

The Chemical Corps Role in Homeland Security

By Major Robert D. Walk

"I, John Doe... do solemnly swear that I will support and defend the Constitution of the United States against all enemies—foreign and domestic; ... SO HELP ME GOD." With these words, I and millions like me, of all branches and components of the armed forces, swore to defend the homeland of the United States. These words show that homeland security is not the providence of one component of the armed forces but is the realm of ALL components of the armed forces. The Chemical Corps, as part of the Army, must also prepare to defend the homeland. This article presents some ideas on how the Chemical Corps must prepare to defend the homeland as part of the total-response team. It discusses the threat, civilian capabilities, and Chemical Corps capabilities. It also evaluates Chemical Corps capabilities in homeland security, recommends changes to individual and unit training, and shows some Chemical Corps accomplishments in this area.

The Threat

Most chemical weapons originated as industrial chemicals. Chlorine and phosgene both were used in German industry during World War I. All hazardous industrial chemicals available at that time (and others synthesized) were evaluated for effectiveness in degrading the enemy. Those that were effective in their assigned mission were weaponized and used. All chemicals used or weaponized for war were included in the Chemical Weapons Convention. This does not mean that they were the only hazards or threats available.

Methyl isocyanate is a toxic chemical that was accidentally released in Bhopal, India, but was never weaponized for war. This chemical is not a militarily significant agent; however, it has killed and could be used by terrorists or others to kill, maim, and terrorize. It is only one of hundreds of chemicals that could be used in terrorism. Contrary to the Chemical/Biological Study (CB 2010), the real threat against our force in the United States is probably from an industrial chemical, not a military chemical.

Current Civilian Capabilities

In a WMD incident, large numbers of citizens could be contaminated with a chemical or biological agent and would require decontamination. Unfortunately, very little specialized mass-decontamination capability is available on the civilian side. It is too expensive to purchase and maintain, so most communities use fire-fighting equipment to perform mass decontamination.

The site of a WMD incident would have to be surveyed, and the limits of the contamination found quickly. Civilian hazardous-materials (HAZMATs) technicians are trained to respond to HAZMATs incidents. They are trained to try and determine unknown contaminants at an incident scene. They respond in civilian Level A (fully encapsulated and a self-contained breathing apparatus) equipment and then work and rest according to Occupational Safety and Health Administration (OSHA) requirements. Civilian capability is not evenly distributed throughout the United States. Major cities like New York maintain a robust capability. Small towns generally maintain much less capability.

Chemical Corps Capability

Chemical soldiers train for war. They are fully trained to use negative-pressure respirators (M40-series masks), other personal protective equipment (battle-dress overgarment with boots and gloves), specialized detection equipment, and decontamination equipment.

Chemical companies prepare for mass decontamination. Currently, all Chemical Corps units prepare for expected missions overseas in a force-projection mode. Expected missions for Chemical Corps units include equipment decontamination and the oversight of troop decontamination. Chemical companies actually do not perform troop decontamination because it is the responsibility of the supported unit. Medical units, not Chemical units, conduct casualty decontamination when needed. With limited personnel, medical units do not have a robust capability to do the necessary decontamination, so they must rely on additional duty personnel.

Reconnaissance units perform reconnaissance functions by using specialized equipment to find contamination of militarily significant chemicals. These procedures are designed to be performed under military conditions against known agents. This is the same capability they can bring to the fight in the United States.

Specialized units do downwind nuclear-, biological-, and chemical-hazard predictions using established procedures. Some units use the Joint Warning and Reporting System (JWARN), currently under advanced development. Using actual meteorological data, these soldiers can predict downwind hazard areas quickly and efficiently. This information can then be used to transmit hazard- and protective-requirement data to affected areas and units.

Evaluation of Chemical Corps Capability in Homeland Security

The Chemical Corps has a robust capability and appears able to provide a great deal of support to our fellow citizens. Unfortunately, this capability does not meet the Office of Safety and Health (OSH) Act



(Above and below) A soldier suits up in protective gear.



requirements for personal protection and training in the United States. The OSH standards were constructed to provide complete protection for the responder, while the military protection assumes some risk. Under AR 385-10, *The Army Safety Program*, to provide support to the first responders, chemical soldiers must meet the same standard of protection and training. Chemical soldiers must become experts in the civilian side to become an asset to the civilian responders. A recommendation to make this happen covers individual-soldier training and unit training and equipping.

