:

(1) Must have a NOSSA produced emissions control (EMCON) bill supported by a current RADHAZ survey per references (c) through (f). Ashore RADHAZ surveys shall be coordinated with and conducted as an installation-wide effort.

(2) Shall address ordnance electrical safety as a means to control and minimize the effects of lightning and electrostatic effects as prescribed in reference (c).

(3) Shall establish and maintain an effective HERO safety program per references (d) and (e).

(4) Shall ensure that personnel working with or near radars, antennae, and transmitters that can affect ordnance safety are trained on the effects of EMR.

(5) Must notify NOSSA of any installation or removal of an electromagnetic radiating system (i.e., radars, transmitters and antennae).

d. COMNAVSEASYSKOM, through NOSSA, shall provide and manage comprehensive Navywide HERO, ordnance electrical safety, and ESD programs that provide policy, standards, and oversight for all naval ordnance commands and for naval ordnance and weapon system acquisition programs as required by references (b), (d), (e), and (g).

(1) Provide HERO and ESD certification of all DON ordnance and material containing EIDs and compile all DON HERO and ESD certification data.

(2) Provide engineering resources and expertise necessary to conduct periodic HERO surveys for installations and commands ashore and forces afloat and develop and provide HERO EMCON bills to mitigate risks affiliated with HERO during the conduct of operations.

e. COs and officers in charge of Navy installations shall:

(1) Request NOSSA to conduct RADHAZ surveys of their respective installation or activity per references (d) and (e). Ensure tenant commands are included as part of an installation-wide RADHAZ survey to ensure that all electromagnetic radiating devices (radar, communication systems, and antennae) are accounted for when assessing areas used for AE operations.

(2) Ensure all facilities used in AE operations are equipped with adequate lightning warning systems, lightning protection, bonding, and grounding systems to divert electrical energy away from AE per reference (d).

CHAPTER 7

ORDNANCE TRANSPORTATION SAFETY

- Ref: (a) 49 CFR
(b) NAVSEA SW020-AG-SAF-010
(c) NAVSEA SW020-AC-SAF-010
(d) NAVSEA SW020-AF-HBK-010
(e) DTR 4500-9R Part II
(f) NAVSEA OP 4 of 1 Apr 2012
(g) NAVSEA OP 5, Volume 1, of 1 Jul 2011
(h) 14 CFR
(i) NAVSUP P-505/MCO P4030.19K
(j) NAVFAC P-301
(k) NAVSEA SW023-AK-SAF-010

1. Purpose. To provide DON AE transportation policy.
2. Background. The DON AE transportation policies are established to comply with reference (a). Shippers and receivers of AE play a critical role within the transportation process to ensure adequate controls are in place to manage the hazards and risks associated with AE transportation.
3. Policy
 - a. All Conveyances
 - (1) DON activities will transport AE as required by Federal and State laws and regulations and DoD policies.
 - (2) All DON commands (ashore and afloat) will ensure that AE offered for transportation is identified properly, hazard classified, packaged, marked, and labeled utilizing references (a) through (k).
 - (3) Military standards and weapons requirements, where appropriate, will be followed when preparing, packing and shipping AE material.
 - (4) In order to ensure compliance with reference (a), shippers will validate that AE being transported is properly manifested and packaged for movement following references (b) and (c) guidance.

b. Motor Vehicle Transportation

(1) All motor vehicle carriers transporting ammunition, explosives and related hazardous material in interstate commerce must comply with the regulations of the Department of Transportation. Safety requirements governing interstate transportation may be imposed by the individual states and by municipalities through which shipments will move. DON vehicles transporting AE are subject to DON regulations and all safety regulations applicable to common carriers. As required by reference (b), a copy of reference (d) will be maintained in the vehicle and complied with whenever AE is being transported.

(2) Motor vehicle conveyances will be inspected prior to AE being loaded per reference (b). Upon receipt, an inspection will be conducted to determine if AE was damaged during transit.

(3) A DON activity that offers a hazardous material for transportation must provide an emergency response telephone number monitored at all times by a person who is either knowledgeable of the hazardous material being shipped or has immediate access to a person who possesses such knowledge and information as required by reference (a), section 172.604.

c. Water Trans-Shipment. Navy and Marine Corps activities transporting AE or related hazardous material to a water port for follow on movement using either a naval or merchant vessel shall adhere to guidance contained in references (a), (e), (f), and (g).

d. Air Transportation. Navy and Marine Corps activities shipping AE via aircraft will ensure that the requirements described by references (h) and (i), International Air Transport Association Dangerous Goods Regulations, and the International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air are followed.

e. Railroad Transportation. Navy and Marine Corps activities shall follow references (j) and (k) whenever a need exists to move AE by rail.

CHAPTER 8

PERSONNEL QUALIFICATION AND CERTIFICATION

Ref: (a) OPNAVINST 8023.24B
(b) MCO 8023.3B

1. Purpose. To establish a DON qualification and certification program for personnel who handle AE.

2. Background. Explosives mishap investigation reports show that causative factors typically include improper handling, inadequate supervision, mechanical and design problems, and acts of nature. To minimize the probability of mishaps, the potential for personnel errors must be controlled through training (qualification) coupled with a management process designed to prevent inadequately trained personnel from performing AE jobs and tasks (certification).

3. Policy

a. CNO (N4) and CMC (SD) will establish and maintain qualification and certification programs for personnel assigned to AE jobs and tasks. These programs will incorporate the following elements:

(1) Service responsibilities for implementing a qualification and certification program.

(2) Specifics jobs and tasks requiring qualification or certification.

(3) Minimum standards of personnel competency in terms of training, proficiency, level of supervision, and safety assurance necessary for safe and successful performance of the job or task.

(4) Methods of documenting personnel qualifications and certifications necessary to perform the job or task.

b. Qualification and certification programs for DON personnel are delineated in references (a) and (b). Compliance and consistency must be strictly monitored and enforced to assure the minimization of risk for all DON personnel.

(1) Compliance will be validated during periodic inspections (ESI and SESI), external command audits, and explosives safety self-audits.

(2) Amplification through local instructions beyond standardized training plan development is not authorized. Unique requirements for a special or separate qualification or certification instruction must be approved by OPNAV (N411) or COMMARCORSYSCOM (PMM-116) for Marine Corps units.

CHAPTER 9

AFLOAT MAGAZINE SAFETY AND CERTIFICATION

Ref: (a) NAVSEA OP 4 of 1 Apr 2012
(b) OPNAVINST 3500.39C
(c) Naval Ships' Technical Manual S9086-XG-STM-010 (NOTAL)

1. Purpose. To develop and maintain a robust magazine certification process. Magazine certification will be used to ensure explosives are stowed in the least hazardous environment possible.

2. Background. It is essential to ensure that explosives are stowed in the safest and most controlled environment as possible due to the dynamic nature of the shipboard environment. Ship magazines must be in full compliance with references (a) through (c).

3. Policy

a. All shipboard ammunition magazines will be certified prior to the stowage of ammunition and will be maintained to meet all minimum requirements necessary for continuous certification.

b. Shipboard ammunition magazines will be certified for a period of no more than 3 years to coincide with the FRP cycle. The TYCOM will be the certification authority and will track certification status for commands under their cognizance.

c. The TYCOM will grant certification post-construction once:

(1) The magazine sprinkler system certification is completed.

(2) The ship has completed U.S. Navy Board of Inspection and Survey (INSURV) acceptance and final contract or combined trials with no major deficiencies and no preponderance of minor deficiencies.

(3) In addition to these programs, submarines may not have any major or preponderance of minor deficiencies pertaining to torpedo rooms.

d. The TYCOM will certify the ammunition magazines, via official correspondence (message or formal letter), delineating the compartment names and numbers of the certified magazines to the CO and stating that they are certified as safe to stow AE.

e. Once certification is obtained, the certification will be renewed each time a TYCOM-sanctioned explosives safety site visit (INSURV, SESI, ordnance handling surface afloat team, weapons safety afloat team, or tactical readiness evaluation) is conducted with no major findings and no preponderance of minor findings.

f. In the event of findings which would result in a non-compliant evaluation during TYCOM-sanctioned visits, the affected magazine will be decertified if the discrepancies cannot be corrected prior to the inspection team's out brief. If discrepancies are not corrected immediately, the ship will have 30 days to clear the deficiency and regain TYCOM certification; or the magazine will be emptied until the ammunition can once again safely be stowed in a certified magazine. If ammunition is to be retained in the decertified magazine, a 24 hours a day, 7 days a week watch must be posted if there is no automatic monitor (F, FH, FD or FZ alarms) or automatic sprinkler capability. Recertification will be granted by the TYCOM after the sanctioned assessment team has visited the ship and declared the non-compliant evaluation deficiency as corrected.

