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FOREWORD

1. PURPOSE

The purpose of MCWP 3-17.2, Explosive Ordnance Disposal Operations, is to provide a supported unit commander and staff, guidance for planning and operations. Also, EOD commanders to use as a source of information to familiarize them with organizational and operational overviews of EOD within a MAGTF. This publication replaces FMFM 13-8, MAGTF Explosive Ordnance Disposal.

2. SCOPE

Unexploded ordnance (UXO) is a frequent hazard in the modern battlespace, especially with the widespread use of submunition weapon systems. It is important during planning to consider the affects of UXO on operations, especially when the operation explicitly requires neutralizing UXO. Also, with the proliferation of MOOTW the Marine Corps is often required to safeguard large numbers of foreign nonmilitary nationals in areas contaminated with UXO. This adds another dimension to operations. It is important to address UXO early and continuously in planning and execution. MCWP 3-17.2 is a non-technical overview of EOD operations, organization, and capabilities for the employment of EOD assets and is suitable for all levels of command.

3. CERTIFICATION

Reviewed and approved this date.

BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS

Explosive Ordnance Disposal

Table of Contents

	Page
Introduction	iii
Chapter 1. Mission and Organizational	
1,001 Mission	1-1
1,002 Explosive Ordnance Disposal Units in Marine Corps Forces	1-1
1,003 Explosive Ordnance Disposal Platoon, Engineer Support Battalion	1-1
1,004 Explosive Ordnance Disposal Section, Marine Wing Support Squadron	1-3
Chapter 2. Capabilities	
2,001 Explosive Ordnance Disposal Intelligence	2-1
2,002 Other Capabilities	2-1
Chapter 3. Planning	
3,001 MAGTF Command Element Planning Requirements	3-1
3,002 Major Subordinate Command Level Planning Requirements	3-1
3,003 Planning Requirements	3-1
3,004 Supporting Area Clearance	3-3
3,005 Noncombatant Evacuation Operations	3-5
3,006 Weapons of Mass Destruction	3-6
3,007 Air Base Recovery After Attack	3-8
Chapter 4. Employment	
4,001 Command Relationships	4-1
4,002 Tasking	4-1
4,003 Employment of EOD Platoon, ESBn	4-1

Coordinating Draft-MCWP 3-17.2, Explosive Ordnance Disposal

4,004	Employment of MEU(SOC)EOD	4-3
4,005	Employment of MWSS EOD Section(s)	4-4
4,006	Offensive, Defensive, and Retrograde Operations	4-5
4,007	Employment During Amphibious Operations	4-6
4,008	Military Operations Other Than War	4-6
4,009	Special Environment Considerations	4-7
4,010	Future Concepts	4-9

Appendix 'A' Explosive Ordnance Disposal Incidents

A-1 Appendix 'B' Table of Equipment

B-1 Appendix 'C' References

C-1 Appendix 'D' Glossary

D-1 Appendix 'E' Definitions

E-1

Introduction

Unexploded munitions have been a challenging feature of battlefields since the first cannonball was fired with a black powder filler. Prior to World War II most ordnance had simple fuzes to ensure that it detonated on impact or after a short time period. All dud ordnance at that time was left alone or destroyed in place by the person with the most knowledge about explosives.

Britain initiated the Explosive Ordnance Disposal (EOD) Service in 1940 to handle the problem of delay fuzed and dud bombs dropped during the German bombing blitz of England. Initially, many bomb disposal technicians died due to their lack of ordnance knowledge and to the trial and error method they used to develop render safe procedures (disarming munitions without destroying them). As its experience increased, the bomb disposal service became a very technical and scientific field.

The United States started an EOD service shortly before entering WW II by sending representatives from each of the military branches to England. Those representatives returned to America and established separate Army and Navy bomb disposal schools. In 1945 the schools combined under Navy cognizance to become the Naval EOD School, attended by personnel from all the military services.

During World War II Marine EOD technicians were attached to every command in the Pacific Theater in addition to having an EOD company at the Amphibious Corps level. Their main mission was to render safe and dispose of unexploded ordnance (UXO) during combat and after islands were seized and secured, preparing them for safe occupation. During the Viet Nam war EOD technicians rendered safe UXO in all areas and on all bases occupied by Marine Corps units. They routinely rendered safe damaged ordnance returning aboard combat aircraft and cleared munitions stuck in artillery and infantry weapon systems. This kind of EOD work continues today.

Over the years munitions have become more complex and varied. Fuze systems have evolved from simple firing pins, through clockwork, to delay, radar, and electronic systems. As munitions have changed, the EOD field has become more complex. Technical and demanding study and training requirements increased to keep pace with the growing complexity. Despite all of the technical advances in munitions there are still failures to function as designed. In addition to the threat of UXO, EOD technicians are faced with improvised explosive devices (IED), such as car bombs, which have become a popular weapon among terrorist organizations. EOD Marines are trained to handle all explosive items to include manufactured military ordnance, weapons of mass destruction, commercial explosive items, and IED.

1 Chapter 1

2 Mission and Organizational

3 1001. Mission

4 The mission of EOD units is to respond to incidents involving unexploded ordnance
5 (UXO) and improvised explosive devices (IED) presenting hazards to units and equipment in the
6 MAGTF's AO; they identify the ordnance, safe the hazard using safe rendering procedures and
7 disposing of the hazard by removal or other means and to provide ordnance intelligence informa-
8 tion. This mission is accomplished by detecting, identifying, rendering safe, recovering, evaluat-
9 ing, disassembling, and finally disposing of unexploded ordnance. This includes conventional,
10 chemical, biological, and nuclear weapons, and IEDs; both U. S. and foreign.

11 1002. Explosive Ordnance Disposal Units in Marine Corps Forces

12 There are EOD units organic to the Force Service Support Group (FSSG) and the Marine
13 Air Wing (MAW), but there are no EOD units organic to a Marine Division. Within the FSSG
14 the Engineer Support Battalion (ESB) contains an EOD platoon. The FSSG is normally tasked
15 with all EOD support for the Marine Division. Each of the Marine Wing Support Squadrons
16 (MWSS) has an EOD section. The MWSSs are located in the Marine Wing Support Group
17 (MWSG) within each MAW. There are normally at least two MWSSs in each MAW (at least one
18 for fixed wing aircraft and one for rotary wing aircraft). These sources of EOD capabilities pro-
19 vide support for a Marine Expeditionary Force (MEF). Staff cognizance for EOD at the MEF
20 and Marine Corps Forces (MARFOR) level is performed by a Marine engineer officer within the
21 G-4.

22 1003. Explosive Ordnance Disposal Platoon, Engineer Support Battalion

23 Mission

24 To provide response teams (in direct support or general support) to units of the MAGTF
25 to eliminate the hazard posed by UXO and IED. The platoon can support all elements of the
26 MAGTF, but provides primary support to elements of the Ground Combat Element (GCE). The
27 Aviation Combat Element (ACE) receives its primary support from its MWSSs (see paragraph
28 1003). The EOD platoon can reinforce MWSSs as requested.

29

30 Organization

31 The EOD platoon is organized and equipped to provide eight fully capable teams in sup-
32 port of the GCE and Combat Service Support Element (CSSE) as shown in Figure (1). These
33 teams can handle eight separate tasks simultaneously or reorganize into smaller teams and respond
34 to greater numbers of incidents, depending upon the type of UXO/IED involved. By using only

1 those tools and publications required by the nature of the incident vice taking the entire equipment
2 and publication sets for each tasking. Marine Expeditionary Unit (MEU (SOC))s are supported
3 by an EOD team normally led by a senior Staff NCO. When deployed, the EOD team normally
4 remains under operational control of the MEU Service Support Group (MSSG) commander. The
5 centralization of command allows the most efficient use of a scarce asset.

6 **Capability**

7 This section discusses the organic capabilities and support requirements of the EOD
8 platoon.

9 **Command and Control.** The EOD platoon commander directs and coordinates the exe-
10 cution of EOD tasks consistent with the commander's guidance of the MAGTF or supported unit.
11 Within the ESBn the EOD platoon is assigned as a section of the S-3, receiving its taskings
12 through the S-3 officer, as shown in Figure (2). The EOD platoon commander is a special staff
13 officer within the ESB. Except for the battalion, EOD platoon tasks are routed through the com-
14 mander's engineer staff officer at each level, (e.g., FSSG, G-4 engineer; MEF, G-4 engineer;
15 MAGTF, G/S-4 engineer). When a team or section of the platoon is attached to a CSSE smaller
16 than an FSSG, it is normally part of the engineer unit within the CSSE. However, operational
17 control and taskings remain the responsibility of the CSSE commander.

18 **Firepower.** The EOD platoon's firepower is limited to individual weapons used for personal se-
19 curity and eight designated marksman rifles , 7.62mm. These rifles are primarily used for the dis-
20 ruption of UXO from a distance (either to destroy the fusing and prevent detonation or to cause a
21 detonation, depending upon its employment).

22 **Mobility.** The EOD platoon must have dedicated vehicles with off-road capability. Teams in the
23 field must be capable of transporting personnel, communications equipment, explosives, and spe-
24 cialized equipment to the site of UXO. The EOD platoon can have several response teams han-
25 dling separate missions throughout the MAGTF's area of operation at any given time. The
26 platoon requires approximately nineteen HMMWV vehicles to provide its mobility. The often
27 isolated and remote mission assignments make it necessary for each team to have a vehicle to
28 reach incident sites. The ESBn normally provides the EOD platoon's transportation requirement,
29 however, this might not be the case. Should this occur the supported commander may need to
30 provide EOD with the necessary transportation.

31 **Equipment.** An EOD platoon maintains eight sets of EOD tools. Each set weighs approxi-
32 mately 1300 lbs and requires approximately 23 cubic feet of storage space. Additionally, the pla-
33 toon maintains eight sets of classified publications requiring secure storage. Each set of tools
34 consists of individual tool kits and EOD unique supporting equipment designed to perform a spe-
35 cific function on specific types of ordnance. An EOD team, responding to an incident, will carry
36 the tools kits and equipment necessary to perform render safe procedures on the expected ord-
37 nance. This allows one EOD team to respond to different UXO incidents simultaneously or for
38 several teams to respond to different incidents using the same tool set.

Coordinating Draft-MCWP 3-17.2, Explosive Ordnance Disposal

1 **Combat Service Support.** The EOD platoon has no organic logistics capability. The platoon
2 receives its logistics support from the ESBn or from the supported unit.

3 **Administration.** The EOD platoon has no organic administrative capability.

4 **Communications.**

Possible Networks	Recommended Type	Reason	EOD Platoon, ESBn	EOD S MV
Local Teams Net	VHF; may be encrypted	If two or more separate teams are working in close proximity, this net is used to coordinate incident response and safety procedures	X	2
EOD Administrative Net	VHF w/ encryption; may require relay/retrans capability or HF w/ encryption if distances are beyond VHF range	Required by EOD unit HQ to monitor, direct, and transmit classified materials to teams in field	X	2
Medical Battalion Evacuation Coordination Net	VHF; air and/or ground; as required by situation	Request medical support	X	2
Infantry Ban Tactical 1; Rifle company/platoon tactical; CSS local; or others as needed	VHF; may be encrypted	EOD units should be able to communicate directly w/ supported units as required or with parent units (i.e., ESB)	X	
Squadron Common	UHF/VHF; may be encrypted	EOD units should be able to communicate directly w/ supported units as required or with parent units (i.e., MWSS)		2
Ground Control	UHF/VHF	EOD team's movements on or near taxiways and runways should be controlled by ground control for safety		2

5 **1004. Explosive Ordnance Disposal Section, Marine Wing Support Squadron**

6 **Mission**

7 To respond to incidents of UXO and IEDs presenting hazards to ACE units and in areas
8 supported by the parent MWSS. The EOD section provides the ACE with the capability to han-
9 dle the hazards associated with UXO of all types. The team provides primary support to all units
10 comprising the aviation organization to which the MWSS is assigned.

