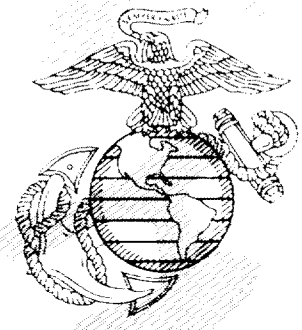
MCWP 3-17.2 (formerly FMFM 13-8)

MAGTF

Explosive Ordnance Disposal



U.S. Marine Corps

PCN 139 718000 00

MCCDC (C 42)
8 Oct 2004

E R R A T U M

to

MCWP 3-17.2

MAGTF EXPLOSIVE ORDNANCE DISPOSAL

1. For administrative purposes, the publication short title has been reidentified. Change *FMFM 13-8* to read *MCWP 3-17.2* wherever it appears in the Manual. Also change the Publication Control Number (PCN) from *13971800000* to *14300012100*.

143 000121 80

DEPARTMENT OF THE NAVY
Headquarters United States Marine Corps
Washington, DC 20380-0001

20 December 1993

FOREWORD

1. PURPOSE

Fleet Marine Force Manual (FMFM) 13-8, *MAGTF Explosive Ordnance Disposal*, addresses the employment of explosive ordnance disposal (EOD) units in support of Marine Air-Ground Task Force (MAGTF) combat operations, and it provides a doctrinal point of reference for the integration of EOD tasks into MAGTF combat operations.

2. SCOPE

FMFM 13-8 provides guidance for the MAGTF commander and his staff in their requests for EOD support. Specifically, this manual addresses planning requirements, organizational structure, command and support relationships, and tasks and capabilities of EOD units.

3. SUPERSESSION

None

4. CHANGES

Recommendations for improving this manual are invited from commands as well as directly from individuals. Forward suggestions using the User Suggestion Form format to—

Commanding General
Doctrine Division (C 424)
Marine Corps Combat Development Command
2042 Broadway Street Suite 215
Quantico, Virginia 22134-5021

5. CERTIFICATION

Reviewed and approved this date.

BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS

C. C. KRULAK
Lietenant General, U.S. Marine Corps
Commanding General
Marine Corps Combat Development Command
Quantico, Virginia

DISTRIBUTION: 139 718000 00

USER SUGGESTION FORM

From:

To: COMMANDING GENERAL, DOCTRINE DIVISION (C 424), MARINE CORPS COMBAT DEVELOPMENT COMMAND, 2042 BROADWAY STREET SUITE 215, QUANTICO VA 22134-5021

Subj: RECOMMENDATIONS CONCERNING FMFM 13-8, *MAGTF EXPLOSIVE ORDNANCE DISPOSAL*

1. In accordance with the Foreword to FMFM 13-8, which invites individuals to submit suggestions concerning this FMFM directly to the above addressee, the following unclassified recommendation is forwarded:

Page	Article/Paragraph No.	Line No.	Figure/Table No.

Nature of Change: ☐ Add ☐ Delete ☐ Change ☐ Correct

2. Proposed new verbatim text: (Verbatim, double-spaced; continue on additional pages as necessary.)

3. Justification/source: (Need not be double-spaced.)

NOTE: Only one recommendation per page.

Record of Changes

Change No.	Date of Change	Date of Entry	Organization	Signature

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MAGTF Explosive Ordnance Disposal

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Chapter 1
Organizational Structure

HISTORICAL PERSPECTIVE

Prior to World War II, explosive ordnance disposal (EOD) organizations did not exist. EOD disposal was handled by the person with the most ordnance experience.

During World War II, Germany initiated a bombing blitz of England. By dropping bombs with long delay fuzes (delays of up to 80 hours after impact), the Germans created a continuous bombing that effectively lasted 24-hours a day. Bombs that did not explode upon impact were considered delay-fuzed until they were dug up, identified, and rendered safe. This dangerous and time-consuming job required the evacuation of over 2,200 locations within metropolitan London and greatly increased both civilian and military casualty rates. In 1940, in an attempt to prevent hazards to both the civilian populace and military operations and reduce the casualty rate, Great Britain established a corps of skilled technicians to handle unexploded enemy ordnance. The British War Office assigned EOD responsibilities to the British Army Royal Engineers and the Royal Navy. The British Army Royal Engineers' bomb disposal units were responsible for ordnance items found on land. The Royal

Navy's mine squads were responsible for ordnance items found at sea; i.e., mines.

