

# ARMY

# CHEMICAL



The Professional Bulletin of the Chemical Corps

# REVIEW

Winter 2009



# CHEMICAL CORPS TRANSFORMATION

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THE PROFESSIONAL BULLETIN OF THE CHEMICAL CORPS  
Headquarters, Department of the Army

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## Chief of Chemical



**Brigadier General  
Leslie C. Smith**

*Army Chemical Review* is dedicated to all Dragon Soldiers and friends of the U.S. Army Chemical Corps and Regiment. In June 2009, we celebrated the 91st anniversary of the Chemical Corps; Regimental Week; and the Joint Chemical, Biological, Radiological, and Nuclear (CBRN) Conference. We could not have completed a successful week without the National Defense Industrial Association, the Chemical Corps Regimental Association, and each participant who traveled to the Ozarks. A special thanks to our noncommissioned officers for planning and executing the events!

This issue of *Army Chemical Review* focuses on the transformation of the Chemical Corps as the Army transforms to deal with an era of persistent conflict. As our Nation conducts a major shift in Iraq and Afghanistan operations, we must continue to demonstrate our flexibility and relevance on both war fronts. Our efforts will focus on helping the Iraqi government and military build a chemical defense company to work military missions and serve as the nation's lead for dealing with nonproliferation requirements. We must remember that both locations remain dangerous, and we must train our Soldiers to deal with the unknown threats that exist in the operational environment—even when the threat is perceived as low.

Our Regiment (like many others) has decided to move force structure from one area to another and, in several cases, has donated this force structure or positions to the larger Army mission. Although these decisions were tough for the Regiment, I ask that you continue demonstrating the flexibility to train, advise, deploy, and remain a combat multiplier for our Army.

Over the next 90 to 180 days, we will start monthly CBRN warfighter forums to address many of the subjects that Regimental Command Sergeant Major Ted Lopez and I hear from you during our visits. Our goals are to—

- Improve communication throughout the Regiment and the entire chemical, biological, radiological, nuclear, and high-yield explosives (CBRNE) community.
- Work requirements for pre- and postdeployment training. (We must ensure that all CBRN personnel are trained and prepared to respond to evolving CBRNE threats and hazards; for example, they should receive hazmat certification and refresher training at the institution and unit.)
- Serve as an after-action review committee and receive backbriefs of missions that units and individuals are executing.

The first step in developing the combating weapons of mass destruction (CWMD) enterprise was participating in the Defense Threat Reduction Agency-led, general officer/senior executive service CWMD community-of-interest meeting in October 2009. We will use that forum to share information and best practices among our CWMD community. In my view, we cannot continue to develop requirements and capabilities that do not serve our communities' efforts and do not move us forward. Look for our feedback from these events.

As part of that CWMD enterprise development, Regimental Command Sergeant Major Lopez and the command sergeants major and sergeants major of the Regiment met in October to work through some of the challenges and opportunities facing the Chemical Corps and the Army. Participants included sergeants major from other Services, deployed leaders, and representatives from all components in the Army. We look forward to the outcomes as part of the effort to move our community forward.

Please continue to send your ideas and thoughts to our world-class CBRN Knowledge Network at [https://www.us.army.mil/suite/portal.do?\\$p=409522](https://www.us.army.mil/suite/portal.do?$p=409522). The entire team is interested in your opinion on what we are doing right and how we can improve. We spend a lot of time placing information on this site and want to know if it is useful to you.

In October, we visited wounded warriors and their families at Walter Reed Army Medical Center. All of the Soldiers were focused on getting back to their units and continuing to contribute to the team. Please take time out of your busy schedule to visit our wounded warriors and their families. These wounded Soldiers and their families demonstrate the dedication and resilience of our Army team and what each of you means for our Nation. We are humbled to serve with you!

Congratulations to our former Chief of Chemical, Brigadier General Tom Spoehr, who was selected for promotion to major general. Well deserved!

I am proud to serve with each of you as your 25th Chief of Chemical.

***ELEMENTIS, REGAMUS, PROELIUM:  
WE RULE THE BATTLE THROUGH THE ELEMENTS!***

## Regimental Command Sergeant Major

### *Greetings, Dragon Warriors!*

First, I would like to thank the Soldiers who competed in Dragon's Peak this year. I would also like to thank the leaders who were involved in making the Dragon's Peak competition happen. The Commandant and I are very proud of how well the Corps performed.

It has been a fast and furious quarter. I have had the opportunity to attend several conferences. Our NCO Corps has been through several realignments. We have fully converted our NCO Education System; the Basic NCO Course has transitioned to the Advanced Leader Course, and the Advanced NCO Course has transitioned to the Senior Leader Course. Required technical skills and leader development instruction will continue to be added to these courses in the future.

It is imperative that our Dragon warriors stay relevant and that their knowledge remain current. Technical development is available at the U.S. Army Chemical, Biological, Radiological, and Nuclear School, Fort Leonard Wood, Missouri, and online. The courses available on the Chemical, Biological, Radiological, and Nuclear Knowledge Network (CKN) at [https://www.us.army.mil/suite/portal.do?\\$p=409522](https://www.us.army.mil/suite/portal.do?$p=409522) are at the forefront of our extended, online development. Many of our Dragon warriors are "one deep" in our deployed units. Their use of the CKN and Protection Net at <https://forums.bcks.army.mil/secure/CommunityBrowser.aspx?id=62418> can provide needed information.



**Command Sergeant Major  
Ted A. Lopez**

*It is imperative that our Dragon warriors stay relevant and that their knowledge remain current.*

During my travels, I have seen our warriors doing great things for our Nation. Please continue to highlight and publish these events and accomplishments. I am extremely excited about where we are going here at Fort Leonard Wood, the Home of the Chemical Corps; our leaders are training more than 83,000 warriors per year. Please come see the latest courses we are offering here.

Dragon warriors, families, retirees, civilians: Be safe; invest in the Corps. Thank you very much for what you do.

## The Warrior Ethos

*I will always place the mission first.*

*I will never accept defeat.*

*I will never quit.*

*I will never leave a fallen comrade.*

# 25th Infantry Division CBRN Section, Operation Iraqi Freedom 09-11: “Tradition” Versus “Reality”

By Major William Joseph Epolito, P.E.

Why write this article? Because there is an institutional push to standardize how divisions could or should use the chemical, biological, radiological, and nuclear (CBRN) section to meet the commander’s requirements and mission sets in Iraq and Afghanistan.

The current threat does not warrant the traditional use of the CBRN section; but the institutional Army has not provided division commanders or, more importantly, division CBRN leaders with the information, tools, or “top cover” to effectively serve as valuable division assets—except for the provision of personnel to fill other, more critical positions such as force protection (FP) officers/noncommissioned officers (NCOs) or liaison or protocol officers. After seven years of persistent conflict, it seems that the U.S. Army Chemical, Biological, Radiological, and Nuclear School (USACBRNS) could do more for CBRN Soldiers in the field. The USACBRNS should provide division CBRN leaders with a “blueprint to success” constructed from the numerous, repetitive, after-action review (AAR) comments from previously deployed divisions.

This article is intended to help CBRN personnel become valuable assets to division commanders without the need to “find their way in the dark.” It does not provide a doctrinal solution, and it does not address a specific theater of operations (other than the specification of a counterinsurgency environment). This article does not contain the answers to all problems; it simply offers a method for addressing them.

## Traditional CBRN Section Versus New Protection Cell

The modified table of organization and equipment (MTOE) for divisional CBRN sections is undergoing a significant shift. For the 25th Infantry Division (ID), that shift will take place in Spring 2010. At that time, the total number of personnel in the 25th ID CBRN section will be reduced from thirteen to ten, with two explosive ordnance disposal (EOD) personnel. In addition, the CBRN section will no longer stand alone; it will be organized under the protection cell.

There are two problems with the new MTOE. First, the protection cell is to be led by a lieutenant colonel who will be required to provide guidance, direction, and oversight of four other lieutenant colonels. Given the diverse missions of

the various sections of the protection cell—provost marshal (PM), air and missile defense (AMD), CBRN, and personnel recovery—and the tension that may develop, it seems that the chief of the cell should be a colonel. Second, the loss of authorizations may create hardships for CBRN sections during the next deployment. Many CBRN sections serve as sources of personnel for other command priority positions such as FP officers/NCOs and liaison and protocol officers, and the commander will expect this to continue. This will make it even more difficult for the CBRN section to retain the personnel necessary to effectively execute assigned missions. To compound this problem, EOD personnel cannot be swapped one for one with CBRN personnel because EOD personnel generally become part of the counter improvised explosive device (C-IED) cell during deployment; they do not belong to the CBRN section unless the CBRN section is assigned the C-IED mission. Unfortunately, personnel tasking rosters are usually approved without input from CBRN sections.

The USACBRNS should immediately initiate an information operations campaign to address the new divisional CBRN structure and explain how it can best be used by the

25th ID personnel strength

Grade	Personnel Under Current MTOE	Personnel Under New MTOE	Remarks
O-5	1	1	
O-4	3	3	One 74A replaced with an 89E (EOD)
O-3	1	1	
E-9	1	1	
E-8	0	1	89D (EOD)
E-7	5	3	
E-6	1	0	
E-5	1	0	
	<b>Total: 13</b>	<b>Total: 10</b>	

division commander. Further, the new MTOE could best be implemented through the CBRN section assumption of the C-IED mission. This would positively impact the division by assisting the division commander in fulfilling mission priorities. In addition, the C-IED mission is an enduring mission that always requires additional military personnel. It is also the mission that would provide the best opportunity for maintaining CBRN section integrity. The C-IED mission would seem to be a better use of the CBRN section than the FP mission because it would allow the section to retain EOD personnel and it would be better aligned with the changing nature of the Chemical Corps from CBRN-only mission sets to a joint CBRN/EOD mission set, as is the case in the 20th Support Command and technical escort units.

### **Reality**

Relating the experiences of the 25th ID in the areas of section manning and mission planning, CBRN/unit status report (USR) missions, and FP missions may be of some help to those of you who are about to embark upon a similar journey. Perhaps, learning how we dealt with these issues will provide you with a head start that we did not have. Hopefully, this will allow you to be even more successful than we were.

#### *Section Manning and Mission Planning*

Section manning and mission planning were the first pressing issues we faced. Our situation was complicated by the fact that the “top three” (chief, deputy, and sergeant major) arrived just months before our deployment. Although the previous leadership was responsible for preparing the section for deployment, the outgoing leaders may have lacked the focus and planning necessary for adequate preparation. This potential problem could be mitigated by assigning the top three during the reset period<sup>1</sup> of Army force generation.

Section manning was our main issue. Although we were manned at full strength, we were tasked to provide the protocol chief, the tactical command post operations officer, and three liaison officers. While we were aware that there would be some taskings, we did not expect to be tasked for five personnel—especially since we were to be assigned the CBRN/USR and FP missions. But, by outlining our mission, personnel requirements, and impacts due to personnel reductions, we were able to reverse the loss of three additional section personnel. The CBRN/USR and FP missions had previously been conducted by twelve personnel from two different sections (versus the nine personnel we were to have in our section). To help mitigate this shortage, we worked with the PM section to obtain an attached military police NCO that could serve as a subject matter expert in the FP cell. Based on our experience, we highly recommend that CBRN sections begin aggressively inquiring about the tasking roster (which is generally kept close-hold until just a few months before deployment) very early in the process—possibly even acquiring a backdoor copy of the roster before it is approved. Waiting too long to learn of personnel taskings negatively impacts mission preparation and training.

The solidification of our deployed mission to a nontraditional environment was a secondary issue. The CBRN/USR mission was assumed; but we requested to retain the FP mission (a repeat mission from our last deployment), and our chain of command concurred. This allowed us to maintain unity in the section and avoid sending personnel to execute other missions. Given the current MTOE, the FP mission is the most realistic and logical CBRN mission, since CBRN is a part of the overall FP mission and since the PM section is often too busy to execute their doctrinally assigned FP mission. We recommend that CBRN sections assume missions that allow them to maintain as much section unity as possible. Personnel who are tasked outside the CBRN section do not receive the same personal attention or branch-specific professional development as those who remain within the CBRN section. This situation can be somewhat mitigated by maintaining a connection with tasked personnel; however, it can be difficult to maintain such a connection when personnel are located at different installations.

The implementation of Army-wide solutions to issues that are identified by units is a very slow process. Therefore, we also recommend that you search for AARs and implement as many relevant recommendations as possible. Many correctable problems are repeated tour after tour because no one spent the time or manpower necessary to research applicable AAR recommendations.

#### *CBRN/USR Missions*

Our main CBRN/USR mission was to manage equipment and respond to and assess hazmat caches and unexploded chemical rounds. This article addresses three main areas—predeployment training, CBRN equipment readiness, and brigade combat team (BCT) reconnaissance platoon employment.

Recommendations for predeployment training include—

- Technical escort training for some division CBRN NCOs and the entire BCT reconnaissance platoon. This training provides relevant, in-depth information about hazmat and CBRN response.
- Resident and deployment-focused hazmat training using toxic industrial chemical protection and detection equipment (TICPDE). This training covers the response to, and assessment of, discovered hazmat and unexploded chemical rounds.

Much of the CBRN equipment available to maneuver units in the deployment environment is nonstandard, off-the-shelf equipment that requires specialized training and maintenance for operation. Two primary examples of this equipment are the Fixed-Site Decontamination System and TICPDE. The Fixed-Site Decontamination System, which is used for terrain and airfield decontamination, consists of a pickup-mounted, hose-and-nozzle assembly that sprays a foamy substance. The TICPDE set is used in responding to and assessing discovered hazmat.

The primary mission of the BCT reconnaissance platoon is to perform CBRN reconnaissance in support of the BCT, but reconnaissance platoons also conduct non-CBRN missions such

as personal security detachment and route clearance missions. The 1/25 Stryker BCT enhanced our commander's mission by forming a partnership with EOD attached support and assuming the role of a weapons intelligence team (WIT) to quickly respond to a CBRN mission. Since many CBRN response missions were conducted with or in support of EOD units, this was a "marriage made in heaven." EOD personnel used the reconnaissance platoon for augmented security, intelligence collection and, when necessary, CBRN response. Three 1/25 Stryker BCT Soldiers were sent to a seven-week National Ground Intelligence Center WIT course; when they returned, they conducted platoon training on the WIT mission. The concept of joint CBRN and EOD is a win-win situation that should serve as a model for all BCT reconnaissance platoons to emulate.

### FP Missions

The FP mission is the most frequent additional task assigned to CBRN sections; it is also one of the areas in which most personnel require additional training and guidance to make an immediate impact. This article addresses FP mission areas involving references, organization and manning, planning, training, and funding.

The primary FP mission references are Army Regulation (AR) 525-13 and Field Manual (FM) 3-0 for overarching principles and policy and Graphic Training Aid (GTA) 90-01-011 for deployment operations and policies. FM 3-37, which is a new but very useful reference, should be used for organization and planning (including the organization and planning of the FP mission) within the protection cell. Other useful references include unit and echelons-above-unit standing operating procedures, operation orders, fragmentary orders, and on-the-job training. There are many other Department of the Army (DA) references; however, we did not find them to be very useful in planning and executing our deployed FP mission.

The organization and manning of the CBRN section are critical to effectively and efficiently execute the FP mission—especially considering the likely low personnel strength of the section. Figure 1 shows what is, in our experience, the most effective method of organizing the CBRN section for the FP mission. However, due to personnel shortages, we were unable to fully adopt this organization. In our case, I was the deputy and was also forced to serve as the FP officer—a position which required about 80 percent of my time. In addition, we were unable to hire a DA civilian FP manager in time for deployment.

