18th Engineer Brigade's Mission Rehearsal Exercise at JMRC

By Lieutenant Colonel Hank Thomsen

The Joint Multinational Readiness Center (JMRC) in Hohenfels, Germany, has been a combat training center for the U.S. Army for decades. JMRC is structured and resourced primarily to train and validate the U.S. Army, Europe's (USAREUR's) brigade combat teams (BCTs). Not until February-March 2008 had JMRC validated a functional engineer brigade for its mission in Operation Iraqi Freedom. With the recent restationing of the 130th Engineer Brigade to Hawaii, the 18th Engineer Brigade became USAREUR's only engineer brigade. As part of V Corps, the brigade coordinates and directs the full range of engineer activities in support of USAREUR operations. For its pending mission in Iraq, the brigade traveled to Hohenfels and Grafenwoehr to conduct gunnery training, platoon- and company-level situational training exercises (STXs), and a brigade mission rehearsal exercise (MRE).

A route clearance team interrogates a suspected IED with a surrogate Buffalo mine-protected vehicle.

Scenario Design Challenges

The scenario design for the brigade's MRE presented JMRC with numerous challenges. As a functional brigade, the 18th must be prepared to operate as a subordinate unit to a corps or division, without overall responsibility for any terrain or populace. Because of this, one of the most difficult challenges in designing the MRE was the replication of adjacent units—to include BCT and maneuver task force headquarters—and their area of operations for the 18th to coordinate with and operate within.

JMRC was also challenged by the need to replicate a command subordinate to the 18th Engineer Brigade. The battalions that were to make up the brigade's task organization in Iraq were not available for the MRE. The 54th Engineer Battalion, a unit subordinate to the 18th in USAREUR, was also validated as part of this exercise, and JMRC replicated the 94th Engineer Battalion (Construction Effects) to round out the brigade. Because replication of a brigade's subordinate battalion was a first for the training center, JMRC prepared as follows:

- Designated an engineer observer/controller (O/C) as the battalion operations and training (S-3) officer to plan and execute the simulated battalion's missions and prepare a steady state operational schedule or story line.
- Coordinated directly with the 94th Engineer Battalion to ensure that the replicated headquarters directed realistic mission sets, problems, and issues to the engineer brigade.
- Coordinated with the United States Army Engineer School, Fort Leonard Wood, Missouri, for personnel to round out the replicated headquarters, because the training center does not have many O/Cs experienced in construction engineering. These personnel provided much-needed expertise in replicating the construction effects battalion during the exercise.

- Simulated the 94th Engineer Battalion during the MRE. This included providing a full-time liaison officer in the 18th Engineer Brigade operations center who reported, conducted update and shift-change briefs, planned, and attended various working groups. Physically adjacent to the higher command headquarters, the simulated 94th Engineer Battalion operations center produced daily reports, answered requests for information, and ensured a coherent story line to challenge the 18th Engineer Brigade staff.

Along with augmentation from V Corps, JMRC replicated a division headquarters as a higher command. It recreated many of the functions of a division headquarters, to include typical battle rhythm events and orders production. The portrayal of a division improvised explosive device defeat (IEDD) working group, which included representatives from all the division's units, gave the 18th Engineer Brigade staff the opportunity to prepare for and participate in a division-level working group.

Ideally, the 18th Engineer Brigade would have conducted an MRE at JMRC simultaneously with a BCT. This would have forced the 18th to interact with a maneuver element that controlled terrain as the engineers conducted assured mobility and general engineering missions throughout the division area of operations. But because of deployment timelines and other USAREUR training events, this was not possible. To make up for this, JMRC simulated BCT headquarters to interact with the 18th Engineer Brigade headquarters and to populate the division operations with daily significant activities. Along with the brigade headquarters, JMRC scripted daily events in the Joint Conflict and Tactical Simulation (JCATS) system that populated the 18th's common operational picture. To ensure that the engineer brigade had a maneuver unit to interact with during route clearance missions on the ground, JMRC used an Army National Guard infantry company. This company was controlled by exercise control (EXCON) and the O/C team working with the 54th Engineer Battalion, conducting missions such as raids or cordon-and-search operations supported by the 54th's route clearance teams.

Establishing Objectives and a Timeline

In coordination with V Corps, the 18th Engineer Brigade and JMRC developed a set of training objectives and validation tasks that guided the development of the exercise. The validation tasks are those tasks that the brigade's senior trainer reviews upon completion of the exercise to ensure that the brigade is ready to deploy. JMRC exercise planners used these validation tasks to develop the exercise scenarios and brigade training missions.