Initially, many bomb disposal technicians died due to the trial and error methods of disposal. Only the officer in charge of the bomb disposal unit or mine squad rendered safe or removed the fuze from a dud or delay-fuzed bomb. The unit's or squad's enlisted members located, uncovered, and once the bomb was defuzed, transported, and assisted in the disposal of the bomb. To reduce the loss of life, Great Britain's Royal Engineers, Navy, Air Force, and scientists developed an elaborate system to locate, render safe, and dispose of unexploded ordnance.

Shortly before the U.S. entered World War II, the U.S. sent representatives from the Army, Navy, and Marine Corps to England for bomb disposal training. By 1946, U.S. graduates from the British EOD school had proven highly effective in the neutralization and disposal of ordnance. This was the beginning of the U.S.'s EOD capability.

EXPLOSIVE ORDNANCE UNITS IN THE FLEET MARINE FORCE

The force service support group (FSSG) maintains one EOD platoon. It is organic to the engineer support battalion (ESBn). See figure 1-1. The EOD platoon consists of approximately 75 EOD personnel. It provides EOD

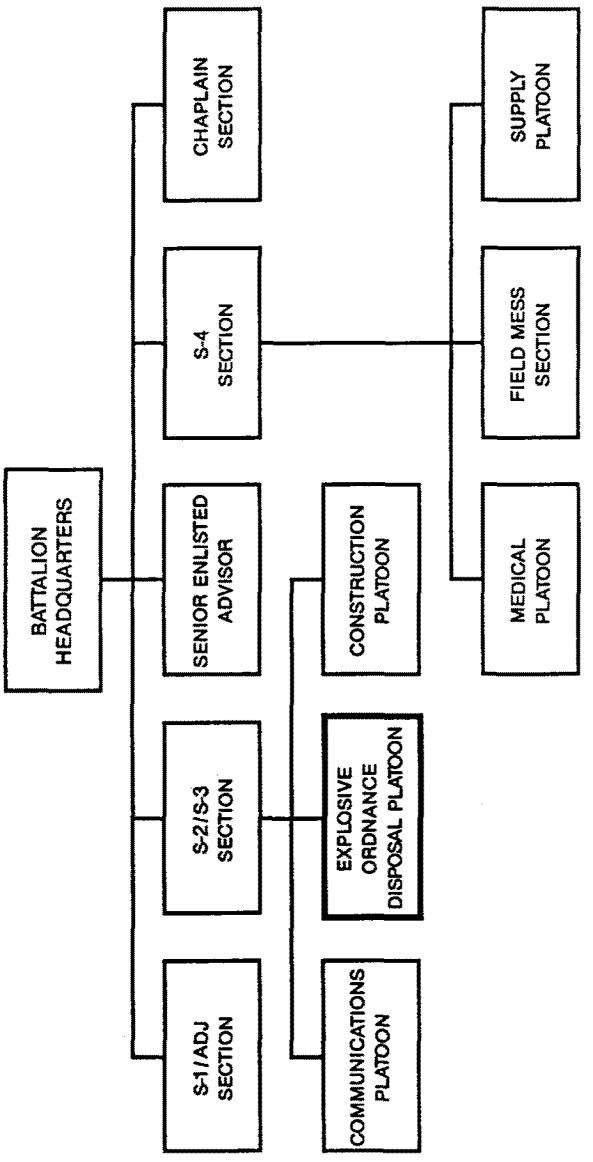


Figure 1-1. EOD Platoon, ESBn.

support, via the combat service support element (CSSE), to the ground combat element (GCE).

The Marine wing support group (MWSG) maintains one EOD section. It is organic to each Marine wing support squadron (MWSS). The EOD section consists of approximately seven EOD personnel. It supports the aviation combat element's (ACE's) EOD requirements. See figure 1-2.

Note

Neither the Marine Division nor the Marine Reserves has an organic EOD capability.

EOD PLATOON, ESBn

The EOD platoon provides the Marine Air-Ground Task Force (MAGTF) with EOD-trained personnel. It primarily supports the GCE, but it also can augment other MAGTF elements. The EOD platoon can perform EOD tasks on nuclear weapons.