11 **Organization**

12 The organization of the MWSS EOD section is shown in Figure (3). The section consists
13 of two EOD teams that can respond to individual taskings. A response team will consist of a
14 minimum of two Marines, which allows for a third response team to be fielded by the section
15 when mission requirements dictate.

16 **Capability**

17 The EOD section is capable of providing full EOD support to an expeditionary airfield and
18 the aviation units stationed at the field. However, the section is limited to supporting only three

1 simultaneous taskings (e.g., one airfield and two FARPs or one airfield, one FARP, and one
2 incident).

3 **Command and Control.**

4 The EOD section leader directs and coordinates the execution of EOD tasks in support of
5 the commander's guidance of the ACE or supported unit. The EOD section(s) in the ACE coordi-
6 nates with the CSSE EOD platoon/team(s) to provide complete support to the MAGTF. The
7 EOD section is part of the S-3 section within the airfield operations division, MWSS. The EOD
8 officer is a special staff officer, responsible to the MWSS commander for all missions and taskings
9 in support of the ACE. Missions are received by the Airfield Operations Division (AOD), via the
10 chain of command. The airfield operations officer, in conjunction with the EOD officer, priori-
11 tizes the missions and assigns tasks to the EOD section. The senior MWSS EOD officer acts as a
12 special staff officer for the MWSG commander on all matters concerning EOD. EOD mission re-
13 quests received by the ACE are tasked to the EOD section(s) through the ACE G-4/S-4 engineer
14 officer. The resulting taskings are submitted to the MWSG S-4 section engineer officer. The
15 MWSG EOD officer coordinates with the MWSSs EOD sections to determine task assignment.
16 The MWSG EOD officer provides the ACE G-4/S-4 engineer officer with technical advice and
17 assistance as required.

18 **Firepower.** The EOD team's firepower is limited to individual weapons used for personal secu-
19 rity and two designated marksman rifles , 7.62mm.

20 **Mobility.** The EOD section requires two HMMWVs, one per team, to provide rapid response
21 to simultaneous incidents. Off-road capable vehicles are required for transporting personnel,
22 communications equipment, explosives, and specialized equipment to the site of any UXO. Addi-
23 tionally, the EOD section must be able to remove the UXO to a safe site after performing render
24 safe procedures. The MWSS normally supports the EOD section's transportation requirement.
25 However, MWSS commitments may preclude the ability to provide EOD with sufficient motor
26 transport assets. Should this occur the supported commander will be required to provide EOD
27 with the necessary transportation.

28 **Equipment.** An EOD section maintains one set of EOD tools weighing approximately 1300 lbs
29 and requires approximately 23 cubic feet of storage space. Additionally, the section maintains
30
31 ual tool kits and EOD unique supporting equipment designed to perform a specific function on
32 specific types of ordnance. An EOD team, responding to a UXO incident, will carry the tool kits
33 and equipment necessary to perform render safe procedures on the expected ordnance. This al-
34 lows one EOD section to respond to multiple UXO incidents simultaneously or for several teams
35 to respond to different incidents using the same tool set.

36 **Combat Service Support.** The EOD section has no organic logistics capability. The team re-
37 ceives its support from the MWSS.

38 **Administration.** The EOD section has no organic administrative capability.

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1 Communications.

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EOD Administrative Net	VHF w/ encryption; may require relay/retrans capability or HF w/ encryption if distances are beyond VHF range	Required by EOD unit HQ to monitor, direct, and transmit classified materials to teams in field	X	2
Medical Battalion Evacuation Coordination Net	VHF; air and/or ground; as required by situation	Request medical support	X	2
Infantry Ban Tactical 1; Rifle company/platoon tactical; CSS local; or others as needed	VHF; may be encrypted	EOD units should be able to communicate directly w/ supported units as required or with parent units (i.e., ESB)	X	
Squadron Common	UHF/VHF; may be encrypted	EOD units should be able to communicate directly w/ supported units as required or with parent units (i.e., MWSS)		2
Ground Control	UHF/VHF	EOD team's movements on or near taxiways and runways should be controlled by ground control for safety		2

1 Chapter 2

2 Capabilities

3 **2001. Explosive Ordnance Disposal Intelligence.** Ordnance technical intelligence in-
4 formation is gathered through the disassembly of U. S. and foreign munitions. U. S. munitions
5 are disassembled when requested by proper authority via the chain of command, to determine why
6 an item is not functioning as designed. Foreign ordnance is disassembled, whenever possible, to
7 obtain detailed intelligence information. This information is reported via the chain of command to
8 the Naval Explosive Ordnance Disposal Technology Division, Indian Head, MD, and the Defense
9 Intelligence Agency. Reporting of ordnance items encountered for the first time and other gath-
10 ered ordnance information is required by joint EOD 60 series publications. EODB 60A 1-1-7 and
11 EODB 60A 1-1-18 provide detailed reporting procedures and requirements. This information
12 provides necessary technical data to ensure the safe accomplishment of the EOD mission and pro-
13 vides commanders with technical intelligence concerning enemy munitions and its capabilities.
14 EOD related ordnance intelligence and identification information may be requested by an EOD
15 unit, by message, electronic mail, fax, voice, or letter to the Marine Corps detachment, Naval Ex-
16 plosive Ordnance Disposal Technology Division. The Technology Division maintains a library of
17 render safe procedures on items of ordnance.

18 **2002. Other Capabilities**

19 Explosive Ordnance Disposal units contribute to the mobility of the MAGTF by providing
20 access to denied terrain, installations and facilities due to hazards from UXO. Explosive Ord-
21 nance Disposal units support tactical operations by providing technical information on U. S. and
22 foreign ordnance. They can identify captured enemy ordnance and conduct fragmentation analy-
23 sis. Explosive Ordnance Disposal units are capable of performing their mission in every opera-
24 tional environment except underwater.

25 Explosive Ordnance Disposal units neutralize hazards associated with explosive ordnance
26 by clearance or render safe. Render safe procedures disarm the ordnance threat by interrupting
27 the firing sequence to prevent detonation. Clearance procedures eliminate the threat by physically
28 removing the ordnance or by destroying the items through detonation or burning. Once the item
29 is disarmed it may be left in place or removed from the area.

30 Explosive Ordnance Disposal technicians are able to identify ordnance and the general di-
31 rection from which the ordnance was fired or dropped. Identification is accomplished through
32 crater and fragmentation analysis.

33 Explosive Ordnance Disposal units use specialized equipment to safely disassemble an ex-
34 plosive item. From disassembly the EOD units can derive technical intelligence on munitions and
35 create training aids and operational technical support (e.g., publications, procedures, techniques,
36 etc.) which are used to enhance Marine EOD training and operational successes (e.g., render safe
37 procedures) with UXO.

1 In a garrison environment, Explosive Ordnance Disposal technicians clear UXO from
2 training ranges to maintain proficiency in tasks mandated by their mission. Clearing training
3 ranges of unexploded munitions also enhances the safety of Marines and protects civilians who
4 may wander onto the range when it is not in use. The EOD technician's thorough knowledge of
5 explosives and their effects, gained from formal training and this practical application in garrison,
6 enhances their operational readiness and capability.

7 **Weapons of Mass Destruction (WMD).**

8 Explosive Ordnance Disposal technicians are trained in rendering safe and final disposition
9 of nuclear, chemical, and biological (NBC) munitions. The EOD team is assigned the mission of
10 rendering safe, packaging and/or disposing of UXOs in a WMD environment. Chapter 4 provides
11 a description of equipment used for WMD response. When working in a potential or existing
12 NBC environment EOD teams have the ability to conduct initial entry into an area to conduct op-
13 erations (e.g., search for suspected WMD munitions or additional weapons).

14

15 Explosive Ordnance Disposal teams also possess a limited, emergency personnel decontami-
16 nation station capability. This permits EOD teams to enter contaminated areas, render safe UXO
17 and then decontaminate themselves afterward. However, EOD does not possess the personnel or
18 equipment to perform extensive decontamination operations. When attached to or in support of
19 another unit whose mission includes decontamination of an area, the subordinate unit would have
20 the responsibility of decontamination, not the EOD team(s).

21

22 **Military Operations Other Than War (MOOTW).**

23 The EOD unit is a critical asset. In several types of MOOTW, particularly in areas with
24 known or suspected terrorist or guerrilla activity or where hostile forces may have little conven-
25 tional military assets the MAGTF may encounter an enemy or adversaries using ordnance items
26 manufactured from many countries as well as "homemade" ordnance. In the Viet Nam conflict
27 for instance, the Viet Cong manufactured numerous explosive items in small jungle factories.
28 Many of these items were made from discarded C-ration cans and bits of string.

29 During operations where the military has not engaged in combat yet UXO and other ord-
30 nance are abundant, the EOD unit provides the commander with the capability to safely identify
31 and destroy ordnance items and weapon systems which do not belong to friendly forces. Trained
32 EOD Marines are vital to these operations because many foreign countries do not use safety fea-
33 tures within their commercially manufactured fuzes to which the U. S. military is accustomed and
34 trained. Many foreign ordnance items may be armed simply by removing a safety pin or turning a
35 switch. U. S. munitions have numerous built in safety features which ensure the safety of the
36 user. During MOOTW the EOD unit will be involved in recovery, render safe and disposal of
37 ammunition, and in handling improvised devices being used by guerrilla or paramilitary units. Ex-
38 plosive Ordnance Disposal personnel will respond in small teams dispatched from the parent unit
39 or teams will be attached to units operating separately or remotely.

1 Explosive Ordnance Disposal Marines are school trained in the rendering safe of IEDs such
2 as homemade bombs built and used by terrorists. EOD units in Marine Corps forces do not
3 maintain a Remote Controlled Transporter (RCT) for such work as is the case at Marine Corps
4 Bases and Air Stations. Rough terrain severely restricts the RCT's mobility. Should a RCT be
5 come necessary for a deployed unit working in an urban environment, one may be requested and
6 obtained from the Marine Corps Detachment, Naval Explosive Ordnance Disposal Technology
7 Division. The Marine Corps Detachment is also the assigned logistics manager for all EOD
8 unique tool kits. Access to the RCT is based on asset availability and transportation.

9 Specialized tools, equipment, and continuing education constitute the means whereby EOD
10 personnel can assist in combating terrorism. Explosive Ordnance Disposal units maintain hand
11 tools, explosives disrupters and an X-ray unit for working on IEDs. To ensure the availability of
12 technical knowledge, EOD units maintain FBI Bomb Data publications and updates along with in-
13 telligence updates and an extensive set of EOD publications. With these resources the EOD Ma-
14 rine can identify the IED, render safe/dispose of the item, and gather intelligence information
15 concerning the IED and its source. Finally, the EOD Marine can teach awareness, response, re-
16 porting, and identification of IEDs and locally manufactured ordnance.