Based on the unit's deployment timeline, JMRC and the engineer brigade developed an exercise timeline. The first portion of the training was the leader training program (LTP) for the brigade staff, conducted at JMRC. This training included classes on the military decision-making process, theater-specific briefings, and observation of the engineer brigade planning process. The engineer brigade LTP culminated with the brigade's orders briefing to subordinate battalions. The 54th Engineer Battalion then began its LTP at Grafenwoehr Training Area, followed closely by an STX at the platoon level, also conducted at Grafenwoehr. Following the platoon-level STX, the brigade moved to Hohenfels and executed a company-level STX and a command post exercise for the battalion and brigade headquarters.

Replicating the Environment

To properly portray the environment of the 18th Engineer Brigade's upcoming deployment, JMRC used numerous assets in the training area, to include civilians on the battlefield (COB), roving traffic jams, and simulated IEDs. As with any brigade MRE at JMRC, the training area was populated with hundreds of COBs, many of them Arabic-speaking, who populated the towns in the training area and served as role players. Each of the towns and its leaders had a background or storyline that has been developed

Opposing Force Soldiers train on replica IED construction and emplacement.

over the past few years during numerous counterinsurgency-based training exercises.

Most of the 18th Engineer Brigade's missions in the training area were based on route clearance. One of the many challenges facing units conducting route clearance in Iraq is the ability to perform their mission in the midst of mostly benign, but cumbersome, traffic. To replicate this traffic, JMRC used roving traffic jams consisting of groups of up to 30 nontactical vehicles controlled by EXCON and designed to cause congestion and confusion during the route clearance missions. The missions for these traffic jams were based on the 54th Engineer Battalion's route clearance schedule and were coordinated at the daily EXCON synchronization meeting. EXCON also made last-minute adjustments to the traffic jam missions with input from O/Cs and COBs.

A Soldier from the 18th Engineer Brigade conducts a survey of the JMRC short takeoff and landing strip.

Over the past few years, JMRC has developed a system to properly replicate IEDs. Because the 18th Engineer Brigade MRE involved units directly involved in neutralizing these devices, JMRC made a concerted effort to have realistic training IEDs on the ground. These devices consisted of initiation systems, training munitions or explosive devices, and effects simulators. The devices were based on systems found in the current theater of operations and were emplaced and controlled by Opposing Force Soldiers from the 1st Battalion, 4th Infantry Regiment, and supervised by JMRC fire markers, the Dragons.

Brigade Missions During the MRE

The 18th Engineer Brigade focused on two main types of missions during their MRE—assured mobility missions in the form of route clearance and numerous general engineering missions.

Assured Mobility

The brigade was tasked by the division to ensure that priority supply routes were routinely cleared by its subordinate unit, the 54th Engineer Battalion. The brigade also received orders to support named operations with route clearance assets. Before executing route clearance missions, the engineer brigade and battalion had to coordinate boundary crossings and any needed support with the appropriate maneuver units, such as quick reaction force, recovery, or air support units. JMRC replicated these maneuver brigade and battalion headquarters with the task force analyst staff.

JMRC provided replicated maneuver units as terrain owners, not only to feed significant actions and operational information to the 18th Engineer Brigade but also to act as response cells to route clearance teams moving throughout the area of operations. Platoon leaders coordinated with landowning units for cross-boundary coordination and for quick reaction force and maintenance recovery assets when overwhelmed by enemy activity. This forced the leader on the ground to initiate contact with the maneuver unit and conduct on-site linkup.

General Engineering

To stimulate the brigade's construction planning, the division tasked the brigade to plan numerous construction projects. These projects included the design of a joint security site, a forward operating base upgrade, and a short takeoff and landing airstrip for unmanned aircraft system operations. The airstrip design was directed during the brigade's LTP, and the planning carried through the entire MRE. It culminated in a back-brief to the division commander.

Gleaning the Lessons Learned

In the War on Terrorism, JMRC must not only train BCTs but also functional brigades before their deployments to Operation Iraqi Freedom or Operation Enduring Freedom. The Army's combat training centers must be flexible in their preparation for any training exercise. The use of all available assets, to include contact with deployed engineer battalions and brigades, support from V Corps engineers, the Engineer School, and the joint IEDD organization ensured that the 18th Engineer Brigade received a quality training event in preparation for deployment.

Lieutenant Colonel Thomsen is currently serving as the chief of engineer doctrine at the United States Army Maneuver Support Center, Fort Leonard Wood, Missouri. His past assignments include service as an engineer observer-controller at the Joint Multinational Readiness Center in Hohenfels, Germany, duties with engineer battalions in Germany and at Fort Bragg, North Carolina, and as an assistant professor in the Department of Civil and Mechanical Engineering at the United States Military Academy (USMA) at West Point, New York.