Feed the Flame: Put the Fire in the Dragon (Soldier)!

By Colonel Robert D. Walk and Lieutenant Colonel Richard D. Howe

The world is changing. As the Army transforms, the chemical, biological, radiological, and nuclear (CBRN) community must also transform. As a result of the changing nature of warfare from a linear battlefield (CBRN operations) to an asymmetric one (CBRN and hazmat operations, depending on the conditions), CBRN and hazmat operations are becoming more alike and less disparate. This article explores whether or not firefighters should become CBRN Soldiers.

Current Situation

Army firefighters (military occupational specialty [MOS] 21M) currently belong to the Engineer branch. They perform firefighting operations (structural, aircraft, wildland, and rescue), salvage hazmat, and conduct fire-protection functions. Due to the global nature of the problem, hazmat operations are a big part of a firefighter's duties.

Wherever there are industrial operations, there is hazmat. From a professional firefighter's perspective, every call involves a hazmat event at some level. For example, emergency medical service responses involving blood or other body fluids are hazmat incidents that personnel have learned to expect and are trained to handle. Smoke and fluids generated at an automobile accident also constitute hazmat. And hazmat is present in all military operations at all military bases. In fact, all chemical, biological, radiological, nuclear, and high-yield explosives operations are classified as hazmat operations. Firefighters must be qualified at the hazmat awareness and operations level during their initial-entry training. Firefighters can become hazmat technician-qualified at any level. And it is possible to obtain the additional certification of hazmat incident commander as a staff sergeant. All Department of Defense (DOD) fire service training is certified by the International Fire Service Accreditation Congress, and the names of firefighters and their qualifications are entered into a national database.

CBRN specialists (MOS 74D) conduct CBRN reconnaissance and surveillance, perform decontamination operations, conduct obscuration operations, conduct CBRN sensitive-site exploitation, and operate and perform maintenance on assigned CBRN defense and individual protective equipment. In non-Chemical units, CBRN noncommissioned officers (NCOs) plan, conduct, and evaluate individual and collective CBRN training and provide technical advice on all CBRN operations and hazards for company level and higher organizations.

Differences and Similarities

Firefighters respond to fires and nonmilitary releases of hazmat; they are generally not meant to be employed under combat conditions. CBRN Soldiers respond to military releases of hazmat under combat conditions. While this contrast between the specialties is somewhat simplistic, it is appropriate.

Fire is a chemical reaction! To control a fire, the sources of the reaction—heat, oxygen, and fuel—must be eliminated. Firefighters normally use water to cool the source of ignition or deprive it of oxygen, thus stopping the reaction. The water is usually applied through the use of a pump and piping. When the pump and piping are placed on an emergency response vehicle to fight fires, the vehicle is referred to as a fire engine. If the

74D Responsibilities

- **74D10.** CBRN specialists support CBRN reconnaissance, surveillance, detection, decontamination, and obscuration operations and serve as company CBRN specialists.
- **74D20.** Soldiers supervise CBRN reconnaissance, surveillance, detection, decontamination, and obscuration operations and serve as company CBRN NCOs.
- **74D30.** Staff sergeants lead CBRN reconnaissance, decontamination, and obscuration squads and biological detection teams and serve as battalion CBRN NCOs who supervise and train company level CBRN NCOs and specialists and inspect company level CBRN readiness.
- **74D40.** Sergeants first class function as platoon sergeants; supervise CBRN reconnaissance, surveillance, detection, decontamination, and obscuration platoons; manage Chemical company operations; serve as CBRN staff advisors at battalion level and higher organizations; supervise and train subordinate level CBRN NCOs and specialists; and inspect subordinate unit CBRN readiness.
- **74D50.** First sergeants, master sergeants, and sergeants major provide staff supervision and coordinate, supervise, and conduct group, division, Corps, and Army level CBRN operations.

Specialized Chemical Branch Areas

- Technical escort units (ASI L3).
- Armored chemical-biological reconnaissance units (ASI L [Fox], L1 [Master Fox], and L6 [Stryker]).
- Army National Guard civil support teams (skill qualification identifier R [enlisted] and R1 [officer]).
- U.S. Army Reserve domestic-response casualty decontamination (operationally trained) and domestic-response reconnaissance (civilian hazmat-trained) units.

same pump and piping are placed on a vehicle to decontaminate hazmat and chemical agents, the vehicle is called a truck-mounted, decontamination apparatus. In fact, firefighting is a secondary mission for the decontamination apparatus.

Hazmat Operations

Hazmat has become a widely recognized threat in the United States. Any chemical, biological, or radiological material that escapes from storage or use and becomes a threat to the American public is considered hazmat. Virtually every industrial operation, from a dairy to a chemical plant, can experience a situation that results in a hazmat response. When a city or a military base in the United States responds to a routine (non-terrorist-generated) hazmat incident, the primary responders (hazmat team) are generally firefighters by training, with additional hazmat specialty training. Why? Because firefighter training includes extensive hazmat training.

