21st Century Mine Warfare

Subject Area Strategic Issues

EWS 2006

21st Century Mine Warfare
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to
Major PJ Nugent, CG 10
7 February 2006

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
07 FEB 2006		**00-00-2006 to 00-00-2006**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
21st Century Mine Warfare	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **United States Marine Corps,Command and Staff College, Marine Corps Combat Development,Marine Corps University, 2076 South Street,Quantico,VA,22134-5068**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**9**	

Operations Enduring Freedom and Iraqi Freedom have required Marine Corps forces to contend with repeated attacks from improvised explosive devices (IED). These devices have been perceived as a new threat that has caught the American military unprepared. To respond to the threat, ground commanders believed the explosive ordinance disposal (EOD) community was the only viable option. This solution however, has proven insufficient due to the small number of EOD technicians. It also overlooks the similarity of IEDs to land mines in their composition and employment. Combat engineers are the members of the Marine air ground task force (MAGTF) primed to conduct countermine operations. Rather than overburdening the EOD community, combat engineers must be utilized for combating the threat of IEDs because their mission, doctrine and task organization best supports these types of operations.

Mission

The main charge of many IEDs is enemy ammunition used in an expedient manner, which prompted many commanders to classify the devices as unexploded ordinance (UXO). The detection, identification, recovery, evacuation, disassembly and/or disposal of UXO are the primary missions of EOD. However, once the UXO is sensitized as part of an IED, it becomes an expedient

land mine, affecting the mobility of friendly forces on the battlefield.

Counter IED operations are conducted to ensure the mobility of forces across the battlefield. The mission of providing mobility to the MAGTF belongs to the combat engineer. This mission is conducted through mechanical or explosive breaching of both natural and reinforcing obstacles. Combat engineers have individual training standards at the Marine level and mission performance standards at the battalion level holding them responsible for the training and execution of these missions.

Reinforcing obstacles such as land mines are employed to restrict the enemy's ability to maneuver. The employment of IEDs has the identical effect on friendly force's ability to maneuver in the battlespace. Along with similarities in their employment, IEDs and land mines are similar in composition. The Joint IED Defeat Task Force states in their IED defeat handbook that an IED consists of three primary parts: an initiation system, a casing, and a main charge. [1] These are the same primary parts of any conventional or expedient land mine. With the

[1] U.S. Army, *Handbook No. 05-23, Counter Improvised Explosive Device (IED) Tactics, Techniques, and Procedures. Joint IED Defeat Task Force, Center for Army Lessons Learned,* 2005. (Fort Leavenworth, KS.), 17.

similarities in composition and employment, IEDs have in effect become the mines of the 21st century.

Doctrine

IEDs are indeed land mines, not a new phenomenon in warfare, and are adequately addressed in current Mine/Countermine doctrine. *Field Manual 20-32, Mine/Countermine Operations*, defines a land mine as "an explosive device that is designed to destroy or damage equipment or personnel."[2] *Field Manual 20-32* goes on to address the improvised mine threat under route and area clearance.

> Mines are not always employed conventionally by military forces organic to the host nation or its enemies. In many cases, they are employed by terrorists against allied forces or the host-nation populace.[3]

Combat engineers are the members of the MAGTF responsible for the employment and defeat of land mines in both offensive and defensive operations. *Marine Corps Warfighting Publication 3-35.3 Military Operations on Urbanized Terrain (MOUT)* clearly states the engineer task in the offense "Breaching obstacles

[2] U.S. Army, *Field Manual 20-32, Mine/Countermine Operations*, 1998 (Washington, DC.), 1-1.
[3] U.S. Army, *Field Manual 20-32,* 11-21.

both outside and inside the city. This includes breaching minefields and neutralizing booby traps and IEDs."[4]

While EOD continues executing this mission, it is having a substantial impact on the doctrine, organization, training, material, leadership, personnel, and facilities (DOTMLPF) spectrum. Marine Corps doctrine states the conditions in which EOD should be employed in the MAGTF. *Fleet Marine Force Manual 13-8, MAGTF Explosive Ordnance Disposal*, states the EOD 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…[5]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.[6]

The breaching of landmines, booby traps and IEDs is not beyond the capabilities of the combat engineer. The

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[4] U.S. Marine Corps, *Marine Corps Warfighting Publication 3-35.3, Military Operations on Urbanized Terrain*, 1998 (Washington, DC.), 4-13.
[5] U.S. Marine Corps, *Fleet Marine Force Manual 13-8, MAGTF Explosive Ordnance Disposal,* 1993 (Washington, DC.), 2-1.
[6] U.S. Marine Corps, *Fleet Marine Force Manual 13-8,* 3-1.

ability to place explosives to clear obstacles remains an inherently important task to providing mobility to the MAGTF.

Task Organization

The responsibility for IED defeat has become an ever-increasing burden on the EOD community. Explosive ordnance disposal units, traditionally conducting combat service support functions, are located in the Marine logistics groups and Marine aircraft wings. Their small numbers and task organization have caused extensive delays in response time to IED encounters. These delays have led to additional structure being allocated to the EOD community. The Force Structure Review Group convened by the assistant commandant of the Marine Corps in March of 2004 realigned the personnel structure throughout the corps, allowing the creation of an additional 150 EOD technicians. Additional structure however, does not address the task organization issues facing EOD. These concerns highlight EOD unsuitability with providing mobility support to the MAGTF.

Combat engineers however, are in direct support of the infantry and are task organized in the Marine divisions to provide engineer support to every infantry battalion. They are also located in the Marine logistics groups and the Marine aircraft wings. Combat engineers are sufficient in number and

properly positioned across the MAGTF to counter the current IED threat. With current Marine Corps task organization, every element of the MAGTF has the organic ability to conduct counter IED operations.

Issues

The growing complexities of the current operating environment have smeared the lines between combat operations and combat service support. The exploitation, not destruction of an IED is the goal of current counter IED operations. Even the combat engineer community initially agreed that the IED was a new threat that was too dangerous for the average combat engineer. The Marine Corps Mine Countermeasures (MCM) Master Plan, developed by the deputy commandant for Plans, Policy and Operations (PP&O), and reviewed by engineers across the MAGTF, states "only Explosive Ordnance Disposal (EOD) Technicians possess the necessary skill set to safely dispose of IEDs."[7]

The current view of IED exploitation does not look beyond the existing threat in Iraq. When conducting security and stability operations, care must be taken to exploit and safely dispose of IEDs. But when Marine Corps forces are conducting offensive operations against future terrorists, IEDs will need

[7] U.S. Marine Corps, *Marine Air Ground Task Force Mine Countermeasure (MCM) Master Plan*, 2004. (Washington, DC.), 7.

to be breached just like traditional obstacles. Future commanders will need to be able to recognize the difference in missions. Additionally, the commanders will need to have combat engineers prepared for this environment and able to provide mobility support to the MAGTF.

Conclusion

The use of improvised explosive devices has cost the lives of hundreds of Marines and soldiers. The personnel and material solutions to counter this threat should be both effective and long term. These solutions require an acceptance of the changing operational environment and the emergence of IEDs as the land mines of the 21st century. The doctrine, tactics, techniques and procedures exist to conduct countermine operations and the Marines with the necessary skills are properly staged across the MAGTF. With the extensive doctrinal, organizational, and personnel challenges to EOD, they will not be able to conduct countermine operations for the entire MAGTF. It is time for not only the combat engineer but also the entire MAGTF to adapt to the changes in mine warfare as the Marine Corps continues to face asymmetrical threats in the new century.

Word Count 1,212

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