CHAPTER 10

EXPLOSIVES SAFETY SITING

Ref: (a) DoD 6055.09-M, DoD Ammunition and Explosives Safety Standards, 29 February 2008
(b) NAVSEA OP 5, Volume 1, of 1 Jul 2011
(c) MCO 3550.9

1. Purpose. To provide policy, guidance, and assign responsibilities for the management of real property as it pertains to explosives safety.
2. Background. Reference (a) requires the Military Services to submit required explosives safety site approvals to the DDESB for review and approval. Additionally, reference (a) requires installations to maintain current installation maps showing approved ESQD arcs or risk-based evaluation distances and site plans that are reconciled with the installation's master plan. Reference (b) provides DON guidance.
3. Policy
 - a. Explosives safety site approval shall be obtained:
 - (1) Prior to starting new construction for facilities within ESQD arcs or otherwise covered by explosives safety criteria.
 - (2) Prior to starting construction to modify existing facilities within ESQD arcs or otherwise covered by explosive safety criteria.
 - (3) Prior to starting new explosives operations not previously sited.
 - (4) Prior to modifying existing explosive operations where there will be an increased risk, such as increasing the sited explosives limits or changing the HC/D.
 - (5) When NOSSA indicates a new site approval needs to be requested due to a need to increase the number of personnel who will be exposed to the risks presented by a PES.

b. Limited exceptions to these requirements for explosive safety site approval are provided in reference (b).

c. Explosives safety site approval documentation must be maintained in permanent records by the DON activity owning the property where the facility or operation was sited.

d. NOSSA must review and approve the siting rationale for a proposed facility before contracts are awarded for design and construction of new or modified facilities. Examples are:

(1) Planned explosives facilities that will not meet standard ESQD criteria and that require protective construction or administrative controls.

(2) Facilities or operations covered by explosives safety deviations.

(3) Require utilization of a barricaded intraline (K9) relationship.

e. The installation CO, where the facility or operation is located, is responsible for obtaining the explosives safety site approval.

f. The following commands are authorized to grant explosives safety site approvals and impose limitations and restrictions on the use of a facility:

(1) DDESB is able to approve any explosives safety site approval request.

(2) NOSSA and COMMARCORSYSCOM (for Marine Corps installations) have approval authority for explosives safety site approval requests when the following conditions exist:

(a) The amount of net explosive weight (NEW) involved does not exceed 300 pounds of HC/D 1.2.2, HC/D 1.3 and HC/D 1.4 material.

(b) No additional risk is imposed to personnel or existing facilities.

(c) Where reference (b) authorizes service-level approval of the explosives site approval request.

(3) NOSSA may issue an interim or temporary site approval on a case-by-case basis provided that no additional hazards are incurred, no violations of established ESQD requirements occur, no permanent construction is involved, and continued operations are required.

g. NOSSA is responsible for issuing guidance on technical and documentation requirements for the explosives safety site approval processes.

h. NOSSA (for Navy installations) or COMMARCORSYSCOM (for Marine Corps commands) will be provided the opportunity to review and recommend restrictions on proposed leasing of DON property within 110 percent of inhabited building distance to a PES. For competitive leasing actions, the explosives safety review of the proposed lease will be conducted prior to public advertising so that appropriate restrictions can be incorporated into the description of suitable use for the parcel or facility.

i. DON installations shall maintain current installation maps and master planning documents that show approved ESQD arcs and explosives safety land-use restrictions. If installation maps and master planning documentation is maintained at the regional-level, the installation CO is responsible for ensuring that these documents are kept current and available to tenant commands.

j. Marine Corps operational ranges that have permanent storage locations, environmental permitted sites, or reduced arc explosive ordnance disposal (EOD) ranges whose explosive arcs are not entirely contained within the operational range are subject to this chapter. All other operational training ranges shall be certified per reference (c).

CHAPTER 11

DEVIATIONS FROM EXPLOSIVES SAFETY REQUIREMENTS

- Ref:
- (a) DoD Instruction 5000.02 of 8 December 2008
 - (b) DoD Directive 6055.9E of 19 August 2005
 - (c) DoD 6055.09-M, DoD Ammunition and Explosives Safety Standards, 29 February 2008
 - (d) OPNAVINST 5430.48E
 - (e) NAVSEA OP 5, Volume 1, of 1 Jul 2011
 - (f) OPNAVINST 3500.39C
 - (g) MCO 3500.27B
 - (h) NAVSEA OP 4 of 1 Apr 2012
 - (i) DoD Instruction 4145.26 of 9 April 2005
 - (j) DoD 4145.26-M, DoD Contractors' Safety Manual for Ammunition and Explosives, 13 March 2008

1. Purpose. To provide policies and assign responsibilities and guidance for requesting, reviewing, approving, and cancelling explosives safety deviations within the DON.

2. Background. There are several kinds of waivers and exemptions: those that are used in acquisition and those used with regard to explosives safety ashore. The process for acceptance or mitigation of risk, during the life-cycle management of a weapon, weapon system, or component is codified in reference (a). SECDEF has authorized the Service Secretaries to grant deviations to governing explosives safety requirements to maintain the readiness of U.S. military forces in situations where full compliance with the DoD AE safety policies cannot be observed. Such deviations are to be granted only for strategic or other compelling reasons.

3. Policy

a. DON shall establish and maintain a system for developing, reviewing, approving, cancelling, and monitoring explosives safety deviations per references (b) and (c).

b. SECNAV has delegated the following authorities:

(1) ASN(EI&E) retains the approval authority for SECNAV explosives safety certifications and special case exemptions (e.g., the Navy's combatant (vessels) exemption).

(2) Authority for approving DON explosives safety waivers and exemptions has been delegated through reference (d) to OPNAV (N41).

(3) OPNAV (N41), OPNAV (N411), and DON component commanders (COMMARCORSSYSCOM (PMM 116); Commander, U.S. Fleet Forces Command (Fleet Ordnance and Supply (N41)); Commander, U.S. Pacific Fleet (Logistics Current Operations (N42)); Commander, U.S. Naval Forces, Central Command (Fleet Ordnance and Supply (N41)); and Commander, U.S. Naval Forces, Europe (Plans (N45)) are permitted to approve short-term deviations. These short-term deviations are referred to as explosives safety event waivers and must not be issued for the same operation at the same location on a recurring basis without the scenario being evaluated for application of a site approval or a waiver.

(4) For contingency operations, DON component commands to a geographical combatant commander (e.g., Marine Forces Central Command) may approve short-term deviations to explosives safety for operational and emergent requirements.

c. The DON delegated approving officials for acquisition associated waivers and exemptions at contractor-owned, contractor-operated (COCO) facilities are the applicable OPNAV warfare sponsors for Navy and COMMARCORSSYSCOM for Marine Corps. All deviations involving acceptance of risk will be accepted and administered by the component acquisition executive for high risks, PEO for serious risks, and PM for low risks. Reviews will be conducted as required by reference (a).

d. DON-delegated approving commands shall take responsibility for and assume all risks resulting from a potential explosive mishap.

e. A DON command will initiate a request for an explosives safety deviation (e.g., event waiver, waiver, exemption, or secretarial certification) whenever a DON explosives safety standard cannot be met. Requests for deviations will be submitted via the appropriate chain of command.

f. When a request for a deviation is made, the DON command must obtain an "operational necessity" endorsement from a flag officer command verifying the need for the deviation based upon strategic or compelling reasons.

- g. Tenant commands will acquire an endorsement from the host installation, as defined in reference (e).
- h. The regional command will provide the "area concurrence" endorsement if the deviation is generated by a host installation.
- i. The submitting command will request renewal or cancellation of each waiver every 2 years and for each exemption a minimum of every 5 years.
- j. The submitting activity shall have a corrective action plan that demonstrates a path forward to mitigate conditions or activities necessitating operations under a waiver.
- k. The submitting activity shall have a corrective action plan for exemptions, when applicable. The submitting activity shall clearly state the reason why a correction of the exemption is not feasible, how continuing the exemption is in the best interest of the DON, or where significant impairment of the U.S. defense posture would result.
- l. The conditions or activity that are under waiver or exemption will be strictly controlled and regulated by the installation commander to preclude additional operations or conditions which might compromise the basis of the originally approved deviation.
- m. Waivers and exemptions will be cancelled on their expiration date. When a waiver or exemption is no longer needed, the activity must request cancellation via the same submission process which was used to obtain the deviation via the chain of command from OPNAV (N411), per reference (d).
- n. An ASN(EI&E) explosives safety certification does not have an expiration date. However, the AMHAZ Review Board shall review each ASN(EI&E) certification for continued necessity during its scheduled reviews of an activity. The DON installation must request by formal letter a cancellation of the certification via the chain of command from OPNAV (N411) when it is no longer needed.

o. All explosive safety deviation requests will be forwarded to OPNAV (N411) and NOSSA for monitoring and retention.

p. Explosives safety deviation submissions will be submitted per reference (e). If the request involves an operation that was evaluated using an operational risk management (ORM) assessment, per references (f) and (g), it must be included in the request.

q. Requests for approval or cancellation of a shore based explosives safety deviation will be forwarded by the DON activity via the appropriate chain of command to OPNAV (N411). The COMNAVFACENGCOM regional activity shall ensure that adequate maps are prepared and submitted as part of the request package. Marine Corps commands will ensure that COMMARCORSYSCOM is included in the routing process. NOSSA will perform a technical review of the request before submitting it to OPNAV (N411) for final review and approval.

r. Event waivers submitted per references (e) and (h) are approved deviations on a case-by-case basis for particular evolutions. They are issued for a limited period (i.e., less than 1 year) to meet a specific readiness or operational requirement which cannot otherwise be satisfied. The request and a statement regarding acceptance of risk will be submitted by DoD naval message using the format contained in reference (e).

s. Requests for waivers of hot work restrictions and cold iron requirements for ships will be submitted to the FLTCDR via the chain of command for approval per reference (e). In port, requests must include the concurrence of the regional commander and installation CO or designated representative.

t. Event waivers for hot work or cold iron waivers are considered to be canceled when the evolution for which they were issued is completed or at the end of the specified time and date of the waiver.

u. Review and recommendation for continuation or cancellation of an explosives safety deviation will be accomplished as part of the AMHAZ review.