Individual-Soldier Training

In a world where WMD use is expected, all chemical soldiers must become decontamination experts. Each soldier must have the knowledge to provide basic decontamination support in any circumstance. All entry-level 54B soldiers must have some decontamination training about equipment, troops, casualties, and civilians. While not true "experts," entry-level soldiers go through the individual methods several times so that they can be useful at any time. The basic tenets of decontamination remain the same—get the goop off and keep it from going where it shouldn't. The primary difference is the use of water and the types of protection used. As the skill level increases, soldiers should receive more training in each area until the 54B40 is able to plan for and supervise the setup of any decontamination line.

In a civilian or toxic industrial-material environment, the contaminant is assumed to be unknown and the responders assume the highest level of protection. To be able to provide support to civilian authorities, chemical soldiers must use this same level of protection. Thus, our soldiers must be trained to use self-contained breathing apparatus and work in Level A. They must also be able to check the area for industrial contaminants. This means training the soldiers to use civilian-style equipment. The advantages are twofold: it enables chemical-reconnaissance soldiers to work in

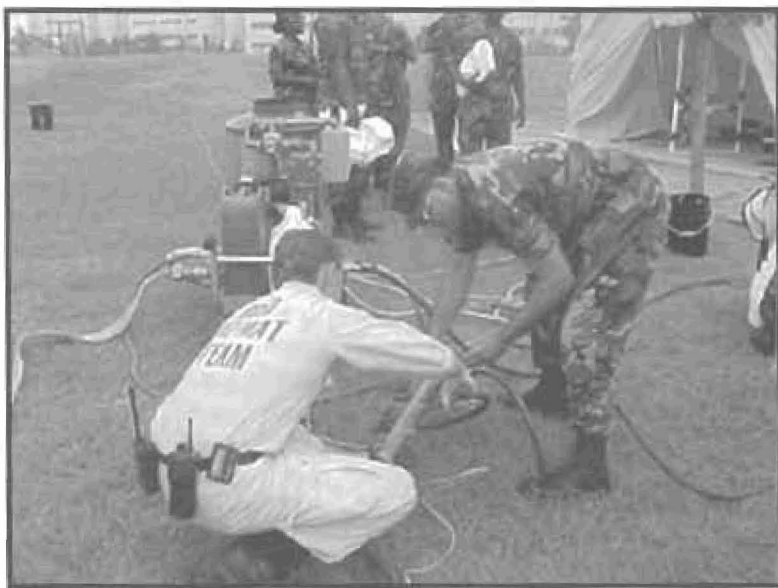
industrial areas overseas in contested areas to check for industrial-hazard leakage and to provide support in a CONUS environment.

Hazard prediction requires some alteration as well. Many responders use the North American Emergency Response Guidebook for quick estimates of hazards for industrial chemicals. Our soldiers need training on this guidebook, which requires a major adjustment of thinking of the leaders and soldiers in this area. Our soldiers can no longer just think of the military-significant agents but must know (or have access to) information on all chemicals. In an overseas deployment, industrial areas will be hazards to our soldiers, and we must have the information to deal with them.

Finally, we need to better certify the training of our soldiers. To support the first responders in a mass-casualty incident, our soldiers must hold a certification that the responders recognize. This means that any soldier entering the "hot zone" must hold a HAZMAT technician certificate, preferably meeting the standards the firefighters meet—the International Association of Firefighters (IAFF) HAZMAT technician standard. Soldiers working on the periphery conducting decontamination need to be trained to the standard necessary to perform their job, at a minimum, the 40-hour hazardous-waste-operations emergency response (HAZWOPER) standard. This would provide them with a certification recognized by the local responders and an incentive to get into the Chemical Corps—they will be getting something they can actually use in the civilian world.