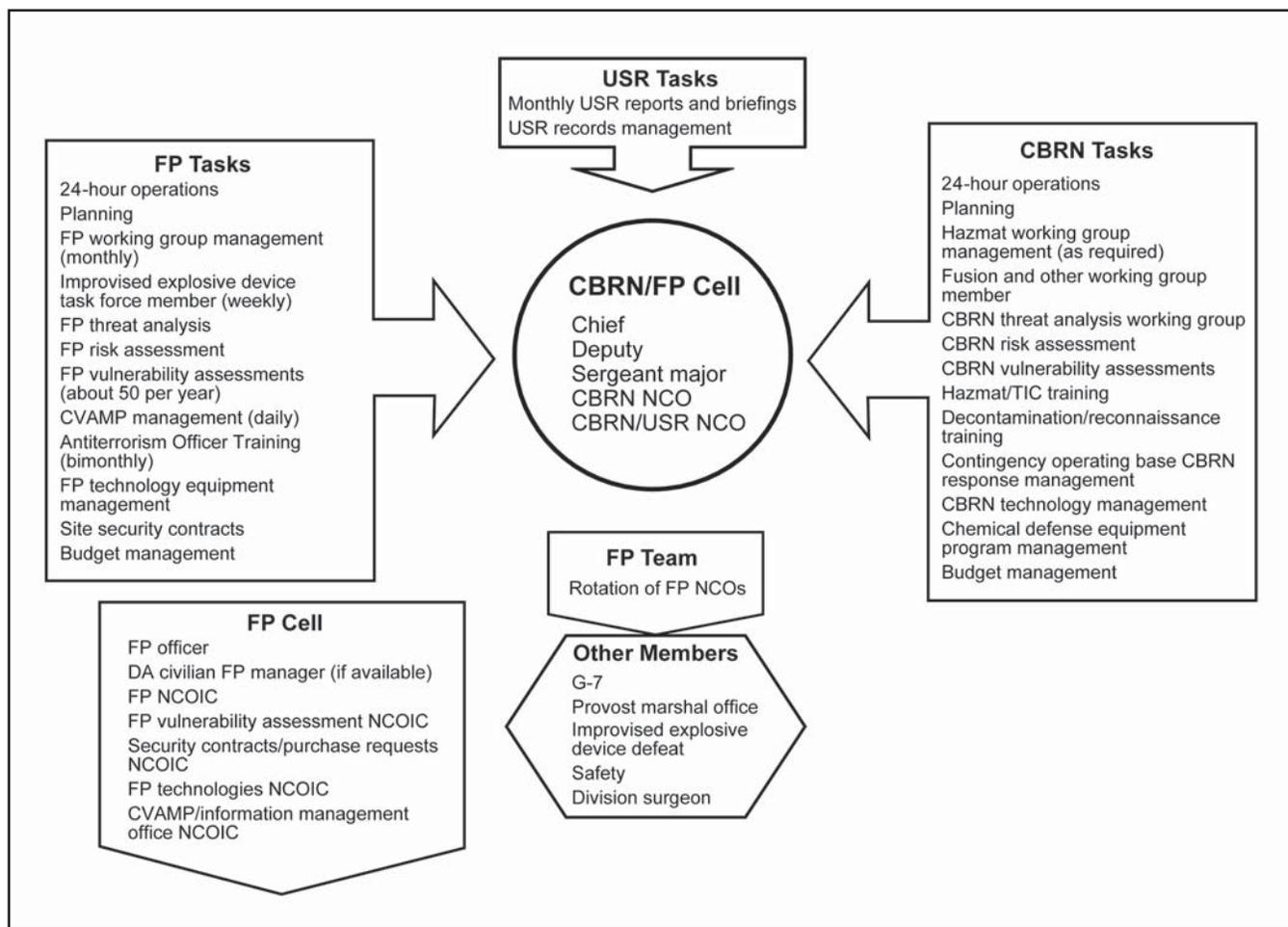


Figure 1. Organization of the 25th ID CBRN section

Fortunately, the attached military police NCO that we were able to obtain for assistance with the FP mission allowed us to accomplish more than we would have otherwise. Because the Military Police Corps is the proponent for FP, it is a great resource from which to seek assistance—even if attaching an NCO is not possible. Considering the strength of the CBRN section, the best solution would be to assign a field grade officer as the FP officer and 60 to 75 percent of the section personnel to the FP mission, as that is the mission that requires the most manpower and time. The CBRN/USR mission can be accomplished by two highly capable senior NCOs, with only leadership and guidance from the chief, deputy, and sergeant major, who are then available to provide leadership and direction to the entire section. Due to the upcoming changes in CBRN section personnel authorizations based on the new division protection cell concept, the availability of personnel to execute the FP mission will change in the future. You will need to reconsider personnel assignments and execution to effectively accomplish the FP mission.

Planning is another major component of the FP mission. Our first planning effort involved understanding the mission and

determining how to execute it. To do this, we used AR 525-13 and FM 3-0 to develop a campaign plan concept in which we referred to FP as the “Kevlar fabric that protects our Soldiers” (see Figure 2). Now that FM 3-37 has been published, it should also be used. Through the initial planning, we became aware of the very broad nature of FP and the necessity of working closely with many other division staff sections, including the surgeon; engineers; and safety, PM, AMD, aviation and personnel recovery, information operations, and EOD sections. Our second planning effort involved the incorporation of our subject matter expertise in division planning efforts. At first, this was difficult because we were not a part of the operations and plans (G-3) “inner circle.” But, after demonstrating what we could offer, we were able to work our way into becoming an integral part of the division planning efforts. In addition, the 25th ID commanding general and command sergeant major took the opportunity at many planning briefings and updates to stress the importance of FP. We recommend that you encourage your commanding general and command sergeant major to do the same. This will help ensure your access to, and influence over, division planning efforts. If personnel are available, we also recommend that at

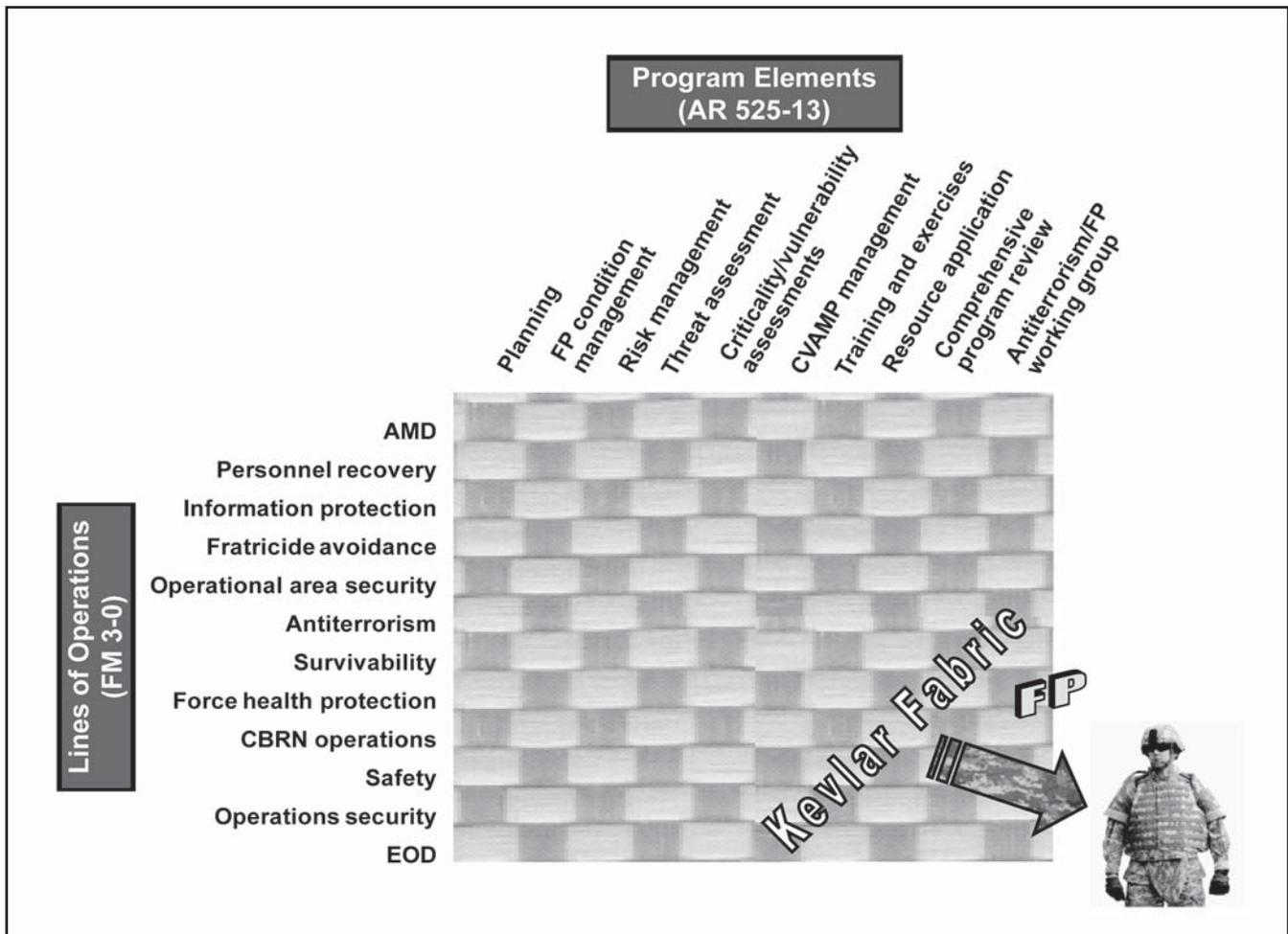


Figure 2. 25th ID CBRN/FP campaign plan concept

least one person be attached to the future operations cell to help maintain situational awareness.

Training assists in effectively executing the FP mission. Nearly all training should be conducted in the rear before deploying. The most wide-reaching predeployment training is Antiterrorism Officer Training. All personnel are required to complete a one-hour, Level I course, which can be accessed online or taken in person from a trained, Level II instructor. All FP officers and NCOs at battalion level and above are required to complete a one-week, Level II basic course, which is generally conducted by mobile training teams (MTTs) at local installations. However, all section personnel—whether they conduct FP missions or not—should attend the training. This allows maximum flexibility in the event that the section becomes short-handed due to leave or other situations. While this training is available in theater, it is often difficult for personnel to attend due to mission requirements and travel time. Division level FP officers are required to complete a one-week, Level II advanced course, which is offered at the U.S. Army Military Police School, Fort Leonard Wood, Missouri. We recommend that the chief, deputy, sergeant major, FP officer (if other than the deputy), and FP noncommissioned officer in charge (NCOIC) also attend. “Victory over terrorism” (VTER) funds are available through the garrison FP office for attendance at this course. Although the Level II basic and advanced courses do not provide much training on the execution of deployed FP missions, they do cover fundamental FP concepts and procedures that will assist with mission execution. Level IV training, which is generally conducted biannually in one central location, is recommended for commanders (O-6 and above). Due to the current operational tempo, it is difficult to schedule personnel to attend this training.

The Contracting Officer Representative (COR) Course and Master Camera Course are also useful. While you will not serve as the COR, you will most likely manage private security contracts. The one-week, MTT COR Course will help you understand the process and COR responsibilities and assist with contract management. The 24-day Master Camera Course, which is conducted at Redstone Arsenal, Alabama, consists of instruction on the capabilities and limitations of tower and aerostat technologies that are managed by the FP section. Other useful local or online FP training courses include physical security courses, MTT C-IED training, and Core Vulnerability Assessment Management Program (CVAMP) training; the CVAMP training is available through the Army Knowledge Online (AKO) Antiterrorism Enterprise Portal.

Although funding is generally a complex, complicated nightmare, there are two programs in place to ensure that the critical FP mission receives adequate funding—the VTER and Combating Terrorism–Readiness Initiative Fund (CbT-RIF) programs. VTER funds, which are normally allocated to, and managed by, major command antiterrorism offices, are used for equipment, supplies, training, and exercises for emerging antiterrorism/FP requirements when other funding is not available. The funds cannot be expended on in-theater

deployments, but can be used in the garrison environment. The CbT-RIF is similar to VTER funds, but CbT-RIF funds are managed at higher levels and are usually used for very expensive items and projects. A long lead time is required for the approval of CbT-RIF expenditures. Additional information regarding CbT-RIF funds can be found in GTA 90-01-011.

The Rapid Equipping Force is a very efficient and effective source. It is a funding/fielding program that generally provides off-the-shelf equipment and technology and is available for the funding of short-term, deployed FP requirements. We often used the Rapid Equipping Force for surveillance, speed mitigation, sniper screens, and other vulnerability mitigation. The force integration officer can be consulted for more information regarding this funding source.

A great division FP section not only identifies vulnerabilities, but also helps the unit mitigate them. Funding is a key component to that mitigation, and the unit often needs the help of the FP section to “break through the red tape.” For example, when we arrived in Iraq, the assistant chiefs of staff for logistics (G-4), signal (G-6), and engineers (G-7) processed most of the division purchase requests and commitments (PR&Cs) without staffing them through our FP section to ensure that they met FP requirements and standards. However, we immediately began working with the G-4, G-6, and G-7 to effectively manage FP-related PR&Cs and to champion the PR&Cs required to mitigate the vulnerabilities. We recommend that you do the same.

## Summary

We recommend that you take the following actions to make the CBRN/USR and FP missions work:

- Plan for all assigned and expected missions immediately. This is necessary for selling your capabilities and keeping your section together.
- Assume significant reductions in the number of section personnel, and immediately begin fighting to retain personnel.
- Seek additional subject matter experts from the PM section if you are responsible for the FP mission.
- Network with division staff. Much information can be obtained through these backdoor relationships.
- Seek additional missions if CBRN/USR is your only assigned responsibility. The traditional mission is not enough to maintain section unity.
- Search for AARs, and implement as many recommendations as possible. Many correctable problems are repeated tour after tour because no one spent the time or manpower required to make the necessary corrections.
- Conduct garrison CBRN and other mission training before deployment; do not wait to be notified that it is available.
- Convince garrison organic BCTs that using the reconnaissance platoon as a WIT is the best use of platoon expertise, manpower, and equipment.

- Learn the mission of deployed, task-organized BCTs, and ensure that attached BCT reconnaissance platoons are properly staffed before arriving in theater. If possible, convince the BCTs to use the reconnaissance platoons as WITs.
- Encourage your commanding general, deputy commanding general, and command sergeant major to stress the importance of FP whenever possible—especially during planning briefings and updates. This will provide you with many opportunities and help you gain the influence and resources that you need to protect the force.
- Use the skills that every CBRN officer and NCO has learned throughout their career. Claw, scratch, fight, and beg your way to making an impact in your unit. You will likely be surprised at how staff savvy you are in relation to Soldiers from other career fields.

### Conclusion

This article is intended to fill an information void and describe the institutional push to standardize how divisions could or should use CBRN sections. While our traditional mission sets may not be as relevant to today's counterinsurgency operations, our skills, experience, dedication and, most of all, our intense drive to make a difference are. If we provide the division with what we have to offer, we will become relevant once again—maybe not for our CBRN skills, but for our ability to make a difference no matter where we are.

**Acknowledgment:** I would like to thank Lieutenant Colonel Forté Ward (CBRN chief), Sergeant Major Melvin Fields (CBRN sergeant major), Master Sergeant Dewayne Hackey (FP NCO), Master Sergeant David Kenner (PM FP

NCO), Sergeant First Class Jay Hart (FP NCOIC), Sergeant First Class Chauncy Hatcher (CBRN/USR NCO), Sergeant First Class Oscar Manners (CBRN operations sergeant), Sergeant First Class Michael Peterson (PM FP NCO), Staff Sergeant Anthony Rowley (FP NCO), and Staff Sergeant Jammie Camacho (FP NCO) for their support during this deployment and for their contributions to this article. We would not have succeeded without you! 

### Endnote:

<sup>1</sup>The term “reset” is used to describe the period during which a unit undergoes Soldier-family reintegration, staffing and equipping regeneration, and limited individual training that renders the unit capable of performing civil support operations.

### References:

- AR 525-13, *Antiterrorism*, 11 September 2008.
- FM 3-0, *Operations*, 27 February 2008.
- FM 3-37, *Protection*, 30 September 2009.
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*Editor's Note.* A for-official-use-only (FOUO) version of this article is available at <<https://protectionnet.bcks.army.mil>>.

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# 86TH CHEMICAL MORTAR BATTALION REUNION

The 86th Chemical Mortar Battalion Association will hold a reunion at the Guesthouse Hotel in Nashville, Tennessee, 14–18 April 2010. Special entertainment is scheduled for Thursday night, 15 April.

For more information, write to Mr. George Murray, 818 West 62d Street, Anniston, AL 36206, or e-mail him at <[gputzer1024@yahoo.com](mailto:gputzer1024@yahoo.com)>.



# ***Tools for a Successful Career as a CBRN Officer***

*By Major Sean Price*

A successful career as an Army officer is often achieved through adaptation and the ability to overcome obstacles and pitfalls as they arise. I have faced many challenges and learned many important lessons throughout my career as a chemical, biological, radiological, and nuclear (CBRN) officer. I hope that sharing these lessons might benefit new CBRN officers as they begin their exciting and rewarding careers.

The situations faced by a new CBRN officer are as unique to that officer's career path as are his or her personality, habits, work ethic, and situational awareness. There is no sure way to address every possible situation that might surface throughout an individual officer's career. However, there are ways to help avoid pitfalls and tools available to reach solutions when those pitfalls cannot be avoided.

The most basic rule of becoming a successful CBRN officer is to understand that no two career paths are the same. For example, the challenges that I have faced differ from those faced by my fellow Chemical Officer Basic Course (COBC) students. Although we received the same training, we were assigned to different units following graduation.

Entry level training is designed to provide students with the basic tools to be effective CBRN officers. It is important that new lieutenants gain as much knowledge as possible during initial training so that they can report to their first units as subject matter experts. Whether participating in a training exercise or an actual combat deployment, as soon as a question involving chemical, biological, radiological, nuclear, or high-yield explosives arises, the commander looks to his or her CBRN officer for advice and recommendations on how to ensure the safety of Soldiers. And now, as a CBRN officer, the pressure is on you! You can either gain the trust and confidence of the commander by having the answer ready or being able to quickly research the answer—or you lose the opportunity, in which case your career grinds to a halt before it gets started. And during deployment, the advice you give and recommendations you make may be the difference between life and death for the Soldiers in your unit.

In addition to learning the basics of the CBRN trade, it is imperative that new CBRN officers pay close attention to the combined arms training portion of COBC. Most new Chemical Corps lieutenants are assigned as battalion CBRN officers. While a staff position may not seem glamorous, it may prove

to be more challenging than expected because CBRN is not the only aspect of the job. The battalion CBRN officer is also an assistant operations and training officer (S3). Everything involving training, planning, battle tracking, and orders production goes through the S3; it is the center of activity during all operations. If you exert the minimum effort necessary to slip through the combined arms blocks of instruction, you will face an uphill battle in your attempt to learn the skills necessary to be successful upon your arrival at the battalion. The more you put into your COBC course, the better prepared you will be when you arrive at your first unit.

A new CBRN officer can also expect to prepare unit status reports (USRs). The USR is actually a very simple report; and with few exceptions, the guidelines are very easy to understand and follow. Yet, throughout my career, I have seldom seen a USR easily completed. The reason for this brings me to the next very important piece of advice, which involves reading publications. While reading publications may sound tedious, it will make all the difference in your career—regardless of the task at hand. I initially found the USR to be a nightmare. Each unit had a unique turn-in system or a different way of briefing the USR. Even more confusing was the number of different perspectives regarding the process for the compilation of information. I received a quick course on the method used to record data, locations of figures on briefing slides, personnel to be briefed, and briefing procedures. But as soon as my audience began asking questions, I got frustrated because I did not know where the data or figures came from or what they meant. Someone eventually showed me the regulation that governed USR reporting. I took the time to read through the regulation, and suddenly it all made sense! From then on, the USR was easy to understand and manage. An additional benefit of reading and understanding publications is that, when you are asked questions, you can refer to those publications in your responses. If you rely solely on your memory for answers, you may be challenged; but if you can produce documentation as backup, you gain instant credibility.