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v. As required by references (i) and (j), contractors, working on behalf of a naval activity shall adhere to the provisions of this instruction. Any need to deviate from DoD and DON explosives safety policies or procedures will be approved at the level of authority outlined in references (a), (e), and (h).

CHAPTER 12

BERTHING AT U.S. DON CONTROLLED ACTIVITIES

- Ref: (a) NAVSEA OP 5, Volume 1, of 1 Jul 2011
(b) ASN(I&E) memo of 19 Oct 2005, Secretarial Acceptance of Risk Associated with Ammunition Stored in Combatant Ship's Magazines (NOTAL)
(c) NAVSEA OP 4 of 1 Apr 2012
(d) OPNAVINST 3128.10G

1. Purpose. To establish explosives safety standards to berth all ships and vessels containing AE at DON activities.

2. Background. ESQD and risk assessment standards issued by the DDESB and published in reference (a) require that AE being handled, stored, or maintained must be kept under the supervision of the Military Services and meet minimum distances from inhabited buildings, passenger railroads, public highways, ships, and other facilities and property.

3. Policy

a. The requirements of this chapter apply to all DON port facilities and berthed ships and vessels, regardless of registry, containing AE. More stringent explosives safety requirements imposed by foreign countries in which U.S. forces are located will be met when an appropriate international agreement makes compliance mandatory.

b. The DON shall apply the DoD ESQD standards published in reference (a). Additional restrictions may be imposed by OPNAV (N41) or NOSSA to help control and protect personnel, equipment, and in selecting locations for required facilities along the waterfront.

c. AE stored in shipboard magazines, launchers, or ready service lockers, which are to be used solely in support of the ship's mission by installed shipboard weapons systems or by embarked aircraft and forces, are exempt from the application of ESQD requirements except when it is being handled or is in the process of being stowed per reference (b). This is known as the combatant exemption. The following exceptions apply:

(1) If the hatches on a fleet ballistic missile (FBM) submarine are opened for any operation related directly to the missile (i.e., loading or maintenance), the total NEW of all missiles onboard must be applied to the pier NEW limit.

(2) AE stowed outside of designated ship's magazines, launchers, or ready service lockers will be considered cargo ammunition. In such cases, the total NEW of all AE aboard the ship will be used to calculate berthing requirements as specified in this chapter.

d. Amphibious warfare ships carrying landing force operational reserve material, mission load allowances and standard training package AE in appropriately designated storage spaces in support of the ships' mission are exempt from ESQD criteria except during handling evolutions, provided the AE is stored under the conditions delineated in reference (c).

e. Berthing of cargo AE ships i.e., modular cargo delivery system ships, lighter aboard ships, barges, maritime prepositioning force ships, and point-to-point AE shipments carried in MSC or commercial vessels is governed by ESQD requirements when carrying cargo ammunition. Collectively, these ships and barges will be referred to as "cargo ammunition ships" and will only be berthed in ports and at berths site-approved for adequate ESQD arcs. AE aboard to support the ship's organic weapons systems is not counted toward the cargo load and is exempt from ESQD arcs under the combatant exemption.

f. Auxiliary submarine (AS) tenders are restricted to carrying 60,000 pounds NEW. AE aboard to support the ship's organic weapons systems is not counted toward the cargo load and is exempt from ESQD arcs under the combatant exemption.

g. With the exception of hospital ships, berthing of Navy or foreign combatant ships will not be restricted by ESQD arcs.

h. Commanders and COs ashore shall maintain the senior officer present afloat (SOPA) instructions for ports providing berthing for AE-laden ships and barges. The instructions will contain a detailed plan of actions to be taken when confronted with an emergency situation that can involve or affect the ship or barge. The instructions shall include specific details for coordination between the ship and support commands.

Additionally, SOPA instructions will contain guidance on the handling of AE at civilian shipyards in their area.

i. All ships carrying AE into a naval shipyard, other than safety of life at sea, small arms security ammunition, and concussion grenades stored per reference (a), must have the shipyard commander's authorization to enter the shipyard. When a commercial shipyard is involved, authorization must be granted by the cognizant supervisor of shipbuilding. Ships entering a shipyard with AE aboard are limited to a maximum of 45 days to allow emergency repair beyond which an event waiver is required.

j. Specific regulations that support DON policies are provided in references (a) and (c).

k. Additional berthing requirements listed in reference (a) apply when a waiver is issued to permit deviation from ESQD requirements for ships and vessels carrying cargo ammunition,.

l. Foreign registered vessels

(1) General guidance regarding procedures for foreign registered vessels entering a U.S. controlled port is contained in reference (d).

(2) All foreign registered vessels carrying AE should be directed to use a Navy port if available.

(3) In the event a Navy port is not available, the port master should make every provision possible to provide berthing for an AE laden ship that will provide adequate security and the necessary safe separation distance from other vessels, hazardous material sites, or PES.

(4) All foreign naval vessels moving or handling AE while in port will be moored at a DDESB site approved berth, wharf, or anchorage capable for the amount of exposed AE.

(5) Any foreign vessel carrying AE not in direct support of the ship, embarked force, or assigned aircraft is considered to be a cargo ammunition ship. These ships shall be moored at a DDESB site approved pier, wharf, or anchorage capable of supporting the total NEW of both the ship's embarked AE and any exposed AE.

CHAPTER 13

HANDLING AMMUNITION AND EXPLOSIVES IN PORT

Ref: (a) NAVSEA OP 4 of 1 Apr 2012
(b) NAVSEA OP 5, Volume 1, of 1 Jul 2011
(c) CNO ltr Ser N457F/452-98 of 27 Jul 98 (NOTAL)

1. Purpose. To establish the explosives safety standards which govern the handling of AE in port. Specific regulations supporting these policies are provided in references (a) through (c).

2. Background. Ammunition handling operations in port create unique circumstances by virtue of the increased risk imposed on personnel not directly involved with the AE handling evolution and infrastructure. This risk must be thoroughly assessed, mitigated wherever possible, and strictly controlled to minimize hazards and to maximize safety.

3. Policy. AE handling will only be permitted in those specific locations authorized by site approvals or approved deviations.

a. AE logistics movements are not to be conducted at Navy ports without the permission of the port activity CO. Maintenance movements and weapons systems operability tests can be conducted in port within the conditions established by the SOPA instruction. Such tests will not generate an ESQD arc. EMCON will be instituted, and the passage or access of non-essential personnel aboard the ship prohibited.

b. The maximum NEW established as the AE limit for the handling location will determine the size of the resulting ESQD arc which will apply only to land, public roads and channels, and pier and wharf facilities.

(1) The ESQD arcs for ships and vessels carrying cargo ammunition are based on the total NEW of cargo ammunition aboard plus the total NEW of the ammunition handled or staged on the pier, as defined in references (a) and (b).

(2) The ESQD for all other ships, less FBM submarines, is based only on the AE actually being handled outside the skin of the ship or not secured aboard.

(3) The ESQD for FBM submarines is based on the total quantity of missiles on the submarine if a hatch is open for any operation directly related to a missile.

(4) The ESQD arc for handling a guided-missile nuclear submarine is based on the NEW of one launch tube provided only one hatch is opened at a time. If more than one tube is opened, the total NEW in the submarine must be applied. Per reference (b), the ESQD arc is based on the greater of the special operations forces ammunition NEW or the reduced ESQD for Tomahawk loading.

c. The handling of AE in port will be permitted only in those specific locations authorized by site approval and under the conditions and requirements established in order to assure a proper explosives safety environment during such handling. Each site approval will establish an explosives limit for each authorized handling pier, berth, or point based on the HC/D of material being handled. Deviations will be assessed critically after being submitted.

(1) Logistics movements of class 1, divisions 1 and 2 AE (except special weapons) are limited to one handling evolution per in-port period as defined in reference (a) for any ship or vessel except tenders and submarines. This limitation is not applicable to ammunition terminals or explosives handling wharves at ballistic missile submarine sites.

(2) Submarines may move up to 24 weapons per in-port period. Changing out a weapon counts as two movements. This limitation is not applicable at ammunition terminals or explosives handling wharves at ballistic missile submarine sites.

(3) The loading and off-loading of full shipboard AE allowances will only be performed at ammunition terminals, explosive anchorages, or locations which are specifically site-approved for that purpose unless the full shipboard AE allowance is less than the approved explosive limit for the pier.

d. No hot work shall be performed at an ammunition terminal pier while any form of AE handling evolution is underway at the same pier or wharf unless specifically permitted by reference (a).

e. Transportation routes shall minimize exposure of personnel and property. Appropriate security for each movement shall be provided.

f. Ships and vessels must notify port and shore activity officials when conducting offloads of AE that has been reclassified as waste military munitions while aboard.

Note: It is illegal to transport material from port for the purpose of dumping it into ocean waters unless a permit has been obtained from the U.S. Environmental Protection Agency.