Unit Training and Equipping

To be able to support our responders, decontamination units must be able to decontaminate people. It can be either easy or hard. Easy means the people are mobile; hard means the people are not mobile. For mobile people, the procedure is simple. Using the M17 SANATORS equipped with a shower apparatus provides the needed support. It is generally gross decontamination with lots of water and stripping and then decontaminating with a solution or even soap and then flushing with more water. For immobile people (litter-borne), the procedure is not simple. This is where our units really come in handy for the civilian responders.



Civilian and soldier check response equipment.

Civilians have no procedures for mass-litter decontamination. At this point, neither do we; we must have procedures; we must have the equipment. We must have the training to support the civilian responders. Our soldiers, as decontamination experts, will be able to provide the necessary decontamination support to the responders if we equip them to do it. We would also have the training and equipment necessary to support our medical units, when necessary.

Reconnaissance units must have OSHA Level A equipment and the civilian-style detection equipment on hand for war- and peacetime use. Their soldiers must be intimately familiar with their equipment. By training the soldiers to the HAZMAT standard and equipping them to use it, they would be able to provide backup support to first responders. They could also be pre-positioned at national events to provide a large federal-response capability. As noted before, this capability will also enhance contingency operations.

Hazard-predication units (JA and JB teams) must have the hardware, software, and training to predict the movement of all WMD agents and their effects on others. Modifying the tools used by the JA and JB teams is a must. JWARN must be modified to predict the downwind movement of the myriad of industrial chemicals in use. Our soldiers must be trained in this modification or on the use of some commercial program for hazard prediction. Units need reference materials covering industrial chemicals available for their use.

Current Accomplishments

Under Defense Reform Initiative Directive 25, U.S. Army and Air Force Reserve and National Guard reconnaissance and decontamination units are being trained and equipped to support our first responders in a WMD incident.

By the end of FY 1999, most U.S. Army Reserve (USAR) dual-purpose chemical companies will have soldiers trained in casualty decontamination. Some soldiers have attended the five-day Field Management of Chemical and Biological Casualties Course at the Medical Research Institute of Chemical Defense in Edgewood, Maryland. Using regional medical training sites at Fort

McCoy, Wisconsin, and Fort Gordon, Georgia, most unit trainers learned casualty decontamination in both military and civilian environments in one weekend. Each trainer received a CD with all presentations used in the training. Each dual-purpose chemical company received four platoon-level casualty decontamination equipment sets specifically for the domestic mission. If necessary, this equipment could be deployed overseas with the unit to provide casualty decontamination support in the OCONUS environment.

Both reconnaissance companies sent unit trainers to the HAZMAT technician course at the Pennsylvania State Fire Academy. This provided them with the necessary skills for the domestic response mission, and they were tasked to pass these skills on to the other soldiers in their units. Their companies will be issued three sets of reconnaissance equipment for use in domestic response.

USAR JA and JB teams have received the first JWARN package. They can begin to refine their skills on this program. As JWARN matures, they will continue to receive updates.

Bottom Line

The homeland-security mission is real; the hazards are multiple. We cannot depend solely on our capability of decontamination, detection, and prediction in a force-protection environment to allow us the capability of responding in the United States. We must improve the capability of our units through improved training for our soldiers and improved equipping of our units and by refining the Chemical Corps mission. The final results will include a continuing mission for the Chemical Corps, better recruiting and retention of soldiers, and better support to the citizens of the United States.

Major Robert D. Walk is currently assigned to the U.S. Army Reserve Command's DCSOPS in the Weapons of Mass Destruction Division. He is a graduate of the Command and General Staff College and the Army Chemical School. He is a graduate of the University of New Hampshire with a B.S. degree in chemical engineering, an M.B.A. degree from Long Island University, and an M.S. degree in civil environmental engineering from the University of Oklahoma. MAJ Walk can be contacted through the Chemical Doctrine Net.

Online

4.2 Mortar Goes Online

There is now a Web site for all of the Chemical Corps's 32 chemical mortar battalions. Check it out at www.4point2.org and find out all you ever wanted to know and more about these distinct units that employed the superb 4.2 mortar in distinguished support to the infantry in WWII and the Korean War. While these proud battalions are no more, their outstanding service lives on in history.