

Environmental Reconnaissance

—An old mission with a new twist

By SFC David Zapata

Over the years NBC defense operations have traditionally contained three basic principles. These principles—avoidance, protection, and decontamination—are the basis of how we do business here in the Chemical Corps.

As part of the first principle, avoidance, we have always emphasized the need to go out and actively "search for" or confirm the presence of nuclear, biological, and chemical hazards in the battlespace. NBC reconnaissance not only focused on finding these hazards, but also provided information of where no hazards existed. This mission, NBC reconnaissance, has taken on a new twist as we shift from a force whose next mission will most likely be one other than full scale war.

A recent development in the Chemical Corps has been the fielding of the M93 Nuclear, Biological, and Chemical Reconnaissance System (NBCRS), otherwise known as the Fox. This NBC reconnaissance platform provides US forces with the ability to conduct NBC reconnaissance faster, safer, and more precise than ever be-

fore. It provides the chemical soldier with a tool never before deployed onto a tactical battlefield—the mobile mass spectrometer (MM1). The mobile mass spectrometer gives the chemical soldier the ability to identify 60 chemical warfare agents almost instantaneously.

An even more recent development has been the fielding of the "environmental" chip for the MM1. This environmental chip provides the chemical soldier with the ability to not only detect chemical warfare agents in the bat-

tlespace, but to also detect industrial/agricultural chemical hazards.

With the fielding of the environmental chip, we have been slow in adopting tactics, techniques, and procedures to fully exploit this new capability. Lack of knowledge and experience of how we could incorporate this new capability into operations drove the doctrinal development.

Recently, 1st Armored Division (1AD) prepared for and deployed to the former Yugoslavia to conduct



NBC reconnaissance soldiers preparing for a mission in Bosnia.



Reconnaissance squad leader using the mobile mass spectrometer to identify an environmental sample.

peacekeeping (and possibly peace enforcement) operations. During IAD's mission preparation, significant industrial and agricultural chemical hazards were identified which could pose significant long- and short-term medical problems for our forces. With our newly fielded capability to precisely detect this type of hazard in an environment where force protection was paramount, the M93 NBCRS Fox proved to be the ideal platform from which to conduct "environmental" reconnaissance missions.

Traditionally, it has been the job of preventive medicine teams to go out and conduct environmental assessments of areas in which US forces operated. These environmental assessments were mainly conducted in areas US forces had occupied and were fairly secure. They took on an administrative flavor, requiring very limited security and mo-

bility. These environmental assessments also dedicated a very limited asset to a specific location.

During these environmental assessments, soil, water, air, vegetation, and bio-medical samples could be taken and sent back to the Theater Army Medical Lab (TAML) for exploitation. These labs have the ability, given time, to identify all types of known chemical hazards as well as many known biological hazards.

Environmental assessment teams not only take samples, but can also provide some identification capability at sites using various detectors (Dräger® tubes, water test kits, M256 detector kits, specialized detector tickets, for example). These assessments require valuable time to conduct all the tests needed to identify many of the possible chemical hazards that might be present. And, in the end, these assessment teams

may find no significant hazard at a particular site, while elsewhere on the battlefield there is a site that urgently requires an environmental assessment team's attention and scrutiny.

Into this picture comes the M93 NBCRS Fox with its high mobility, lightly armored, very precise capability to detect environmental chemical hazards while on the move. With the proper tactics, techniques, procedures, and guidance, the Fox unit can provide the information needed to focus environmental assessment teams to places on the battlefield which require their expertise. They do this by conducting environmental reconnaissance.

The environmental reconnaissance mission is designed to quickly and accurately identify areas on the battlefield that pose long- or short-term health risks from industrial/agricultural hazards. It helps to better focus limited

preventive medicine environmental assessment assets to areas of concern. Once such an area is quickly identified using the M93 NBCRS, US environmental assessment teams can be brought forward to these specific sites to better focus their collection efforts.

Environmental reconnaissance is conducted by M93-equipped NBC reconnaissance units. Each unit is augmented by an environmental science officer, MOS 72D67, from the preventive medicine ranks. This environmental science officer travels with the Fox unit as it conducts environmental reconnaissance missions. As hazards are identified at a site by the NBC recon unit, the environmental science officer makes a determination if a more thorough environmental assessment should be made. If so, he contacts the appropriate elements and provides them with site location, description, tactical significance, and most importantly, the known hazards in the area. The NBC recon unit with its environmental science officer then continues on to its next environmental reconnaissance site.

To better conduct these environmental reconnaissance missions, the



An environmental reconnaissance being conducted at a US site in Northern Bosnia.

NBC recon unit should be trained in hazardous material (HAZMAT) operations and augmented with some of the basic equipment that the environmental assessment teams have. This equipment would provide the Fox unit with better sampling tools with which to collect samples to send forward to the TAMLs and to collect samples in areas inaccessible to the FOX (inside buildings). Such samples would have to be collected and returned to the MM1's probe so that they can be identified.

This new environmental reconnaissance mission, conducted for the first

time on a battlefield by the 25th Chemical Reconnaissance Platoon in the former Yugoslavia, is a mission that will be around for as long as there is a concern for the health and welfare of US forces.

Conducting environmental reconnaissance will equip the commander with a tool to provide a more thorough risk assessment for his forces. It gives added value to the Chemical Corps and, most importantly, allows us to provide information that will help safeguard our forces.



Fox unit in the Bosnian-Serbian Zone of Separation during a reconnaissance mission.