CHAPTER 14

MANAGEMENT OF MATERIAL POTENTIALLY PRESENTING AN EXPLOSIVE HAZARD (MPPEH)

- Ref: (a) DoD Directive 3200.15 of 10 January 2003
(b) DoD Instruction 4140.01 of 14 December 2011
(c) DoD 6055.09-M, DoD Ammunition and Explosives Safety Standards, 29 February 2008
(d) DoD Directive 4715.1E of 19 March 2005
(e) DoD Instruction 4715.4 of 18 June 1996
(f) DoD Instruction 4715.6 of 24 April 1996
(g) 40 CFR 266.M
(h) DoD Instruction 4140.62 of 25 November 2008
(i) NAVSEA OP 5, Volume 1, of 1 Jul 2011

1. Purpose. To define policy assigning responsibilities for management and disposition of MPPEH.

2. Background. The potential for an item to present an explosive hazard is the single characteristic that distinguishes it from other DoD material. MPPEH can be grouped into four broad categories based on material type. These categories include military munitions and munitions debris, range-related debris, other debris, and munitions-related facilities and equipment.

3. Policy. It is DON policy to:
 - a. Manage MPPEH in a manner that will support operational readiness and mission requirements, per reference (a); in compliance with supply chain material management policies, per reference (b); explosives safety standards, per reference (c); and environmental requirements, per references (d) through (g).

 - b. Ensure contracts or other legal agreements require compliance with MPPEH management procedures contained in reference (h) by all non-DON entities that possess, manage, process, or provide disposition of MPPEH, material documented as safe (MDAS), or material documented as an explosive hazard (MDEH) for the DON.

c. Manage MDEH in such a manner as to prevent it from being commingled with MPPEH or MDAS or misidentified as MPPEH or MDAS once the explosive hazards it presents have been determined.

d. Manage MDAS in such a manner as to prevent it from being commingled with MPPEH or MDEH or misidentified as MPPEH or MDEH once it has been determined to be safe.

e. MPPEH shall be properly assessed and its explosives safety status documented prior to its transfer within or release from DoD control per reference (h). DON criteria for MPPEH explosives safety assessment, determination of MDAS and MDEH, and management requirements is contained in reference (i).

(1) MDAS

(a) MDAS is defined as MPPEH that has been assessed and documented as not presenting an explosive hazard and for which the chain of custody has been established and maintained. Since MDAS does not present an explosive hazard, it is not managed as explosive material and is safe for release from DoD control. Documentation of a material's explosives safety status as safe only remains valid if the material is properly segregated and secured. Chain of custody must be maintained until the material is released from DoD control.

(b) MDAS may contain residual explosives that are not apparent to the unaided eye during 100 percent visual inspections. These residues, however, shall not be in concentrations sufficient to pose an explosive hazard.

(c) MDAS does not have any additional management requirements from an explosives safety perspective. However, other requirements (e.g., trade security, demilitarization, environmental requirements) may apply to MDAS.

(2) MDEH

(a) MDEH is defined as MPPEH that cannot be documented as MDAS. It has been assessed and documented as to the maximum explosive hazards the material is known or suspected to present and for which the chain of custody has been established and maintained.

(b) MDEH shall only be transferred or released to entities qualified to receive and manage the explosive hazard documented to exist.

(c) MDEH management will comply with reference (i) to protect people and property from the potential damaging effects of explosives. Such compliance includes, but is not limited to, specific personnel qualifications and criteria for storage and transport. Additionally, other requirements such as trade security and demilitarization and environmental compliance may apply to MDEH.

f. The explosives safety status of MPPEH shall be determined by either 100 percent visual inspections or by DDESB approved processing.

CHAPTER 15

INERT, PRACTICE, AND SERVICE AMMUNITION

Ref: (a) OPNAVINST 8023.24B
(b) OPNAVINST 8015.2B
(c) NAVSEA OP 5, Volume 1, of 1 Jul 2011
(d) NAVSEA OP 4 of 1 Apr 2012

1. Purpose. To define policy for management of inert, practice, and service AE under DON control.

2. Background. AE not properly identified and controlled as being inert can cause mishaps which may result in the loss of life, personal injury, property damage, or false alarms. Proper identification and control of AE is critical to maintaining an effective ESMP.

3. Policy

a. Inert, practice, and service AE shall be identified, managed, and controlled per references (a) through (d).

b. Only inert ordnance items certified as being completely free of explosive material or ordnance items manufactured inert may be used for classroom training and display. Both are controlled and managed per references (a) and (b).

c. Inert ordnance items shall not contain hazardous substances such as batteries, high pressure vessels, or other devices such as spring loaded high tension assemblies which may cause injury unless a valid training requirement exists and controls are in place to minimize the probability of mishap.

d. Ordnance items fired for demonstrations, ceremonies, public functions, and patriotic occasions shall be of the service or practice type which presents the minimum safety risk.

e. All PMs, PEOs, and their agents shall ensure that sufficient inert ordnance items are procured to support the Naval Education and Training Command and fleet training requirements.

f. Only inert ordnance items shall be used while in port or at anchor during shipboard weapon system loading or arming drills per reference (a).

g. Classroom training and loading drills shall be conducted with certified inert ordnance items.

h. Per references (c) and (d), only authorized personnel will certify ordnance items as inert.

i. Inerting ordnance items afloat is not authorized.

j. Commands, including naval museums, shall maintain a record of all ordnance items under their cognizance that have been certified inert or procured as inert per references (c) and (d).

k. Service ammunition contains explosive material and is intended for combat use or operational training. It shall not be used in lieu of inert ammunition without formal approval, via message or letter, from the applicable TYCOM per reference (a).

CHAPTER 16

EXPLOSIVES SAFETY ON NAVAL OPERATIONAL RANGES

- Ref: (a) DoD Directive 4715.11 of 10 May 2004
(b) DoD Directive 4715.12 of 12 July 2004
(c) DoD 6055.09-M, DoD Ammunition and Explosives Safety Standards, 29 February 2008
(d) MCO 3550.12
(e) MCO 3570.1C
(f) MCO 3550.9
(g) MIL-HDBK-1027/3B of June 1995
(h) NAVSEA OP 5, Volume 1, of 1 Jul 2011
(i) OPNAVINST 3571.4
(j) OPNAVINST 3500.39C
(k) CNO ltr Ser N457F/452-98 of 27 Jul 98 (NOTAL)

1. Purpose. To define policy for explosives safety on Navy operational ranges where military munitions have been used per references (a), (b), and (c). Marine Corps operational training ranges will follow policy per references (d), (e), and (f).

2. Background. The DON has a responsibility to sustain the highest levels of readiness to meet mission requirements while protecting the public and operating in an environmentally responsible manner. The Navy and Marine Corps shall use and manage operational ranges in a manner that ensures their safety and long-term sustainability.

3. Policy. It is Navy policy to use and maintain operational ranges in a manner that supports national security objectives while limiting to the extent practical the potential for explosives mishaps and the damaging effects to personnel, property, and the environment. Marine Corps policy is to ensure the safe and sustainable use of Marine Corps operational training ranges. AE use on Marine Corps operational training ranges will be managed per reference (e). As applicable, DON commanders and COs, both ashore and afloat, shall:

a. Ensure operational ranges are located and constructed per reference (g) and have documented design certification and explosives safety sited areas as appropriate per reference (h).

b. Ensure operational range clearance requirements are established and implemented per reference (i).

c. Restrict access to operational ranges, especially impact areas, and other areas suspected of containing unexploded ordnance (UXO).

(1) Take appropriate action to prevent unauthorized access to operational ranges. Such actions include establishing access controls (e.g., posting UXO hazard warning signs, fencing the area, establishing roving security patrols) and providing public notifications of potential hazards.

(2) Ensure individuals authorized to access operational ranges are provided appropriate explosives safety training prior to entering the range.

(3) Establish guidelines to determine when individuals with authorized access to the operational range will be escorted.

d. Ensure procedures are in place to:

(1) Notify installation personnel and the public of range operations that may present an explosive hazard off the operational range.

(2) Respond promptly to protect personnel and property from such hazards both on and off the installation.

e. Ensure requirements of reference (j) are followed when a hazard assessment is conducted for range commands. Hazard assessments are required when new munitions are authorized for use on the range, new hazards are identified, new clearance methods are used, or when intrusive work is planned.

f. Maintain permanent records of range activities per references (a), (b), (i), and (k).

g. Provide appropriate information to local officials regarding compatible uses of non-DON property located near DON ranges.

h. Ensure procedures are in place to respond to a release or substantial threat of release from an operational range to an off-range area.

i. Establish safe and practical methods for recycling or disposing of MPPEH generated from range residue per chapter 14 of this instruction.

j. Minimize the use of munitions containing sub-munitions or depleted uranium (DU) that are required to support national security objectives.

(1) For sub-munitions, restrict such use to specifically designated target or impact areas.

(2) For DU, restrict such use to specifically designated Nuclear Regulatory Commission licensed target or impact areas. When possible, DU will be fired into containment fixtures and high explosive munitions will not be fired into the same range impact areas.

(3) Establish sole use target or impact areas to segregate such munitions from other munitions when practical.

k. Identify, manage, and site facilities used to store military munitions to include waste military munitions located on an operational range per references (h) and (k).

CHAPTER 17

AMMUNITION AND EXPLOSIVES OPERATING PROCEDURES

Ref: (a) NAVSEA OP 4 of 1 Apr 2012
(b) NAVSEA OP 5, Volume 1, of 1 Jul 2011
(c) MCO P8020.10B
(d) OPNAVINST 3500.39C
(e) NOSSAINST 8023.11B (NOTAL)

1. Purpose. To provide policy for developing, writing, and maintaining standard operating procedures (SOP) for operations that involve the storage, manufacturing, assembly, transportation, and handling of AE materiel.