17 **Dynamic Entry.**

Example: There was an informal group called "The dump of the month club" during the Viet Nam conflict. It was composed of EOD Marines and others who provided support by clearing the hazardous munitions. The Viet Cong had a habit of infiltrating or putting rocket fire into ammunition dumps. When an ammunition dump detonates, many of the stored munitions are not destroyed. They are thrown over miles of territory and damaged through impact, shock and fire. Many of these items are extremely hazardous, having received the forces necessary to arm their fusing systems. Each ammunition dump took months to collect and/or destroy all of the munitions damaged by the attacks. For a while the Marines would finish one dump and the Viet Cong would attack another.

18 Explosive Ordnance Disposal units provide explosives expertise and the capability to per-
19 form dynamic entry (DE) (e.g., into a building). DE involves the use of specialized technical entry
20 methods against a specific target which is identified in sufficient time to allow for entry and as-
21 sault planning. EOD personnel perform the DE mission in support of maritime special purpose
22 force (MSPF) and military police special response teams. Methods include the use of mechanical
23 tools, thermal torch, shotgun, and explosives. Dynamic entry methods ensure 100 percent pene-
24 tration of the target using a minimum of force, intended to limit collateral damage.

25 Some techniques and fundamentals used in DE are the same as those used in engineer
26 breaching operations, though on a much smaller scale. It is not the mission of EOD to perform
27 breaching for maneuver forces. An assault breaching operation or any other large scale breaching
28 operation is outside the capability of EOD units due to the limited number of personnel within the
29 unit. Breaching missions required by the GCE maneuver forces are outside the scope of the EOD
30 mission, examples of missions which might involve DE are:

1 In-extremis hostage rescue (IHR), and
2 raids conducted for the destruction or rescue of equipment.

3 **Aviation.** The EOD section provides the ACE with the capability to respond to malfunctioning
4 weapons and ammunition, and munitions jettisoned from an aircraft. At times ordnance may be
5 armed and partially suspended and ammunition may jam within the aircraft's guns. Explosive Ord-
6 nance Disposal teams provide the commander the capability to clear area denial munitions from
7 the airfield after attack.

8 **Ammunition Recovery/Destruction.**

9 Explosive Ordnance Disposal units provide the capability to identify enemy munitions that
10 are captured or found in the MAGTF's area of operations. Further, by identifying the munitions,
11 EOD units can ensuring storage compatibility, to include separation, proper handling, and final
12 disposition of WMD to prevent accidental detonation and contamination. Additionally, EOD
13 units provide the commander with the ability to destroy large quantities of unserviceable
14 ammunition.

15 Ensuring the complete destruction of tens of thousands of rounds of small arms ammunition
16 and hundreds or thousands of items of explosive munitions at one time requires special demolition
17 skills not typically found within other explosives using communities. Although, any experienced
18 individual with the knowledge to detonate explosives may achieve this if so tasked, an EOD tech-
19 nician should be available to supervise such tasks whenever possible to prevent the creation of a
20 greater problem from the munitions being scattered over a large area.

21 During operations in Desert Storm, EOD teams responded to hundreds of calls for assis-
22 tance, to check and destroy stockpiles of Iraqi ordnance consisting of hundreds of tons of muni-
23 tions of all calibers. During operation Provide Comfort, the EOD teams collected and destroyed
24 thousands of rounds of munitions of all calibers and hundreds of weapons of all types. These mu-
25 nitions were collected by the maneuver forces during sweeps of the occupied cities. Performance
26 of this mission freed GCE forces to continue their maneuver and mission.

27 **Support of Other United States Non-Military Organizations.** Explosive Ordnance Disposal
28 units provide EOD support to the Secret Service (USSS) and Department of State (DoS) for pro-
29 tection of the President, Vice President, and visiting dignitaries. The EOD personnel assigned to
30 these duties become part of "special activity forces" that provide the capability to search for and
31 identify explosive devices which may be a hazard to protected individuals. The request for EOD
32 units to provide this support is originated by the USSS or DoS with taskings being done via the
33 normal chain of command. When in garrison, EOD units will be tasked by the Army Very Impor-
34 tant Person Coordinator (VIPCO), with the request first going to HQMC, LPO-1. HQMC will
35 task EOD units via the chain of command. When providing this support the EOD technicians are
36 attached to the VIP support staff. Explosive Ordnance Disposal Marines maintain the necessary
37 credentials and security clearances for providing such support. The individuals assigned to

Coordinating Draft-MCWP 3-17.2, Explosive Ordnance Disposal

1 support USSS and DoS provide only search and identification capability, as required by USSS
2 and DoS regulations. Render safe procedures of any explosive items identified is normally pro-
3 vided by EOD units from the non-military departments or the military commander responsible for
4 the area in which the VIP is visiting. Normally, Marine EOD personnel assigned to these missions
5 do not take their specialized equipment and publications and are augmenting existing EOD units.

6 **Surf Zone (10' to High Water Mark).** Presently, EOD's capability to operate in the surf zone is
7 limited in scope due to insufficient number of trained personnel and a lack of equipment. Explo-
8 sive Ordnance Disposal units have the technical expertise to handle UXOs found in the surf zone
9 and can respond to any items within reach, but Marine Forces EOD units do not maintain any un-
10 derwater diving equipment on the table of equipment or specialized training to work in an under-
11 water environment. As such EOD units can not render safe any UXOs located at a depth as to
12 require breathing apparatus. This limits EOD operations to time periods when the tide exposes
13 the surf zone. U.S. Navy EOD units that are organized, trained, equipped for, and have the mis-
14 sion for handling all ordnance seaward of the high water mark and underwater (i.e., below the wa-
15 ter's surface) in rivers and streams.

1 CHAPTER 3

2 Planning

3 Explosive Ordnance Disposal tasking shall be addressed in planning as soon as possible to
4 assist in mission success. Failure to address EOD tasks during planning can hinder tactical mobil-
5 ity, and reduce the operational tempo of the MAGTF.

6 **3001. MAGTF Command Element Planning Requirements.**

7 The command element (CE) does not have an EOD staff billet. The senior EOD techni-
8 cian within the MAGTF, usually the EOD platoon leader, should augment the engineer section of
9 the CE's staff as early in the planning process as possible. The EOD staff officer provides techni-
10 cal assistance for EOD related matters to:

- 11 * Plan EOD employment to provide the best possible support.
- 12 * Determine the potential ordnance threat to operations based on the identified ordnance or-
13 der of battle. When requested by the CE staff ordnance data for use in the order of battle
14 will be provided by the Naval Explosive Ordnance Disposal Technology Center.
- 15 * Coordinate the execution of EOD tasks with other services and foreign forces in joint
16 and/or multinational operations, and with civilian authorities.
- 17 * Recommend the appropriate EOD employment techniques and command and support
18 relationships.
- 19 * Identify special training, tactics, equipment, or material support required by EOD
20 organizations.

21 **3002. Major Subordinate Command Level Planning Requirements.**

22 The MAGTF's major subordinate commands must plan for anticipated EOD requirements.
23 All EOD capabilities are in the ESBn of the FSSG and the MWSS of the MWSSG. The Marine di-
24 vision does not have any organic EOD capability and must request EOD support from the
25 MAGTF commander via the G-4. The EOD platoon coordinates with the ACE EOD sections to
26 ensure complete support to the MAGTF.

27 **3003. Planning Requirements.**

28 Planning requirements applicable to all requested EOD operations:

29 **Response priority.** The potential exists for the MAGTF to identify more UXO incident
30 locations than can readily be handled by available EOD units. Because of this, EOD incidents are
31 categorized based on the threat to MAGTF operations, personnel, and facilities. During the plan-
32 ning process, locations essential to the MAGTF mission should be pre-categorized by priority to
33 ensure timely response by EOD units. The response categories used by EOD to identify response
34 priority are discussed in Appendix A.

1 **Liaison Requirements.** Liaison must be made early in the planning phase with the com-
2 mand requesting support. Initial liaison should be made by the EOD team leader tasked with sup-
3 porting the operation. The liaison personnel should identify capabilities and assets available and
4 any additional support that may be required.

5 **Intelligence Requirements.** Accurate and complete knowledge of enemy, U.S., and al-
6 lied ordnance is critical to EOD planning and operations. The G-2/S-2 sections will provide infor-
7 mation critical to EOD planning. An ordnance order of battle can detail, along with unit contact
8 reports, what ordnance can be expected to be encountered, in what amounts, and what delivery
9 systems are present. The Naval EOD Technology Division has the capability to identify and pro-
10 vide information to attack and defeat ordnance items that the EOD unit has not previously seen
11 and for which no information is available within the unit's technical manuals. This support is
12 available to all EOD units down to the basic two man response team. Order of Battle and first
13 seen ordnance requests can be transmitted via any available communications method. The re-
14 sponse is normally classified information and will be transmitted either by classified message, se-
15 cure data, or voice transmission. Response time will vary depending on the amount of research
16 required and the availability of information, but the response will normally be made within twenty
17 four hours.

18 **Communications Requirements.** Explosive Ordnance Disposal units receive communi-
19 cations equipment from their parent commands, either the ESBn or the MWSS. To ensure coor-
20 dinated support to the entire MAGTF the EOD unit headquarters must maintain radio contact
21 with all of its subordinate EOD teams. When an EOD team is attached to a supported unit it must
22 still maintain contact with the EOD headquarters unit to receive UXO reports and to obtain tech-
23 nical assistance when required. All communications equipment should have encryption capability;
24 the EOD command and control net must be a secure net. The secure net allows the transmitting
25 of technical data to EOD teams requiring assistance during a response, which may include classi-
26 fied material. Minimum EOD communications requirements include access to the following nets
27 (from highest to lowest priority):

- 28 * Local EOD command and control.
- 29 * Medical emergency evacuation.
- 30 * Local area commander or agency (as required).
- 31 * Higher headquarters (as required).
- 32 * Safety/control (as required).
- 33 * Joint and /or combined EOD organizations operating within the area of operations.

34 **Explosive Ordnance Disposal Equipment.** Each EOD team deploys with a set of tools
35 and equipment weighing approximately 1300 lbs (98 cubic feet) and two HMMWV's with trailers.
36 The EOD platoon, ESBn deploys with eight sets of EOD team tools and equipment. Each set is
37 embarked in a Quad-con with small, immediate response tool kits embarked in a Pal-con mounted
38 within the team HMMWV. The EOD section, MWSS deploys with one set of tools. The method
39 of embarkation is determined by the parent command.

1 **Class V(w).** EOD operations require a variety of class V(w) materials to include bulk ex-
2 plosives, demolition materials, small arms ammunition, and explosive cartridges. The quantity of
3 class V required by the EOD unit is determined by the operation and the intelligence estimate of
4 the types and quantities of UXOs expected to be encountered. The EOD unit leader, working
5 with the engineer units' staffs will determine the required quantity of class V required for an op-
6 eration. See MCO 8010 for a listing of explosives and ammunition that the EOD unit may
7 require.

8 **Mobility Requirements.** When attached to a supported unit the EOD team will normally
9 bring with its own organic transportation. Additional support may be required depending on the
10 mission. While wheeled transportation provides EOD teams the response capability needed for
11 most tasking, an aircraft may be required when minimum response time is paramount. One off-
12 road capable vehicle per two man EOD team is ideal for response requirements along with a
13 cargo vehicle/trailer capable of carrying the team's equipment.

