

Combat Engineers: Force Multipliers in the Fight Against IEDs
Captain Sok, Paul Y.

Report Documentation Page

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IEDs are the single greatest cause of American casualties in the current operating environment. Clay Wilson, a specialist in technology and national security, wrote in a recent CRS Report for Congress that IEDs "have caused over 70% of all American combat casualties in Iraq and 50% of combat casualties in Afghanistan, both killed and wounded."¹ Explosive Ordnance Disposal (EOD) personnel in the Marine Corps have been designated as the sole subject matter experts of IED reduction and removal. However, the abundant IED encounters and attacks across the Iraq and Afghanistan theater of operations have made the timely reduction of IEDs difficult. As a result, combat engineer Marines should be allowed to blow IEDs in place because there are not enough EOD personnel to handle all IED encounters efficiently, engineers have the resident knowledge of demolitions and initiation devices to destroy IEDs, and cross training with EOD personnel would equip engineers with the ability to facilitate the mobility of units on the roads of Iraq and Afghanistan.

Current Practice and Background

For the past four years, improvised explosive devices (IEDs) have proven to be detrimental to the overall effectiveness of U.S. forces in the Global War on Terrorism. Even though IED

¹ Clay Wilson, "Improvised Explosive Devices (IEDs) in Iraq and Afghanistan: Effects and Countermeasures," *CRS Report for Congress*, (21 November 2007): 1-2, *DTIC/STINET* (15 December 2007).

attacks have fallen by 42% in the past six months, reports indicate at increased number of IED attacks in Afghanistan.² The Marine Corps must continue to discover improved and more effective methods and train more qualified personnel to destroy IEDs encountered by convoys in combat zones.

Insurgents have effectively delayed the Marine Corps units' ability to reach their destination rapidly to conduct follow-on raids, cordon and knock operations, and re-supply convoys on a daily basis. IEDs have become a primary means by which the enemy damages the will of U.S. forces to fight and has become the primary tool used to inflict chaos in units operating along major supply routes and in cities.

EOD Personnel Shortages

Recently, an influx of Navy and Army EOD teams and Navy electronic warfare officers has made it possible to detect and neutralize IEDs with greater effectiveness.³ Yet, too many IEDs are still encountered by units on a daily basis for EOD personnel to dispose of all threats efficiently. EOD has been a low density MOS in the Marine Corps that does not possess enough qualified and IED trained personnel to deploy en mass to Iraq or Afghanistan. Their screening and selection process and the duration of their MOS training does not facilitate the force

² Clay Wilson, 2.

³ Clay Wilson, 3-4.

structure development necessary to provide in-stride IED reduction capabilities. If Marine units had EOD personnel to conduct in-stride IED reduction, the timely movement from a tactical assembly area to an objective in order to conduct missions would be greatly improved.

The reality, however, is that the EOD community is neither task organized nor doctrinally tasked to conduct hasty mobility operations for specific units. Currently, approximately 60 EOD Marines are available to reduce and render safe all IEDs in the I or II Marine Expeditionary Force's area of operations. EOD elements are usually organic to combat service support units and are not organic to the division. They have the monumental task of diffusing and safely disposing of unconventional and unidentifiable foreign munitions for the entire MAGTF to which they are attached.⁴

Combat engineers, on the other hand, are task organized and possess the personnel dedicated to conduct vital mobility operations, which provide the MAGTF's subordinate elements the organic capability to execute in-stride breaches and route clearance tasks.⁵ The Marine Corps currently has over 1500 combat engineers that have completed the required USMC demolitions, mine, and anti-handling device removal training to

⁴ U.S. Marine Corps, Fleet Marine Force Manual 3-18/MCWP 3-17.2, "MAGTF Explosive Ordnance Disposal," 20 Dec 1993.

⁵ Combat Engineer Officer Period of Instruction, "Obstacle Breaching," Marine Corps Engineer School, February-May 2003.

attain the 1371 or 1302 military occupational specialty (MOS) designations.⁶ Engineer elements are organic to division, group, and wing units within a MAGTF. They exist in sufficient numbers organic or attached to deployed Marine units and can provide more timely movements to enable mission accomplishment through the reduction of encountered IEDs. These actions fully fall within the bounds of mobility as a mission essential task and would improve the safety of U.S. personnel during the restoration and stability efforts of the Marine Corps in Iraq and Afghanistan in general.

Resident Knowledge

In fact, engineer platoons are currently deployed in Iraq as route clearance teams that have the mission of finding and identifying the initiation device, the main charge, and the casing of IEDs. At this point, EOD personnel are called up to destroy in place or diffuse an IED manually or through the use of robotic equipment. Although engineers are not trained to do this and are not tasked currently to disarm or diffuse IEDs, engineers do have the ability to reduce IEDs once the main charge has been positively identified. If engineers are provided extensive training on the proper identification of a limited scope of conventional ordnance used for IED main charges and given remote investigation and destruction capabilities,

⁶ Engineer Individual Training Standards, MCO 1510.95A.

they would be a valuable contribution to the Marine Corps' counter insurgency efforts in Iraq and Afghanistan. EOD personnel should remain as the only Marines who have the training to diffuse or render safe an IED, but engineers must be capable of reducing an IED in support of mobility.