2. Background. Lack of written procedures, use of inadequate or incorrect procedures, and failure to adhere to approved written procedures have resulted in mishaps that caused personnel injury, loss of life, and damage to property.

3. Policy

a. All processes that involve the handling of AE shall be conducted with approved operating procedures. These procedures shall provide all the direction necessary for the safe and effective conduct of operations as directed by references (a) through (c) and ORM principles of reference (d).

b. COMMARCORSYSCOM shall coordinate and issue criteria for Marine Corps activities when developing procedures for AE operations on shore installations.

c. NOSSA has issued criteria through reference (e) for the development and use of operating procedures for AE operations at shore installations.

d. TYCOMs will coordinate with ship designers and material subject matter experts on developing SOPs to be used by DON forces afloat for handling AE and weapon systems.

e. The supervisor of shipbuilding shall work with the host contracting representative in developing SOPs for the handling of AE within the shipyard(s).

CHAPTER 18

EXPLOSIVES SAFETY REVIEW, OVERSIGHT, AND VERIFICATION OF MUNITIONS RESPONSES

Ref: (a) DoD 6055.09-M, DoD Ammunition and Explosives Safety Standards, 29 February 2008
(b) NAVSEA OP 5, Volume 1, of 1 Jul 2011
(c) NOSSAINST 8020.15C

1. Purpose. To issue policy, define authority, and assign responsibility for response actions involving munitions of explosives concern and MPPEH.
2. Background. Navy and Marine Corps units are required to submit explosives safety submissions to the DDESB when real property is known or suspected to contain either munitions of explosives concern or MPPEH, per references (a) and (b). Guidelines for developing these submissions are contained in reference (c).
3. Policy. The DON shall incorporate practices that maximize explosives safety and protect personnel and the environment from the potentially harmful effects of AE. These practices shall include the following:
 - a. Review of explosives safety and environmental aspects of the munitions response project.
 - b. Contracts involving or having the potential for involving AE shall include appropriate explosives safety clauses and required document references.
 - c. Periodic inspections or audits of munitions response activities for compliance with explosives safety and environmental policy and plans.
 - d. DON installations will submit an explosives safety submission to NOSSA or COMMARCORSYSCOM (PMM-116) for an endorsement prior to the package being forwarded to DDESB. This action must be accomplished prior to starting munitions response activities at a site that will involve the placement of explosives, the intentional physical contact with munitions of

explosives concern or MPPEH, or when conducting ground-intrusive activities in areas known or suspected to contain munitions of explosives concern or MPPEH.

e. NOSSA and COMMARCORSYSCOM (PMM-116) will ensure explosives safety submissions incorporate all aspects of explosives safety per references (a) through (c).

f. NOSSA and COMMARCORSYSCOM (PMM-116) will periodically inspect or audit munitions response activities at respective service installations per reference (c). These inspections or audits will encompass both documents and field operations.

CHAPTER 19

INCIDENT, MALFUNCTION, AND MISHAP REPORTING

Ref: (a) DoD Instruction 6055.07 of 6 June 2011
(b) DoD Instruction 6055.16 of 29 July 2008
(c) OPNAVINST F3100.6J (NOTAL)
(d) MCO 3504.2
(e) OPNAVINST 5102.1D/MCO 5102.1B
(f) OPNAVINST 8000.16D
(g) MCO 8025.1E

1. Purpose. To provide policy and guidance for the notification, investigation, and reporting of DON explosive related incidents, malfunctions, and mishaps.

2. Background. Preventing explosives mishaps will enhance operational readiness of naval forces by reducing scenarios that can cause personnel injury, destruction of property, or damage to the environment. Prompt reporting of an incident, malfunction, or mishap allows leadership to begin an investigation to gather facts, analyze data, and determine root causes that led to the mishap. This information is important to prevent a reoccurrence and to share lessons learned.

3. Policy

a. The DDESB requires notification and collection of information from mishaps involving AE or chemical agents per reference (a).

(1) OPNAV (N411) will provide DDESB with information on mishaps occurring at Navy activities involving Sailors or Navy contracted personnel. Information will be provided to the DDESB as required by reference (b).

(2) COMMARCORSYSCOM will provide DDESB with information on mishaps occurring at Marine Corps activities involving Marines or Marine Corps contracted personnel. Information will be provided to the DDESB as required by reference (b).

b. Navy serious incidents or special media reports involving AE must be reported to OPNAV (N411) for appropriate action and dissemination per reference (c).

c. Marine Corps serious incidents or special media reports involving AE must be reported to COMMARCORSYSCOM (PMM-116) for appropriate action and dissemination per reference (d).

d. DON commands shall report all explosive and chemical agent mishaps per reference (e) to COMNAVSAFECEN for any of the following:

(1) All explosive mishap reports of Navy and Marine Corps munitions, weapon systems, ordnance incidents that result in personal injury or death, and ordnance impacting off range.

(2) Any explosive event not meeting one of the above severity classifications will be reported as an explosive event report per reference (f).

e. Explosive mishap reports and hazard reports, as defined in reference (e), will be reported using the Web Enabled Safety System report structure even if an ordnance system works as designed and human error contributed to an incident or mishap.

f. COMNAVSAFECEN will maintain a repository of completed investigative reports regarding major and serious AE mishaps that occur on a DON activity.

g. Conventional ordnance deficiency reports (CODR) and explosive event reports shall be submitted by Navy and Marine Corps activities per reference (f). Naval Air Systems Command and COMNAVSEASYSYSCOM shall analyze collected data, propose solutions, and enact procedures that will lead toward minimizing the reoccurrence of similar types of incidents.

h. Marine Corps activities will report malfunctions that involve AE or weapon systems per reference (g). COMMARCORSYSCOM will coordinate the analysis of collected data, propose solutions, and enact procedures that will lead towards minimizing the reoccurrence of similar types of incidents.

i. Under certain conditions any incident, malfunction, or mishap may warrant an investigation. References (e), (f), and (g) must be reviewed to determine if an investigation is required. Additionally, the aforementioned references will provide information on how to initiate, establish, conduct, and complete an investigation. Investigations will also require

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periodic reports regarding status, findings, causes, and contributing factors that can help others deduce a conclusion which may lead to modification of a weapon, weapon system, or discontinued use.

CHAPTER 20

DON CONTRACTOR AMMUNITION AND EXPLOSIVES OPERATIONS

Ref: (a) DoD Instruction 4145.26 of 9 April 2005
(b) DoD 4145.26-M, DoD Contractor's Safety Manual for Ammunition and Explosives, 13 March 2008
(c) NAVSEA OP 5, Volume 1, of 1 Jul 2011
(d) DFAR 252.223-7002
(e) MCO 8023.3B
(f) OPNAVINST 8023.24B

1. Purpose. To provide explosives safety policy for work being performed on behalf of the DON through contractual agreements, per references (a) through (c).

2. Background

a. Responsibility for compliance with safety and health standards issued under Public Law 91-596 Occupational Safety and Health Act (OSHA) of 1970 rests with the individual prime contractor and any sub-contractor(s).

b. Responsibility for the administration and enforcement of OSHA standards rests with the U.S. Department of Labor, unless otherwise provided by special agreement between the Secretaries of Labor, Defense, and Navy covering contractor operations on defense installations during periods of national industrial mobilization.

c. DoD prescribes and enforces applicable explosives safety standards in references (a) and (b) for work performed under DoD contracts. These standards minimize the potential for mishaps that could interrupt DoD operations, delay project or production completion dates, adversely impact the DoD production base or capabilities, damage or destroy DoD-owned material or equipment, cause injury to DoD personnel, or endanger the safety of the general public.

3. Policy

a. Contracting officers shall incorporate reference (d) and the provisions of this instruction into all contracts involving AE on DON property.

b. Contracts issued for AE operations on naval installations or government-owned, contractor-operated (GOCO) activities, ships, vessels, and munitions response sites shall comply with the requirements of reference (c).

c. Contracting officers and their representatives shall consult with naval installation explosives safety managers to ensure appropriate required explosives safety publications, explosives safety input, and references are included into the contracts.

d. Managers of COCO properties and contractor site managers are required to consult with appropriate Navy representatives to determine which applicable ESMP elements and publications are needed as part of the related AE operation. Where a specific explosives safety naval government representative has not been identified for a GOCO or COCO activity conducting AE operations, the GOCO or COCO manager may contact either NOSSA or COMMARCORSYSCOM (PMM-116) for technical guidance.

e. COs and caretaker site officers will not authorize work activities for DON or other government agency AE operations under their cognizance which do not comply with applicable safety requirements of references (b), (c), (e), and (f).