14 **Disposal Area Requirements.** A disposal area is required for the proper destruction of
15 enemy and friendly weapons and ammunition. A regional disposal site should be established near
16 the ASP or in the area of operational assignment. A minimum safe distance of 1000 feet from any
17 inhabited building is sufficient for smaller ordnance items (e.g., mortars, grenades, 40mm, etc.),
18 provided overhead cover is available. However, the standard of 4400 feet would allow disposal
19 of heavy cased munitions up to 200 pounds net explosive weight (e.g., 500lb bombs, 155mm artil-
20 lery, etc.). In addition to the safe distances mentioned above, when establishing an EOD disposal
21 site within close proximity of an active airfield, tempo of flight operations and flight patterns must
22 be taken into consideration. Aircraft should maintain a minimum of 5000 feet clearance from a
23 disposal area. If this is not possible, explosive work performed at the site must be coordinated
24 with airfield operations to ensure no aircraft enter the danger area during detonations.

25 **3004. Supporting Area Clearance**

26 Area clearance is a planned, deliberate, and time consuming removal of unexploded,
27 dropped, fired, or placed ordnance performed to make an area safe for travel and occupation.
28 This operation is performed in rear areas which are safe, or relatively safe from enemy attack. An
29 area clearance operation involves search, identification, and removal of the hazard by render safe
30 procedures or destruction. If time allows, the UXO are ultimately collected and destroyed.

31 Although area clearance is a combat engineering mission, EOD supports this mission
32 through application of their specialized expertise and skills in an IED and UXO environment.
33 Battlespace cluttered with these items impedes mobility and degrades safety, thus potentially con-
34 straining maneuver. Combat engineering techniques used for breaching, mine detection, and dis-
35 armament or destruction are not always feasible or suited to dealing with IED and UXO.
36 Ordnance intelligence gathering or the location of the UXO or IED may require render safe pro-
37 cedures vice destruction in place.

38

39 Likely area clearance scenarios for EOD Teams are multiple UXO clearance and disposal
40 operations involving: MSRs, airfield recoveries, ASPs, and port facilities. Multiple UXO

1 operations involve areas saturated with UXO's that threaten the commander's ability to maneuver.
2 Though EOD teams may assist the engineers in widening a breach after the maneuver forces have
3 passed, EOD does not have the capability to rapidly clear or breach an obstacle field. The EOD
4 Team leader provides technical guidance and helps the supported unit commander develop a
5 course of action. Identifying the location of the explosive ordnance, enforcement of safety meas-
6 ures, determining render safe procedures, and removal of the UXOs are the responsibility of the
7 EOD team leader. Based on his EOD expertise, the team leader can estimate the time needed to
8 clear the designated area. The main consideration is to assure safe passage of all personnel and
9 equipment through designated areas. When planning area clearance operations considerations
10 include:

11 **Density and type of unexploded ordnance.** Clearance of submunitions and area denial
12 munitions is extremely time consuming. Clearance could extend from several days to several
13 weeks. This is due to the munition's fuzing, which is designed to deter access, prohibit travel, or
14 channel personnel into an area. Fuzing methods include random, long-delay, antisturbance, and
15 magnetic influence. The density of UXOs consisting of bombs, mortars, and artillery will be much
16 less per given area than will be UXOs consisting of submunitions and area denial munitions.
17 Therefore, other types of UXO encountered during maneuver, such as bombs, mortars, and artil-
18 lery, require much less time to clear.

19 **Personnel augmentation:**

20 Non-EOD personnel augmentation may be needed to assist in UXO clearance operations.

21 The number of augmentees will depend on the size of the area to be cleared as well as how
22 quickly the clearance needs to be accomplished. Augmentees will form a sweep line to locate
23 hazards, with EOD Technicians following behind. There should be one EOD technician per five
24 to six augmentees. In this way, the EOD technicians can watch, respond to and mark ordnance
25 items found by the sweep line and determine the best course of action for disposal.

26 Medical support should be on site or immediately available during all clearance operations.
27 Any accident involving ordnance could be potentially catastrophic with numerous casualties.

28 Security forces are required when working in an unsecured area. Ordnance clearance re-
29 quires full time concentration by EOD personnel.

30 **Equipment Requirements.** An area clearance operation may require additional equip-
31 ment support. The amount of equipment is dependent on the size of the area to be cleared and
32 number of personnel available. The following items should be considered when planning equip-
33 ment needs:

- 34 * HMMWVs and/or trucks for movement of personnel, explosives, and ordnance
- 35 * Heavy engineer equipment for excavation and area preparation
- 36 * Communication equipment to maintain contact between individual teams, medical sup-
37 port, and CP

- 1 * Equipment to include but not limited to shovels, picks, ear protection, MOPP suits
- 2 * Class V: Large amounts of demolitions will be needed to accomplish an area clearance.

3 **3005. Noncombatant Evacuation Operations (NEO).**

4 Noncombatant evacuation operations are operations conducted to relocate threatened
5 noncombatants from locations in a foreign country. These operations normally involve U.S. citi-
6 zens whose lives are in danger, and may also include selected foreign nationals. There are two
7 major components of a NEO. The first is the evacuation control center, which is responsible for
8 screening and preparing for transport the citizens and foreign nationals to be evacuated. The sec-
9 ond is the security force, which is responsible for the perimeter security of the NEO site. EOD
10 normally participates in a NEO as part of the ECC.

11 The EOD unit's role in NEO is two fold: (1) Assist in securing the evacuation control cen-
12 ter (ECC) as a member of the ECC team and (2) ensuring the safety of all personnel through bag-
13 gage and personnel searches. An EOD team consisting of no less than two EOD technicians is
14 assigned to the forward command element in order to evaluate the area proposed for the ECC for:

- 15 * Potential explosive hazards
- 16 * Safe areas for staging personnel and baggage screening
- 17 * Containment area for suspect contraband

18 **Baggage/Personnel Search.** Prior to evacuation, carried bags/parcels and personnel will
19 be searched for contraband, weapons, or explosives prior to processing. EOD personnel will be
20 available at both baggage and personnel search sections to assist with identification of
21 contraband/suspect items found during the MP, and Department of State personnel searches.

22 **Containment Area.** An area for contraband/suspect items will be designated at a safe
23 distance from the ECC.

24 **Personnel Requirements.** For long term operations a minimum of six EOD technicians
25 are required to support the NEO. EOD technicians will normally operate in three teams:

- 26 * One team for baggage search
- 27 * One team for personnel search
- 28 * One team for back-up/relief

29 **Equipment.** The quantity of EOD equipment which can be transported to support a NEO
30 operation is normally limited by the transportation assets available to support the mission. EOD
31 equipment to be used will be based on METT-T. Vehicles may be required for transportation of
32 personnel/explosives.

33 **3006. Weapons of Mass Destruction (WMD).**

Coordinating Draft-MCWP 3-17.2, Explosive Ordnance Disposal

1 Response to an incident involving a WMD weapon/device involves gathering information,
2 planning the route for movement, selecting the personnel, equipment, and procedures for the re-
3 sponse. The EOD mission is to reconnoiter the weapon/device, and perform emergency render
4 safe procedures to ensure the item will not detonate until forces with the capability to remove the
5 device take control of the incident.

6 Chemical agents are the most likely threat to be encountered; however, the possibility of
7 biological agents being used must always be considered. All CB weapons have the same purpose
8 -- to spread contamination. Therefore, the EOD approach to deal with them is the same. Re-
9 sponse to an incident involving CB weapons requires gathering information, planning the route for
10 movement, selecting the personnel, equipment, and procedures for the response. The EOD mis-
11 sion is to reconnoiter the weapon/device, and perform render safe procedures to ensure the item
12 will not detonate or spread contamination.

13 Explosive Ordnance Disposal teams respond to a WMD accident/incident, by the fastest
14 means available. If the EOD team is the first military unit on-site, the team leader will assume
15 control of the situation.

16 How the EOD team leader handles the incident depends on the resources available, cur-
17 rent tactical situation, directives from the headquarters, and quantity and type of weapon(s) in-
18 volved. Specific responsibilities of the EOD team leader include:

19 WMD

20 Establish a temporary operations center, when the EOD team is the first unit on site
21 Determine respiratory protection required
22 Prepare the team to enter the incident site
23 Keep the Commander informed of incident progress
24 Request disposition instructions for the contaminated waste, classified components,
25 and other contaminated items.
26 Protect classified information in the operations center and making sure all classified
27 materials are accounted for after the incident is complete
28 Determine the quantity of ordnance involved and fuse conditions
29 Determine the procedures to be used against the UXO hazard
30 Render safe the munition(s) and dispose of the weapon as directed by the com-
31 mander responsible for the incident or area
32 A downwind hazard area must be established. If the type of agent or its amount is
33 unknown, EOD and NBCD personnel can calculate the extent of the hazard area

34 Nuclear

35 Ensure dosimeters, if available, are worn properly
36 Document radiation exposure of all team members.
37 Notify the decontamination team of the type and amount of radiological
38 contamination.

1 Chemical/Biological

2 Notify the decontamination team of the type and extent of chemical contamination.

3 Determine a disposal site-

4 **Disposal Site.** Explosive Ordnance Disposal has the capability to destroy chemical
5 and biological ordnance on the battlefield. The following considerations must be taken into ac-
6 count when designating or identifying a disposal site for CB agents:

7 Direction of prevailing winds and ambient temperature.

8 Elevation and openness of terrain.

9 Distance from inhabited areas and lines of communication

10 Area free of trees and tall brush

11 Suitable location available for a decontamination station

12 Communications equipment

13 **Logistics requirements.** The parent organization or the supported unit must provide
14 support for the EOD unit, including class IV and V materials. The number of EOD technicians
15 and the amount of equipment necessary to respond and support an incident involving WMD
16 weapon/material is determined by the requirements of the mission. Multiple EOD teams with
17 equipment may be necessary to support a small unit with a significant WMD UXO situation or a
18 single EOD team may respond to support a large unit with a small scale situation.

19 **Personnel Requirements.** The EOD team assigned to a CB incident may be quickly
20 overwhelmed by the size and complexity of the mission. The EOD team may require the assign-
21 ment of additional EOD technicians to successfully complete the mission. In addition, the EOD
22 team responding to a CB UXO may require support from other units and Marines. The number
23 of EOD technicians necessary to successfully complete a CB response will depend on the quantity
24 and size of the UXOs identified. A single artillery shell will require fewer EOD technicians to
25 mitigate the hazard than will a 500 pound aircraft cannister.

26 **Equipment Requirements.** The exact quantities or types of equipment that will be nec-
27 essary to successfully render safe, decontaminate and dispose of a WMD UXO will be situation
28 dependent. The following list provides a very general guideline of the types of equipment that
29 will be needed to successfully mitigate a WMD UXO. Each EOD team will be task organized for
30 the specific incident with EOD specific equipment. This equipment will include, but not be limited
31 to:

32 Detection equipment (alpha, beta, gamma survey meters)

33 First aid materials

34 Means of communication

35 EOD tools and equipment

36 Engineer equipment. To include the possible use of fork lifts, dump trucks, and

37 bulldozers

1 NBC decontamination equipment. The NBCD section will be able to determine the type
2 and quantity of decontamination equipment necessary for the mission.
3 Communication equipment
4 Vehicles/air transportation. Transportation will be needed to move personnel, and
5 equipment. The personnel and equipment will need transportation to the incident site
6 and may also require transportation from the contamination free area to the UXO. Fi-
7 nally, transportation may be necessary to transport the rendered safe and packaged
8 UXO to a safe disposal site.
9 Packaging equipment. Packing material will be needed should the UXO have to be
10 moved to a safe disposal site or shipped for intelligence analysis.
11 Protective clothing.