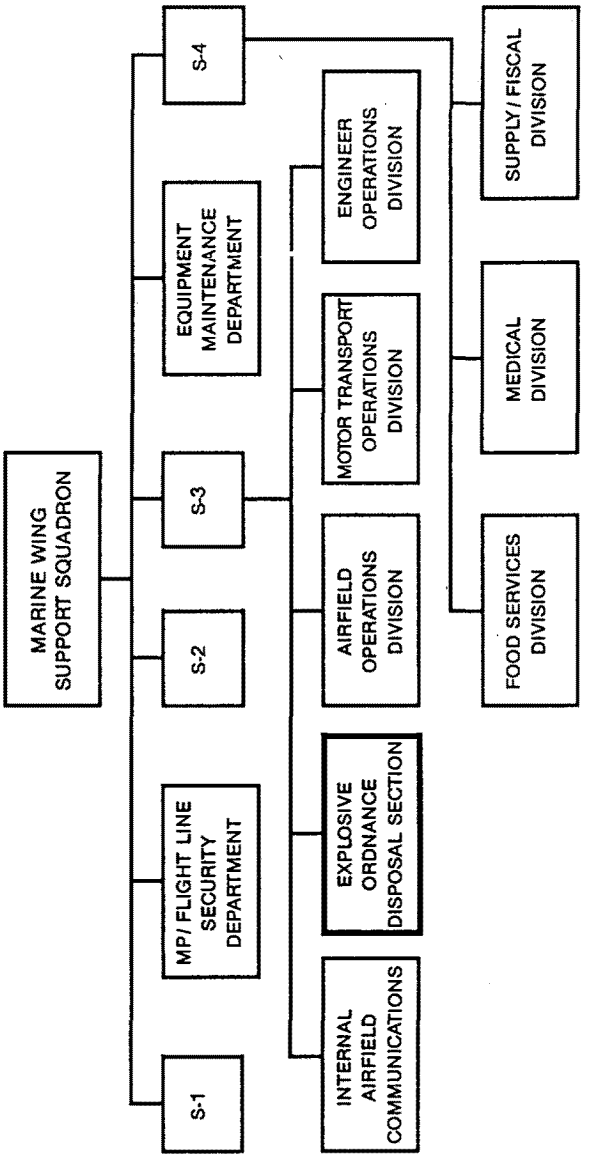


Figure 1-2. EOD Section, MWSS.

Mission

"The EOD mission is to provide a capability to neutralize the hazards associated with explosive ordnance that are beyond the normal capabilities of other specialties, and present a threat to operations, installations, personnel, and material." (MCO 3571.2F, *Explosive Ordnance Disposal Program*)

Organization

Command and Control. The EOD platoon commander performs the command and staff functions of planning, directing, and coordinating EOD tasks in support of the CSSE's mission. The EOD platoon must coordinate with the MWSS's EOD section for complete EOD support to the MAGTF.

Firepower. The EOD platoon's firepower is limited to individual weapons used for personal and local security.

Mobility. The ESBn fulfills the EOD platoon's vehicular transportation requirements. EOD teams and their equipment are air-transportable.

Combat Service Support. Table 1-1 identifies the EOD platoon's organic combat service support capability.

Table 1-1. EOD Platoon's Combat Service Support Capability

Function	Capability
Supply	None. The H&S company, ESBn provides supply support.
Maintenance	Capable of organizational (1st and 2d echelon) maintenance on organic equipment. The maintenance battalion, FSSG provides intermediate (3d and 4th echelon) maintenance support.
Transportation	None. The ESBn provides vehicular transportation.
General Engineering	None. The appropriate companies of the ESBn, FSSG provide general engineering support.
Health Services	None. The H&S company, ESBn provides medical support. The dental battalion, FSSG provides dental support.
Services	None. The service company, H&S battalion, FSSG provides services support.

Administration. The EOD platoon does not have an organic administrative capability. Headquarters & service (H&S) company, ESBn provides administrative support to the EOD platoon.

Concept of Employment

The EOD platoon provides task-organized EOD teams, each composed of at least two qualified EOD personnel, in support of MAGTF GCE requirements. Chapter 3 addresses specific EOD concepts of employment.

EOD SECTION, MWSS

MWSS EOD sections provide task-organized EOD teams directly to the ACE to support ACE operations. It also can augment other MAGTF elements. MWSS EOD sections can perform EOD tasks on nuclear weapons.