It is also important to be able to locate information contained in publications. One of the things that I have never understood is why any CBRN officer would roll out to the field and set up shop without first checking his or her field box to ensure that current versions of all applicable publications were available. Publications can be electronically stored on a compact

disk and pulled up on a laptop computer in a field setting. However, it is my experience that having an organized box of printed CBRN-specific publications on hand is the only way to ensure that you do not come up short during field operations. You may find that “your” field computer must be shared with others and that you do not have unlimited access to electronic information. Do not end up in this situation. Always make sure that hard copies of publications are readily available. This is a necessary redundancy in the field. Also, make sure that you check the field box yourself. If you take someone else’s word that the box has been checked and that it contains the proper publications, you may be sorry.

Situational awareness is also important. Throughout my career, I have found that most of the answers I was looking for were right in front of me. Pay attention to everyone and everything around you, regardless of whether or not you are directly involved. Analyze information, and learn from it. Every unit has a specific mission as well as multiple additional projects and taskings. There never seems to be enough time to complete everything, yet the assignments keep coming. Commanders must establish their priorities, and these are evident in various types of meetings (planning, training) that you will attend throughout your career. Ensure that your efforts support those of your commander. As a lieutenant, you will probably feel overloaded during the first few months. However, things will begin to make sense over time.

Another important function of new CBRN officers is ensuring the CBRN readiness of the unit. During peacetime, it is the CBRN officer’s job to ensure that unit CBRN training requirements are met. With the different responsibilities of a CBRN officer, it is often difficult to work CBRN training into the training schedule and even more difficult for the CBRN officer to be present when the training takes place. One key to success is figuring out how to conduct CBRN training in conjunction with unit training events such as field exercises. For example, CBRN personnel might practice operating and maintaining decontamination equipment by using sprayers to wash vehicles upon the completion of a field exercise. In addition, the CBRN officer might also work with the battalion S3 to develop a program in which company CBRN personnel compete with one another in the completion of various CBRN tasks. A plaque that is passed from one unit to another during battalion awards ceremonies might provide extra incentive to ensure that company CBRN training is conducted to standard.

Throughout the course of their careers, CBRN officers will learn that they do not know nearly as much as they thought they did when they came out of training. It is important that

new CBRN officers find another CBRN officer who can serve as a mentor. As a lieutenant, I found that my greatest asset was the regimental chemical officer. I learned more about my trade from him than I have from any other officer. He took it upon himself to teach me what he had learned throughout his career. I learned about CBRN employment doctrine, how CBRN agents work when humans come into contact with them, how to establish a course for the certification of CBRN personnel and, most importantly, about the finer points of being an officer in general. I applied the information that I learned from the regimental chemical officer to training exercises during my tenure as a brigade chemical officer. In addition, I followed the example of my mentor and took a vested interest in providing the same mentorship for my subordinates; make sure that you do the same.

The final advice that I want to pass on is to make sure that you are actively engaged in unit extracurricular activities and social functions. There are several reasons for this. First, the Army is steeped in tradition and formal functions have traditionally been held for officers throughout military history.

Second, these activities build a sense of unity among officers. Third, your rater and senior rater will see that you are a team player. You will likely be surprised at how much people enjoy formal events. If for no other reason, participate in these activities because they are part of what it means to be an officer. And bring your spouse

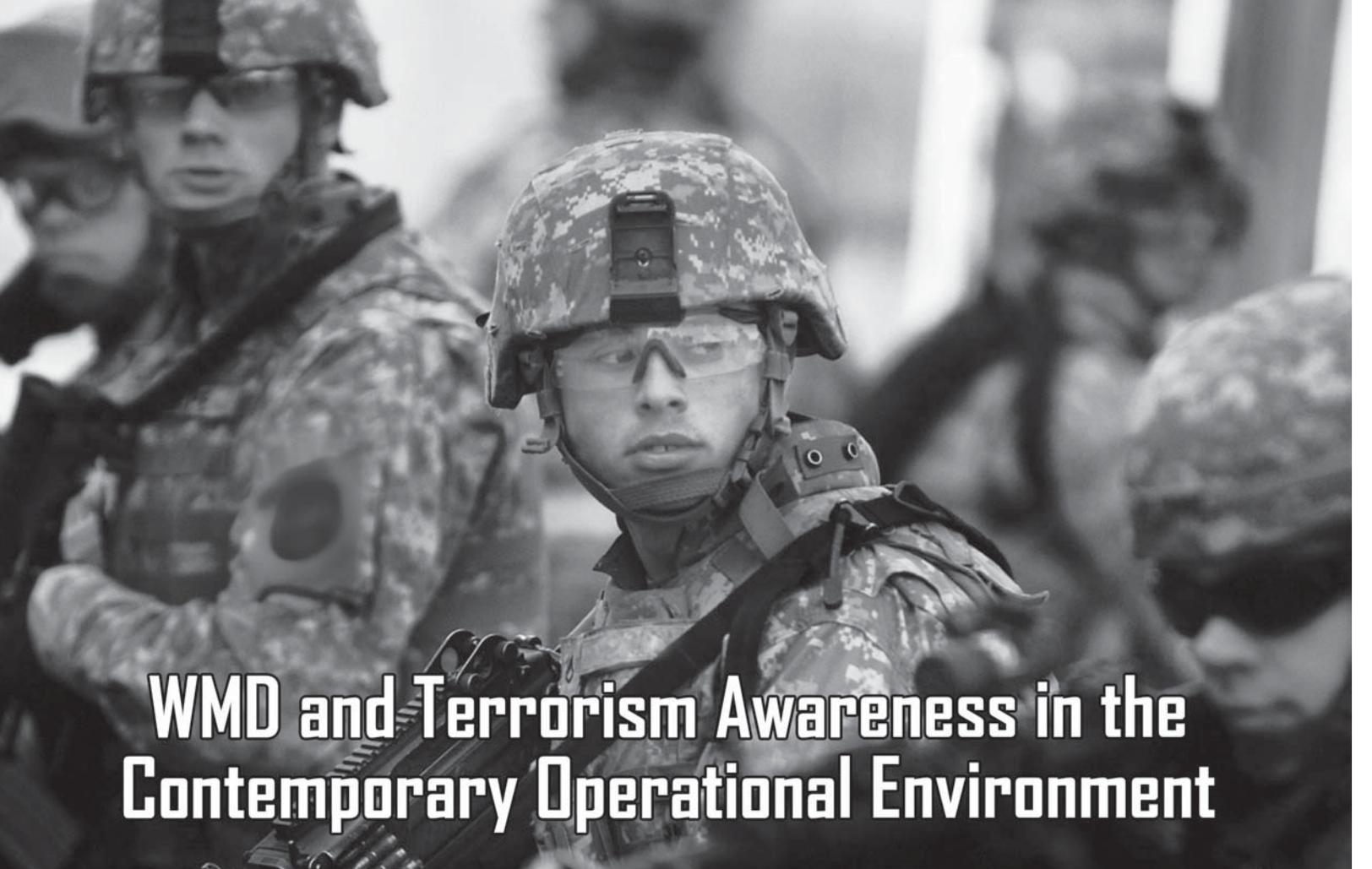
or significant other with you. Never forget your families—they care about you, are interested in what you do, and deserve to be included in events. Allow your family to be involved in your career.

These are some of the things that I have learned during my short career as a CBRN officer. I have experienced many changes, but the Army has recently begun changing at an even more rapid pace. With these changes, new lieutenants are faced with an increasing number of challenges. However, I believe that these tips are still relevant to the success of new CBRN officers. I encourage all of you to take heed and to pass your knowledge on to CBRN officers who will follow. 

*The situations faced by a new CBRN officer are as unique to that officer’s career path as are his or her personality, habits, work ethic, and situational awareness.*

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*At the time this article was written, Major Price was attending Intermediate Level Education at the U.S. Army Command and General Staff College, Fort Leavenworth, Kansas. He now works in the Passive Defense Section, 94th Army Air and Missile Defense Command, Fort Shafter, Hawaii. He holds a bachelor’s degree in general studies from Pittsburg State University, Pittsburg, Kansas.*



# WMD and Terrorism Awareness in the Contemporary Operational Environment

*By Mr. Jon H. Moilanen*

*“ . . . one of the greatest dangers we continue to face is the toxic mix of rogue nations; terrorist groups; and nuclear, chemical, or biological weapons. North Korea and Iran present uniquely vexing challenges in this regard. North Korea has produced enough plutonium for several atomic bombs; Iran is developing the capabilities needed to support a nuclear weapons program.”*

*—Secretary of Defense Robert M. Gates<sup>1</sup>*

The above statement, issued by Secretary of Defense Gates, acknowledges the growing threat of weapons of mass destruction (WMD) and identifies actors who have them or seek to obtain them. In addition to these nation-states, terrorists who might use WMD as a means to promote their extremist agendas also pose a significant threat.

In early 2009, Mr. Dennis C. Blair, Director of National Intelligence, noted that deterrence and diplomacy have traditionally constrained the use of WMD by most nation-states. Yet, some terrorist groups are not bound by such constraints. Expanding opportunities for terrorists to obtain chemical, biological, radiological, and nuclear (CBRN) materiel represent a significant threat to the United States and its partners. Intentions for the acquisition and use of WMD are evident in terrorists,

ranging from transnational groups (such as al-Qaida) to lone individuals.<sup>2</sup> The target of an attack might be within the United States or in any other area of U.S. presence around the world.

## **Definition of the WMD Threat**

How do Soldiers and leaders recognize the threat of WMD and terrorism? They must know which conditions, circumstances, and influences<sup>3</sup> of their immediate operational environment affect military operations. The threat of terrorism is routinely assessed during recurring military tasks and missions. To provide a source of situational knowledge regarding foreign and domestic terrorism threats and to warn of possible WMD use against the United States, the U.S. Army Training and Doctrine Command (TRADOC) Deputy Chief of Staff for Intelligence

(G-2) publishes a series of informational handbooks that support organizational and individual antiterrorism training, military education, and operational missions.

Although various definitions are available, the Department of Defense (DOD) defines WMD as “weapons that are capable of a high order of destruction and/or of being used in such a manner as to destroy large numbers of people” and specifically indicates that WMD may include high-yield explosives and nuclear, biological, chemical, or radiological weapons.<sup>4</sup> DOD defines terrorism as “the calculated use of unlawful violence or threat of unlawful violence to inculcate fear.” Terrorism is intended to coerce or to intimidate governments or societies in the pursuit of goals that are generally political, religious, or ideological.<sup>5</sup>

### TRADOC G-2 Terrorism Handbook Series

The focus of the TRADOC G-2 Intelligence Support Activity (TRISA) terrorism handbook series is on the threat of terrorism. TRADOC G-2 Handbook No. 1 is the capstone handbook of this antiterrorism-oriented series.<sup>6</sup> TRADOC G-2 Handbook No. 1.04 contains more details about the threat of WMD.<sup>7</sup> It recognizes that a full spectrum threat can be foreign or domestic, describes the categories and characteristics of WMD, and discusses special considerations such as dual-use technology, toxic industrial material, and genetic engineering. It concludes with information about how the threat or enemy thinks, operates, and considers possible U.S. armed forces vulnerabilities. Both of these handbooks are periodically updated with contemporary assessments.

Other TRADOC G-2 handbooks complement TRADOC G-2 Handbook No. 1.04. For example, TRADOC G-2 Handbook No. 1.01 contains six detailed case studies of terrorism, including three incidents involving WMD—the sarin attack on

the Tokyo subway system (1995), the domestic bombing of the Alfred P. Murrah Federal Building (1995), and the bombing of the Khobar Towers in Saudi Arabia (1996).<sup>8</sup>

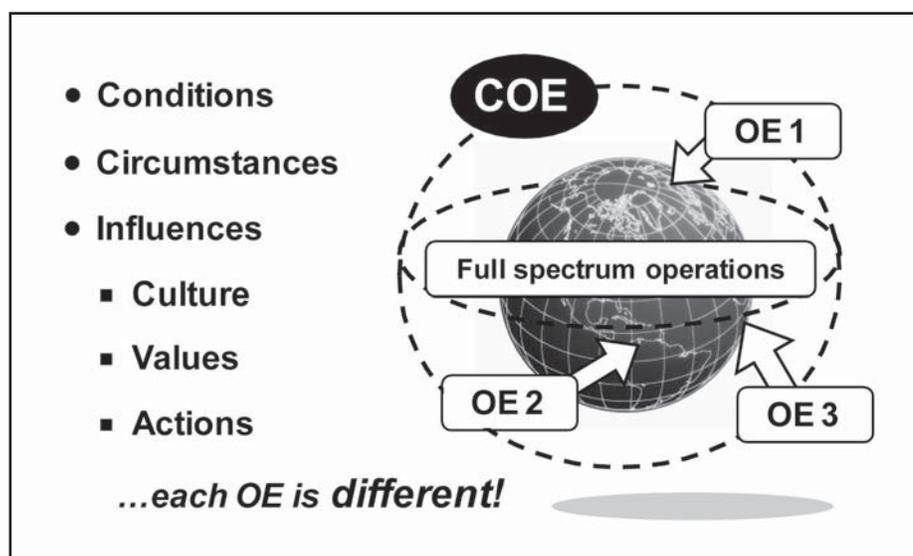
### Situational Awareness and Understanding

An understanding of the WMD terrorism threat requires the collection and analysis of information. These tasks are completed through intelligence preparation of the battlefield, which results in increased situational awareness and situational understanding and acts as a catalyst for leader decisionmaking. Situational awareness refers to the immediate knowledge of the conditions, circumstances, and influences of a mission. Relevant relationships among mission variables and critical judgment create situational understanding and facilitate decisionmaking.<sup>9</sup>

Mission variables include political, military, economic, social, information, infrastructure, physical environment, and time (PMESII+PT).<sup>10</sup> Through situational understanding, it is possible to identify gaps in information, threats to the force or mission accomplishment, threat or enemy options and likely future actions, operational opportunities, probable consequences of proposed friendly force actions, and probable effects of the operational environment on the mission. This continuum of information helps refine what is known and unknown about a threat or enemy.<sup>11</sup>

### Contemporary Operational Environment

The contemporary operational environment (COE) refers to the collective set of conditions derived from a comprehensive assessment of actual worldwide conditions affecting military operations. The operational variables of conditions, circumstances, and influences pose realistic challenges for training, leader development, and capability development for



Dynamics of COE awareness

Army forces and their joint, intergovernmental, interagency, and multinational partners. COE is not an artificial construct created just for training; it is a representative composite of variables that affect the conduct of U.S. generating and operating force missions. COE is an overarching concept for relevant aspects of operational environments that exist now or could exist in the next ten to fifteen years.<sup>12</sup>

The following operational settings may be considered when relating levels of risk management, protection, operational security, and antiterrorism measures to generating and operating forces:

- On deployment to an operational mission.
- In transit to or from an operational mission.
- In installation or institutional support not normally deployed in the conduct of an organizational mission.

### Description of the WMD Threat

The principal means of WMD addressed in the TRADOC G-2 handbooks is CBRN.<sup>13</sup> The addition of high-yield explosives to this list of potential hazards results in what is known as chemical, biological, radiological, nuclear, and high-yield explosives (CBRNE).<sup>14</sup> Incidents can involve accidental releases, toxic industrial material, biological pathogens, radioactive matter, and high-yield explosives that can cause devastating effects on a target.<sup>15</sup> The confirmation of a WMD terrorist attack may not occur until well after the incident takes place.

#### Chemical Vector

The threat of a chemical attack by terrorists is derived from two possible primary sources—the acquisition of militarized chemical weapons and delivery systems and the demonstrated ability to manufacture improvised chemical agents and means of dissemination. Dual-use material and advanced technologies obtained by terrorist groups increase the danger. While dual-use material and advanced technologies have legitimate practical

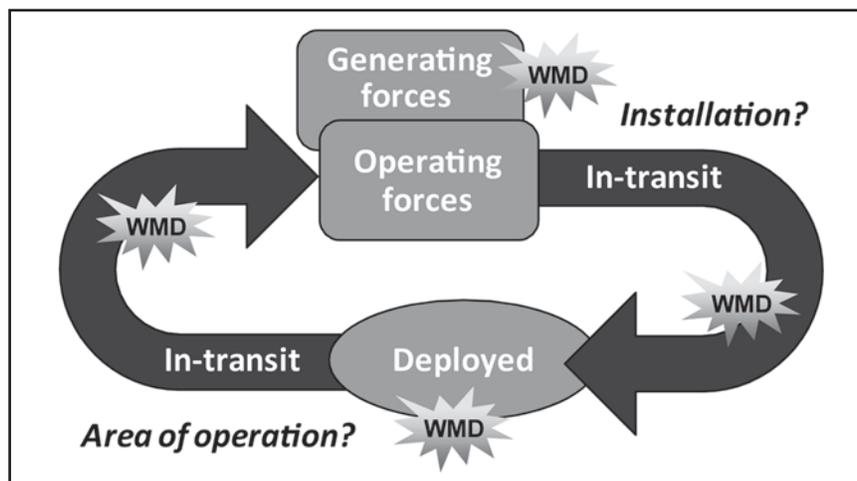
uses in commerce, medicine, and science; they warrant conscientious monitoring and control when they can be used to produce WMD.

Previous terrorist attempts at WMD production have exposed the difficulty in weaponizing CBRN material for mass disruption or destruction. Nonetheless, in 1995, the Japanese cult Aum Shinrikyo manufactured the chemical nerve agent sarin and released it in the Tokyo subway network—killing 12 people and injuring 5,500 others.<sup>16</sup> Even the Aum Shinrikyo attack demonstrated the unpredictable nature of chemical weapons and problematic issues of dissemination. Fortunately, the effects were much less deadly than what the terrorists had planned.