APPENDIX A

ACRONYMS

<u>ACRONYM</u>	<u>DEFINITION</u>
ACAT	Acquisition Category
AE	Ammunition and Explosives
AMHAZ	Ammunition and Hazardous Materials Handling Review Board
AS	Auxiliary Submarine
ASN	Assistant Secretary of the Navy
ASN(EI&E)	Assistant Secretary of the Navy (Energy, Installations and Environment)
AWIS	Airborne Weapons Information System
CFR	Code of Federal Regulations
CMC	Commandant of the Marine Corps
CNO	Chief of Naval Operations
CNO (N4)	Deputy Chief of Naval Operations, Fleet Readiness and Logistics
CO	Commanding Officer
COCO	Contractor-Owned Contractor-Operated
CODR	Conventional Ordnance Deficiency Report
COMMARCORSYSCOM	Commander, Marine Corps Systems Command
COMNAVFACENGCOM	Commander, Naval Facilities Engineering Command
COMNAVSAFECEN	Commander, Naval Safety Center
COMNAVSEASYSYSCOM	Commander, Naval Sea Systems Command
DDESB	Department of Defense Explosives Safety Board
DoD	Department of Defense
DON	Department of the Navy
DU	Depleted Uranium
E3	Electromagnetic Environmental Effects
EED	Electro-Explosive Device
EID	Electrically Initiating Device

<u>ACRONYM</u>	<u>DEFINITION</u>
EMCON	Emissions Control
EMR	Electromagnetic Radiation
EOD	Explosive Ordnance Disposal
ES	Exposed Site
ESD	Electrostatic Discharge
ESI	Explosives Safety Inspection
ESMP	Explosives Safety Management Program
ESO	Explosives Safety Officer
ESQD	Explosives Safety Quantity Distance
EZ	Exclusion Zone
FBM	Fleet Ballistic Missile
FLTCDR	Fleet Commander
FRP	Fleet Response Plan
GOCO	Government-Owned Contractor-Operated
HC/D	Hazard Class/Division
HERF	Hazards of Electromagnetic Radiation to Fuel
HERO	Hazards of Electromagnetic Radiation to Ordnance
HERP	Hazards of Electromagnetic Radiation to Personnel
INSURV	Inspection and Survey
MCO	Marine Corps Order
MDAS	Material Documented As Safe
MDEH	Material Documented as an Explosive Hazard
MPPEH	Material Potentially Presenting an Explosive Hazard
MSC	Military Sealift Command
NAVSEAINST	Naval Sea Systems Command Instruction
NEW	Net Explosive Weight
NOSSA	Naval Ordnance Safety and Security Activity
OPNAV (N41)	Logistics Programs and Business Operations
OPNAV (N411)	Ordnance Programs and Policy Branch

<u>ACRONYM</u>	<u>DEFINITION</u>
OPNAVINST	Chief of Naval Operations Instruction
OPREP	Operational Report
ORM	Operational Risk Management
PEO	Program Executive Office
PES	Potential Explosion Site
PETN	Pentaerythrite Tetranitrate
PM	Program Manager
RADHAZ	Electromagnetic Radiation Hazards
RDX	Cyclotrimthylenetrinitramine
RF	Radio Frequency
SAFER	Safety Assessment for Explosive Risk
SD	Safety Division
SECDEF	Secretary of Defense
SECNAV	Secretary of the Navy
SECNAVINST	Secretary of the Navy Instruction
SESI	Shipboard Explosives Safety Inspection
SITREP	Situation Report
SOP	Standard Operating Procedure
SOPA	Senior Officer Present Afloat
TNT	Trinitrotoluene
TYCOM	Type Commander
USMC	United States Marine Corps
UXO	Unexploded Ordnance
WSESRB	Weapon System Explosives Safety Review Board

APPENDIX B

GLOSSARY OF TERMS

1. Ammunition and Explosives (AE). Any non-nuclear ordnance, ammunition, explosive or explosive materiel, item, device, or hazardous waste classed or being developed to be classed as a United Nations Organization class 1, division 1 through 6 item (e.g., 1.1, 1.2.1, 1.2.2, 1.2.3, 1.3, 1.4, 1.5 and 1.6).
2. Ammunition Handling. Physically interacting with AE.
3. Ammunition or Munition. A complete device charged with explosives, propellants, pyrotechnics, initiating compositions or chemical material for use in military operations, including demolitions. Certain suitably modified munitions can be used for training, ceremonial, or non-operational purposes.
4. Ammunition Terminal. An activity which has been approved for large quantity AE transfers to and from DON ships (particularly cargo ammunition ships).
5. Authorized Visitor. Personnel conducting project or mission-related functions that require them to be present in the exclusion zone (EZ). Visitors will be allowed access to the EZ for specific purposes and their exposure limited. Examples are safety and quality inspectors, project managers, and regulators.
6. Caretaker Site Officer. Government representative responsible for managing a closed DoD installation (e.g., base realignment and closure property), including environmental remediation and munitions response projects.
7. Cargo Ammunition Ship. The following ships and vessels, regardless of Military Service ownership, nationality, or use when carrying AE as cargo not required for offensive or defensive operations:
 - a. Fleet combat logistics force ships: ammunition (T-AE), fleet replenishment oilers (T-AOE), dry cargo/ammunition (T-AKE), and fast combat support (T-AOE).

b. Fleet service support ships: ocean tugs (T-ATF), rescue and salvage (T-ARS), afloat forward staging base (AFSB), submarine tenders (AS), hospital (T-AH), command (LCC), and cable repair (T-ARC).

c. Special mission ships: missile range instrumentation (T-AGM), ocean surveillance (T-AGOS), oceanographic survey (T-AGS), and submarine and special warfare support (MV).

d. Sealift: tankers (T-AOT), large, medium speed roll on/roll off (T-AKR), high speed vessels (HSV and JHSV), and container (T-AK).

e. Preposition ships: maritime prepositioning force container, roll on/roll off and tanker (T-AOT, T-AK and T-AKR), Army prepositioned stocks roll on/roll off and container (T-AKR and T-AK), Air Force container (T-AK), aviation logistics support (T-AVB), dry cargo ammunition (T-AKE), and offshore petroleum distribution system (T-AG).

f. MSC chartered ships and or vessels (e.g., maritime preposition force ships and high speed vessels).

g. Lighters and barges.

h. Any other ship and or vessel entering a DON-controlled port.

8. Certification. A formal documented declaration that an individual or capability by virtue of management review has met all of the qualification requirements established to perform a mission, task, or function.

9. Chain of Custody. The documentation of identification, inspection, verification, and certification to ensure that DoD has complied with the applicable procedures from the time of collection through final disposition.

10. Chemical Agent. A chemical compound intended for use in military operations to kill, seriously injure, or incapacitate persons through its chemical properties. Excluded are riot control agents, chemical herbicides, smoke, and flame-producing

devices. Pesticides, insecticides, and industrial chemicals are also excluded unless selected by the DoD components for chemical warfare purposes.

11. Chemical Agent Mishap. Any unintentional or uncontrolled release of a chemical agent when:

a. Reportable damage occurs to property from contamination or costs are incurred for decontamination.

b. Individuals exhibit physiological symptoms of agent exposure.

c. The agent quantity released to the atmosphere is such that a serious potential for exposure is created by exceeding the applicable maximum allowable concentration-time levels for exposure of unprotected workers, the general population, or property.

12. Classroom Training. Training conducted in a classroom environment using only inert ammunition.

13. Cold Iron. The ship shuts down its main power plant and becomes heavily dependent for electrical power and other hotel services being provided by a shore activity. A ship in cold iron is not capable of providing immediate propulsion.

14. Combatants. All DON-controlled ships not classified as explosive support ships (i.e., all ships which do not carry cargo ammunition).

15. Combatant Ship. A ship that carries ammunition in its magazines, launchers, or ready service lockers used solely in support of the ship's mission by shipboard weapons systems or embarked aircraft and troops.

16. Conventional Ordnance Deficiency Report (CODR). A report initiated when an ordnance or weapon system fails to function per design and intent which results in no property damage or injury. The CODR is initiated using the Airborne Weapons Information System (AWIS) at <https://awis.navair.navy.mil>. For commands without Internet access, use the procedures defined in OPNAVINST 8000.16D submitting a naval message. This includes improper storage, explosives, ammunition, explosive systems or

devices, including weapon system's components that come in direct contact with the ordnance and armament handling, and support equipment used to fire, handle, load, deliver, store or transport ordnance as described below:

- a. Malfunctions (see definition).
- b. Inadvertent launch or arming. The unintentional launch or arming of an explosive component or weapon caused by a mechanical failure.
- c. Defective weapons support equipment. Deficiencies that involve any device or equipment (e.g., aircraft armament equipment, airborne weapons support equipment, material handling equipment, ordnance handling equipment) used to support the manufacture, test, assembly, handling or transportation (e.g., skids, trailers, slings or similar equipment) of an explosive item or system.
- d. Observed defect. A discovered defective weapon or weapon system component that comes in direct contact with the ordnance, small arms, weapons, conventional ordnance, explosives and ammunition (e.g., protruding primers, cracked grains, damaged or broken breech bolts or firing pins, broken or scratched missile radomes, and advanced corrosion).
- e. Other deficiencies. The failure of an explosive component or explosive system to test, calibrate, or otherwise meet preloading or pre-operational use requirements (e.g., failing to successfully pass a built-in test, OTTO fuel II spills, and items falling off aircraft).

17. Deflagration. A chemical reaction producing vigorous evolution of heat and sparks or flame and moving through the material being consumed at a speed less than that of sound.

18. Detonation. A chemical reaction producing vigorous evolution of heat, sparks, or flame and moving through the material being consumed at a speed greater than that of sound.

19. Deviation. A departure from an established rule or standard. For explosives safety application, a deviation authorized by OPNAV (N41) is considered to be a departure from DoD and DON criteria, but under strictly controlled and

regulated conditions based upon compelling operational need. Deviations which may be authorized by appropriate authority within the DON are event waivers, exemptions, and secretarial certifications. This includes waivers (recurring and non-recurring), exemptions, and secretarial exemptions and certifications.