12 **3007. Air Base Recovery After Attack (BRAAT)**

13 The purpose of this section is to provide EOD planning guidelines necessary to support an
14 MWSS, performing airfield damage repair after conventional munitions attack, and for an EOD
15 team providing rapid clearance of UXO from priority areas of an airfield. UXO's have the capa-
16 bility to disrupt and/or paralyze normal operations and can do so for long periods of time. These
17 disruptions/interruptions to operations are particularly applicable to targets such as airfields,
18 where rapid reopening of priority areas is required. Refer to MCWP 3-21.1, Aviation Ground
19 Support, for additional information concerning BRAAT.

20 Regardless of the munitions employed against an airbase, base recovery, and, in particular,
21 airfield recovery, must take place in the shortest time possible. Several factors will effect when
22 and how each UXO is rendered safe and cleared during an airbase recovery mission. These fac-
23 tors include, but are not limited to: the sensitivity of the fusing, condition of the munitions, loca-
24 tion of the munitions, and the priority of clearance assigned to the location.

25 Unexploded ordnance must be located, identified, and marked as it poses a significant haz-
26 ard to repair crews. Explosive Ordnance Disposal personnel perform UXO locating, rendering
27 safe, and disposal procedures to reduce this hazard. The EOD team leader provides the com-
28 mander with a clearance plan. While the overall BRAAT plan encompasses much more than
29 EOD, the following considerations should be addressed by the commander in regards to the EOD
30 response to airfield recovery:

- 31 * Identify and prioritize critical facilities.
- 32 * Assign EOD personnel to damage assessment teams.
- 33 * Assign an EOD representative to the operations center staff.
- 34 * Assign EOD personnel to the emergency response section.
- 35 * Augmentation by non-EOD personnel trained in demolition techniques.

36 **Personnel requirements:** To successfully clear the large quantity of UXO expected after
37 an airbase destruction and denial attack the MWSS EOD team will need personnel augmentation.
38 The EOD team members have the expertise to perform the mission, but lack the manpower neces-
39 sary to perform the mission in a reasonable amount of time. To successfully perform the mission

1 the EOD team will provide technical expertise while working with assigned augmentees to clear
2 the hazardous UXO. The EOD personnel will perform all render safe procedures and the aug-
3 mentees will assist in locating ordnance and disposal of rendered safe items. The below list pro-
4 vides the types of personnel augmentation that may be necessary to support the UXO clearance
5 portion of the air base recovery mission:

- 6 * Augmentees. Individuals to be used for ordnance locating and as working parties.
- 7 * NBC Team. Support will be necessary when UXO are suspected/confirmed to be
8 CB.
- 9 * Engineers. Individuals to operate heavy equipment, provide engineering skills and to
10 assist with explosive/demolition work.
- 11 * Medical teams. To provide emergency medical assistance when EOD teams are oper-
12 ating too far from medical care to obtain immediate response.
- 13 * Security forces. Support necessary to secure the area while EOD teams are concen-
14 trating on ordnance clearance.

15 **Equipment requirements:** The specific types and quantity of equipment necessary to
16 clear the UXO will depend on the type and quantity of items found. Should the UXO consists of
17 only area denial submunitions then heavy equipment needed for moving large items will not be
18 necessary. It is expected that there will be a mix of ordnance used during the attack resulting in a
19 mix of UXO. Because of this, various types of equipment will be needed to perform the mission.
20 The list below describes the types of equipment that will be necessary to clear multiple, large and
21 small, UXO from an air base. It is to be used as a planning tool; it is not to be considered all in-
22 clusive. The EOD officer will provide recommendations and requests for equipment support dur-
23 ing planning.

- 24 * Ditching machine or trencher. Necessary for gaining access to buried UXO and also
25 for excavating a disposal/holding pit for rendered safe munitions.
- 26 * Mobile crane. Necessary for gaining access to UXO under debris and also for moving
27 large bombs.
- 28 * Forklift(s). Necessary for moving rendered safe bombs and for moving equipment.
- 29 * Scooploader. Used for excavating disposal/holding areas
- 30 * Tractors
- 31 * Front-end loaders/Backhoe. For movement of debris and tamping of ordnance being
32 destroyed by detonation.
- 33 * Road Grader. Used for debris clearance on runways, taxi ways, and roads.
- 34 * Towed Sweeper. Used for debris clearance where submunitions may still exist.
- 35 * Armored bull-dozer or blade tank. Used for clearing submunitions from hard surface
36 areas such as runways and taxi ways.
- 37 * Dragging chains. Used for clearing submunitions and area denial munitions from run-
38 ways and taxi ways.
- 39 * Bomb moving equipment. Lifting bars, slings, etc.
- 40 * Communication equipment
- 41 * Motor Transportation. HMWVs, trucks, and trailers.
- 42 * Marking equipment. Engineer tape, UXO flags, etc.

Coordinating Draft-MCWP 3-17.2, Explosive Ordnance Disposal

- 1 * Chemlites (red, blue, green). Used for marking ordnance, cleared areas, etc. after dark.
- 2 * Night vision goggles. Used for clearance work continuing after dark.
- 3 * GPS instruments. Used for accurate mapping of the UXO and cleared areas.

1 CHAPTER 4

2 Employment

3 4001. Command Relationships

4 EOD units may be employed in GS, DS, or attached to other organizations in the
5 MAGTF. Regardless of a unit's status, teams will maintain communications with the EOD HQ
6 (e.g., EOD platoon, ESBn or EOD Section, MWSS) to exchange classified and unclassified ma-
7 terials for render safe procedures and aid in coordinating incident response. EOD units normally
8 do not have AOs because they support other units.

9 4002. Tasking.

10 Maneuver warfare requires mobility across the battlespace. Unexploded ordnance and
11 IEDs are obstacles that restrict mobility and present a threat to operations, personnel, and mate-
12 rial. Explosive Ordnance Disposal units in the ACE and CSSE give the MAGTF commander with
13 the capability to neutralize these obstacles. There are two methods for the employment of EOD
14 assets in support of MAGTF operations; task assignment and area assignment. They may also be
15 used in combination.

16 **Task assignment.** Task assignment is when a commander assigns responsibility for per-
17 formance of one or more specifically defined missions to an EOD unit; for example, clearing un-
18 exploded munitions from a main supply route. Task assignment is preferred when multiple
19 missions must be prioritized to satisfy MAGTF requirements and/or when centralized control of
20 EOD resources is desired.

21 **Area assignment.**

22 Area assignment is when a commander assigns responsibility for performance of all EOD
23 tasks in a designated geographic area to a specific EOD unit. Area assignment may be advanta-
24 geous if the commander is responsible for a specified geographical area. If the supported com-
25 mander does not have any specific mission requirements for his EOD assets (i.e., one or morwe
26 separate incidents for which a task assignment would be appropriate), he may wish to give an area
27 assignment to locate and destroy or render safe any UXO in their area of operations. Area assign-
28 ments are normally best suited to MOOTW and defensive operations.

29 4003. Employment of the EOD Platoon, ESBn

30 The EOD platoon is organized, trained, and equipped to deploy eight fully capable EOD
31 teams in support of a MAGTF. The EOD platoon is the primary source of EOD support for the
32 CSSE and GCE. The EOD platoon may be tasked to support the EOD section in the ACE.

33 **General Support**

1 Unless explicitly changed by an operation order or stipulated in commander's guidance,
2 the EOD platoon is normally in general support of the MAGTF with emphasis on supporting the
3 CSSE. The EOD platoon may support the GCE, but the GCE has combat engineers to address
4 mobility requirements, EOD support occurs on an as-needed basis. The ACE has organic EOD
5 sections, therefore the EOD platoon would not normally provide support to the ACE unless as an
6 augmentation to support MAGTF missions or as a response to enemy actions (e.g., enemy attacks
7 an airfield).

8 The EOD platoon is most effectively employed when operating in general support, under
9 centralized control of the platoon headquarters. The headquarters directs EOD team operations,
10 internal platoon logistics, administration, and security. If mission requirements grow, involve
11 combining separate MAGTFs or enlarging from a MEU to a MEF, the EOD platoon assumes
12 cognizance over all subordinate EOD assets of the CSSE and normally remain in general support.

13 An EOD unit attached to support a smaller MAGTF (i.e., a MEU(SOC)), will normally be
14 under the operational control of the CSSD and normally in general support of the MAGTF.

15 **Determining Direct Support or Attachment Status**

16 The standard EOD section normally consists of seven technicians. However, the number
17 of technicians for a team can vary from not less than two to as many as fourteen. The size of the
18 team provided will depend on the supported unit's mission and anticipated EOD requirements.
19 Considerations for team size can include time available for a mission, amount of known or sus-
20 pected UXO, or size of a geographical area under an area assignment.

21 **Direct Support**

22 Enemy actions, intelligence estimates, or anticipated requirements generated by an opera-
23 tions plan may determine that a particular unit will need frequent or extensive EOD support. This
24 can often be provided through direct support. When an EOD team is in direct support of a sup-
25 ported unit, it will be tasked by that supported unit's commander.

26 Various weapons organic to a MAGTF may require special EOD procedures to remove a
27 round that is lodged in the weapon system. An EOD team could be in direct support to a maneu-
28 ver element or task force if that force is the main effort and EOD assets in general support could
29 not reasonably provide a timely response.

30 Having an EOD unit in direct support of a maneuver element or main effort may place
31 them too far from the platoon for effective control. Limited duration support, unreasonable re-
32 sponse times are examples of when direct support would be preferable.

33

34 **Attachment**

1 Though the EOD platoon is in general support of the MAGTF, individual EOD teams may
2 be temporarily attached to other organization requiring support from the CSSE. The attached
3 EOD unit, under the command of the supported commander, receives its tasking from the sup-
4 ported commander and provides the unit an immediate EOD response capability.

5 When an EOD team is attached to a supported unit, it will be tasked by that supported
6 unit's commander.

7 Various weapons organic to a MAGTF may require special EOD procedures to remove a
8 round that is lodged in the weapon system. An EOD team could be attached to a maneuver ele-
9 ment or task force if that force is the main effort and EOD assets in general support could not rea-
10 sonably provide a timely response.

11

12 Unexploded ordnance on Main Supply Routes (MSR) are a serious threat to lines of com-
13 munication and require EOD response. These threats are most effectively addressed by having an
14 EOD team attached to a mobile CSSD (MCSSD). The EOD team attached to a MCSSD and as-
15 signed a MSR clearance mission will be tasked by the MCSSD commander. This is most favor-
16 able because the MCSSD can provide logistics support (e.g., resupply, maintenance, etc.) to its
17 attachments. The MCSSD may also travel long distances from the main CSSE resulting in dimin-
18 ished control by the platoon. Timely and effective CSS is essential to maneuver warfare. Attach-
19 ment to a CSSD is most effective for EOD teams in support of GCE units because it is in the best
20 position to respond to changing missions and battlespace conditions.

21 These considerations, along with the overall mission requirements, commander's guid-
22 ance, distance from the EOD platoon HQ, speed and tempo of operations, are all relevant to de-
23 ciding the most effective and efficient command relationship for EOD units. Because EOD
24 resources are scarce, decisions to provide direct support or attachments should be made only
25 when general support cannot satisfy the mission requirements.