Nation-states have used chemical weapons with mass destruction effects against their own people. For example, in 1987 and 1988, Saddam Hussein directed Iraqi military forces to use chemical weapons against the Kurdish population in northern Iraq. About forty chemical weapons attacks took place during the eighteen-month campaign. Mustard (a blister agent) and sarin, tabun, and VX nerve agents were employed in aerial bombs, 122-millimeter rockets, aerial spray dispensers on aircraft, and conventional artillery shells and used as weapons of terror.<sup>17</sup> A chemical attack on the city of Halabja in March 1988 resulted in about 5,000 civilian deaths and a corresponding number of chemical injuries.

#### Biological Vector

Biological weapons may consist of pathogenic microbes, toxins, or bioregulator compounds. Pathogens are disease-producing microorganisms such as bacteria, rickettsiae, and viruses; they occur naturally, but can be altered using biotechnology. Toxins are poisons that are formed naturally by animals and vegetables, but they may also be synthetically produced. Bioregulators affect cellular processes in the body. Depending on the specific compositions of biological weapons,



Where is the WMD threat?



**Tokyo sarin attack (1995)**

they can incapacitate or kill people and animals and destroy plants, food supplies, and materiel.

Critical factors to consider in conjunction with the use of biological weapons include the incubation period of the biological agent, degree and duration of incapacitation, and other short- and long-term effects that may result. Terrorists may take these factors into account in planning the attack. The incubation period determines the length of time it takes for symptoms of the biological agent to become evident and, consequently, to correctly diagnose the incident as an attack.

A pathogen, such as anthrax, could be used against various targets, including population centers, food and water supplies, economic sites, and other infrastructure. Anthrax invades in one of three ways—through the skin (dermal absorption), the digestive system (ingestion), or the lungs (inhalation), with inhalation being the most serious route of attack. The incubation period for anthrax may be several days, depending on conditions. Decontamination, long-term medical treatment for physical and psychological issues, and economic disruption add to the immediate effects of an attack.

#### ***Radiological Vector***

Radioactive material is widely used in medical, commercial, industrial, and research facilities. It can be incorporated into a “dirty” bomb that is designed to disperse the radioactive materials. Radioactive material can be distributed in the atmosphere or in a confined area such as an office ventilation system through the use of a radiological dispersal device. Aircraft can be used to disperse radioactive powders or aerosols.<sup>18</sup> A radiation-emitting device can be used as a passive method of radiological attack. The radiation-

emitting device can be set up to expose a certain population to intense radiation for a short period of time or to low levels of radiation over an extended period. The knowledge of such contamination and the fear of physical injury or psychological harm can be significant.<sup>19</sup>

Disaster response and recovery issues associated with a radiological attack include the medical treatment of people in the affected area, the possible evacuation and relocation of populations, and the return of physical property and materiel to a useable state with no fear of radiation.<sup>20</sup> Although not an act of terrorism, an incident that took place in Goiânia, Brazil, in 1987 illustrates the impact of a little more than one ounce of the radioactive isotope cesium-137. Its dispersal resulted in injuries, deaths, and significant contamination of property. More than 100,000 people were screened for radioactive contamination. Short-term symptoms included skin burns, and many people developed radiation-associated illnesses. More than twenty people were hospitalized. Evaluations for long-term health issues, such as increased incidences of cancer, are ongoing. More than 6,000 tons of household belongings and other materials were packed in concrete-lined steel containers and placed in a restricted area.<sup>21</sup> Extensive decontamination and medical treatment continued for several years.

#### ***Nuclear Vector***

Nuclear material represents a distinct danger, but the production of a weaponized nuclear device requires exceptional technical expertise and capabilities and access to fissile material. It is very difficult, but possible, for terrorists to obtain nuclear material. Avenues that terrorists might pursue to gain access to nuclear technologies and materiel may include international nuclear weapons technology proliferation networks such as the



**Goiânia incident (1987)**

A.Q. Khan network, state sponsors of terrorism, transnational criminal groups, and other illegal activity.

### **Identification of Threat Actors**

In an unclassified report to Congress, the Central Intelligence Agency stated that many of the more than thirty designated foreign terrorist organizations have expressed interest in acquiring WMD.<sup>22</sup> The *National Defense Strategy*<sup>23</sup> identifies rogue states such as Iran and North Korea as a threat to international order; Iran sponsors terrorism while continuing to build nuclear technology and enrichment capabilities. And although North Korea was recently removed from the U.S. Department of State list of terrorism sponsors, it remains a serious nuclear and missile proliferation threat. Recent threats publicized by North Korea highlight the increasing danger of its use of nuclear weapons and proliferation of supporting technologies.<sup>24</sup> Concerns about the possibility of nonstate actors acquiring WMD through clandestine production, state sponsorship, or theft continue.<sup>25</sup>

The most dangerous type of terrorist threat to the United States is a transnational movement that exploits religious extremism for ideological ends. The U.S. Government considers the al-Qaida network the most serious transnational threat to the United States. Targets and methods of attack will most likely continue to be economic in nature, involving commercial aviation, the energy sector, or mass transportation.<sup>26</sup> According to Mr. Blair, al-Qaida would “. . . use any CBRN capability it acquires in an anti-U.S. attack, preferably against the Homeland.”<sup>27</sup> As security measures make attacks on particular targets more difficult, other less protected targets such as large public gatherings or locations of symbolic monuments or notable buildings may be chosen.<sup>28</sup>

Emergent actions indicate that terrorism which was previously centralized and controlled by formal networks and organizations is increasingly conducted by loosely affiliated terrorists or groups of terrorists that may generally align themselves with an ideology or special-interest agenda. These terrorists are often interested in conducting unconventional attacks. Some declare that their acquisition of WMD is a religious duty (extremist ideology) and threaten to use WMD to influence political actions, achieve specific economic or financial objectives, or leverage other types of concessions. Some groups wish to employ WMD to create large numbers of military and civilian casualties and to capitalize on the psychological effects of these events.<sup>29</sup>

A prominent case in which lone terrorists used WMD occurred on 19 April 1995, when Timothy McVeigh and Terry Nichols bombed the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma. Their truck bomb was a relatively simple device composed of several thousand pounds of ammonium nitrate fertilizer, explosives, and other materials.<sup>30</sup> The effects were devastating—the blast and immediate aftermath killed 168 men, women, and children and injured more than 800 others. The explosion also severely damaged a large area of downtown Oklahoma City.

Another significant case involving a lone terrorist occurred in 2001. Anthrax spores were distributed through the U.S. postal system in a biological attack that caused five deaths and injured seventeen others. Significant psychological stress overshadowed the more obvious physical impacts of the attack. In 2008, the U.S. Department of Justice (DOJ) announced that Dr. Bruce Ivins, a DOD microbiologist, was solely responsible for the attack.<sup>31</sup>

### **Sharing of Awareness, Understanding, and Expertise**

TRISA hosts an informal, electronic consortium which connects an expanding network of users and subject matter experts who share awareness, understanding, and expertise and collaborate on training, education, and operational issues. In this Threats Terrorism Team (T3) network, threat and terrorist information is shared among members of the U.S. Joint Staff; Army Staff; U.S. Army North (as the Army component of the U.S. Northern Command); U.S. Army Installation Management Command; First Army (as it mobilizes, trains, validates, and deploys Reserve Component units or provides training to joint, combined, and Active Army forces as part of the U.S. Army Forces Command); and U.S. departmental, interdepartmental, interagency, and intergovernmental offices.

TRADOC schools and centers provide an excellent means for bridging training and professional education readiness with operational readiness in organizational units and institutional garrisons, sites, and activities. Relevant training is available at the U.S. Army Sergeants Major Academy; U.S. Army Warrant Officer Career College; U.S. Army Command and General Staff College; Army Intelligence Center; and U.S. Army Infantry, Armor, CBRN, and Military Police Schools. As the proponent for Army antiterrorism officer training, the U.S. Army Military Police School uses the TRADOC G-2 terrorism handbooks in their curricula.

Other armed Services also use the TRADOC G-2 terrorism handbook series. These organizations include the U.S. Navy Center for Security Forces, U.S. Air Force Security Forces Center, and U.S. Marine Corps Training and Education Command. Information sharing among the U.S. Army, Navy, Air Force, Marine Corps, and Coast Guard is fundamental in improving Homeland security; Homeland defense; and offensive, defensive, and stability operations in the midst of a long war that includes enemy terrorism.

### **Future Situational Understanding**

An understanding of the enemy and WMD acts of terrorism is critical to the success of future antiterrorism and counterterrorism missions undertaken by friendly forces, allies, and coalition partners. The TRADOC G-2 terrorism handbooks can help establish situational awareness and understanding of current terrorist threats, capabilities, and limitations and also those of the future. Because the handbooks are updated regularly, they are living documents that may be consulted during recurring assessments and action

in institutional and operational mission areas in the United States and abroad. The TRADOC G-2 terrorism handbook series is a critical Soldier and leader antiterrorism tool for institutional organizations, in-transit forces and activities, and deployed operational units. 🗨️🗨️

**Endnotes:**

<sup>1</sup>Robert M. Gates, “Submitted Statement on DOD Challenges to the Senate Armed Services Committee,” 27 January 2009, <<http://www.defenselink.mil/speeches/speech.aspx?speechid=1337>>, accessed on 3 September 2009.

<sup>2</sup>Dennis C. Blair, “Annual Threat Assessment of the Intelligence Community for the Senate Select Committee on Intelligence,” 12 February 2009, <<http://intelligence.senate.gov/090212/blair.pdf>>, accessed on 8 September 2009.

<sup>3</sup>Joint Publication (JP) 3-0, *Joint Operations*, 17 September 2006.

<sup>4</sup>JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 12 April 2001 (as amended through 17 March 2009).

<sup>5</sup>*Ibid.*

<sup>6</sup>TRADOC G-2 Handbook No. 1, *A Military Guide to Terrorism in the Twenty-First Century*, 15 August 2007.

<sup>7</sup>TRADOC G-2 Handbook No. 1.04, *Terrorism and WMD in the Contemporary Operational Environment*, 20 August 2007.

<sup>8</sup>TRADOC G-2 Handbook No. 1.01, *Terror Operations: Case Studies in Terrorism*, 25 July 2007.

<sup>9</sup>Field Manual (FM) 3-0, *Operations*, 27 February 2008.

<sup>10</sup>JP 3-0 and FM 2-0, *Intelligence*, 17 May 2004.

<sup>11</sup>FM 2-0 and FM 3-0.

<sup>12</sup>“COE Definition,” TRISA-Contemporary Operational Environment and Threat Integration Directorate (CTID) e-mail message, 22 January 2009. (See also “Operational Environment 2009–2025,” TRADOC White Paper, August 2009.)

<sup>13</sup>“Country Reports on Terrorism,” U.S. Department of State, Office of the Coordinator for Counterterrorism, 30 April 2008, <<http://www.state.gov/s/ct/rls/crt/2007/103703.htm>>, accessed on 9 September 2009.

<sup>14</sup>Field Manual Interim (FMI) 3-90.10, *Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives Operational Headquarters*, 24 January 2008.

<sup>15</sup>JP 1-02.

<sup>16</sup>Walter Laqueur, *The New Terrorism: Fanaticism and the Arms of Mass Destruction*, Oxford University Press, New York, 1999.

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<sup>20</sup>“Effects of Radiological Terrorism,” *Radiological Terrorism Tutorial*, prepared for the Nuclear Threat Initiative by the Center for Nonproliferation Studies, Monterey Institute of International Studies, Monterey, California, 2004, <[http://www.nti.org/h\\_learnmore/radtutorial/chapter02\\_02.html](http://www.nti.org/h_learnmore/radtutorial/chapter02_02.html)>, accessed on 10 September 2009.

<sup>21</sup>Don Philpott, “Lesson Learned: Silent Killer—Goiânia, Brazil’s Radiation Disaster!” *Homeland Defense Journal*, Volume 2, April 2004. (For additional information, see *The Radiological Accident in Goiânia*, International Atomic Energy Agency, Vienna, Austria, 1988, <[http://www-pub.iaea.org/MTCD/publications/PDF/Pub815\\_web.pdf](http://www-pub.iaea.org/MTCD/publications/PDF/Pub815_web.pdf)>, accessed on 10 September 2009.)

<sup>22</sup>“Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 January Through 30 June 2003,” Director of Central Intelligence, <[http://www.fas.org/irp/threat/cia\\_jan\\_jun2003.htm](http://www.fas.org/irp/threat/cia_jan_jun2003.htm)>, accessed on 10 September 2009.

<sup>23</sup>*National Defense Strategy*, U.S. Department of Defense, June 2008.

<sup>24</sup>“North Korea Would Use Nuclear Weapons in a ‘Merciless Offensive,’” *The Independent*, 9 June 2009, <<http://www.independent.co.uk/news/world/asia/north-korea-would-use-nuclear-weapons-in-a-merciless-offensive-1700590.html>>, accessed on 11 September 2009.

<sup>25</sup>*National Defense Strategy*.

<sup>26</sup>Robert S. Mueller III, “Statement Before the Senate Select Committee on Intelligence,” Congressional Testimony, 11 January 2007, <<http://www.fbi.gov/congress/congress07/mueller011107.htm>>, accessed on 11 September 2009.

<sup>27</sup>Blair, 12 February 2009.

<sup>28</sup>Mueller, 11 January 2007.

<sup>29</sup>National Security Presidential Directive (NSPD)-17, *National Strategy to Combat Weapons of Mass Destruction*, December 2002, <<http://www.fas.org/irp/offdocs/nspd/nspd-17.html>>, accessed on 11 September 2009.

<sup>30</sup>Lou Michel and Dan Herbeck, *American Terrorist: Timothy McVeigh and the Oklahoma City Bombing*, HarperCollins Publishers, Inc., New York, 2001.

<sup>31</sup>Jeffrey Taylor and Joseph Persichini, “Transcript: DOJ News Conference on Bruce Ivins,” 8 August 2008, <<http://www.npr.org/templates/story/story.php?storyId=93415845>>, accessed on 11 September 2009.

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# USAR Consequence Management Unit: Relevant and Ready

*By Captain Dana Perkins, Ph.D.*

*“Far and away, the best prize that life offers is the chance to work hard at work worth doing.”*

*—Theodore Roosevelt<sup>1</sup>*

The stand up of the U.S. Army 20th Support Command (SUPCOM) (Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives [CBRNE]) in October 2004 and the expansion of its role as the core element of the Joint Task Force for Weapons of Mass Destruction (WMD) Elimination, as directed by the 2006 *Quadrennial Defense Review Report*, led to the task organization of operational CBRNE forces under one command.

There are four 20th SUPCOM subordinate organizations in the Active Army—the 48th Chemical Brigade, 52d Ordnance Group (Explosive Ordnance Disposal), 71st Ordnance Group (Explosive Ordnance Disposal), and CBRNE Analytical and Remediation Activity. There is also one U.S. Army Reserve (USAR) Consequence Management Unit (CMU) under operational control of the 20th SUPCOM.

The USAR CMU, a unique organization that was originally established as the Army Reserve Unit–Consequence Management on 9 July 2001, is headquartered in Abingdon, Maryland. Its members, who are primarily from the National Capital Region, are organized into three multidisciplined, chemical, biological, radiological, and nuclear (CBRN) technical augmentation cells supported by a medical team in Atlanta, Georgia. In the USAR chain of command, the CMU falls under the 415th Chemical Brigade, 335th Theater Signal Command.

The mission of the USAR CMU is to provide specialized CBRN support to the 20th SUPCOM and combatant/joint task force commanders and to provide defense support to civil authorities<sup>2</sup> to counter or eliminate CBRN threats.

The contributions of USAR CMU Soldiers throughout the planning and execution of numerous continental U.S. and outside the continental U.S. exercises demonstrate their “brain power” as CBRN subject matter experts (SMEs). Recent exercises involving the USAR CMU include Red Dragon 2008, Ulchi Focus Lens 2008, Ardent Sentry 2008, Flexible Response 2008, Red Dragon 2009, and Key Resolve 2009.

Per Department of Defense (DOD) Directive 2060.02 and the *National Military Strategy to Combat Weapons of Mass Destruction* based on the *National Strategy to Combat Weapons*

*of Mass Destruction*, the three strategic pillars (nonproliferation, counterproliferation, and consequence management) are integrated into the following eight DOD mission areas:

- WMD offensive operations.
- WMD elimination operations.
- WMD interdiction operations.
- WMD active defense.
- WMD passive defense.
- WMD consequence management.
- Security cooperation and partner activities.
- Threat reduction cooperation.

While the primary focus of the USAR CMU mission is on consequence management, USAR CMU Soldiers also have specialized skills and expertise that span the full operational spectrum of combating WMD (see Table 1).

USAR CMU Soldiers are highly educated, professionally accomplished, strategic and creative thinkers who are also effective communicators. They draw significant expertise from their respective civilian careers as federal or state employees, contractors, or industry or health services representatives. The USAR CMU commander expects these Soldiers to make a personal commitment to specialized military and technical training to maintain readiness, technical proficiency, and standby capability so that they may deploy in support of training events, exercises, and real-world missions. Specified training requirements include not only military schools and courses, but also specialized CBRN courses (see Table 2).