20. Directed Energy Weapon. Devices or systems that radiate or concentrate EMR with the primary intent of permanently damaging or destroying enemy personnel and material.

21. Discarded Military Munitions. 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 UXO and 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.

22. Disposal. End of life tasks or actions for residual material resulting from demilitarization or disposition operations.

23. Disposition. The process of reusing, recycling, converting, redistributing, transferring, donating, selling, demilitarizing, treating, destroying, or fulfilling other end of life tasks or actions for DoD property.

24. DoD Component. The Office of the Secretary of Defense, Military Departments (Department of the Navy, U.S. Air Force and U.S. Army), Joint Chiefs of Staff, Office of the Inspecting General of the DoD, combatant commands, defense agencies, DoD field activities and all other organizational entities of the DoD.

25. DON and Naval. The terms DON and naval used herein refer to both the U.S. Navy and USMC. It also includes Military Service and government employed personnel and is extended to contractors working on behalf of the DON when performing work on DON-owned or controlled property.

26. Dud. An explosive item which has not been armed as intended or fails to explode after being armed.

27. Electrically Initiated Devices (EIDs). DoD ordnance fired by an EID. These EIDs can be affected by high-power EMR.

28. Empty Ammunition. An ammunition item or component whose explosive material was not loaded at time of manufacture or has been completely removed and not replaced by similar or other explosive material.

29. Essential Personnel. Personnel whose duties require them to remain within an ESQD arc for one of the following reasons:

- a. Direct involvement in an AE handling operation.
- b. Normal in-port ship keeping duties by assigned personnel.
- c. Provision of mission-related in-port services.
- d. Provision of mission-related repairs and or tests to in-port ships.
- e. Safe and efficient completion of the munitions response action.

NOTE: Not included are vendors, commercial delivery vehicles unless carrying mission-related material, dependents, and non-DoD personnel except as categorized above.

30. Event Waiver. A deviation approved on a case-by-case basis for a particular evolution or issued for a limited period to meet a specific limited recurring readiness or operational requirement which cannot otherwise be satisfied.

31. Exclusion Zone (EZ). A zone created as part of a munitions response action to protect personnel, property, and equipment from an explosive incident. It establishes a dynamic ESQD arc that can move within prescribed boundaries, can be suspended, and is cancelled upon project completion.

32. Exemption. A deviation from mandatory explosives safety requirements approved for the purpose of long-term satisfaction of recurring readiness or operational requirements. A positive program for eventual correction of the deficiency must be

planned and in the process of being carried out. Exceptions are when authorization to purchase real estate required to meet ESQD clearances has not been granted, where it is in the best interest of the United States to grant agricultural leases of encumbered land, and when significant impairment of the defense posture of the United States would result. Exemptions are generally issued for a maximum of 5 years. They will not be granted for a period in excess of that estimated for correction of the deficiency.

33. Explosive Event Report. A report made in response to an unintentional detonation, firing, deflagration, burning, or launching of ordnance material to include ordnance impacting off-range, leaking fuels or oxidizers (less OTTO fuel II), and chemical agent releases. Explosive events will be reported using the report format in OPNAVINST 8000.16D. Explosive event reports will be submitted to the AWIS Web site at <https://awis.navair.navy.mil> via naval message if the damage does not result or meet the severity criteria for a class A, B, C, or D incident or mishap.

a. Detonation, Deflagration, Burning, or Firing. An unintentional or inadvertent initiation, explosion or reaction of explosive material, component or system. Example: unintentional discharges of all guns, including small arms (this includes discharge of a weapon in government quarters or unintentional discharges and ricochets during training on ranges), aircrew escape propulsion systems, marine location markers and decoy flares, etc.

b. Inadvertent Launch. An unintentional launching of a weapon.

c. Chemical Agent Release. Any unintentional or uncontrolled release of a chemical agent when:

(1) Damage occurs to property from contamination, or costs are incurred for decontamination.

(2) Individuals exhibit physiological symptoms of agent exposure.

(3) The quantity released to the atmosphere creates a serious potential for exposure.

(4) Propellants (both solid and liquid) or propellant fuels and oxidizers (less OTTO fuel II) are leaked or are spilled.

(5) All ordnance impact off-range. This includes all small arm ranges where ricochets cause bullets to impact outside surface danger zones.

34. Explosive Hazard. A condition where danger exists because explosives are present that may react (e.g., detonate, deflagrate) in a mishap that might yield potential unacceptable effects (e.g., death, injury, damage) to people, property, operational capability or the environment.

35. Explosive Mishap. A mishap or incident involving conventional ordnance, ammunition, explosives, explosive systems, and devices resulting in an unintentional detonation, firing, deflagration, burning, or launching of ordnance materiel to include ordnance impacting off range, leaking or spilled propellant, fuels and oxidizers (less OTTO fuel II), or chemical agent release. Examples of explosive mishaps are:

a. An explosion or functioning of explosive material or devices (except as a result of enemy action).

b. Inadvertent actuation, jettisoning, releasing, or launching of an explosive device.

c. Impacts of ordnance off-range. This includes all small arms ranges where ricochets cause bullets to impact outside the surface danger zone.

36. Explosive Mishap Report. A report that is initiated as a result of a mishap or incident involving conventional ordnance, ammunition, explosives, explosive systems and devices resulting in an unintentional detonation, firing, deflagration, burning, launching of ordnance material (including all ordnance impacting off-range), leaking or spilled propellant, fuels and oxidizers (less OTTO fuel II), or chemical agent release. Mishaps and incidents defined as explosive mishaps and meeting severity classification of class A, B, C, or D will be reported as an explosive mishap report per OPNAVINST 5102.1D/MCO P5102.1B even if the ordnance system works as designed and human error

contributed to an incident or mishap. Any explosive event not meeting one of these severity classifications will be reported as an explosive event report.

37. Explosive Ordnance Disposal (EOD). The detection, identification, on-site evaluation, rendering safe, recovery and final disposal of UXO and of other munitions that have become an imposing danger, for example by damage or deterioration.

38. Explosive System. A weapon, device, or tool using explosive material.

39. Explosives Limit. The maximum quantity of AE permitted in a PES. Explosives limits are based on ESQD damage considerations and are expressed in net pounds of explosives, number of rounds or units, or other measuring units. Also known as "explosive quantity."

40. Explosives or Explosive Material. A chemical or liquid mixture of chemicals, which undergoes rapid chemical change liberating a large quantity of energy in the form of blast, light, or hot gases. Incendiary material and certain fuels and oxidizers made to undergo a similar chemical change are also explosive material. Examples of explosive material include:

a. Explosives - a material (filler) used to produce a violent reaction. Fillers include but are not limited to the following: trinitrotoluene (TNT), pentaerythrite tetranitrate (PETN), cyclotrimethylenetrinitramine (RDX), Explosive D, tetryl, fulminate of mercury, black powder, smokeless powder, flash powder, and rocket and missile propellants.

b. Fuels and Oxidizers - OTTO fuel II, mixed amine fuel, inhibited red fuming nitric acid, and ethylene oxide.

c. Incendiaries - Napalm, magnesium, thermite, and pyrotechnics.

41. Explosives Quantity. See "Explosives Limit."

42. Explosives Safety

a. A condition where operational capability and readiness, personnel property, and the environment are protected from the unacceptable risk of a mishap involving munitions.

b. The summation of all actions conducted at DON commands, ashore and afloat, designed to manage and control the risks and hazards inherent with the presence and handling of AE.

c. Explosives safety is the process used to prevent premature, unintentional, or unauthorized initiation of explosives and devices containing explosives; and with minimizing the effects of explosions, combustion, toxicity and any other deleterious effects. It includes all mechanical, chemical, biological, electrical, and environmental hazards associated with explosives, hazards of EMR to AE, and combinations of the foregoing. Explosives safety encompasses the manufacturing, handling, maintenance, storage, transfer, release, testing, delivery, firing, or disposal of explosives.

43. Explosives Safety Quantity-Distance (ESQD) Arcs. The prescribed minimum safe separation distance necessary to afford an acceptable degree of protection and safety between a PES and an ES. The ESQD arc size is defined by the following equation: $D=K(W)^{1/3}$, where "D" is the arc's radius in feet, "K" is a predetermined constant and "W" is the NEW in pounds. The larger the K value, the greater degree of protection is afforded to the ES.

44. Exposed Site (ES). Any structure or area that is in proximity to AE. An ES may also be a PES if it contains or is intended to contain AE.

45. Firmware. The combination of a hardware device and a set of computer instructions or computer data that reside as read-only software on the hardware device. The firmware cannot be modified under program control.

46. Hazardous Material. Any material that, because of its quantity, concentration, physical or chemical characteristics, may pose a real hazard to human health or the environment. Hazardous material includes the following categories: flammable, combustible, toxic, corrosive, oxidizers, aerosols, and compressed gases.