Industrial operations do not take place only in the United States. As our Soldiers discovered in Iraq, hazmat incidents collaterally result from combat operations and sensitive-site exploitation. Non-terrorist-generated hazmat incidents in the theater of operations still require a hazmat response. In recent cases, these responses have been conducted by hazmat-trained CBRN Soldiers. Why? Because firefighters in the theater of operations are focused on specific protection missions and may not be available. In contrast, there are many CBRN Soldiers and they represent the only trained capability available for responses.

CBRN Operations

CBRN incidents are also considered a threat to the Homeland. Because there is no demonstrable peacetime use for nuclear weapons, nuclear incidents always elicit a military response in addition to the normal nonmilitary response. When CBRN material is used as a weapon for targeting Soldiers on the battlefield, CBRN operations become necessary. The U.S. Army Chemical Corps responds with CBRN specialists and units to advise commanders, save Soldiers, and allow the mission to continue. Why? Because that is the designated mission of the Chemical Corps.

When terrorists use CBRN material as a weapon in a city or a military base, the first response includes the local hazmat team, which is usually staffed by firefighters. As the response develops, National Guard weapons of mass destruction–civil support teams (which are staffed with Soldiers and airmen who have been trained by the U.S. Army Chemical, Biological, Radiological, and Nuclear School) provide support. Other Chemical units, primarily from the Army Reserve and National Guard, can also respond to provide backup hazmat and mass decontamination support.

Response Operations

Chemical Corps command and control follow the military model of command and control, whereas the Fire Service uses the Incident Command System (ICS) for command and control. Because the military model was used as a basis for the ICS, the differences are primarily in nomenclature and focus. In addition, CBRN Soldiers and U.S. Army firefighters both receive training on the Military Command and Control System and the ICS. CBRN Soldiers focus more on the Military Command and Control System, while firefighters focus more on the ICS.

Use

War destroys infrastructure, which in turn results in hazmat incidents. On varying scales, examples include incidents in Grenada, Panama, Bosnia, Haiti, Kuwait, Afghanistan, and Iraq. In each of these locations, we have helped rebuild the infrastructure and assisted in government operations (firefighting, hazmat reduction, and disaster response) until the country's own government was capable of supporting itself. If we had not helped these nations rebuild, we may have won the battles, but would have lost the wars.

The number of deployable 21Ms in the Engineer branch is about 1,000. Due to force structure decisions, most Army firefighters are federal or contract civilians. While well-trained, civilian firefighters do not deploy. The Chemical Corps, by contrast, is much stronger; there are more than 20,000 CBRN-trained Soldiers in the Chemical Corps, and most have had some hazmat training. The 74D and 21M Soldiers must be able to work together, particularly in hazmat operations. One way to do this would be to create a single branch to oversee them—an all-hazard response branch.

Proposal

Transferring the firefighting proponency to the Chemical Corps under the Maneuver Support Center would strengthen the Army's firefighters and CBRN Soldiers. The firefighting specialty would become a more significant part (about 10 percent) of the branch, so attention to firefighters' needs would increase. Firefighters would also benefit from improved developmental opportunities. Currently, advancement to the senior NCO level is limited due to the number and types of units. There are few staff positions at the senior NCO level, and firefighting warrant officers do not exist. A properly melded and reformed CBRN response branch would allow firefighters to develop into first sergeants, sergeants major, and warrant officers.

The Chemical branch would also benefit from a rebirth of the old concept of multiple-capability (hazmat, CBRN decontamination, and firefighting) decontamination units. CBRN training would include more common civilian response operations that focus on hazmat and the ICS, and military chemical doctrine would be adjusted to easily enable more civilian response operations. This would result in a more capable and adaptable CBRN response corps. Practicing skills on real, small-scale, civilian incidents would serve as great training and preparation for large-scale incidents.

Think of the training and operational possibilities that would exist if a firefighting platoon or detachment were organic to a Chemical company! What if MOS 74 included "74Fs" ("F" for "firefighter"), vice 21Ms?

The firefighting MOS should be kept separate and distinct and designated "74F." To the maximum extent possible, working relationships—particularly in hazmat—should be fostered through cross training in advanced individual training. The Basic NCO Course should include firefighting, CBRN, and hazmat phases. The Advanced NCO Course should also include these same phases, but with a focus on leadership. At the master sergeant level, all eligible 74-series Soldiers would be considered for leadership positions and promotion to sergeant major.

Increasing the capabilities of the 74D CBRN Soldiers is also important. We need to have an additional skill identifier (ASI)-producing course in basic structural and wildland firefighting and ICS practices for nonfirefighting Soldiers. The goal of the course, which should be about eighty hours long, should be a solid familiarization for E-4s through E-7s. These Soldiers could provide basic leadership and instruction at fire incidents where their unit is tasked to fight fire or, with a little extra training, could be detailed to undermanned firefighting detachments.

Conclusion

The world is changing. The clear distinction between CBRN operations and hazmat and civil response operations is fading. These operations are now becoming one. At the U.S. Army Maneuver Support Center, all of the experts are in one place. Because the Engineer Corps is already sufficiently committed to doctrinal challenges, perhaps this one small element should be removed from their plate. The Chemical Corps should pick up the firefighting proponency to maintain relevancy and to meet what will surely be future needs.

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