The technical competence of USAR CMU Soldiers may be evaluated using an adapted form of Miller’s Pyramid (Figure 1, page 20)—a model developed by George E. Miller for use in evaluating the skills and abilities of clinical personnel. The “knows” (knowledge) level makes up the lowest tier of the pyramid, followed by the “knows how” (competence) level, the “shows how” (performance) level, and the “does” (action) level. In the context of the USAR CMU, the base of the pyramid represents basic CBRN technical knowledge—everything the USAR CMU Soldiers learned through formal military and civilian education. As the Soldiers gain hands-on training and

**Table 1. USAR CMU subject matter expertise**

CBRN threat/vulnerability assessment
Bioterrorism/biowarfare threat assessment
CBRN incident consequence management
CBRN mass casualty decontamination and medical management
Chemical/biological agent modeling
CBRN agent detection
Biosafety/biosecurity
Microbiology
Epidemiology
Entomology
Toxicology
Preventive medicine
Chemical demilitarization
Environmental risk management and safety compliance
Civil affairs
Force protection/antiterrorism
Counterterrorism/counterintelligence
Strategic intelligence analysis
Emergency services
Risk communication
Strategic planning
CBRN training/exercise development
Multilingual expertise
Explosive ordnance disposal/technical escort unit experience
Joint and interagency experience

experience, they begin to work their way up the competence pyramid. Eventually, they are able to apply their knowledge in the field. At that point, they are considered to be SMEs. USAR CMU leaders continuously assess the progress of their Soldiers toward competence in CBRN and Army standards.

In addition to their dedication to specialized training, USAR CMU Soldiers must also be committed and available for deployment to missions involving a wide range of complex CBRN tasks on very short notice. For example, a rapid response is essential in supporting civilian authorities who are dealing with the aftermath of a domestic CBRN terrorist attack. Moreover, the proliferation and globalization of CBRN asymmetric threats among state and nonstate actors requires that the USAR sustain their efforts as a current operational force, continuing to build the capability to recognize and mitigate these threats and train under complex scenarios to maintain readiness. USAR CMU exercise planners and SMEs are uniquely positioned to build this capability across Regular Army-USAR-civil authorities boundaries.

Colonel Joseph Weihs, USAR CMU Commander, stated, “As the USAR Consequence Management Unit is integrating itself into the 20th CBRNE Support Command and the CBRNE consequence management response force structures aimed at developing expertise and capability in combating WMDs and supporting civilian authorities in responding to CBRNE

**Table 2. USAR CMU specified training requirements**

<b>Military Education</b>
Basic Officer Leader Course and/or Officer Advanced Course
Basic Noncommissioned Officer Course and/or Advanced Noncommissioned Officer Course
Combined Arms and Services Staff School/Combined Arms Exercise Program or Captains Career Course (captains and above)
Intermediate Level Education or Command and General Staff Officer Course (majors and above)
Reserve Component Joint Professional Military Education: < <a href="http://www.jfsc.ndu.edu">http://www.jfsc.ndu.edu</a> > or (boarded) < <a href="https://www.hrc.army.mil">https://www.hrc.army.mil</a> >
Reserve Component National Security Course (nonmedical lieutenant colonels and above) (boarded): < <a href="http://www.ndu.edu/jrac/">http://www.ndu.edu/jrac/</a> > or Command and General Staff College/U.S. Army War College (boarded): < <a href="http://usacac.army.mil/cac2/cgsc">http://usacac.army.mil/cac2/cgsc</a> > or < <a href="http://www.carlisle.army.mil">http://www.carlisle.army.mil</a> >
Battle Staff Course (noncommissioned officers)
<b>Selected CBRN Training</b>
Defense Support of Civil Authorities Course: < <a href="http://www.usarnorth.org/public/spd.cfm?spi=events">http://www.usarnorth.org/public/spd.cfm?spi=events</a> >
CBRNE Consequence Management Response Force Course: < <a href="http://www.usarnorth.org/public/">http://www.usarnorth.org/public/</a> >
Incident Command System and National Incident Management System/National Response Plan Courses (and other courses offered by the Federal Emergency Management Agency Emergency Management Institute): < <a href="http://www.training.fema.gov/emiweb/IS/crslst.asp">http://www.training.fema.gov/emiweb/IS/crslst.asp</a> >
CBRN Basic Course taught by USAR CMU SMEs during battle assemblies
Field Management of Chemical and Biological Casualties Course (FMCBC): < <a href="https://ccc.apgea.army.mil/courses/in_house/brochureFCBC.htm">https://ccc.apgea.army.mil/courses/in_house/brochureFCBC.htm</a> >
Medical Management of Chemical and Biological Casualties Course: < <a href="https://ccc.apgea.army.mil/courses/in_house/MCBC.htm">https://ccc.apgea.army.mil/courses/in_house/MCBC.htm</a> >
Joint Planning Orientation Course: < <a href="http://www.jfsc.ndu.edu">http://www.jfsc.ndu.edu</a> >
Joint Senior Leader Course: < <a href="https://www.atrrs.army.mil/atrrscc/courseInfo.aspx?fy=2009&amp;sch=031&amp;crs=4K-74A%2f494-F18&amp;crstitle=JOINT+SENIOR+LEADER&amp;phase=&gt;">https://www.atrrs.army.mil/atrrscc/courseInfo.aspx?fy=2009&amp;sch=031&amp;crs=4K-74A%2f494-F18&amp;crstitle=JOINT+SENIOR+LEADER&amp;phase=&gt;</a> >
Joint Planner’s Course for Combating Weapons of Mass Destruction: < <a href="http://jko.jfcom.mil">http://jko.jfcom.mil</a> >
CBRN Mass Casualty Decontamination Course: < <a href="http://www.wood.army.mil/3chembde/irtd%20web%20page/cbrnmasscasualtydecon2.htm">http://www.wood.army.mil/3chembde/irtd%20web%20page/cbrnmasscasualtydecon2.htm</a> >
Medical Effects of Ionizing Radiation Course: < <a href="http://www.afri.usuhs.mil/outreach/meir/meir.htm">http://www.afri.usuhs.mil/outreach/meir/meir.htm</a> >
Other specialized Joint Forces Staff College CBRN classes: < <a href="http://www.jfsc.ndu.edu">http://www.jfsc.ndu.edu</a> >
Other specialized Defense Nuclear Weapons School CBRN classes: < <a href="http://www.dtra.mil/oe/cs/programs/training/dnws/controlled_access_info.cfm">http://www.dtra.mil/oe/cs/programs/training/dnws/controlled_access_info.cfm</a> >
Various medical classes (Tri-Service CBRNE and Homeland Security Medical Executive Courses: < <a href="http://www.dmrta.army.mil/courses.html">http://www.dmrta.army.mil/courses.html</a> >; Hospital Management of Chemical, Biological, Radiological/Nuclear, and Explosive Incidents Course: < <a href="https://ccc.apgea.army.mil/courses/in_house/cbrne.htm">https://ccc.apgea.army.mil/courses/in_house/cbrne.htm</a> >; Army Medical Department professional development education: < <a href="https://www.hrc.army.mil/site/protect/Reserve/soldierservices/guidance/pde.htm">https://www.hrc.army.mil/site/protect/Reserve/soldierservices/guidance/pde.htm</a> >)
<b>Note.</b> All Web sites listed were accessed on 25 August 2009.

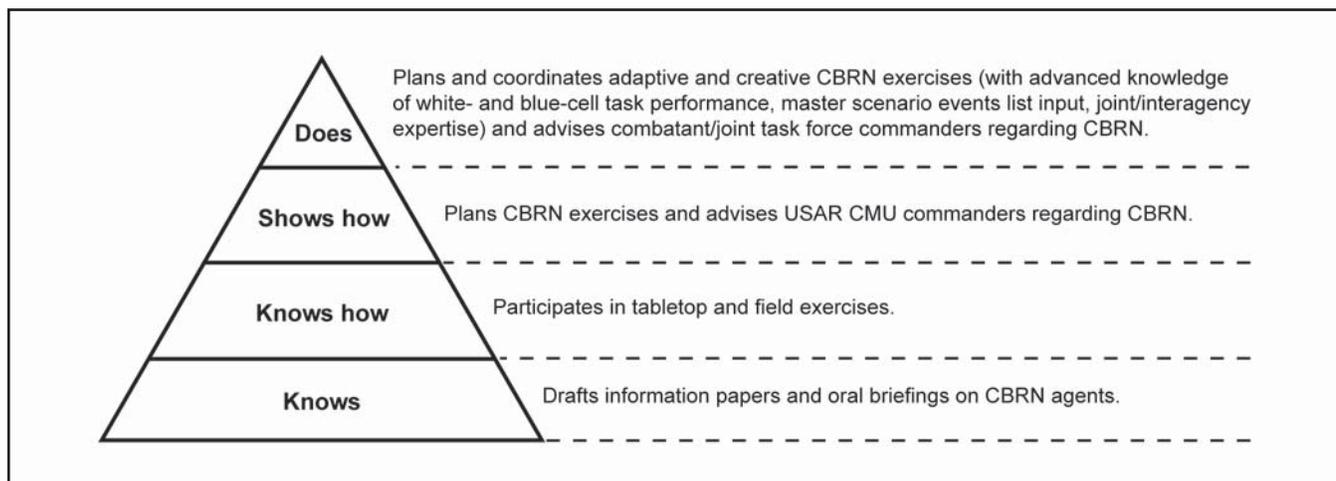


Figure 1. CBRN knowledge pyramid (adapted after Miller, 1990)<sup>3</sup>

incidents, we are continually looking for mentally agile and adaptive SMEs to join our ranks and support future operations. Specialized CBRN knowledge is developed through training, on-the-job experience, and mentorship. New Soldiers are welcomed in the USAR CMU family and mentored to efficiently integrate and develop or use their specialized skills—whether acquired in the civilian or the military world—for the benefit of the U.S. Army in response to future contingencies.”

**Endnotes:**

<sup>1</sup>Theodore Roosevelt, “A Square Deal” speech, New York State Agricultural Association, Syracuse, New York, 7 September 1903.

<sup>2</sup>Defense support to civil authorities is formally defined in the *National Response Framework* (published by the U.S. Department of Homeland Security, January 2008, and available online at <<http://www.fema.gov/pdf/emergency/nrf/nrf-core.pdf>>). It involves the allocation and assignment, when requested, of DOD resources (federal military forces, DOD civilians, contract personnel, and DOD agencies and components) to support civil authorities during civil emergencies such as terrorist threats or attacks and major disasters.

<sup>3</sup>George E. Miller, “The Assessment of Clinical Skills/Competence/Performance,” *Academic Medicine*, Volume 65, Number 9, September 1990.

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*Quadrennial Defense Review Report*, DOD, 6 February 2006.  
 DOD Directive 2060.02, *Department of Defense (DOD) Combating Weapons of Mass Destruction (WMD) Policy*, 19 April 2007.  
*National Military Strategy to Combat Weapons of Mass Destruction*, Chairman of the Joint Chiefs of Staff, 13 February 2006.  
*National Strategy to Combat Weapons of Mass Destruction*, December 2002.

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# DODI 3222.3 and Army System HEMP Survivability: An Update

*By Mr. Robert A. Pfeffer*

*Note.* A previous article entitled “DODI 3222.3 and Army System HEMP Survivability” was published in the Combating WMD Journal in 2007.<sup>1</sup> Since then, several Department of Defense (DOD) initiatives have delayed the planned release of Department of Defense Instruction (DODI) 3222.3. This article provides an update and explains the status of DODI 3222.3.

## **Background**

The conflicts of the 21st Century have resulted in a significant change in the way the U.S. Army thinks and fights. The threat has changed and, with it, the structure of the Army. The emphasis is no longer on an all-out nuclear exchange with another superpower. Instead, the most recent conflicts have involved less sophisticated enemies who use more conventional (nonnuclear) methods of warfare. Therefore, near-term future conflicts are expected to be less decisive and possibly longer-lasting than more traditional conflicts.

The strategic advantage of using new technology to apply the “shock and awe” effect on large groups of adversaries has also diminished. New technology is now more likely to be used to respond to small concentrations of adversaries who themselves use new technology on an extended battlefield. The most probable adversarial use of new technology is the use of commercial, off-the-shelf (COTS) electronics to communicate and to detonate conventional munitions or relatively unsophisticated chemical, biological, radiological, and nuclear weapons.

One common thread between the Cold War and conflicts of the 21st century is the ever-increasing reliance on new

technologies to improve the Army fighting capability and remain a force multiplier. The most dramatic technological revolution has been the simultaneous improvement and continued miniaturization of semiconductor devices. Subsystems have physically shrunk at the same time their capabilities have improved. Unfortunately, this improvement is also available to adversaries; cell phones are one example.

COTS electronics and electrical equipment provide the most advanced technology available for commercial and military applications. However, there are potential pitfalls to the military use of just any COTS materiel solution. The life expectancy of equipment in relatively benign commercial environments is four years or less. However, the military expectation is that the equipment last for a longer period of time in harsher battlefield environments, including environments of extreme heat or cold as well as severe electromagnetic environments, such as those with a high-altitude electromagnetic pulse (HEMP). Therefore, DOD has directed additional requirements on all electronic and electrical systems that support critical missions. One of these requirements is that systems operating in a wide range of electromagnetic environments be protected from associated electromagnetic environmental effects (E3). Directions were outlined in a series of documents known as Department of Defense directives (DODDs) and DODIs.

## **DODDs and DODIs**

The Constitution of the United States establishes the framework for our government. The legislative branch writes legislation, and the executive branch signs or otherwise allows

this legislation to become public law. At the top of the directive pyramid is the President, who issues classified or unclassified presidential directives or executive orders that explicitly identify executive priorities on national issues. For issues that include military equipment or facility protection, DOD first develops policy (directives) and then implementation guidance (instructions). DODDs are the formal DOD means of providing broad policy guidance on specific issues of concern to the Secretary of Defense and the President. DODDs contain a statement of the issue, and they identify the responsibilities of the Office of the Secretary of Defense and subordinate organizations. Policy implementation guidance is then provided in associated DODIs. DODDs and DODIs are categorized into the following eight major subject groups:

- 1000: Manpower and Personnel (Civilian, Military, and Reserve).
- 2000: International and Foreign Affairs.
- 3000: Plans and Operations, Research and Development, Intelligence, and Computer Language.
- 4000: Logistics, Natural Resources, and Environment.
- 5000: Acquisition, Administrative Management, Organizational Charters, Security, Public Affairs, and Legislative Affairs.
- 6000: Health.
- 7000: Budget, Finance, Audits, and Information Control.
- 8000: Information Management/Information Technology.

The nuclear weapons effects (NWE) community is familiar with the 5000 series. DODD 5000.01 states that “Acquisition managers shall provide U.S. Forces with systems and families of systems that are secure, reliable, interoperable, compatible with the electromagnetic spectrum environment, and able to communicate across a universal information technology infrastructure, including NSS [national security systems], consisting of data, information, processes, organizational interactions, skills, analytical expertise, other systems, networks, and information exchange capabilities.”<sup>2</sup> To implement DODD 5000.01, the joint staff prepared Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3170.01F.<sup>3</sup> Following this guidance, each Service prepared its own implementing documents in the form of regulations. The Army’s implementing regulation for NWE (including HEMP) survivability is Army Regulation (AR) 70-75.<sup>4</sup>

### **DODD 3222.3**

On 8 September 2004, the previous version of DODD 3222.3 (10 August 1990) was reissued “. . . to update policy and responsibilities for the management and implementation of the DOD Electromagnetic Environmental Effects (E3) Program to ensure mutual electromagnetic compatibility (EMC) and effective E3 control among ground, air, sea, and space-based electronic and electrical systems, subsystems, and equipment,

and with the existing natural and man-made electromagnetic environment (EME).”<sup>5</sup>

The directive explicitly outlines the following five-part policy:<sup>6</sup>

- All electrical and electronic systems, subsystems, and equipment, including ordnance containing electrically initiated devices, shall be mutually compatible in their intended EME without causing or suffering unacceptable mission degradation due to E3.
- Military E3 specifications, standards, and handbooks stressing interface and verification requirements, establishing operational performance, and specifying developmental and operational test methodologies shall be developed following guidance outlined in DOD 4120.24-M.<sup>7</sup>
- Analytical tools and databases for EMC analysis and E3 assessment shall be developed and maintained to predict, prevent, and correct E3 deficiencies of military systems in the intended operational EME.
- DOD shall maintain measurement capability to quantify E3 of military systems to and from their intended operational EME.
- E3 awareness and training shall be promulgated throughout DOD.

### **DODI 3222.3**

Originally scheduled for completion in 2006, DODI 3222.3 was intended to support DODD 3222.3 by outlining the directive implementation process. The release of the instruction was later postponed until 2007. However, in the meantime, two new initiatives affected the publication of DODI 3222.3. First, a policy memo from former Deputy Secretary of Defense Gordon England stipulated that future DODDs and DODIs would be combined into one document referred to as a DODI. Thus, the existing DODD 3222.3 would be cancelled once the DODI 3222.3 draft was revised to include DODD 3222.3, resulting in the new DODI 3222.3. On 20 May 2009, it was announced that the new DODI 3222.3 was complete, in the approval process, and expected to be signed and released as early as 2009. In addition, DODD 5134.08, which addresses combating weapons of mass destruction protection of military systems, was released on 14 January 2009.<sup>8</sup>

### **Army HEMP Survivability**

Since the 1960s, the Army has exercised an NWE survivability program that includes the survivability of HEMP. The success of the initial program was due, in part, to the audit trail used to monitor the progress of new systems that supported critical missions.

In reestablishing the 2004 Electromagnetic Pulse Commission, Congress reiterated its concern for homeland security by raising the issue of HEMP protection of our national assets—especially those that support critical missions. That concern, coupled with the implementation and enforcement of DODD 3222.3, has resulted in a renewed emphasis on HEMP



## Future Impact to Army and Other Service Acquisition Programs

If properly enforced, DODD 3222.3 and the new DODI 3222.3 would further strengthen existing NWE survivability documentation. According to DODD 3222.3, the HEMP survivability requirement must be met by all military electronic and electrical systems—not just those that support critical missions. Thus, E3 protection from such EMEs as HEMP, high-powered microwaves, and electrostatic discharge is no longer just a survivability requirement—it is now an operational requirement; therefore, it is no longer available as a trade-off for materiel developers.