Mission

"The EOD mission is to provide a capability to neutralize the hazards associated with explosive ordnance that are beyond the normal capabilities of other specialties, and present a threat to operations, installations, personnel, and material." (MCO 3571.2F)

Organization

Command and Control. The EOD section officer performs the command and staff functions of planning, directing, and coordinating EOD tasks in support of the ACE's mission. The EOD section officer also serves as a special staff advisor to the MWSS commander under the cognizance of the MWSS operations officer. The EOD section must coordinate with the ESBn's EOD platoon for complete EOD support to the MAGTF.

Firepower. The EOD section's firepower is limited to individual weapons used for personal and local security.

Mobility. The MWSS fulfills the EOD section's vehicular transportation requirements. EOD teams and their equipment are helicopter-transportable/deliverable.

Combat Service Support. Table 1-2 identifies the EOD section's organizational combat service support capability.

Administration. The EOD section does not have an organic administrative capability. The squadron S-1 section provides administrative support to the EOD section.

Table 1-2. EOD Section's Combat Service Support Capability

Function	Capability
Supply	None. The supply section, MWSS provides supply support.
Maintenance	Capable of organic (1st and 2d echelon) maintenance on organic equipment. The maintenance battalion, FSSG provides intermediate (3d and 4th echelon) maintenance support.
Transportation	None. The MWSS provides vehicular transportation.
General Engineering	None. The MWSS provides general engineering support.
Health Services	None. The MWSS provides medical support. The dental battalion, FSSG provides dental support.
Services	None. The service company, H&S battalion, FSSG provides services support.

Concept of Employment

The EOD section provides task-organized EOD teams, each composed of at least two qualified EOD personnel, in support of MAGTF ACE requirements. Chapter 3 addresses specific EOD concepts of employment.

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Chapter 2
Mission, Tasks, and Capabilities

MISSION

The mission of EOD units is to provide the MAGTF with the capability to neutralize the hazards associated with unexploded foreign and domestic ordnance that is beyond the capabilities of other specialties and presents a threat to operations, installations, personnel, and material. They accomplish their mission by detecting, identifying, rendering safe, recovering, evacuating, and disassembling and/or disposing of unexploded ordnance. The EOD platoon's area of expertise includes all conventional, improvised, chemical, biological, and nuclear weapons.

EOD units contribute to MAGTF mobility by allowing the MAGTF to use terrain, installations, and facilities denied to them due to hazards from unexploded ordnance. EOD units support tactical operations by providing technical information on U.S. and foreign ordnance. They can identify anticipated and/or captured threat ordnance and analyze ordnance impact debris.

TASKS AND CAPABILITIES

EOD units perform a variety of missions in any type of environment. Both MAW- and FSSG-based EOD units are structured and equipped to perform all EOD tasks. EOD tasks and capabilities are classified into three broad categories: ordnance disposal; foreign ordnance information/intelligence collection, evaluation, and exploitation; and U.S. ordnance information/ intelligence collection, evaluation, and exploitation. Table 2-1 identifies specific capabilities of EOD units.

EOD units perform ordnance disposal by either clearing the ordnance or rendering the ordnance safe. Clearing procedures physically remove the threat. Rendering safe procedures disarm the threat by interrupting its ability to detonate, but the ordnance is not physically removed from the site. Whenever a rendering safe procedure is performed, all precautions must be taken for a possible "high order" (unacceptable) detonation.

EOD units collect, identify, evaluate, and exploit foreign ordnance. They provide the supported commander with technical information concerning foreign ordnance and mines. Technical knowledge of foreign ordnance is critical to both the EOD unit and the supported commander.

EOD units maintain information on U.S. ordnance. They also have access to the Naval Explosive Ordnance Disposal Technology Center. This Center provides them with information that is not resident within the EOD unit.