26 **4004. Employment of MEU (SOC) EOD**

27 The MEU (SOC) EOD capability is resident in the MEU Service Support Group (MSSG).
28 The MSSG normally has a six man EOD detachment from the ESB, consisting of three two man
29 teams. Two teams are normally in general support of the MAGTF while one team is attached to
30 the Maritime Special Purpose Force (MSPF). If the MEU (SOC) deploys with less than two full
31 teams, the MEU(SOC)'s MSPF will not likely have a dedicated EOD detachment. MEU (SOC)
32 units should request EOD support through the same process by which CSS support would be re-
33 quested (refer to MEU(SOC) SOP or OPORD coordinating instructions). Support requests sub-
34 mitted will be passed to the CSSOC for processing. An incident category and priority, as
35 discussed in appendix A, will be assigned by the senior EOD technician (normally the EOD de-
36 tachment leader) and one of the EOD teams will respond, in order of priority.

37 The EOD detachment leader brings critical expertise to the MEU(SOC)'s crisis action
38 team. His recommendations concerning threat ordnance, force protection, and mobility in areas

1 that are highly contaminated with unexploded ordnance are vital in planning for MEU(SOC)
2 missions.

3 Although the MSSG is responsible for EOD support to the MEU(SOC) (with ACE EOD
4 support primarily dedicated to support ACE assets), both Navy and host nation EOD teams
5 (which may be available) may support the MEU(SOC) when it requires an increased EOD capa-
6 bility. Normally, Navy EOD teams are embarked aboard the amphibious ready group (ARG) and
7 may be requested via the chain of command to augment the MEU's organic EOD capability when
8 ashore.

9 **Special Missions**

10 In addition to conventional operations, deployed EOD teams are trained and equipped to
11 support special missions as part of a MEU (SOC) or MSPF.

12 **Maritime Intercept Operation (MIO).** Marine EOD teams may be attached to a unit conduct-
13 ing a visit, board, search, and seize (VBSS) operation. The EOD teams provide the capability to
14 render safe or destroy IEDs and other hazardous devices.

15 **Gas and Oil Platform Operation (GOPLAT).** The EOD team is assigned to the assault force
16 to neutralize IEDs and can perform special demolition procedures to destroy critical locations.

17 **In-Extremous Hostage Recovery (IHR).** Marine EOD technicians are assigned to augment the
18 MSPF. The EOD technicians, assigned to support the assault unit must be qualified in assault
19 skills to operate as part of the team during all phases of the operation. During the IHR, the EOD
20 technicians are tasked with the clearance of explosive devices and are members of the dynamic en-
21 try teams. The EOD technicians assist the person or persons tasked with breaching (establishing
22 an entry point) to facilitate surprise and speed of entry.

23 **4005. Employment of MWSS EOD Section(s).**

24 The MWSS has an EOD section consisting of six technicians and one officer. This section pro-
25 vides general support to the Marine Air Group (MAG) that the MWSS is assigned to support.

26 The recommended support role of the MWSS EOD section and assignment policy, in order of
27 preference, would be:

28 1) General support of the ACE with task assignments as needed; Depending on the size
29 and configuration of the ACE, there may be limited EOD assets. This limitation may require cen-
30 tralized control to effectively respond to incidents or taskings.

31 2) Direct support of ACE units with task assignments as needed: An ACE with multiple
32 MAGs and MWSSs normally assigns one MWSS to each MAG by type (i.e., fixed or rotary).
33 Each MWSS is in direct support of their respective MAG.

1 3) Attachment to support task assignments (e.g. FARP); If the MAW or MAG mission
2 requires operating units from a remote site an EOD team may be attached with a task assignment
3 to provide on-site support.

4 4) General support to the MAGTF if required; The scheme of maneuver and/or com-
5 mander's guidance may place EOD assets in a general support role. This would normally be done
6 only when the EOD unit within the CSSE is unable to support the tasks or incidents of the CSSE
7 and GCE.

8 When deployed with an ACE, requests for EOD support are made through the Aviation
9 Ground Support Operation Center (AGSOC) of the expeditionary airfield to which the section is
10 assigned. The EOD section, in support of an ACE, may need to be augmented when the scheme
11 of maneuver requires the use of multiple FARPs. The need for EOD technicians to be stationed at
12 a FARP site will be determined by the location of the site and the number and type of aircraft
13 planned to use it. The requirement for an EOD team at each FARP takes into account the small
14 numbers of EOD technicians available within the ACE and the response time desired. A minimum
15 of two EOD technicians must be stationed at a site requiring one team. The maximum size of the
16 team is determined by the size, use of the site, and other EOD requirements of the ACE.

17 **4006. Offensive, Defensive, and Retrograde Operations**

18 **Offensive operations:** During offensive operations, ESBn EOD teams may be attached
19 to the maneuver elements to facilitate rapid response to any UXO which may hinder their maneu-
20 ver. The EOD team provides rapid response to individual items of unexploded ordnance, the
21 team cannot clear ordnance for units in contaminated areas or minesfields. Minesfields are more
22 expeditiously breached by combat engineers or other units organized and equipped for breaching.
23 The rapid response of an EOD team will allow the occupation of terrain or structures otherwise
24 too hazardous for use. At a minimum, the attached EOD team will require logistic support for
25 fuel, ammunition/explosives, and rations from the supported unit.

26 The EOD sections in the MWSSs may be part of FARP operations. EOD may assist in evaluating
27 enemy antiair defense systems by studying aircraft damage, weapons fragments or components
28 lodged in returning aircraft.

29 **Defensive operations:** During defensive operations, the employment of ESBn EOD
30 teams should be more centralized to provide continuous support across the MAGTF. EOD sup-
31 port will be requested via the MAGTF G-4 for expeditious response to EOD incidents. EOD re-
32 sponse will provide the capability for MAGTF elements to continue occupation of key terrain by
33 alleviating the hazards presented by UXO which has been dropped, fired, or otherwise identified
34 within the defensive positions. Employed in general support or direct support, the EOD platoon
35 will receive logistic support from the ESBn or CSSE as appropriate.

36 The EOD sections in the MWSSs are an important part of BRAAT operations. Returning an at-
37 tacked airfield to operations in a timely manner aids the tempo and flexibility of operational plans.

1 **Retrogrades:** During retrogrades the EOD platoon will dispatch EOD teams to assist the
2 CSSE to destroy large quantities of ammunition and equipment that was stored to support the
3 GCE. UXO encountered during the retrograde movement will not normally require EOD re-
4 sponse unless it is so positioned as to halt ground movement. EOD with the MWSSs would per-
5 form similar activities in support of ACE units.

6 **4007. Employment During Amphibious Operations**

7 Explosive Ordnance Disposal units involved in an amphibious operation may assign subor-
8 dinate EOD teams as required to support the Landing Force Shore Party (LFSP). The remaining

Example: EOD teams were deployed as members of each MAGTF during Operation Restore Hope. The main work accomplished during the operation was to destroy the weapons and ammunition collected by the GCE from the Somali clans. The EOD team destroyed hundreds of weapons, thousands of rounds of ammunition, and rockets and projectiles of all types on a daily basis.

9 EOD personnel will remain in general support and be assigned to follow-on missions. The senior
10 EOD Officer will remain with the CSSE headquarters or the MAGTF command element to advise
11 and recommend EOD employment of the assigned EOD unit. This staff function will normally be
12 determined by the MAGTF commander's guidance. The primary mission of the Marine EOD unit
13 is the support and protection of the MAGTF forces ashore and to assist with the support and pro-
14 tection of forces still embarked aboard ship.

15 **4008. Military Operations Other Than War (MOOTW)**

16 **Noncombatant Evacuation Operation (NEO).** During a NEO the NEO site commander nor-
17 mally has tactical control of the EOD team. EOD technicians should be co-located with the
18 search teams, which are part of the NEO party. The search teams normally establish their sta-
19 tion(s) at the entry point to the evacuation site. Stationing at the entry point is intended to mini-
20 mize the likelihood of refugees bringing contraband, weapons, or explosives into the site and
21 endangering NEO party members, security forces, or other evacuees.

22 **Tactical Recovery of Aircraft or Personnel (TRAP).** Marine EOD technicians involved in this
23 mission are under the tactical control of the search team leader. The EOD technicians will assist
24 in the extraction of personnel from the aircraft and the recovery, rendering safe, or destruction of
25 any remaining explosive and classified components of weapons systems or the aircraft as required.

26 **Foreign Humanitarian Assistance.**

27 The optimal method of employment during a foreign humanitarian assistance mission is for the
28 EOD platoon to be in general support of the MAGTF, assigned an area, and responding to in-
29 dividual requests for assistance tasked via the chain of command. Marine EOD support can
30 be used to destroy weapons, ordnance and explosives collected by the MAGTF, and to collect

1 and report ordnance related information. EOD units support MAGTF internal security
2 through the response to IEDs and by providing instruction to MAGTF units concerning ord-
3 nance identification and IED awareness.
4 Disaster areas are often visited by VIPs from the U.S. and foreign nationals. Just as EOD
5 provides support to U.S. VIPs (military and non-military) they can also support VIP visits to
6 disaster areas.
7 If a disaster should strike an area where munitions are manufactured, stored, or utilized, EOD
8 support may be necessary to allow relief forces to perform their mission and to safe guard
9 citizens.

10 **Peace Operations.**

11 Many peace operations occur after extensive combat operations have been conducted (e.g.,
12 Bosnia). This leads to an environment littered with mines, IED, and UXO. Extensive clearing
13 operations for both combat engineers and EOD technicians will be necessary to protect
14 MAGTF personnel and local citizens.
15 Security support for VIPs.
16 Training of local forces may be necessary.

17 **Non-government Operations**

18 **4009. Operational Environment Considerations**

19 **Cold Weather Operations**

20 Frozen ground or permafrost can reduce ability to excavate and remove UXO buried in the
21 ground;
22 Severe low temperatures can degrade the equipment performance of the EOD technicians and
23 affect the fusing mechanisms in UXO, perhaps making them more susceptible to detonation;
24 Technicians working in cold weather can reduce there work efficiency because of bulky cloth-
25 ing and an inability to work for long periods of time in the cold; plan for EOD missions to
26 take longer than normal to accomplish.

27 **Mountain Operations**

28 Mountainous terrain will reduce the mobility of teams, thus increasing incident response;
29 Retrieval of disarmed UXO will be more difficult in mountainous terrain, most UXO will need
30 to be destroyed in place;
31 Irregular terrain features will make sweeping and locating UXO more difficult and time con-
32 suming, increasing the time required for tasks;

1 The high altitude terrain may affect communications (e.g., line of sight may be impaired), ad-
2 ditional communications support may be necessary in this type of terrain (including the use of
3 dedicated communications personnel and relay stations).

4 **Riverine Operations**

5 As with the surf zone, EOD units are not equipped for underwater operations and are restricted to
6 those areas either permanently or intermittently above water. U.S. Navy EOD units are organ-
7 ized, trained, and equipped for handling all ordnance underwater (i.e., below the water's surface)
8 in rivers and streams.

9 **Jungle Operations**

10 Jungle terrain will reduce the mobility of teams, thus increasing incident response time;
11 Irregular terrain features and vegetation will make sweeping and locating UXO more difficult
12 and time consuming, increasing the time required for tasks;
13 High humidity and moisture may reduce the effectiveness of EOD equipment;
14 The environment is conducive to the use of IED and booby traps, making it a more hazardous
15 environment.