By addressing E3 protection in a single directive, DODD 3222.3 encourages system designers to design all E3 protection at the same time, thus sharing and ultimately reducing E3 protection costs. This philosophy is consistent with the unified E3 protection approach discussed in Quadripartite Standardization Agreement (QSTAG) 1051.<sup>11</sup>

### Conclusion

DODD 3222.3, which is the first DODD to specifically address EMC and E3 control of all electronic and electrical systems, places an operational requirement on E3 (including HEMP) protection. It could have a significant technical and monetary impact on future Army equipment acquisitions. However, the new DODI 3222.3 remains in final draft with no scheduled release date.

#### Endnotes:

<sup>1</sup>Robert A. Pfeffer and John L. Carter, "DODI 3222.3 and Army System HEMP Survivability," *Combating WMD Journal*, Issue 1, Spring/Summer 2007.

<sup>2</sup>DODD 5000.01, *The Defense Acquisition System*, 12 May 2003.

<sup>3</sup>CJCSI 3170.01F, *Joint Capabilities Integration and Development System*, 1 May 2007.

<sup>4</sup>AR 70-75, *Survivability of Army Personnel and Materiel*, 2 May 2005.

<sup>5</sup>DOD Issuances (Official Department of Defense Web Site for DOD Issuances), <<http://www.dtic.mil/whs/directives/corres/dir.html>> (DODD 3222.3: *DOD Electromagnetic Environmental Effects [E3] Program*), accessed on 17 September 2009.

<sup>6</sup>DODD 3222.3, *DOD Electromagnetic Environmental Effects (E3) Program*, 8 September 2004.

<sup>7</sup>DOD 4120.24-M, *DOD Standardization Program (DSP) Policies and Procedures*, 9 March 2000.

<sup>8</sup>DODD 5134.08, *Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs (ATSD [NCB])*, 14 January 2009.

<sup>9</sup>Ibid.

<sup>10</sup>MIL-STD 2169B, *High Altitude Electromagnetic Pulse (HEMP) Environment*, December 1993.

<sup>11</sup>QSTAG 1051, Edition 1, *A Unified Approach to Electromagnetic Protection*, 6 October 1998.

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Robert A. Pfeffer, "Reducing Army EM Protection Costs: A New Look at an Old Problem," *NBC Report*, Fall/Winter 1999.

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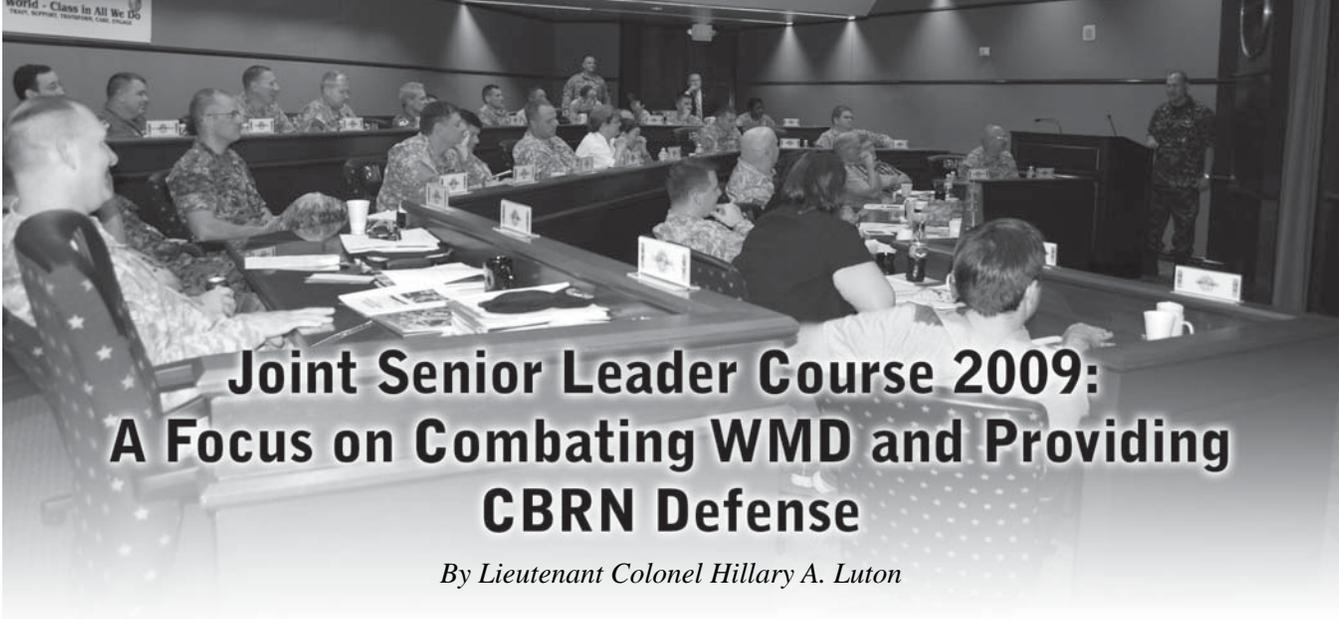
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## Joint Senior Leader Course 2009: A Focus on Combating WMD and Providing CBRN Defense

By Lieutenant Colonel Hillary A. Luton

In an international environment where the “if” and “when” of a potential terrorist attack are nearly interchangeable, we must be cognizant of the types of attacks that are possible—if not likely. The Joint Chiefs of Staff Force Structure, Resources, and Assessment Directorate (J8); Joint Requirements Office for Chemical, Biological, Radiological, and Nuclear (CBRN); and U.S. Army CBRN School jointly host a course that not only addresses the “if” and “when,” but also covers several topics related to CBRN warfare.

The four-day Joint Senior Leader Course (JSLC), which was most recently held at Fort Leonard Wood, Missouri, 23–26 July 2009, is also offered in April and December of each year. The course is available to senior leaders from all Services and components with a rank of lieutenant colonel (or O-5 equivalent) or above or sergeant major (or E-9 equivalent), Department of Defense (DOD) civilians, other interagency personnel, and coalition partners interested in CBRN defense and response.

The basic objective of JSLC is to educate senior leaders about DOD policies, programs, organizations, and efforts to combat weapons of mass destruction (WMD) and to explain how DOD forces are incorporated into homeland defense and defense support to civil authorities. Students are trained in the areas of CBRN fundamentals, CBRN defense, WMD threats and elimination, consequence management, and coordination against terrorism. In addition to receiving chemical warfare instruction from a historical perspective, participants gain firsthand experience with live-agent training. They also gain an understanding and appreciation of the latest cutting-edge, state-of-the-art CBRN technologies and techniques and have the opportunity to improve the CBRN knowledge base.

JSLC students are introduced to a wide range of agencies involved in defending and reacting to CBRN threats. The course could even be described as “super purple,” in that it brings joint, interagency, intergovernmental, and multinational groups together to collaboratively work on a common problem, thereby elevating the knowledge level and better protecting nations.

The course featured several outstanding speakers, including U.S. Ambassador Donald A. Mahley, former U.S. Department of State special negotiator for chemical and biological arms

control; the Honorable John D. Ashcroft, former U.S. Attorney General; and Dr. Steve Bucci, former Deputy Assistant Secretary of Defense for Homeland Defense and Americas’ Security Affairs. CBRN representatives from all U.S. military branches and several foreign military organizations provided insight into current CBRN defense policies, relations, and activities.

During his presentation, Ashcroft indicated that, although chemical technology has been in existence since World War I, advancements in technology make it necessary to “use technology effectively in order to respond effectively.” He further stated that the purpose of security is to enhance freedom—not to take it away.

Bucci also addressed the importance of national security and the need to be prepared for domestic threats. “We have a viable threat today,” he said. He explained that our enemies have defined what they want to do, described what they can do, and stated that they will not give up. He went on to describe the efforts involved in domestic defense and explain that the domestic plan will man, plan, budget, and equip for a variety of defensive measures, including CBRN threats.

According to Major General Gregg F. Martin, commander of the Maneuver Support Center and Fort Leonard Wood, CBRN is “the biggest strategic threat to our Nation.” The ability of agencies to communicate effectively, share information, and work together for the benefit of national defense is of paramount importance. Even if it is not possible to determine where and when an attack will take place, it is possible and necessary to be prepared for anything.

For more information on future JSCL courses, contact Mr. Terry Johnson at <[terry.johnson28@conus.army.mil](mailto:terry.johnson28@conus.army.mil)>, (573) 563-6090 (commercial), or 676-6090 (DSN).

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# *The New FP Role of the Chemical Corps*

*By Major Jeffrey A. Lovell*

*“Under the [Base Expeditionary Targeting and Surveillance Systems–Combined (BETSS-C)] Programme, the Army Asymmetric Warfare Office plans to spend \$1.5 billion to acquire 300 more towers for Afghanistan and Iraq and equip the more than 200 existing towers with improved surveillance, communications, and [command and control] systems.”<sup>1</sup>*

The BETSS-C is only one program that represents a small percentage of the vast amount of money allotted for the “sense and warn” aspect of force protection (FP). Some aspects of FP require a unique set of capabilities and competencies, and the lack of structured FP cells at the battalion, squadron, and brigade levels is a concern. The chemical, biological, radiological, and nuclear (CBRN) sections within the current modular organization can provide structured cells from the battalion/squadron level to division/corps level, filling the operational FP cell gap.

Before defining the roles and responsibilities of the FP cell, the definition of FP must first be established. Department of Defense Directive (DODD) 2000.12 defines FP as “actions taken to prevent or mitigate hostile actions against [Department of Defense] personnel (including family members), resources, facilities, and critical information. These actions conserve the force’s fighting potential so it can be applied at the decisive time and place and incorporate the coordinated and synchronized offensive and defensive measures to enable the effective employment of the Joint Force while degrading the opportunities of the enemy. [FP] does not include actions to defeat the enemy or protect against accidents, weather, or disease”<sup>2</sup> The importance of FP to mission success can be inferred from this definition. The role of the FP cell is to execute the commander’s antiterrorism (AT)/FP program. It is the responsibility of the FP cell to ensure that military units are not disrupted while executing their mission-essential tasks.

At the division level, the FP cell coordinates through FP working groups and manages the flow of information down to subordinate units through direct lines of communication. Through criticality and vulnerability assessments, the FP cell identifies potential gaps and weaknesses requiring attention in areas that might be overlooked by units—including the areas of physical security and risk management. The FP cell also manages the combatant commander’s initiative fund for the

acquisition and fielding of new FP technology. In a statement before the Air and Land Forces Subcommittee and Seapower and Expeditionary Forces Subcommittee of the House Armed Services Committee, Major General Robert Lennox stated, “. . . we have adapted our institutional processes to expedite the latest force protection equipment to our deployed forces, whether they are combat brigades or sustainment forces. We recognize that this enemy is highly adaptive; and we have established systems, enabled by your funding and support, to responsibly procure equipment and promising technologies at an ever-increasing pace.”<sup>3</sup> Advances in technology have led to an increase in the procurement of FP equipment, which is big business in Iraq and Afghanistan today. The fielding of equipment into the country is supervised by program managers; however, once the equipment is signed for, the unit becomes responsible. Because FP is of paramount importance in combat zones, it is necessary to understand how the FP cell functions.

Although the statement of a commander’s intent may emphasize the value of FP in relation to mission accomplishment, actual practice on the ground may not reflect a corresponding level of importance. For example, attempts to identify theater forward operating bases and combat outposts via FP officers during my most recent deployment to Afghanistan met with limited results. The FP officers were comprised of representatives from most branches (including military police, field artillery, chemical, engineer, infantry, and air defense artillery), and they ranged from sergeants first class to majors. Some were AT/FP Level II-certified, but most were not (although FP officers are required to obtain such certification no later than six months after assignment).<sup>4</sup> Most of the FP officers were assigned to that position as an additional duty and were, therefore, wearing multiple operational hats.

As challenging as it was to obtain information at the division level, obtaining it at the brigade level was even more problematic. While units received new equipment at an

accelerated rate, issues with the fielding and implementation of that equipment remained. The lack of a structured FP cell at the battalion/squadron and brigade levels severely hindered the unit's ability to conduct operations. Thus, a structured cell containing preexisting elements in modular units is required for an exemplary FP program.

The current modular division contains four protection cells that operate from the tactical command post—the protection/provost marshal, protection/engineer operations, protection/air defense, and protection/CBRN cells. Combined Joint Task Force 82 was CBRN-based, while its predecessor (Combined Joint Task Force 101) was air defense artillery-based. The protection/engineer operations cell continues to be used in counterinsurgency fights and peacekeeping operations. The provost marshal is engaged with detainee operations. This division model can be used at subordinate level commands with the same effectiveness.

Personnel with experience in the realm of FP are familiar with the maxim “everything is force protection.” However, focusing on “everything” results in a focus on nothing. Under those circumstances, FP becomes ineffective—and the mission and lives are placed at risk. The Chemical Corps has the organization and structure necessary to support FP at all levels, from the battalion/squadron to the corps. As a branch, we should seize the opportunity to make an impact at the highest levels by embracing the FP role. We should focus on training our young officers and noncommissioned officers to be FP experts. ●●●

#### Endnotes:

<sup>1</sup>Ian Kemp, “Securing the Base,” *Armada International*, Issue 5, October/November 2008, <[http://www.armada.ch/08-5/article-full\\_08-5.pdf](http://www.armada.ch/08-5/article-full_08-5.pdf)>, accessed on 27 October 2009.

<sup>2</sup>DODD 2000.12, *DOD Antiterrorism (AT) Program*, 18 August 2003, <<http://www.dtic.mil/whs/directives/corres/pdf/200012p.pdf>>, accessed on 23 October 2009.

<sup>3</sup>“Statement by Major General Robert Lennox, Assistant Deputy Chief of Staff, G-3/5/7; Brigadier General Peter N. Fuller, Program Executive Officer Soldier; Mr. Kevin M. Fahey, Program Executive Officer, Combat Support and Combat Service Support, Before the Air and Land Forces Subcommittee and Seapower and Expeditionary Forces Subcommittee, House Armed Services Committee, U.S. House of Representatives, on the Army Force Protection Programs,” First Session, 111th Congress, 4 February 2009, <[http://armedservices.house.gov/pdfs/ALSPEF020409/Lennox\\_Fuller\\_Fahey\\_Testimony020409.pdf](http://armedservices.house.gov/pdfs/ALSPEF020409/Lennox_Fuller_Fahey_Testimony020409.pdf)>, accessed on 23 October 2009.

<sup>4</sup>Army Regulation (AR) 525-13, *Antiterrorism*, 11 September 2008.

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## ALABAMA UNITS ACTIVATE

On 15 April 2009, two more Alabama Army National Guard units entered active duty in support of the War on Terrorism.

Departure ceremonies were held on 21 April for the 1343d Chemical Company at the Fort Payne Army National Guard Readiness Center, Fort Payne, Alabama, and for the 151st Chemical Battalion at the Army National Guard Readiness Center in Gadsden, Alabama.

City, county, and state officials joined senior National Guard personnel at the brief ceremonies. Following the ceremonies, both units departed for Fort Hood, Texas, to begin an intensive train-up period.

The 1343d Chemical Company now performs in-theater security missions, and the 151st Chemical Battalion serves as a command and control headquarters for units that provide support services to Soldiers and civilians in Kuwait and Iraq.

With the mobilization of these two chemical units, more than 14,000 Alabama Army and Air National Guard members have been called to active duty in the War on Terrorism since 11 September 2001.

# U.S. Army Chief of Chemical and CBRN School Commandant Pins on General Officer Star

*By Mr. Luke Waack*

The U.S. Army Chief of Chemical and Chemical, Biological, Radiological, and Nuclear (CBRN) School Commandant was promoted during a ceremony held at the U.S. Army Maneuver Support Center, Fort Leonard Wood, Missouri, 3 September 2009. Colonel Leslie Smith was promoted to brigadier general in the presence of several hundred Soldiers, family members, and friends. Lieutenant General Dennis Via, director of the Command, Control, Communications, and Computer Systems Directorate (J-6), Joint Staff, presided over the ceremony. “I first met then Captain ‘Les’ Smith eighteen years ago, when we served together in the 82d Airborne Division. Those were some very tough and challenging days, but also some of our very best days. We knew then that there was something special about this chemical officer named Captain Smith,” Via said.

Following Via’s remarks, Smith’s wife, Venedra, pinned the star on the new brigadier general’s chest. Brigadier General Smith then spoke about people who had influenced him in positive ways throughout his life and career. “As I wear this star, I carry the leaders, NCOs [noncommissioned officers] and Soldiers, community, friends, and family with me daily,” Smith said.

According to Brigadier General Smith, “Jackie Robinson once said, ‘Your life is not important, except for the impact it may have on other lives.’” Smith explained that the five points of the general officer’s star represent several impacts in his life.

“The first point of the star represents leaders—many of whom are here today,” Smith said. “The second point on that star represents those NCOs and Soldiers who helped me to become the Soldier I have become,” he added. He went on to indicate that “The third point on that star stands for community that helps and ambassadorship that supports. We all know it takes a village, but how many of us actually become a part of that village—to encourage, harass, and motivate people to make it to the next level? We all have a part to play—to develop not only our biological children, but also those children in our community.” Continuing his description, Smith indicated that “The fourth point on that star is for friends. Next to your family, your friends help sustain you through all those many assignments and the hardships you endure.” And finally, “The fifth and final point on the star is for family. There is no doubt that I would not be where I am today without support from a

great family. My mom is one of the most flexible and adaptive leaders I have ever known. My dad died when I was five; she could have packed it in, said life was too hard, and blamed the system. Instead, she made the strategic decision to send all of her children to private schools—before school vouchers,” Smith said.

In closing, Brigadier General Smith said, “I pray that you glean that my message has little to do with me, but everything to do with how blessed we are and that one person can make a difference—be it that counselor in high school, the big brother or big sister mentor, or the uncle or aunt who makes the extra effort with a knucklehead kid.”