Proper Training to Reduce IEDs

Members of both the EOD and engineer communities believe and argue that EOD teams are the only units who have the capability, training, and experience to deal with IEDs in general. All engineers are taught the fundamentals and the practical application of conventional and expedient demolitions through an extensive series of classes and practical application demolition shoots as a student at the Marine Corps Engineer School. During this training period, engineers prove their ability to utilize electric and non-electric initiation devices and construct various charges to breach explosive and non-explosive obstacles.⁷ Engineers also receive extensive training on the identification of foreign and U.S. ordnance and how to defeat the threats of a minefield in order to maintain the mobility of a unit. Engineers are instructed on the proper procedures to search for buried mines, to check for secondary

⁷ U.S Army, Field Manual 5-250, "Explosives and Demolitions," 30 July, 1998, Chapters 2 and 3.

initiation devices (booby traps), and to clear or destroy mines in the safest manner possible.⁸

The extensive demolitions and mine/countermine operations training administered by the Marine Corps Engineer School provides a solid foundation upon which further IED training could build and equip combat engineers with the ability to reduce identifiable IEDs in a combat environment with an acceptable amount of risk associated with specified missions. Combat engineers can contribute effectively to the IED mitigation efforts in Iraq and Afghanistan if they are provided additional IED specific training. Although EOD personnel are the resident experts on IEDs and the tactics, techniques, and procedures that the enemy uses to emplace IEDs against U.S. forces, combat engineers can reinforce the efforts to defeat IEDs by providing additional manpower, assets, and the ability to provide mobility to units in a more expedient manner.⁹ Engineers would simply augment the Marine Corps' endeavors to alleviate the effects of IEDs on the overall combat effectiveness and mission accomplishment of units.

Proper training on the use of robotic equipment, which are currently funded by the Joint IED Defeat Organization and provided to EOD teams, would further aid engineers in safely

⁸ U.S. Army, Field Manual 20-32, "Mine/Countermine Operations," 29 May 1998, Parts 1 and 2.

⁹ EWS Engineer Officers Fall OFEC 2007 Period of Instruction, "Mobility Operations in an Improvised Explosive Device Environment," Marine Corps Engineer School, October 2007.

destroying an IED in place without the undue need to place personnel in the harmful threat radius of explosives.¹⁰ Skeptics should not perceive the engineer community as wanting to replace EOD personnel as the subject matter experts on IEDs. Rather, they should realize that engineers can be an effective instrument in providing prompt and valuable mobility along major routes and within the cities of the Marine Corps' area of operations.

Cross Training with EOD

In depth cross training with EOD personnel would also equip engineers with the knowledge and skills to contribute to the overall increased safety of U.S. personnel and assets from IED attacks. There have been 3,914 deaths of U.S. personnel in Iraq to date.¹¹ The number of deaths caused by IEDs could be mitigated by using engineers to augment the EOD community. EOD personnel and engineers have worked closely together in the recent years in Iraq as members of route clearance teams with the successful induction of counter IED assets, such as the Husky and the Buffalo vehicles. These vehicles are used to detect, expose, and mechanically detach initiation systems from the main charge of IEDs while protecting its occupants. The Marine Corps would benefit if the engineer community took

¹⁰ Clay Wilson, 4.

¹¹ "U.S. Casualties in Iraq," <http://www.globalsecurity.org/military/ops/iraq_casualties.htm> (17 December 2007).

further steps to train on the use of robotics as well as the techniques used to identify and destroy IEDs.

Counter Argument

Both the engineer and EOD communities should refrain from getting involved in a turf battle over who should handle IEDs. These futile efforts to bring legitimacy to either community only inhibit the Marine Corp's ability to develop more evolved methods and unified means to breach IEDs rapidly. Ultimately, EOD personnel and engineers all have the duty to provide vital support for units deployed to the Middle East. The primary objective of both communities should be to work together to provide a safer environment for Marine Corps units from the effects of IEDs through the facilitation of mobility and route clearance by engineers and the diffusion and expertise of IEDs by EOD teams. The greater good of the Marine Corps and its mission should outweigh the desires of either the engineer or EOD communities to gain further legitimacy for their MOS.

Conclusion

In the current counterinsurgency environment, IEDs are the enemy's most effective means of slowing the U.S.'s restoration efforts in Iraq and Afghanistan. EOD personnel have effectively led the fight against IEDs by studying the enemy's tactics, techniques, and procedures as well as by learning about the numerous initiation devices, main charges, and casings used for

IEDs in the constantly evolving battlefield. Yet, too few EOD personnel are deployed to handle all of the IED incidents that occur in theater efficiently. The task organization and the number of personnel in the combat engineer community can augment the EOD teams' efforts in dealing with IEDs. The main reason for allowing engineers to reduce IEDs in place is to provide improved and more efficient mobility for Marine units in Iraq and Afghanistan. The diffusion and the rendering safe of IEDs are EOD missions, while mobility is one of the four engineer fundamental tasks, which would be achieved in the form of destroying IEDs on site with explosive charges. The collaborative and mutually supporting efforts of the EOD and engineer communities to defeat IEDs would increase the safety of U.S. personnel and assets in theater and would work to bring stability to Iraq and Afghanistan more quickly.

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