Table 2-1. EOD Platoon and EOD Section Capabilities

	EOD PLT		EOD SEC	
	Primary	Secondary	Primary	Secondary
Ordnance Disposal				
Assist with the routine destruction of ammunition stocks in the absence of qualified ammunition/ordnance personnel.		x		x
Assist in the emergency destruction of ammunition to protect life and property or prevent enemy use.		x		x
Teach demolition procedures for the emergency destruction of ammunition.		x		x
Respond to bomb threats that involve suspected homemade bombs, boobytraps, or sabotage devices made of explosives or other hazardous ordnance.	x		x	
Support recovery/salvage operations of damaged or destroyed combat vehicles, aircraft, and weapons systems that contain hazardous ordnance.		x		x
Clear misfired projectiles if owning unit's misfire procedures fail.	x		x	
Provide technical information to the MAGTF.		x		x
Contact Naval Explosive Ordnance Disposal Technology Center as required.	x		x	
Detect, field evaluate, recover, render safe, and dispose of any conventional, nuclear, chemical, or biological ordnance, both U.S. and foreign.	x		x	
Respond to incidents involving unexploded ordnance that affect safety and/or security.	x		x	
Remove or render safe all hazardous fuzed projectiles, rockets, bombs, or missiles.	x		x	
Assist commanders in planning EOD operations.	x		x	
Handle and render safe "hung" ordnance on aircraft if ordnance is determined unsafe and beyond the capabilities of aviation ordnance personnel.		x	x	
Advise crash crew personnel and the officer in charge of an aircraft mishap investigation of existing hazardous explosive threats.		x	x	
Operate in a nuclear, chemical, or biological environment.	x		x	

Table 2-1. EOD Platoon and EOD Section Capabilities (Continued)

	EOD PLT		EOD SEC	
	Primary	Secondary	Primary	Secondary
Clear MAGTF-occupied areas of dud-fired munitions, area denial munitions, or submunitions.	x		x	
Perform special and general demolition operations.		x		x
Advise the commander on the protective measures required to reduce the effects of explosive ordnance.	x		x	
Assist in safety determination of damaged munitions.		x		x
Clear impact areas of dud munitions.	x		x	
Assist in rapid runway repair operations by clearing runways and surrounding areas of dud-fired, delay, or area denial munitions.		x	x	
Provide the maritime special purpose forces with the capability to neutralize explosive hazards encountered during special operations missions.		x		
Conduct explosive ordnance reconnaissance.	x		x	
Leak, seal, package, and dispose of chemical munitions.	x		x	
Provide technical EOD information.	x		x	
Support the U.S. Secret Service and the Department of State as directed by the Commandant of the Marine Corps.		x		x
Foreign Ordnance Information/Intelligence Collection, Evaluation, and Exploitation				
Identify and evaluate foreign ordnance debris.		x		x
Perform supporting recovery salvage operations.		x		x
Provide technical information on foreign mines.		x		x
Detect, field evaluate, recover, render safe, and dispose of any conventional, nuclear, chemical, or biological foreign ordnance.	x		x	
Acquire, disassemble, and exploit all types of explosive ordnance, foreign or first seen, for technical intelligence. This includes render safe procedures, safety precautions, functioning, and employment.	x		x	

Table 2-1. EOD Platoon and EOD Section Capabilities (Continued)

	EOD PLT		EOD SEC	
	Primary	Secondary	Primary	Secondary
Educate personnel on the hazards of foreign unexploded ordnance.		x		x
Provide commanders with technical information concerning threat force ordnance.	x		x	
Provide assistance and guidance on matters pertaining to explosive safety.		x		x
Assist in safety determination of damaged munitions.		x		x
Provide technical EOD advice.	x		x	
U.S. Ordnance Information/Intelligence Collection, Evaluation, and Exploitation				
Support recovery salvage operations.		x		x
Detect, field evaluate, recover, render safe, and dispose of any conventional, nuclear, chemical, or biological U.S. ordnance.	x		x	
Acquire, disassemble, and exploit all types of explosive ordnance, U.S. or first seen, for technical intelligence. This includes render safe procedures, safety precautions, functioning, and employment.	x		x	
Educate personnel on the hazards of unexploded ordnance.		x		x
Provide assistance and guidance on matters pertaining to explosive safety.		x		x
Determine safety of damaged munitions.		x		x
Provide EOD expertise to investigations of ammunition malfunction and/or mishaps.		x		x
Provide technical EOD advice.	x		x	

Chapter 3
EOD's Role in the MAGTF

CONCEPT OF EMPLOYMENT

EOD personnel are extremely valuable to the MAGTF and provide the MAGTF with unique capabilities. EOD is a highly technical occupation performed by a small number of qualified personnel. If possible, geographic collocation of EOD personnel and equipment contributes to the most economic management of EOD units.

Note

EOD units are not trained, organized, or equipped to conduct minefield breaching operations or to use explosives to create or clear obstacles. Minefield breaching and explosive obstacle creation/clearance are combat engineer tasks.