16 **Desert Operations**

17 The sand can be detrimental to EOD equipment, requiring more maintenance;
18 The ground below the sand is often very compacted and hard, making UXO retrieval more
19 difficult;
20 Extreme heat will reduce the amount of time technicians can work, desert environment water
21 requirements will mean more storage or hauling requirements for teams to allow for additional
22 water consumption;
23 With ambient temperatures reaching into the 120+ degrees F, UXO casings and mechanisms
24 could become much hotter, making them difficult to work on. Time restrictions permitting
25 work only in the morning or evenings may increase the time required to finish tasks.

26 **Military Operations on Urbanized Terrain (MOUT)**

27 Buildings and structures may adversely impact communications; additional communications
28 support may be necessary in this type of terrain (including the use of dedicated communica-
29 tions personnel and relay stations) to enable centralized command and control of EOD teams;
30 Urbanized terrain is conducive to IED and booby trap employment, increasing the hazard to
31 EOD personnel;

1 Urban areas may require more extensive use of render safe procedures to protect existing fa-
2 cilities, MAGTF personnel and local citizens (e.g., churches, mosques, facilities to be used by
3 the MAGTF, hospitals, etc.).

4 **4010. Future Concepts**

5 **Operational Maneuver From The Sea (OMFTS).**

6 OMFTS may provide for increased flexibility in the use of Naval EOD technicians. The
7 scenarios described below illustrate how this new flexibility may be of benefit.

8 The OMFTS concept envisions that most or all aviation---especially fixed-wing aviation---
9 will remain sea based. While at sea UXO support for aviation elements is primarily a Navy re-
10 sponsibility. The OMFTS concept could provide flexibility in the use of a scarce resource, EOD
11 technicians. This flexibility can occur because until such time as shore based aviation operations
12 are conducted EOD personnel in the MWSS could augment the ESBn EOD platoon in satisfying
13 support requirements. This is not to say that there is no need for EOD support in the MAW un-
14 der OMFTS, rather that support would not necessarily be a continuous necessity and would be
15 largely driven by operational requirements for FARPs and other AGS facilities established ashore
16 temporarily. If OMFTS is followed by sustained operations ashore, by design or circumstance,
17 the MWSS EOD section would revert to its general support role.

18 In OMFTS MAGTF EOD units can also reinforce Navy EOD teams prior to the amphibi-
19 ous assault, allowing them to perform their underwater mission while the Marine teams assume
20 shipboard support. As such, MWSS EOD teams would be able to assume responsibility for avia-
21 tion support aboard ship, freeing the Navy EOD team to reinforce other Navy EOD teams per-
22 forming underwater missions.

23 **Ship To Objective Maneuver (STOM).** During STOM EOD teams from the ESBn EOD pla-
24 toon may be attached to maneuver elements. These personnel can thereby provide more immedi-
25 ately responsive support. When the objective is secured, EOD personnel are then also readily
26 available to render safe any UXO or other hazardous munition which may impede consolidation,
27 reorganization, and resupply. It is reasonable to anticipate that the rapid maneuver to the objec-
28 tive will increase the likelihood of capturing large stockpiles of enemy ordnance that will require
29 evaluation and eventual disposal.

1

Appendix A

2

Explosive Ordnance Disposal Incidents

3 An EOD incident is the suspected or detected presence of unexploded or damaged explo-
4 sive ordnance that constitutes a hazard to operations, installations, personnel, or material. The
5 potential exists for the MAGTF to identify more EOD hazards than can be cleared by available
6 EOD units. Because of this, EOD incidents are categorized based on the threat to operations,
7 personnel, or facilities. During the planning process, areas or locations that display or have the
8 potential for EOD incidents should be precategorized based on the commander's guidance and in-
9 tent. This assists subordinate EOD units in developing supporting plans and task-organizing sup-
10 porting assets. Incident categories may include any type of ordnance or explosive (both foreign
11 and U.S.): conventional, improvised, chemical, biological, or nuclear. Incidents are categorized
12 as defined below:

13 * **Category A.** Incidents that constitute a grave and immediate threat. This cate-
14 gory is given priority over all other incidents. EOD procedures start immediately,
15 regardless of risk to EOD personnel.

16 * **Category B.** Incidents that constitute an indirect threat. Before initiating EOD
17 procedures, a waiting period is normally observed to reduce the potential hazard to
18 EOD personnel.

19 * **Category C.** Incidents that constitute a minor threat. EOD personnel address
20 these after category A and B incidents are resolved, as the situation permits, and
21 with the minimum potential hazard to EOD personnel.

22 * **Category D.** Incidents that constitute no threat at the present time.

Appendix B

Table of Equipment

- 3 This appendix identifies the equipment authorized on current T/E's of EOD units.
- 4 Column 1 indicates quantities for the EOD platoon in headquarters and service Company,
5 7th and 8th engineer support battalion, 1st and 2d FSSG.
- 6 Column 2 indicates quantities for the EOD platoon in headquarters and service company,
7 9th engineer support battalion, 3d FSSG.
- 8 Column 3 indicates quantities for the EOD team, supply company, CSSG 3.
- 9 Column 4 indicates quantities for all MWSS EOD sections, both fixed and rotary wing, re-
10 gardless of Marine aircraft wing to which assigned.

TAMCN/Nomenclature	U/I	1	2	3	4
C4148IIE/self-contained breathing apparatus MSA	ea	A/R	A/R	A/R	A/R
E0129IIE/book set, EOD	se	5	4	1	1
EO0359IIE/remote demolition firing device M122	se	16	14	1	1
E0759IIE/mechanical remote fuze diassembly kit MK 121 Mod 0	se	4	3	1	1
E0958IIE/locator ordnance Mk 26 Mod 0	se	8	7	1	1
E220IIE/EOD field operations set	se	8	7	1	1
E2650IIE/non-magnetic tool kit, EOD, MK 36	se	4	3	1	1
E018IIE/set, EOD lightweight X-ray Mk 32 Mod 1	se	8	7	1	1
E3070IIE/set, remote wrench Mk 1 Mod 3	se	8	7	1	1
E3080IIE/set, dearmor, .50 cal Mk 2 Mod 1	se	24	22	2	2
E3110IIE/kit, nuclear weapons, EOD	se	2	2	1	1

Appendix C

References

1. Standardization Agreements (STANAGS)

- 2143 Explosive Ordnance Reconnaissance/Explosive Ordnance Disposal: This agreement provides general guidelines delineating the capabilities which an EOD unit must maintain and the requirements of the EOD staff officer. The agreement further defines an EOD incident and sets the categories and priorities for EOD incidents.
- 2369 Identification and Disposal of Surface and Air Munitions-AEODP-2: This agreement registers United States acceptance to use AEODP-2, which is a standardized publication listing all known ordnance. It further requires the reporting of new and newly identified ordnance for insertion into the publication. Use of AEODP-2 is restricted to EOD units.
- 2370 Principles of Improvised Explosive Device-AEODP-3(A): This agreement registers United States acceptance to use AEODP-3(A), which is a manual for EOD concerning procedures for handling incidents involving Improvised Explosive Devices.
- 2377 Procedure for the Management of an EOD Incident for Use When Working With NATO Forces, Police, Civil Defense, and/or Other Agencies: This agreement provides checklists, serving as incident response guides, to be used by all levels of command, staff, and EOD units when handling and responding to EOD incidents.
- 2389 Minimum Standards of Proficiency for Explosive Ordnance Disposal: This agreement contains a list of required EOD capabilities and establishes the minimum standards of proficiency required to be met by each individual EOD technician.
- 2391 Explosive Ordnance Disposal Recovery Operations on Fixed Installations-AEODP-5: This agreement registers United States acceptance to use AEODP-5 as the guide for EOD actions to be conducted for recovery operations on fixed installations.
- 2884 Underwater Munitions Disposal Procedures AEODP-1: This agreement registers United States acceptance to use AEODP-1 as the guide for identification and disposal of underwater explosive Ordnance. AEODP-1 consists of 7 volumes.
- 2897 Standardization of EOD Equipment Requirements and Equipment: This agreement provides standardized design requirements for EOD tools and further provides a listing of approved EOD tools and equipment with country of origin.

2. Department of Defense (DOD) Directives

- 5160.62 Single Manager Responsibility for Military Explosive Ordnance Disposal: This directive assigns the Navy as the single service manager of the military EOD program and details the responsibilities of that assignment. It further assigns the relationship for the other services.

3. Marine Corps Documents

Marine Corps Doctrinal Publications

- MCWP 3 Command and Control: This publication does not specifically address EOD units, but is used by those units to ensure proper command and control.
- MCWP 3-17 Engineer Operations: This publication lists the location of EOD units within the ESBn.
- MCWP 3-17.3 MAGTF Breaching Operations: This publication mentions Navy EOD, but is used by Marine EOD when providing augmentation to the ESBn during breach widening operations.
- MCRP 3-17.2A Unexploded Ordnance Procedures: This publication provides basic identification information for items of unexploded ordnance. This publication though of use by EOD units is geared toward non-EOD units in the identification of UXO and actions to be taken.
- MCRP 4-5.1 UXO Multi Service Procedures or Operations in an Unexploded Ordnance Environment: This publication details the planning, reporting and tracking procedures to be used by each service for operations involving UXO.

4. Marine Corps Orders

- 1510.78 Individual Training Standards System for Ammunition and Explosive Ordnance Disposal: This directive lists the tasks and performance standards in which Marines in the EOD MOS must be proficient.
- 1510.101 Individual Training Standards (ITS) System for Marine Corps Special Skills-Volume 2: This directive lists the tasks and performance standards in which a Marine must be proficient to perform the dynamic entry mission.
- 3571.2 Explosive Ordnance Disposal Program: This directive provides the mission statement, training/qualification, tools and equipment, and operational guidance for the Marine Corps' EOD program.
- 4340.1 Reporting of Missing, Lost, Stolen, or Recovered Government Property: This directive provides the Marine Corps requirements and procedures for reporting missing, lost, stolen and recovered ordnance items.
- 5510.7 Marine Corps Personnel Reliability Program: This directive provides the reliability and administrative requirements which must be met for individuals who must work with or come in close proximity of nuclear weapons.
- 5521.3 Personnel Security Investigations, Security Clearance, and Accesses: This directive provides guidance for obtaining personnel security clearances. All EOD technicians must maintain a secret security clearance.
- 5740.2 Event/Incident Report: This directive is not EOD specific, it is used to ensure proper reporting of mishaps and incidents.

- 7330.2 Report for United States Marine Corps Resources in Support of the United States Secret Service: This directive provides guidance and formats for reporting personnel, equipment, and costs incurred while providing support to the USSS. The command must submit a report each time EOD provides support to USSS.
- 8010.1 Class V (w) Supply for the Fleet Marine Force Combat Operations: This directive provides the Class V(w) allowance for all units to include EOD during combat operations.
- 8025.1 Class V (w) Malfunction and Deficiency Reporting: This directive provides guidance for the reporting of problems involving U.S. munitions.
- 8027.1 Interservice Responsibilities for Explosive Ordnance Disposal: This directive is a joint order which details the EOD responsibilities for each service.

4. Department of the Navy Documents

Secretary of the Navy Instructions (SECNAVINST)

- 3020.4 Employment of Department of Defense Resources in Support of the United States Secret Service: This directive sets the requirements for supporting the USSS by the Navy and Marine Corps. It includes details on how EOD units will be employed and tasked.
- 5500.4 Reporting of Missing, Lost, Stolen, or Recovered (M-L-S-R) Government Property: this directive provides reporting procedures and requirements for missing, lost, stolen or recovered items of ammunition.
- 5510.28 Access to and Dissemination of Restricted Data: This directive provides guidance for ensuring the security of classified material. It is used by EOD units to ensure that proper security is maintained for EOD publications.