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*Mr. Waack is the assistant editor of the Fort Leonard Wood Guidon.*



**Brigadier General Leslie C. Smith**

# The USACBRNS DIMA Team: Training Officers to a Higher Standard

*By Captain Herschel H. Flowers*

Twice a year, for two weeks at a time, a group of officers and senior noncommissioned officers meet at Fort Leonard Wood, Missouri, to implement a plan that they have been working on for the past year. These Soldiers are members of the U.S. Army Chemical, Biological, Radiological, and Nuclear School (USACBRNS) Drilling Individual Mobilization Augmentee (DIMA) Team. Their mission is to ensure that the training standards for the Reserve Component Chemical, Biological, Radiological, and Nuclear Captain's Career Course (RC-CBRNC3) are met or exceeded during each training period.

This is not an easy job. These team members have different backgrounds, busy civilian careers, and family obligations that must be put aside in an attempt to ensure that the 100-plus chemical, biological, radiological, and nuclear (CBRN) lieutenants, captains, and majors who attend RC-CBRNC3 each year successfully complete Phases III and V. To make this task even more challenging, these two phases (which sometimes have completely different logistical requirements) take place concurrently at different locations throughout Fort Leonard Wood. This requires the DIMA Team members to be flexible and adaptable—ready to fit in at one place and able to participate in another training event or activity in another location just hours later.

The senior instructor and officer in charge of the DIMA Team is Major Robert Danner. He is responsible for coordinating the overall operation of the team, which is afforded two weeks during each phase to carefully balance the wartime and defense support to civil authorities mission training required by many National Guard CBRN officers who serve on civil support teams (CSTs). "It's always difficult to strike a balance between our current 'green mission' and the 'white mission' that many of the officers that attend Phase III and Phase V train for as members of CSTs or CERFP [chemical, biological, radiological, nuclear, and high-yield explosives enhanced response force package] units across the country," Major Danner admits. "Add to that the fact that, on average, we have over ten branch transfer officers per phase during each course who never received the basic CBRN officer training, but who must meet the standards and requirements just like everyone else and who, at times, will require special attention from the instructors to accomplish tasks that other CBRN officers are already familiar with."

Still, Major Danner acknowledges that the challenges faced by the DIMA Team keep the members motivated—not only to find different ways in which to teach the material for each

course, but also to come up with suggestions for modifying and improving course plans. "We take all [end-of-course, after-action reviews] very seriously and try [to] incorporate suggestions made by students in either the way we teach the material or with the material itself—in which case, we pass these comments on to the course managers, who will use them when putting together future programs of instruction."

But for every successful course, there must be an administrative and logistical framework of support for the instructors and students. The DIMA Team member responsible for ensuring that this framework is in place for the RC-CBRNC3 is Sergeant Major Jack Tussey. Sergeant Major Tussey, who has more than forty years of experience, ensures that the course is conducted safely and efficiently. "Safety is our number one priority while we are here. Every member of our DIMA Team, every student that takes part in these courses has someone behind them that helped them get here. Wives, sons and daughters, mothers and fathers—they all deserve to have their Soldiers back home safely, and it's our responsibility to make sure that, while they are here at Fort Leonard Wood, our operations are run with safety as our top priority. From the day they arrive to the time they take their [physical training] test, go through the Chemical Defense Training Facility, and until they leave my care, we strive to complete each task safely."

Major Danner and Sergeant Major Tussey know that, although considerable work is required for RC-CBRNC3 Phase III and Phase V preparation, the unique DIMA Team is up to the challenge of maintaining a current knowledge of all CBRN doctrine and real-world missions and continually seeking new ways to prepare Soldiers to leave Fort Leonard Wood with the knowledge and expertise that they need when they return home. "We come together as a team, where everyone uses their military background, education, professional knowledge, and even past experiences to plan out the tasks for each year and the direction or focus for each phase . . . to anticipate the needs and obstacles students might have while here," Danner said. "While the Active Component captains have months [to learn what they need to know], we have less than one to make sure [Reserve Component officers] are prepared to face the challenges at their units."

The success of the DIMA Team is partly due to team members conducting regular conference calls and working on plans and schedules months in advance. They realize that, as one course ends, another is on the horizon and that possible

modifications must be discussed, planned, and, if necessary, applied in the near term. “Less than one hour after the students from Phase V stepped off the graduation stage this past July, our team was discussing the [after-action reviews] students submitted, possible changes in the upcoming courses, logistical problems that we faced, our overall opinion on how everything went, as well as the schedules for our next conference calls,” Sergeant Major Tussey explained.

In addition to the tasks already described, some members of the DIMA Team may be selected for mobilization. Much of the heavy, day-to-day burden falls on those members. They are in contact with potential students; and they coordinate future training events, sometimes reserving locations for class functions months in advance. They also ensure that all officers meet the course prerequisites, answer questions posed by Soldiers and their units before arriving at Fort Leonard Wood, and track student advancement through distributed learning modules. Last year, Major Joan Lenahan-Bernard was mobilized; she coordinated the logistics that allowed the unit to complete these missions.

Major Lenahan-Bernard understands the uniqueness of the team and each member’s role in the overall mission. “Our DIMA Team does a great job when we meet twice here at Fort Leonard Wood, but it’s also our job during the remainder of

the year, either back here at the schoolhouse while mobilized or wherever we may be, to make sure that the students have someone able to answer any questions they might have regarding these courses—be that schedules, enrollment in Phases III and V, the requirements they need to meet, even the [distributed] learning courses they need to complete before arriving, since these courses serve as the framework for a lot of what they are going to see while they are here,” she said. “They incorporate both their wartime mission as well as education in areas that are part of their stateside mission.”

Regardless of their position on the USACBRNS DIMA Team, team members ensure that officers attending the courses leave with an understanding of their mission and that they are ready to assume higher levels of responsibility—as company commanders or staff officers who can provide commanders with the knowledge necessary to succeed in CBRN situations. ●●●

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# 83d Chemical Battalion

*By Captain Michael Ramsey*

“High-angle hell” is what they called it. The “Four Deuce,” the 4.2-inch-diameter, 48-inch-long tube capable of throwing a sustained volley of 80 rounds per hour up to 565 yards (4,400 yards with the improved high-explosive, point-detonating round), proved invaluable to infantry and ranger units during World War II. The men of the 83d Chemical Mortar Battalion carrying this tool of war emulated the bravery and versatility of Dragon Soldiers.

The 83d Chemical Battalion was first activated at Camp Gordon, Georgia, on 10 June 1942. The battalion was designed to carry thirty-six 4.2-inch-diameter mortars (with each shell weighing about 25 pounds) for a total firepower effect that is equivalent to the standard weapon of a division artillery brigade—the 105-millimeter howitzer. These mortars provided a lethal, mid- to close-range fire support capability to infantry units supported by the 83d. On 29 April 1943, after intensive training, the battalion departed for overseas duty, serving 508 days in combat in the Mediterranean theater and mainland Europe during World War II. The 83d fought in eight campaigns and successfully performed five amphibious operations and one airborne operation. The battalion boasts a brilliant campaign record, firing more than 500,000 mortar rounds in support of such distinguished units as Darby’s Ranger Force X,<sup>1</sup> the 82d and 101st Airborne Divisions, and the 2d and 41st British Commandos. The heroism of the 83d was rewarded in the form of 876 Purple Hearts (with 91 oak-leaf clusters), 3 Distinguished Service Crosses, 2 Legions of Merit, 39 Silver Stars, 9 Soldier’s Medals, 97 Bronze Stars, and 5 Croix de Guerre. The battalion then underwent several reorganizations, redesignations, inactivations, and reactivations.

The 83d was reactivated as the 83d Chemical Battalion at Fort Bragg, North Carolina, on 1 October 1993 and relocated to Fort Polk, Louisiana, on 15 September 2000. The WARTRACE units were the 101st Chemical Company (Smoke/Decontamination), Fort Bragg, and the 59th Chemical Company

(Smoke/Decontamination), Fort Drum, New York. The 83d served as the active duty command and control headquarters for chemical units assigned or attached to the XVIII Airborne Corps or a joint task force commander. The battalion deployed from Fort Polk on 8 February 2003, serving 118 days in Kuwait and Iraq in support of the 377th Theater Support Command, V Corps, and 1st Marine Expeditionary Force.

In 2007, chemical units assigned to the 83d Chemical Battalion at Fort Polk included the Headquarters, Headquarters Detachment; 7th Chemical Company (Biological Integrated Detection System [BIDS]); and the 51st Chemical Company (Combat Support). That year, the battalion was reorganized under the 48th Chemical Brigade, Fort Hood, Texas, and 20th

Support Command (Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives), Aberdeen Proving Ground, Maryland. The 21st Chemical Company (Combat Support), Fort Bragg, and 101st Chemical Company were attached for training and readiness authority; and the 63d Chemical Company, Fort Campbell, Kentucky, and 92d Chemical Company, Fort Stewart, Georgia, were similarly attached during their deployments to Operation Iraqi Freedom (OIF)

and Operation Enduring Freedom (OEF), respectively. The 83d Chemical Battalion was also assigned oversight and responsibility for the 1st Maneuver Enhancement Brigade (Rear) during the most recent deployment of the brigade headquarters in support of OEF.

Immediately after 11 September 2001, the 83d Chemical Battalion deployed BIDS platoons from the 7th Chemical Company to Uzbekistan and Qatar in support of OEF and deployed the company headquarters and three platoons to Washington, D.C., to provide biodetection capabilities at the Pentagon in support of Operation Noble Eagle. The U.S. Army Reserve 310th Chemical Company (BIDS) joined the rest of the battalion, and a rigorous predeployment train-up



cycle began. In January 2003, the 83d Chemical Battalion was deployed to Kuwait as part of the force buildup. The 83d (which was task-organized with the 7th, 51st, 68th, 181st, and 310th Chemical Companies) supported V Corps, the 1st Marine Expeditionary Force, and the 173d Infantry Brigade (Airborne) in Iraq; 10th Mountain Division in Afghanistan; 3d Special Forces Group in Jordan; and 377th Theater Support Command in Kuwait.

Since the redeployment of the battalion in July 2003, platoon- and company-size elements have conducted doctrinal and nondoctrinal missions in support of OIF and OEF. The battalion was awarded the Meritorious Unit Commendation for its service in combat, and individual companies received accolades for their specific missions.

On 1 October 2007, the 83d Chemical Battalion was reorganized under the 48th Chemical Brigade and the newly formed 20th Support Command. The 21st and 101st Chemical Companies were attached for training, readiness, and authority; and the 63d and 92d Chemical Companies were similarly attached during their deployments to OIF and OEF, respectively, until their redeployments in early 2009.

In 2009, the chemical units assigned to the 83d Chemical Battalion at Fort Polk included the Headquarters, Headquarters Detachment and 7th and 51st Chemical Companies.

The 83d Chemical Battalion is rich with history and valiant service. Today, the Dragon Soldiers of the 83d Chemical Battalion continue the same traditions of honorable service that were first evident during World War II. The battalion is equipped to conduct chemical, biological, radiological, and nuclear (CBRN) reconnaissance; biological surveillance; and smoke and decontamination operations to counter CBRN threats in support of combatant commanders or other governmental agencies. They continue to support the War on Terrorism and set a strong example for all Dragon Soldiers.

Confront Any Mission. Rounds Away!



#### Endnote:

<sup>1</sup>Darby's Ranger Force X was a special task force of U.S. Army Rangers charged with the invasion of Sicily.

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*At the time this article was written, Captain Ramsey was a student attending the CBRN Captain's Career Course at the U.S. Army Chemical, Biological, Radiological, and Nuclear School, Fort Leonard Wood, Missouri.*

**Editor's Note.** On 12 December 1944, Private First Class Richard H. Griffin, B Company, 83d Chemical Mortar Battalion, was killed in action near Riquewihr, France. He was posthumously awarded the Distinguished Service Cross and two Purple Hearts for extraordinary heroism in action. Private First Class Griffin was inducted into the U.S. Army Chemical Corps Hall of Fame on 25 June 2009 (see page 51).



Do you need up-to-date information about chemical, biological, radiological and nuclear (CBRN) career management, courses, equipment, doctrine, and training development? All of this information and more is available at the CBRN Knowledge Network (CKN) Web site. To visit the CKN, go to the Fort Leonard Wood Web site <<http://www.wood.army.mil/>> and select *Maneuver Support Knowledge Network (MSKN)* in the lower right-hand column of the home page. At the Army Knowledge Online (AKO) portal, log in using your user name and password. On the *Maneuver Support Knowledge Network* page, select *CBRN-KN* followed by *CKN Portal* to check out this great resource.

# CBRN Soldiers Visit Anniston Army Depot

*By Mr. Michael B. Abrams*

Eleven chemical, biological, radiological, and nuclear (CBRN) Soldiers went on a summer trip—not to a beautiful beach for rest and relaxation, but to a military facility to see something that they had never seen before. Soldiers of the 101st Airborne Division (Air Assault) traveled from Fort Campbell, Kentucky, to Anniston Army Depot, Alabama, to take a look at chemical agent-filled munitions. The munitions are stored at the Anniston Chemical Activity (ANCA) and demilitarized at the Anniston Chemical Agent Disposal Facility. The weapons that the Dragon Soldiers saw were 4.2-inch mortars filled with mustard blister agent.

At one time, more than 31,500 tons of nerve and mustard agents were stored in nine locations throughout the United States. There are now six sites across the country where chemical munitions are stored for the U.S. Army Chemical Materials Agency, Aberdeen Proving Ground, Maryland. Chemical munitions have been stored at ANCA since 1963; hundreds of thousands of chemical munitions containing about 880 tons of mustard agent are now stored there.

The storage of chemical munitions presents a risk to the Army civilian work force and surrounding communities. Legislation and an international treaty mandate that all munitions be safely demilitarized. Provisions of the treaty, known as the Chemical Weapons Convention, are managed by the Organisation for the Prohibition of Chemical Weapons, which is headquartered in the Netherlands. Internationally, 188 countries have ratified this treaty.

Since 1990, more than 21,068 tons (about 67 percent) of the agents in over 2,228,636 munitions and containers have been safely demilitarized. In addition to the demilitarization facility at Anniston, there are facilities in Arkansas, Oregon, and Utah that are currently operating to safely eliminate chemical munitions stockpiles. Two storage and disposal facilities have closed—one at Aberdeen Proving Ground and the other on Johnston Atoll in the Pacific. A third facility, located at Newport Chemical Depot, Indiana, is undergoing closure. However, additional demilitarization facilities are under construction at Blue Grass Army Depot, Richmond, Kentucky, and Pueblo Chemical Depot, Pueblo, Colorado.

Disposal operations at Anniston began in August 2003. Since then, more than 60 percent of the local stockpile (about 403,237 munitions) has been safely processed.

First Lieutenant Matthew S. Hacker is the chemical officer, 2d Battalion, 502d Infantry Regiment, 2d Brigade Combat Team. He led the Dragon Soldiers on their mission to Anniston.

According to First Lieutenant Hacker, “All except two of the eleven Soldiers that visited Anniston entered the Army after the Chemical Weapons Convention came into effect, so most of us never considered how different our jobs might be with the addition of CBRN offensive operations.”

Hacker stated that “In general, Army Chemical Corps Soldiers are trained to protect the force and allow the Army to continue to fight in an environment in which the threat of weapons of mass destruction is ever-increasing. I think the job of the Chemical Corps Soldiers is unique in that we all are trained to protect the force. But, we all hope that we never have to do our job.” He went on to explain that, while Dragon Soldiers are trained and prepared for the worst, they hope and pray that the force is never attacked with weapons of mass destruction.



**Anniston Army Depot employees use an overhead crane to safely place an enhanced on-site container.**

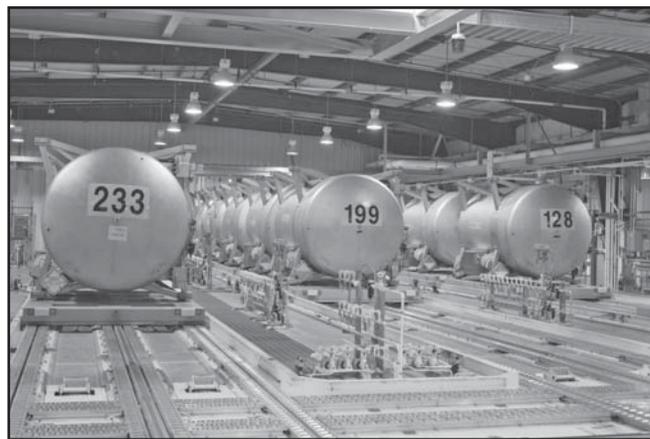
During the tour of the storage facility, the door to the storage igloo was opened, revealing the chemical munitions stockpile inside. One of the visiting Soldiers exclaimed, “Stock and awe!”

Mr. Phillip M. Trued Jr., the chief of staff of Anniston Army Depot and a retired Army Chemical Corps officer, discussed other activities that take place at the depot. In addition to its use as a chemical munitions storage and disposal facility, Anniston Army Depot is designated as the Center of Industrial and Technical Excellence for tracked and wheeled combat vehicles; self-propelled and towed artillery; bridging systems; and individual and crew-served, small-caliber weapons. Trued pointed out that Anniston employees perform depot level maintenance on vehicles, ranging in size from the Stryker to the 70-ton, M1 Abrams tank and a variety of vehicles in between (such as the M113 armored personnel carrier, M88 recovery vehicle, and M9 armored combat earthmover). Major components of these vehicles are overhauled and returned to stock.

The Soldiers’ trip to Anniston was short, but worthwhile. First Lieutenant Hacker was impressed with the visit and tours. He said, “We were privileged to witness ongoing operations at the Anniston Army Depot. The Anniston trip was a great addition to our training. Seeing live chemical munitions is a chance that most Chemical Corps Soldiers will never have the opportunity to witness—especially in that amount.” He added,



**A forklift operator lifts a pallet of mustard-filled, 4.2-inch mortars.**



**Enhanced on-site containers are staged during normal demilitarization operations.**

“At the battalion level, we train on protecting the troops against the CBRN threat as well as operations in a CBRN environment. We were able to take away information that will help us in our operations.”