There are three techniques for employment of EOD units in support of MAGTF operations: task assignment, area assignment, or a combination assignment. The availability of supporting transportation and the reliability of adequate

communications are key factors that govern the MAGTF's choice of EOD employment technique.

Task Assignment

Task assignment designates the responsibility for performance of one or more specifically defined tasks to an EOD unit(s); e.g., recovery and disposal of a specific round of dud ordnance. Task assignment is the preferred form of work assignment because it clearly defines the task and permits maximum centralized control of scarce EOD resources.

Area Assignment

Area assignment designates the responsibility for performing all EOD tasks in a designated geographic area to a specific EOD unit. Area assignment may be advantageous if a large area must be covered. This type of assignment allows the EOD commander maximum flexibility in prioritizing tasks and assigning available personnel.

Combination Assignment

Due to the limited number of EOD units available to the MAGTF, a combination of task and area assignment techniques may be employed to use EOD-unique assets effectively. An EOD unit may be assigned responsibility for EOD tasks in a designated area, or they may be directed to

augment another EOD unit for a specific mission outside their area of responsibility.

COMMAND RELATIONSHIPS

The different types of control form command relationships and specify the degree of authority one unit has over another unit. Command relationships are either permanent (organic or assigned) or temporary (attached or detached). The degree of operational control and administrative control determines the basic command relationships. FMFM 3, *Command and Control*, provides additional information on command relationships.

Typically, an EOD unit is temporarily attached to a supported organization. The length of the attachment depends upon the duration of the mission that required the attachment. The attachment is subject to the limitations imposed by the attachment order. The attached EOD unit is under the command of the supported commander, receives its taskings from the supported unit, and provides the supported unit with immediate EOD capabilities.

The supported unit must provide the EOD unit's logistical support, including class IV and V materials. The number of EOD technicians and their equipment requirements are determined by the mission, not by the unit to which they are attached. The supported unit's supply support requirements

will increase due to the EOD unit's personnel, equipment, vehicle, and communications requirements.

SUPPORT RELATIONSHIPS

A support relationship is accomplished by directing one force (called a supporting force) to support (or operate in support of) another force (called a supported force). A unit placed in support of another unit is directed by the parent commander to respond directly to the supported commander. Supported commanders do not exercise command over the supporting unit, nor do they assign missions to the supporting unit. Typically, an EOD unit is placed in either general or direct support. FMFM 3 provides additional information on support relationships.

General Support

An EOD unit in general support provides EOD services to the supported force as a whole and not to any particular subordinate organization. The commander in general support retains command of organic assets and control of attached elements and employs them in the most beneficial manner. Priority of EOD tasks, if there is a conflict, is determined by the next higher, common commander. If the EOD commander is unable to exercise reliable and timely command and control over his EOD units, this type of support relationship should not be used.

Logistics for an EOD unit in general support are provided by its parent organization. Typically, the supported command is unable to provide the EOD-unique vehicles, equipment, and communications required by the EOD unit.

Direct Support

An EOD unit in direct support is not attached to or under the command of the supported unit, yet priority of EOD support goes to the supported unit. The parent organization of the EOD unit retains command of the EOD unit. The parent organization continues to provide administrative and logistical support to the EOD unit. A direct support relationship provides the supported unit with rapid access to EOD capabilities without the burden of providing logistical and administrative support.

The EOD unit commander reports to the supported unit commander and, if necessary, provides liaison. The supporting EOD unit prepares its support plan in direct response to the supported unit's plans. An EOD unit in direct support of an infantry unit is responsible for all EOD tasks in the zone of action or sector of defense of the supported unit, unless otherwise specified.

EOD INCIDENTS

An EOD incident is the suspected or detected presence of unexploded or damaged explosive ordnance that constitutes a hazard to operations, installations, personnel, or material. The potential exists for the MAGTF to identify more EOD hazards than can be cleared by available EOD units. Because of this, EOD incidents are categorized based on the threat to MAGTF operations, personnel, or facilities. During the planning process, areas or locations that display or have the potential for EOD incidents should be pre-categorized by the MAGTF engineer officer. This assists subordinate EOD units in developing supporting plans and task-organizing supporting assets. Incident categories may include any type of ordnance or explosive (both foreign and U.S.): conventional, improvised, chemical, biological, or nuclear. Incidents are categorized as defined below:

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

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

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

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

PLANNING

Mission, enemy, terrain and weather, troops and support available-time available (METT-T) significantly affect the planning of anticipated EOD tasks. Failure to address EOD tasks during planning can hinder tactical mobility, threaten sustainment operations, and reduce the operational tempo of the supported MAGTF.