5. Navy Documents

Naval Sea Systems Command Ordnance Pamphlet (NAVSEA OP)

- 5 Technical Manual for Ammunition and Explosives Ashore: This is a multi-volume directive, of which volume 1 is the most referenced. Volume 1 provides details for storage, quantity/distance, and disposal of items of ammunition.
- 2239 Motor Vehicle Driver's Handbook for Ammunition, Explosives, and Hazardous Materials: This directive provides detailed requirements for transporting explosive materials by motor vehicle.
SWO-AA-MMA-010: This directive provides information concerning demolition materials and their use. It further provides guidance for performing demolition operations and the handling of explosive misfires.

Office of the Chief of Naval Operations Instruction (OPNAVINST)

- 3440.15 Minimum Criteria and Standards for Navy and Marine Corps Nuclear Weapons and Nuclear Weapons Accidents and Incidents Response: This directive provides guidance and requirements that must be performed when responding to an incident involving a nuclear weapon. This directive provides guidance to EOD units when responding to such incidents.
- 5102.1 Mishap Investigation and Reporting: This directive provides general guidance for reporting to include mishaps involving explosives. EOD units use this directive when mishaps occur which injure EOD personnel.
- 5510.1 Department of the Navy Information and Personnel Security Program Regulation: This directive provides guidance and procedures for maintaining security of classified material. EOD uses this directive to ensure proper security is maintained and proper procedures are used for the use and storage of EOD publications.
- 8020.13 Certification and Identification of Inert Ordnance for Display, Training, or Other Purposes: This directive provides requirements: This directive provides the requirements for marking, certifying and tracking ordnance items from which the explosives have been removed. EOD units use this order when removing the explosives from ordnance items which are to be used for training aids and display.

6. Army Documents

Army Regulations

- 75-15 Responsibilities and Procedures for Explosive Ordnance Disposal: This directive provides guidance for EOD operations and assistance provided to the civilian community within the United States. It includes reporting procedures and report forms.
- 385-65 Identification of Inert Ammunition and Ammunition Components: This directive provides further guidance for the marking of ordnance items from which explosives have been removed. Inert Marine Corps ordnance must meet the requirements of this order and OPNAVINST 8020.13.

Field Manuals

- 5-250 Explosives and Demolitions: This manual provides information on the use of explosive demolition materials. It provides procedures for the use of explosives and it also provides information concerning the use of explosives to perform demolitions.

1

Appendix D

2

Glossary

ACE	aviation combat element
AGSOC	aviation ground support operations center
ARG	amphibious ready group
ASP	ammunition supply point
BRAAT	base recovery after attack
CP	command post
CSSE	combat service support element
DART	damage assessment response team
DAT	damage assessment team
DoS	Department of State
ECC	evacuation control center
ECCS	emergency contamination control station
EOD	explosive ordnance disposal
ESBn	engineer support battalion
FARP	foward arming and refueling point
FSSG	Force Service Support Group
GCE	ground combat element
H&S	headquarters and service
IHR	in extremis hostage recovery
MAGTF	Marine Air Ground Task Force
MAW	Marine Aircraft Wing
MCSSD	mobile combat service support detachment
MEU (SOC)	Marine Expeditionary Unit (Special Operations Capable)
METT-T	mission, enemy, terrain and weather, troops and support-time available
MIO	maritime intercept operation
MOOTW	military operations other than war
MOS	minimum operating strip
MP	military police
MSPF	Maritime Special Purpose Force
MSR	main supply route
MSSG	MEU Service Support Group

Coordinating Draft-MCWP 3-17.2, Explosive Ordnance Disposal

MWSG	Marine Wing Support Group
MWSS	Marine Wing Support Squadron
NEO	noncombatant evacuation operation
OMFTS	operational maneuver from the sea
SMUD	standoff munitions disruption
U.S.	United States
UXO	unexploded ordnance
WMD	weapons of mass destruction

1

Appendix E

2

Definitions

3 **ammunition-** (DOD, NATO) A device charged with explosives, propellants, pyrotechnics, initiat-
4 ing composition, or nuclear, biological, or chemical material for use in connection with defense or
5 offense, including demolitions. Certain ammunition can be used for training, ceremonial, or non-
6 operational purposes. (Joint Pub 1-02)

7 **detonation-** A detonation is classed as an explosion. It is a chemical reaction that propagates
8 with such rapidity that the rate of advance of the reaction zone into the unreacted material ex-
9 ceeds the velocity of sound in the unreacted material. The rate of advance of the reaction zone is
10 termed "detonation rate" or "detonation velocity." When this rate of advance attains such a value
11 that it will continue without diminution through the unreacted material, it is termed the "stable
12 detonation velocity." When the detonation rate is equal to or greater than the stable detonation
13 velocity of the explosive, the reaction is termed a "high order detonation." When the detonation
14 rate is lower than the stable detonation velocity of the explosive, the reaction is called a "low-
15 order detonation." (NAVEODB 60A-1-1-15)

16 **disposal area-** An assigned area to which explosive ordnance is taken for final disposal opera-
17 tions. (NAVEODB 60A-1-1-15)

18 **dud-** (DOD, NATO) Explosive munition which has not been armed as intended or which has
19 failed to explode after being armed. (Joint Pub 1-02)

20 **dynamic entry-** The surgical breach of a designated target utilizing the minimum force necessary
21 to ensure 100% penetration with a minimum of collateral damage. Methods include mechanical
22 tools, thermal torch, shotgun, and explosive charges.

23

24 **equipment-** (DOD, NATO) All non-expendable items needed to outfit/equip an individual or
25 organization. (Joint Pub 1-02)

26 **explosive ordnance-** (DOD, NATO) All munitions containing explosives, nuclear fission or fu-
27 sion materials and biological and chemical agents. This includes bombs and warheads; guided and
28 ballistic missiles; artillery, mortar, rocket, and small arms ammunition; all mines, torpedoes, and
29 depth charges; demolition charges; pyrotechnics; clusters and dispensers; cartridge and propellant
30 actuated devices; electro-explosive devices; clandestine and improvised explosive devices; and all
31 similar or related items or components explosive in nature. (Joint Pub 1-02)

32 **explosive ordnance disposal-** (DOD, NATO) The detection, identification, field evaluation,
33 rendering-safe, recovery, and final disposal of unexploded explosive ordnance. It may also in-
34 clude the rendering safe and/or disposal of explosive ordnance which have become hazardous by

Coordinating Draft-MCWP 3-17.2, Explosive Ordnance Disposal

1 damage or deterioration when the disposal of such explosive ordnance is beyond the capabilities
2 of personnel normally assigned the responsibility for routine disposal. (Joint Pub 1-02)

3 **explosive ordnance disposal incident-** (DOD, NATO) The suspected or detected presence of
4 unexploded explosive ordnance, or damaged explosive ordnance, which constitutes a hazard to
5 operations, installations, personnel or material. Not included in this definition are the accidental
6 arming or other conditions that develop during the manufacture of high explosive material, techni-
7 cal service assembly operations or the laying of mines and demolition charges. (Joint Pub 1-02)

8 **explosive ordnance disposal operation-** Any mission where employment of EOD procedures by
9 qualified EOD personnel on an item(s) of hazardous or suspected hazardous unexploded ord-
10 nance, which presents a threat to operations, installations, personnel, or material, is conducted.

11 **explosive ordnance disposal procedures-** (DOD, NATO) Those particular courses or modes of
12 action taken by explosive ordnance disposal personnel for access to, diagnosis, rendering safe, re-
13 covery, and final disposal of explosive ordnance or any hazardous material associated with an ex-
14 plusive ordnance incident.

15 **a. access procedures.** Those actions taken to locate exactly and to gain access to unex-
16 ploded explosive ordnance.

17 **b. diagnostic procedures.** Those actions taken to identify and evaluate unexploded ex-
18 plusive ordnance.

19 **c. render safe procedures.** The portion of the explosive ordnance disposal procedures
20 involving the application of special explosive ordnance disposal methods and tools to
21 provide for the interruption of functions or separation of essential components of un-
22 exploded explosive ordnance to prevent an unacceptable detonation.

23 **d. final disposal procedures.** The final disposal of explosive ordnance which may in-
24 clude demolition or burning in place, removal to a disposal area or other appropriate
25 means. (Joint Pub 1-02)

26 **explosive ordnance disposal response team-** The initial EOD team responds to an explosive
27 ordnance incident for the purpose of locating, identifying, and categorizing explosive incidents.
28 This response team may pick up, do a render safe and/or dispose of many simple incidents
29 (booby-traps, hand grenades, etc.) (MCO 3571.2)

30 **explosive ordnance disposal team-** A minimum of two fully qualified EOD technicians capable
31 of performing any EOD operation. (MCO 3571.2)

32 **explosive ordnance disposal unit-** (DOD) Personnel with special training and equipment who
33 render explosive ordnance safe (such as bombs, mines, projectiles, and booby traps), make intelli-
34 gence reports on such ordnance, and supervise the safe removal thereof. (Joint Pub 1-02)

1 **explosive ordnance reconnaissance-** (NATO) Reconnaissance involving the investigation, de-
2 tection, location, marking, initial identification and reporting of suspected unexploded explosive
3 ordnance, by explosive ordnance reconnaissance agents, in order to determine further action.
4 (Joint Pub 1-02)

5 **gas and oil platform mission-** A mission developed in the 1980s for the disablement of a gas or
6 oil platform located off shore. Also the mission to recover hostages from a gas or oil platform lo-
7 cated off shore.

8 **hung weapons-** (DOD) Those weapons or stores on an aircraft that the pilot has attempted to
9 drop or fire but could not because of a malfunction of the weapon, rack or launcher, or aircraft re-
10 lease and control system.

11 **inextremis hostage recovery-** A military assault by select forces to recover hostages being held
12 by terrorists or enemy forces on foreign soil. The assault is normally carried out covertly.

13 **maritime intercept operation-** An operation carried out by naval and Marine Corps forces to
14 stop, search, and if necessary seize cargo from foreign ships in specially designated areas. This
15 operation is carried out to enforce an economic embargo or preclude armaments from reaching an
16 aggressor nation.

17 **misfire-** (DOD, NATO) **1.** Failure to fire or explode properly. **2.** Failure of a primer or the pro-
18 pelling charge of a round or projectile to function wholly or in part. (Joint Pub 1-02)

19 **noncombatant evacuation operation-** The evacuation of U.S. citizens from foreign countries by
20 military forces. The operation is carried out to ensure the security of U.S. citizens living and
21 working in a foreign country which becomes involved in extreme turmoil.

22 **ordnance-** (DOD) Explosives, chemicals, pyrotechnic and similar stores, e.g., bombs, guns and
23 ammunition, flares, smoke, napalm. (Joint Pub 1-02)

24 **render safe procedures-** See explosive ordnance disposal procedures.

25 **tactical recovery of aircraft and personnel-** The recovery of downed aircraft and personnel
26 from enemy terrain conducted by military forces.

27 **unexploded explosive ordnance-** Explosive ordnance which has been primed, fuzed, armed, or
28 otherwise prepared for action, and which has been fired, dropped, launched, projected, or placed
29 in such a manner as to constitute a hazard to operations, installations, personnel or material and
30 remains unexploded either by malfunction or design or for any other cause. (Joint pub 1-02)