47. Hot Work. Heat or spark producing equipment used for welding, melting, or with blow torches or other devices that develop temperatures higher than 288° F (degrees Fahrenheit).
48. Impact Area. The identified area within a range intended to capture or contain ammunition, munitions, or explosives and resulting debris, fragments, and components from various weapon system employments.
49. Inadvertent Launch. An unintentional launch of a weapon.
50. Inert Ammunition. Ammunition and components that contain no explosive or energetic material.
51. Inert Certification. A determination through examination that there is no energetic material remaining in ammunition or components.
52. Inert Material. Non-hazardous material, such as sand, plaster, or cement, used in ammunition items or components to simulate energetic material. The material shall be used only when necessary to provide realism, structural integrity, or for ballistic purposes.
53. Landing Force Operational Reserve Material. Material including rations, ammunition, fuel, clothing, weapons, etc., necessary to support Marine Corps expeditionary units.
54. Magazine (Afloat). The specific spaces which are designated for the stowage of AE and ordnance items.
55. Magazine (Ashore). Any building or structure, except an operating building, used for and meeting the approved design requirements for storage of AE.
56. Malfunction. An explosive item, device, or system that fails to function in a manner for which it was designed.
57. Material Documented as Safe (MDAS). MPPEH that has been assessed and documented as not presenting an explosive hazard, and the chain of custody has been established and maintained. This material is no longer considered to be MPPEH.

58. Material Documented as an Explosive Hazard (MDEH). MPPEH that cannot be documented as MDAS. It has been assessed and documented as to the maximum explosive hazards the material is known or suspected to present, and for which the chain of custody has been established and maintained. This material is no longer considered to be MPPEH.

59. Material Potentially Presenting an Explosive Hazard (MPPEH). Material owned or controlled by the DoD that, prior to determination of its explosives safety status, potentially contains explosives or munitions (e.g., munitions containers and packaging material; munitions debris remaining after munitions use, demilitarization or disposal; and range-related debris); or potentially contains a high enough concentration of explosives that the material presents an explosives 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 the DoD-established munitions management system and other items that may present explosion hazards (e.g., gasoline cans and compressed gas cylinders) that are not munitions and are not intended for use as munitions.

60. Military Munitions

a. The term "military munitions" means all ammunition products and components produced for or used by the U.S. Armed Forces for national defense and security, including ammunition products or components under the control of the DoD, the Coast Guard, the Department of Energy, and the National Guard.

b. Such term includes the following:

(1) Confined gaseous, liquid, and solid propellants.

(2) Explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries, including bulk explosives and chemical warfare agents.

(3) 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, and demolition charges.

(4) Devices and components of any item specified in subparagraphs 60b(1) through 60b(3).

c. Such term does not include the following:

(1) Wholly inert items.

(2) Improvised explosive devices.

(3) Nuclear weapons, nuclear devices, and nuclear components, other than nonnuclear 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 (section 2011 et seq. of title 42, United States Code) have been completed.

61. Misfire. A failure to fire or explode properly as designed.

62. Mishap. An unplanned event or series of events that results in damage to DoD property. This includes occupational illness to DoD military or civilian personnel, injury to DoD personnel on- or off-duty, injury to on-duty DoD civilian personnel, damage to public or private property, and injury or illness to non-DoD personnel caused by DoD operations.

63. Motor Vehicle Mishap. Motor vehicle mishaps include collisions with other vehicles, objects, terrain features, animals or pedestrians; personal injury or property damage due to cargo shifting in a moving vehicle; personal injury occurring within or from falling or jumping from a moving vehicle; and towing or pushing mishaps. It does not include injuries occurring while loading, unloading, mounting, or dismounting a non-moving vehicle or when the vehicle is not operating under its own power; cargo damaged as a result of weather, or by objects thrown or propelled into it by weather or natural phenomena; and damages by fire when no collision occurred.

64. Munitions Constituents. Any material originating from UXO, discarded military munitions or other military munitions.

65. Net Explosive Weight (NEW). The actual weight of explosive mixture or compound including the TNT equivalent of other energetic material which is used in the determination of explosive limits and ESQD arcs.

66. Non-Essential Personnel. Individuals who are not required to perform a function or duty directly related to the explosive operation being performed. Examples include: non-command related observers, vendors, dependents, non-DoD personnel, non-ordnance related safety personnel, and weapon platform maintenance personnel.

67. Operational Necessity. A mission associated with war or peacetime operations in which the consequences of an action justify the acceptance of risk of loss of equipment and personnel.

68. Operational Range. A range that is under the jurisdiction, custody, or control of SECDEF and is used for range activities.

69. Operational Training. Training conducted with inert, practice, or service AE in maintenance, production, or operational areas. This training may include actual operation and firing of weapon systems and assemblies, disassembly, test, manufacture, or disposal of AE.

70. Ordnance. Military material such as combat weapons of all kinds with AE and equipment required for their use. Ordnance includes all the things that make up a ship's or aircraft's armament (e.g., guns, ammunition and all equipment needed to control, operate, and support the weapon).

71. Organic Shipment. Any shipment utilizing military or civilian Federal employee drivers and a military-owned conveyance.

72. Potential Explosion Site (PES). Any structure or area that contains or is intended to contain AE. A PES may also be an ES if it is in proximity to another PES.

73. Practice Ammunition. Ammunition specifically designed or modified for use in exercises, practice, or operational training. It may be either expendable or recoverable. It is not inert and may contain all the explosive material normally

contained in service ammunition. It may contain additional explosive material such as pyrotechnics, spotting charges, or flotation devices to assure destruction, location, or recovery.

74. Qualifications. A documented list of requirements an individual or activity must qualify to prior to being certified (i.e., testing, formal classes, licenses, documented on-the-job training and experience, demonstrated task proficiency, physical, etc.).

75. Radiation Hazard (RADHAZ). There are three types of RADHAZs: hazards of EMR to people (HERP), fuel (HERF) and ordnance (HERO), as follows:

a. HERP is the danger to personnel from the absorption of electromagnetic energy by the human body.

b. HERF is the hazard associated with the possibility of igniting fuel or other volatile materials through radio frequency (RF) energy induced arcs or sparks.

c. HERO is the susceptibility of an EED or EID to RF energy. Modern communication and radar transmitters can produce high electromagnetic environments that are potentially hazardous to ordnance. These environments can cause premature actuation of sensitive EIDs.

76. Range-Related Debris. Debris other than military munitions debris collected from operational ranges or former ranges.

77. Reclassification. A change in operational or testing status.

78. Secretarial Exemptions or Certifications. A written authority granted by a Secretary of a Military Department or an authorized official to deviate from the requirements of explosives safety standards to allow the construction of new PESS or ESS.

79. Secured On Board. The condition that exists when AE is lowered below an open deck or positioned behind the outer hull of a ship. Missiles, except FBM, being loaded into vertical launch system tubes or above-deck launch canisters will be

considered secure when they are inserted into the launcher and the crane hook removed, whether or not the entire missile is within the launcher.

80. Service Ammunition. AE containing explosive material intended for operational training or combat use.

81. Special Incident Reporting Operational Report (OPREP) (OPREP-3 NAVY BLUE and OPREP-3 NAVY UNIT Situational Report (SITREP)). The OPREP-3 reporting system provides DON military units, at any level of command, a system to report significant events and incidents to the highest levels of command.

a. OPREP-3 NAVY BLUE series message is used to provide CNO and other naval commanders notification of incidents that are of high Navy vice national level interest.

b. OPREP-3 NAVY UNIT SITREP series message is used to inform the operational commander or appropriate higher authority of incidents not meeting OPREP-3 NAVY BLUE criteria.

82. Subject Matter Expert. A person, who through knowledge, skill, experience, training, or education, possesses scientific, technical or other specialized knowledge that may assist in understanding or determining a particular fact or issue.

83. Sustainable Range Management. Management of a DoD range in a manner that:

a. Supports national security objectives and maintains the operational readiness of the U.S. Armed Forces; and

b. Ensures the long-term viability of DoD ranges while protecting human health and the environment.

84. Training Ammunition. Service, practice, or inert AE used during the course of training personnel.

85. Transferred Within or Released from DoD Control. A receiver has acknowledged receipt of MDEH or MDAS material by signed documentation (e.g., DD Form 1348-1A Issue Release/Receipt Document) and has taken physical custody of the MDEH or MDAS from the DoD.

86. Unexploded Ordnance (UXO). The term "unexploded ordnance" means military munitions that:

a. have been primed, fused, 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, whether by malfunction, design, or any other cause.

87. 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.

88. Vent. To expose 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.

89. Waiver. A deviation from mandatory explosives safety requirements. A waiver is approved for the purpose of a temporary satisfaction of recurring readiness or operational requirements issued pending the completion of corrective measures to eliminate the requirement for the waiver.

90. Waste Military Munitions. Unused military munitions are a waste when:

a. abandoned by being disposed of, burned, detonated, incinerated, or treated prior to disposal;

b. removed from storage in a military magazine or other storage area for the purpose of being disposed of, burned, detonated, incinerated, or treated prior to disposal;

c. deteriorated or damaged to the point it cannot be put into a serviceable condition and cannot reasonably be recycled or used for other purposes; or

d. declared a solid waste by an authorized military official.

91. Weapon System. A weapon and those components required for its operation and support. This includes all conventional weapons, ammunition, guns, missiles, rockets, bombs, flares, powered targets, depth charges, mines, torpedoes, unmanned vehicles that launch weapons or are themselves launched using a shipboard weapon or combat system or ship-based aircraft and explosives-operated devices. It includes all explosive items, packaging, handling, stowage, test equipment, simulators, guidance systems, fire control systems and launchers and their components. Software and firmware related to monitoring, arming, initiation, or deployment of a weapon is included. This definition also encompasses the manufacturing, processing, packaging, handling, transport, and storage of explosive items and related components ashore.