Command Element Planning Requirements

The senior MAGTF staff engineer officer, under the MAGTF commander's purview, has cognizance over EOD requirements. An EOD officer should augment the command element's staff as early in the planning process as possible. The EOD officer provides technical assistance for EOD-related matters; specifically, he—

- Determines the potential ordnance threat to MAGTF operations based on the theater's ordnance order of battle.

- Coordinates the execution of EOD tasks with joint and/or combined (military and civilian) authorities.

- Recommends the appropriate EOD employment technique and command and support relationships.

- Identifies special training, tactics, equipment, or material support required by MAGTF EOD organizations.

Subordinate-Level Command Planning Requirements

The MAGTF's major subordinate commands must plan for anticipated EOD requirements. The GCE commander, not having organic EOD assets, informs the MAGTF commander's cognitive staff officer of his EOD requirements. The ACE commander identifies EOD tasks that exceed his organic capability and requests augmentation or reinforcement. After identifying EOD requirements of major subordinate commands, the MAGTF staff can set priorities and coordinate EOD requirements and the CSSE commander can determine the support required (personnel and equipment).

Overall Planning Requirements

Liaison Requirements. The EOD staff representative is responsible for the rapid dissemination of information concerning unknown or first-seen ordnance to the MAGTF command element, other Services, and allied EOD organizations. Rapid dissemination of unknown or first-seen ordnance information is critical to mission accomplishment and personnel safety.

Intelligence Requirements. Accurate and complete knowledge of enemy, U.S., and allied ordnance is critical to EOD planning and operations. Location and condition of known ordnance is also critical and becomes part of the MAGTF's essential elements of information. The MAGTF G-2/S-2 and EOD officer ensure that all information from the Naval Explosive Ordnance Disposal Technology Center (under message address indicating group 0435) is made immediately available to the CSSE and ACE EOD units.

Mobility Requirements. The EOD unit's mobility directly affects the efficiency and success of MAGTF EOD operations. Air, wheeled, or tracked transportation may be required to support EOD unit mobility. The rapid execution of EOD tasks (particularly category A incidents) requires a highly mobile and responsive transportation capability.

Communications Requirements. Task-organized EOD units do not have organic communications equipment. EOD

operations require extensive communications. Augmentation of communications personnel and/or equipment to EOD units must be identified early in the planning process. Minimum EOD communications requirements include access to the following communications nets (given in order of priority):

- Local EOD command and control.
- Medical emergency evacuation.
- Local area commander or agency (as required).
- Higher headquarters (as required).
- Safety/control (as required).
- Joint and/or combined EOD organizations operating within the theater of operations.

Disposal Area Requirements. MAGTF EOD units require a suitable disposal/demolition site. The site must be large enough to contain the fragmentation of the ordnance detonated within its radius.

Appendix A
Glossary

Section I
Abbreviations and Acronyms

ACE ..... aviation combat element
CSSE ..... combat service support element
EOD ..... explosive ordnance disposal
ESBn ..... engineer support battalion
FSSG ..... force service support group
GCE ..... ground combat element
H&S ..... headquarters and service
MAGTF ..... Marine Air-Ground Task Force
MAW ..... Marine aircraft wing
METT-T ..... mission, enemy, terrain and weather, troops and support available-time available
MWSG ..... Marine wing support group
MWSS ..... Marine wing support squadron
U.S. ..... United States

Section II
Definitions

ammunition—(DOD, NATO) A device charged with explosives, propellants, pyrotechnics, initiating composition, or nuclear, biological, or chemical material for use in connection with defense or offense, including demolitions. Certain ammunition can be used for training, ceremonial, or nonoperational purposes. (Joint Pub 1-02)

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

disposal area—An assigned area to which explosive ordnance is taken for final disposal operations. (NAVEODB 60A-1-1-15)

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

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

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

explosive ordnance disposal—(DOD, NATO) The detection, identification, field evaluation, rendering-safe, recovery and final disposal of unexploded explosive ordnance. It may also include the rendering safe and/or disposal of explosive ordnance which have become hazardous by damage or deterioration when the disposal of such explosive ordnance

is beyond the capabilities of personnel normally assigned the responsibility for routine disposal. (Joint Pub 1-02)

