Victory Sappers:
V Corps Engineers in Operation Iraqi Freedom
Part 1: The Attack to Baghdad and Beyond . . .

By Colonel Gregg F. Martin and Captain David E. Johnson

"The sappers of the Victory Corps were all over the battlespace, providing value wherever they were employed . . . river crossing operations, building and maintaining infrastructure, conducting stability and support operations, repairing airfields, conducting combat operations—and much, much more . . . all done to an exceptionally high standard . . . each member of this high-energy team is a national hero."

—Lieutenant General William S. Wallace
Former Commanding General, V (U.S.) Corps

A year after the fateful 11 September 2001 attacks, the United States began to assemble a "coalition of the willing" for the second phase of the war on terrorism—the liberation of Iraq. The United States and coalition allies built up forces in neighboring Kuwait and prepared for war. After diplomacy failed, the air and ground forces of the assembled coalition crossed the Iraqi border on 21 March, with V (U.S.) Corps leading the attack as the main effort. The attack, code-named Operation Iraqi Freedom, isolated Saddam Hussein's bases of power in Baghdad and Tikrit. The goal was to eliminate the regime quickly—with a minimum loss of life and destruction of civil infrastructure—in order to rapidly transition to Iraqi civil rule capable of ensuring peace, prosperity, and freedom for the Iraqi people.

U.S. Army engineers played a crucial role during the initial attack and continue to do so during the follow-on stability and support operations and rebuilding effort. Every element of the

An armored D9 dozer clears a road blocked by a destroyed vehicle.

Armored Vehicle-Launched Bridge (AVLB). Based on the M48/M60 chassis, the AVLB is both slow and difficult to maintain under the best of circumstances; continuous operations and an extremely austere logistics environment made the task even harder. The maintenance problems were exacerbated by recovery problems. The AVLB should be replaced by the Wolverine. Much of the construction equipment in combat heavy units and CSEs is in the same condition and must be replaced.

M113 Engineer Squad Vehicle (ESV). The ESV often lagged behind the maneuver forces it was supposed to support. In addition, it did not offer enough protection against enemy fire. Despite their need for mobility support, some maneuver commanders became unwilling to commit their scarce engineer assets forward into the fight for fear of losing them to enemy fire. The Army must outfit armored engineers in an appropriate vehicle that can keep up with the maneuver forces it supports and that offers adequate force protection.

Mine-Clearing Line Charge (MICLIC) and the Volcano. These two key engineer weapon systems—both mission-essential in the combat training center environment—did not meet expectations. During Operation Iraqi Freedom, the Volcano was never fired, and only one MICLIC was fired. For scatterable mines, the release authority was held at the Combined Forces Land Component Commander level; during a rapidly moving campaign against an ill-defined enemy, it is nearly impossible to identify a target and get timely approval to use scatterable mines during a short window of opportunity. For breaching, a more effective technique was either to physically remove the mines or to conduct a mechanical breach with a D9 or an MCAP D7 dozer; an M1 Panther II; a tank with a plow; or an M9 ACE. Given the real-world limitations of both the MICLIC and the Volcano, we should invest in other means to accomplish the intended effects.

Signal, C2 Package, and Logistics Support

For EAD engineers, three special shortfalls emerged: First, although EAD engineers operate throughout the division and corps battlespace, they often were not high enough on the priority to receive dedicated support from corps signal assets and often operated away from divisional signal support. Without the ability to communicate, EAD engineers lost some of their ability to operate independently, provide the mobility portion of the common operational picture, or to serve as key C2 nodes for the division. Second, EAD engineers did not have the same C2 hardware and software that the division was using. This diminished their ability to see and understand the battlefield to the same degree as their maneuver brethren. Third, the logistics systems were not flexible enough to support the dynamic and fast-moving role that EAD engineers played within the division and corps areas of operation. In particular, maintenance (especially Class IX) and construction materials (Class IV) were a constant challenge. These issues need to be worked hard before the next conflict.

Rapid Helipad Construction and Dust Control

There was an enormous demand on engineers to rapidly construct hundreds of helipads in the desert. The dust, dirt, and sand caused dangerous brownout conditions that damaged the aircraft and caused several crashes. The best and fastest method to meet the demand for helipads was to install Mobi-Mat pads. Fast to emplace and extremely effective, this material should be purchased in sufficient quantities and issued to both divisional and EAD engineer units—PRIOR to crossing the line of departure.

Recommendations

Continue to develop assured mobility into doctrine. Develop corresponding mission-essential task list changes, training models, evaluation tools, and TTP for implementing the doctrinal framework. Organizations need to include enhancers such as topographic, engineer reconnaissance, and reach-back capabilities. For example, each division and separate maneuver brigade or ACR needs a FEST–A. TeleEngineering Tool Kits must be fielded to every engineer battalion and ACR engineer company. Another critical component of assured mobility is the ability of engineers to conduct MOUT effectively. (See article on page 32.)

Combat engineers supporting maneuver forces need comparable training and modern equipment to be combat capable and relevant for the maneuver commander. In particular, engineers need a more survivable and capable squad vehicle, preferably one that uses the same chassis as the infantry and armor it supports. Sappers also need equivalent enhancers, such as thermal sights and night-vision capability. MOUT training should receive greater emphasis and Engineer Qualification Tables should include mounted gunnery so that engineers are better trained to fight alongside tanks and infantry. Engineers should be included in fielding distribution plans with the maneuver units they habitually support—and not as separate fieldings.

During combat operations, EAD engineers will be task-organized in functional teams to perform specific missions. To prepare for combat, units should develop, train, and employ force enhancement modules (FEMs) designed around capabilities rather than units. (See "Transforming the 130th Engineer Brigade…One Step at a Time," *Engineer*, May 2001, pages 52-60; and "Operation Enigma Strike: Testing the Deployability of the 130th Engineer Brigade FEMs," *Engineer*, April 2002, pages 41-43.) Deployments and decentralized training are the preferred mediums for training the junior leaders who will form these modules and operate independently across wide areas of operation. Such leaders must be flexible, adaptive, and innovative—able to make things happen based on a clearly articulated and understood commander's intent.

Engineers must work more closely with the Ordnance Branch on EOD. The requirement for the destruction of weapons caches, ammunition dumps, and UXO quickly outstripped the resources of the EOD units, and combat engineers picked up