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DTRA, U.S. MARINE CORPS TEST PORTABLE BIO HAZARD SYSTEMS

FORT BELVOIR, Alexandria, VA – The 10th Marines Regimental participated in a testing exercise at Camp Lejeune on January 15 and 16 to evaluate portable biohazard detection systems. The man-portable biohazard detection systems can be used in the field when biological threats are suspected for "detect to treat" utilization. This January test is part of a Defense Threat Reduction Agency (DTRA) $15.8 million, 18-month evaluation called the Expeditionary Biological Detection Advanced Technology Demonstration (EBD ATD). The results of the ATD will transition to the Joint Biological Tactical Detection System (JBTDS) program of record.

In the private sector, portable systems are commonly used to detect various hazards, but until now, the military has relied on large, heavy, power-intensive detection systems that are able to detect and identify classical Biological Warfare Agents at low concentrations. They are commonly used at fixed sites for major installation protection, and their bulk – not to mention their expense – makes them impractical for field use.

The U.S. Marine Corps has been looking for a system that is flexible and mobile and can be rapidly deployed, used and sustained by ground forces in all types of operational environments. For this field demonstration, the Marines demonstrated five samplers, two detectors and two identifiers, arranged in multiple configurations that make up a family of biological detection and identification systems. DTRA is the ATD program sponsor and has worked side by side with the Marines as they tested equipment. Once tests are complete, the goal is to transition the findings and lessons learned from this ATD to the JBTDS program so that all branches of the military can benefit.

"We want to be able to treat military personnel affected by biological hazards and minimize exposure by point detection. Demonstrating the systems – how mobile and easily deployable in the field they are, is critical," said Maj. Daniel T. Davis, EBD ATD Coordinator. "Our simulation exercise also tested for shock, vibration, blowing sand, rain and dust."

In addition to withstanding harsh environmental conditions, the equipment has to be fast and accurate. "Typically, if someone in the field is exposed to a biological threat, they may not even know it until they begin to get sick. It could take awhile to identify the pathogen through blood work, locate medicine and administer it. We need something that will work faster than that," said Maj. Davis.

EBD: Camp Lejeune, N.C.

With the portable systems, people in the field can immediately test the area for hazards, get the results within minutes, get a list of the medicine that will work best, and radio ahead for treatment. Quick treatment can be the difference between life and death for those who are exposed. If more than 24 hours

pass between exposure and treatment, chances of survival are greatly diminished. On the other hand, people who are treated within 24 hours of exposure have a very high rate of survival.

The equipment that was field tested weighed less than 37 lbs. and provided continuous automated operation for at least 8 hours on a single military standard battery. The identifiers are able to analyze the hazard within minutes and differentiate between biological and non-biological particles; classify the biological particles as a spore, toxin, vegetative bacteria or virus; and identify up to eight known biological pathogens.

DTRA safeguards America's interests from weapons of mass destruction (chemical, biological, radiological, nuclear and high explosives) by controlling and reducing the threat to the United States and its allies, and providing quality tools and services for the warfighter. This Department of Defense combat support agency is located at Fort Belvoir, Va., and operates field offices worldwide.

Fact Sheet –
Expeditionary Biological Detection (EBD) Advanced Technology Demonstration (ATD)

Pictures –
http://www.dtra.mil/newsservices/photo_library/rd/EBD/EBD.cfm

Program –
http://www.dtra.mil/rd/cbt/programs/EBD/index.cfm