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

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

explosive ordnance disposal procedures—(DOD, NATO) Those particular courses or modes of action taken by explosive ordnance disposal personnel for access to, diagnosis, rendering safe, recovery, and final disposal of explosive ordnance or any hazardous material associated with an explosive ordnance disposal incident.

a. **access procedures.** Those actions taken to locate exactly and to gain access to unexploded explosive ordnance.
b. **diagnostic procedures.** Those actions taken to identify and evaluate unexploded explosive ordnance.

c. **render safe procedures.** The portion of the explosive ordnance disposal procedures involving the application of special explosive ordnance disposal methods and tools to provide for the interruption of functions or separation of essential components of unexploded explosive ordnance to prevent an unacceptable detonation.
d. **recovery procedures.** Those actions taken to recover unexploded explosive ordnance.
e. **final disposal procedures.** The final disposal of explosive ordnance which may include demolition or burning in place, removal to a disposal area or other appropriate means. (Joint Pub 1-02)

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

explosive ordnance disposal team—A minimum of two fully qualified EOD technicians capable of performing any EOD operation. (MCO 3571.2F)

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

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

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

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

render safe procedures—See explosive ordnance disposal procedures.

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

Appendix B
References

1. Standardization Agreements (STANAGs)

2143 Explosive Ordnance Reconnaissance/Explosive Ordnance Disposal (EOR/EOD)

2369 Identification and Disposal of Surface and Air Munitions—AEODP-2

2370 Principles of Improvised Explosive Device—AEODP-3(A)

2377 Procedure for the Management of an EOD Incident for Use When Working With Other Agencies

2389 Minimum Standards of Proficiency for Explosive Ordnance Disposal Trained Personnel

2391 Explosive Ordnance Disposal Recovery Operations on Fixed Installations—AEODP-5

2884 Underwater Munitions Disposal Procedures—AEODP-1

2897 Standardization of EOD Equipment Requirements and Equipment

2. Department of Defense (DOD) Directive

5160.62 Single Manager Responsibility for Military Explosive Ordnance Disposal Technology and Training

3. Marine Corps Documents

Fleet Marine Force Manuals (FMFMs)

3 Command and Control

13 MAGTF Engineer Operations

13-7 MAGTF Breaching Operations (under development)

13-8-1/ FM 21-16 Unexploded Ordnance Disposal (under development)

Marine Corps Orders (MCOs)

1510.78 Individual Training Standards System for Ammunition and Explosive Ordnance Disposal Occupational Field 23

3571.2F	Explosive Ordnance Disposal Program
4340.1	Reporting of Missing, Lost, Stolen, or Recovered Government Property
5510.7	Marine Corps Personnel Reliability Program
5521.3	Personnel Security Investigations, Security Clearance, and Accesses
5740.2E	Event/Incident Report
7330.2B	Report for United States Marine Corps Resources in Support of the United States Secret Service
8010.1D	Class V (W) Supply for the Fleet Marine Force Combat Operations
8025.1C	Class V (W) Malfunction and Deficiency Reporting
8027.1C	Interservice Responsibilities for Explosive Ordnance Disposal

4. Navy Documents

Secretary of the Navy Instructions (SECNAVINST)

3020.4E	Employment of Department of Defense Resources in Support of the United States Secret Service
5500.4F	Reporting of Mission, Lost, Stolen, or Recovered (M-L-S-R) Government Property
5510.28	Access to and Dissemination of Restricted Data

Naval Explosive Ordnance Disposal Bulletin (NAVEODB)

60A-1-1-15	General EOD Information, Tools, Techniques

Naval Sea Systems Command Ordnance Pamphlet (NAVSEA OP)

5	Technical Manual for Ammunition and Explosives Ashore
2239	Motor Vehicle Driver's Handbook for Ammunition, Explosives, and Hazardous Materials

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
5102.1C	Mishap Investigation and Reporting
5510.1H	Department of the Navy Information and Personnel Security Program Regulation
8020.13	Certification and Identification of Inert Ordnance for Display, Training, or Other Purposes (with Change 1)

5. Army Documents

Army Regulations (ARs)

75-15	Responsibilities and Procedures for Explosive Ordnance Disposal
385-65	Identification of Inert Ammunition and Ammunition Components

Field Manual (FM)

5-250 Explosives and Demolitions

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