“As the world changes, so does our mission,” continued First Lieutenant Hacker. “Some of the Chemical Corps Soldiers may even one day find themselves stationed at one of these facilities. We were surprised to learn that few Soldiers were stationed at the facility, so we were honored to have been allowed this experience.”

During the visit, Anniston officials suggested that similar visits could be arranged for other Dragon Soldiers. First Lieutenant Hacker indicated, “While all Chemical Corps Soldiers may not have the opportunity to make a similar trip, it is something that all should consider. I am glad that we created this relationship for future Chemical Corps Soldiers at Fort Campbell.”

Following the tour, Hacker said, “At facilities like Anniston, chemical Soldiers have the opportunity to witness CBRN demilitarization operations. At Anniston, we learned there is still a long way to go before we demilitarize all of the Nation’s stockpile. Even though it may not affect most chemical Soldiers’ daily operations, it is certainly something that we all should understand.”

For more information, visit the following Web sites:

- Anniston Army Depot: <<http://www.anad.army.mil/about.shtml>>.
- U.S. Army Chemical Materials Agency: <<http://www.cma.army.mil/>>.
- Organisation for the Prohibition of Chemical Weapons: <<http://www.opcw.org/>>.

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*Mr. Abrams is a public affairs officer for the ANCA and the Anniston Chemical Agent Disposal Facility, Anniston Army Depot. He holds a bachelor’s degree in radio-television from Southern Illinois University–Carbondale.*

# Improved CARCs Support Chemical Corps Mission

*By Ms. Donna S. Provance; Mr. Robert J. Fisher, P.E.; and Mr. Thomas Guinivan, P.E.*

The National Defense Center for Energy and Environment (NDCEE)<sup>1</sup> and the U.S. Army Environmental Command (USAEC)<sup>2</sup> recently assisted four Army facilities in switching to two improved chemical agent-resistant coatings (CARCs)—MIL-DTL-64159, Type II, water-dispersible (WD), and MIL-DTL-53039C, Type III, solvent-based—both of which contain low levels of volatile organic compounds (VOCs) and no hazardous air pollutants (HAPs). The U.S. Army Research Laboratory has fully tested, evaluated, and approved the new CARCs, with approval documented in MIL-DTL-53072C.<sup>3</sup> The new CARC topcoats are qualified product list items available through the U.S. General Services Administration.

CARCs were first developed in the early 1970s to protect deployed systems in extreme environments. Over the years, changes have been made to meet demands associated with the environment, performance, and safety. Today, CARCs provide camouflage and infrared signature reduction in combat zones, offer superior resistance to chemical and biological warfare agent penetration, and greatly simplify decontamination, thereby extending the service life for military vehicles and equipment. CARCs are one of the tools used by the Chemical Corps to defend against chemical and biological attacks—they essentially serve as “personal protective equipment” for tactical vehicles and equipment.

The U.S. Environmental Protection Agency is developing a new Defense Land Systems and Miscellaneous Equipment (DLSME) National Emissions Standard for Hazardous Air Pollutants (NESHAP), which will regulate HAPs in surface-coating operations. In response to the proposed DLSME NESHAP, additional MIL-DTL-53039C topcoat types that contain even lower levels of VOCs and no HAPs (Types IV–VI and VIII) have recently been approved. A significant benefit of the new lower VOC/no-HAP CARCs is the reduced exposure of personnel to potentially hazardous working conditions associated with VOC and HAP emissions. Other expected benefits include reduced material, operating, and disposal costs.

Due to the proposed DLSME NESHAP, the U.S. Army Research Laboratory has withdrawn approval for MIL-C-46168—a solvent-based, plural-component coating. Approval for MIL-DTL-53039C, Types I and II (solvent-based, single-component coatings that use silica-based flattening agents), may also be withdrawn.

CARC topcoats are routinely applied at Army depots and maintenance facilities as part of a repair procedure or to change color. Depending on deployment camouflage requirements, tan or green topcoat coloring is applied to weapon systems. The green camouflage color system consists of black, green, and brown, with green as the base. Chalk is used to add the camouflage pattern to the base as stipulated by Army regulations for each weapon system. Each camouflage color section is labeled with a 1 (black), 2 (green), or 3 (brown); and sections are coated as needed.

Fort Benning and Fort Stewart, Georgia; Anniston Army Depot, Alabama; and Fort Wainwright, Alaska, were aided in their transitions to new CARC topcoats without an adverse impact on their production schedules. These facilities share attributes with other Army depots and maintenance facilities; however, none of the facilities are identical. Factors such as climate, type of equipment serviced, throughputs, and personnel experience make each site unique.

NDCEE/USAEC assistance was provided primarily through demonstrations. They—

- Determined the CARC formulation that was best-suited for operations at each installation. Operational field conditions were replicated to the maximum extent feasible, thus providing painters with the most realistic basis from which to evaluate the performance of the CARC alternatives and ancillary equipment.
- Helped installation personnel smoothly integrate the new coating and ancillary equipment into ongoing painting operations. Although alternative CARC formulations serve as “drop in” replacements, the implementation of new material always involves a learning curve. Hands-on demonstrations with the new coatings and auxiliary paint equipment addressed installation painters’ issues and concerns.

The NDCEE/USAEC demonstrations were also designed to address the unique needs of each site with reference to enhancing overall paint/depaint operations. To achieve this secondary goal, the site demonstrations involved one or both of the following objectives:

- Provide coatings applicator training. Except for a few minor adjustments, the new CARC formulations serve as drop-in replacements for the older formulations; therefore, personnel who were experienced in applying

CARCs required little or no training in applying a new CARC topcoat. Demonstrations at Fort Stewart and Fort Wainwright featured Spray Technique Analysis and Research for Defense training, which offered strategies and techniques that enabled painters to use less coating and improve finish quality. Fort Benning and Georgia National Guard personnel also attended the training at Fort Stewart.

- Determine the coating removal technologies that are best-suited for operations at each installation. All demonstrations featured a water-blasting technology. Other technologies demonstrated included a vacuum-sanding system (Fort Benning and Fort Stewart) and corn hybrid polymer blasting (Fort Wainwright).

Inherent to these objectives is an understanding that the primary challenge for many Army painting operations is the requirement to maintain a high level of vehicle and equipment throughput. Application methods, ease of operation, and maintenance requirements are other challenges that must be addressed. While these secondary challenges may not be as critical for installations with high throughput requirements, they factor into the overall determination of CARC transition effectiveness and, therefore, must be incorporated into the decisionmaking process for all installations.

Following the demonstrations and consumption of current CARC supplies, all host sites reported the ability to efficiently switch to alternative CARC topcoats. Fort Benning, Fort Stewart, and Fort Wainwright switched to the MIL-DTL-64159, Type II, CARC; while Anniston Army Depot switched to the MIL-DTL-53039C, Type III, CARC. Fort Wainwright also elected to have a quantity of MIL-DTL-53039C, Type III, CARC on hand for jobs requiring a quicker-than-normal turnaround time.

In summary, the NDCEE and USAEC succeeded in their goal of helping four Army installations successfully transition to the use of low VOC/no-HAP CARC topcoats. Installation painters can now apply and remove CARCs with more ease, more accuracy, and less time. Vehicle finish quality has improved, and overspray wastes have decreased. Furthermore, the CARC



**CARC demonstration at Fort Wainwright**

transition supports installation and Army sustainability goals and objectives targeted toward reducing the use of hazmat, increasing environmental compliance, improving worker safety, and reducing greenhouse gas emissions to improve overall regional air quality.

**Endnotes:**

<sup>1</sup>The NDCEE, which was established in 1991, conducts research on and demonstrates and supports the fielding of viable, mission-driven solutions that reduce total ownership costs and fulfill environmental, safety, occupational health, and sustainability requirements. It is operated by Concurrent Technologies Corporation (CTC), a nonprofit organization. The Office of the Assistant Secretary of the Army (Installations and Environment) is the executive agent for the NDCEE. For more information, visit <<http://www.ndcee.ctc.com>>.

<sup>2</sup>The USAEC leads and executes environmental programs and provides environmental expertise that enables Army training, operations, acquisition, and sustainable military communities. The USAEC locates and fields new and innovative technologies to help installations complete their environmental missions faster, easier, and more cost efficiently. For more information, visit <<http://aec.army.mil>>.

<sup>3</sup>MIL-DTL-53072C, *Chemical Agent Resistant Coating System Application Procedures and Quality Control Inspection*, 6 June 2003.

**CARC formulation comparison**

Silica-based CARCs	Polymeric bead-based CARCs
<ul style="list-style-type: none"> <li>• MIL-DTL-64159, Type I               <ul style="list-style-type: none"> <li>▪ Plural component</li> <li>▪ WD</li> <li>▪ Up to 1.8 pounds of VOC per gallon</li> </ul> </li> <li>• MIL-DTL-53039C, Types I and II               <ul style="list-style-type: none"> <li>▪ Single component</li> <li>▪ Solvent-based</li> <li>▪ 1.5 pounds of VOC per gallon</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• MIL-DTL-64159, Type II               <ul style="list-style-type: none"> <li>▪ Plural component</li> <li>▪ WD</li> <li>▪ Up to 1.8 pounds of VOC per gallon</li> </ul> </li> <li>• MIL-DTL-53039C, Types III–VI and VIII               <ul style="list-style-type: none"> <li>▪ Single component</li> <li>▪ Solvent-based</li> <li>▪ Under 1.5 pounds of VOC per gallon</li> </ul> </li> </ul>

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*Mr. Guinivan is a registered professional engineer with the USAEC and is the NDCEE program manager. He is a graduate of the Army War College and a member of the Army Acquisition Corps.*



## CBRN Reconnaissance Platoon Executes Joint Mission With EOD Units

*By Captain Daniel Meany and Sergeant First Class Lashawn Lenore*

Most Stryker brigade combat team (SBCT) chemical, biological, radiological, and nuclear (CBRN) reconnaissance platoons deploying to Operation Iraqi Freedom (OIF) lack missions that leverage the unique and relevant skills of Military Occupational Specialty 74DL5. Many CBRN reconnaissance platoons, including that of the last rotation of the 1st Brigade, 25th Infantry Division (1/25) SBCT (then flagged as the 172d SBCT), are tasked with convoy escort or security detail. However, the Soldiers and leaders of the CBRN Reconnaissance Platoon, D Troop, 5-1 Cavalry Squadron, Brigade Troops Battalion (BTB), met their objective to provide a pertinent mission set to the 1/25 SBCT.

The SBCT is unique in that the entire CBRN reconnaissance platoon is assigned to the SBCT squadron by a modified table of organization and equipment, rather than attached like many reconnaissance platoons of other brigades. This provides the platoon with a solid, dependable, consistent chain of command from the platoon leader, through the troop and squadron commanders, to the brigade commander. If leveraged properly, the continuity in leadership and chain of command ensures that platoon training requirements and go-to-war paths are always met or exceeded and that the platoon is relevant and ready.

Two years ago, the 172d SBCT redeployed from OIF to Fort Wainwright, Alaska, and Staff Sergeant (now Sergeant

First Class) Lashawn Lenore (exclusively a 74D Soldier) transitioned from an infantry squad leader with C Company, 4-23 Infantry Battalion, to the section sergeant of the only SBCT CBRN platoon. He quickly departed to attend the CBRN Reconnaissance Course (L5) conducted at Fort Leonard Wood, Missouri. Second Lieutenant (now Captain) Daniel Meany was also at Fort Leonard Wood, where he was completing the Basic Officer Leadership Course (BOLC) III. The L5 and BOLC III instructors emphasized sensitive-site exploitation (SSE), toxic industrial materials (TIMs), and toxic industrial chemicals (TICs) in the courses.

Following their coursework, Staff Sergeant Lenore and Second Lieutenant Meany returned to an assembled platoon at Fort Wainwright. Lenore convinced squadron leadership that all Soldiers should be L5-qualified. Eleven Soldiers subsequently attended the course, and all successfully completed it.

Five days after their return to Fort Wainwright, the platoon received three Fox M93A1 Nuclear, Biological, and Chemical Reconnaissance System training vehicles. Six Soldiers simultaneously attended a Fox maintenance course. The platoon had all of the equipment and training necessary to begin their mission.

Staff Sergeant Lenore and Second Lieutenant Meany assessed the platoon mission-essential task list and determined



**CBRN Soldiers participate in hazmat reconnaissance training at a forward operating base in Iraq.**

that, although the Soldiers were L5-qualified, a platoon level culmination event was in order. Following a field training exercise (FTX) at Yukon Training Area, Fort Wainwright, the platoon was capable of performing any doctrinal CBRN reconnaissance mission. Nine days later, the platoon returned to Yukon Training Area to participate in squadron FTX 07-07. Their attempt to integrate into squadron level, contemporary operating environment-driven exercises demonstrated a gap in capability. It was apparent that, at a minimum, some dismounted competency would be required for rapid CBRN confirmation or denial.

After returning from FTX 07-07, Lenore and Meany discussed a shared vision designed to enable the platoon to provide combat power and make an active contribution. They considered the following threats to be the most likely to require CBRN reconnaissance:

- **Improvised explosive devices (IEDs).** IEDs were considered to be the most likely CBRN, TIM, or TIC threat. The discovery of IEDs requires initial explosive ordnance disposal (EOD) interrogation.
- **Manufacturing facilities.** Facilities that manufacture weapons of mass destruction or unknown bulk explosives also present opportunities for CBRN reconnaissance. These sites also require initial EOD interrogation.

Lenore and Meany further believed that the following unique core capabilities of 74DL5 Soldiers operating the M93A1P1 Fox could be leveraged against these most likely

CBRN threats while the Soldiers provided synergy in use and concurrent combat power:

- **Evidence collection.** L5 Soldiers are trained in evidence packaging and transportation procedures.
- **SSE.** Emerging CBRN doctrine addresses deliberate L5 search techniques.
- **Identification of unknown substances.** L5 Soldiers use the Fox system to confirm the presence of TICs and TIMs.
- **Mounted maneuver.** L5 Soldiers operate the M93A1P1 Fox, which is an independent, capable, lethal maneuver platform.

Because EOD involvement was necessary and already being conducted in conjunction with the most likely CBRN threats, Staff Sergeant Lenore and Second Lieutenant Meany focused on the opportunity to integrate and streamline joint operations. EOD operations require supported unit escort and forensic exploitation assistance, which (with additional training in the areas of warrior tasks/drills, dismounted reconnaissance [hazmat], and SSE weapons intelligence teams [WITs]) can be best provided by the SBCT CBRN reconnaissance platoon.

Before promoting the assumption of additional tasks, the platoon generated confidence through the competent execution of 5-1 Cavalry Squadron scout tasks. The platoon met the squadron commander's intent during numerous troop and squadron FTXs, military operations in urban terrain training, range performance under all conditions, and mounted gunnery operations. The dedicated execution of "warrior" tasks permitted the salesmanship of "scientific" tasks.

After persistent persuasion, the 5-1 Cavalry Squadron allocated \$15K for dismounted CBRN training. Based on guidance from the U.S. Army CBRN School commandant, Second Lieutenant Meany pursued off-the-market hazmat training, eventually securing the services of the Alaska West



**CBRN Soldiers conduct a dismounted assault during military operations in urban terrain training at Fort Wainwright, Alaska.**

Training Center, Fairbanks, Alaska. The center manager (who is also the hazmat team chief for the Fairbanks North Star Borough) used the professional knowledge he gained from working with the 103d Civil Support Team, Alaska, to help generate an appropriate hazmat technician level course.

The military intelligence background and advocacy of the D Troop commander was instrumental in obtaining the last remaining tactical site exploitation (TSE) (then referred to as SSE) training segment. Three Soldiers were enrolled in National Ground Intelligence Center WIT training, which consisted of a demanding, seven-week, advanced TSE course held at Aberdeen Proving Ground, Maryland. In the meantime, the platoon received two weeks of National Ground Intelligence Center TSE training, which covered latent print collection, combat scene photography, and physical evidence processing. Three Soldiers also attended master breacher training to familiarize themselves with military explosives used by EOD units. In an effort to spread TSE knowledge across the brigade, Staff Sergeant Lenore and First Lieutenant Meany developed a brigade TSE certification program to be presented to at least two Soldiers per maneuver battalion company. As a result, more than eighty Soldiers were TSE-certified in five 40-hour periods. This established a firm background in Soldier, dismounted CBRN, and TSE skills.

Unfortunately, it was not possible to accomplish every initiative. Joint integration training that had been planned to leverage the M93A1 Fox and unique developing capabilities of the 95th CBRN Company, Fort Richardson, Alaska, on a point reconnaissance was deferred. In addition, the Fairbanks

North Star Borough hazmat team had invited the CBRN Reconnaissance Platoon to provide knowledge depth on a volunteer basis; but because of the high-tempo training environment of the 5-1 Cavalry Squadron, time was too scarce. Lastly, the platoon had hoped to make use of the M1135 Stryker CBRN Reconnaissance Vehicle, but it was unavailable for fielding at the time of deployment. Overall, though, the equipment and training received before deployment was unequalled.

Before the CBRN Reconnaissance Platoon was involved in National Training Center Rotation 08-08, D Troop was detached from the 5-1 Cavalry Squadron and assigned to the 1/25 SBCT BTB for OIF 08-09. The BTB commander continued cultivating a progressive climate. Following the cancellation of the M1135 Stryker CBRN Reconnaissance Vehicle, the first updated M93A1P1 Fox Nuclear, Biological, and Chemical Reconnaissance System was received at the National Training Center and slat armor and advanced command, control, communications, computers, intelligence, surveillance, and reconnaissance were installed. The platoon completed eight conventional CBRN reconnaissance missions, proving their capability to execute multiple missions before beginning scenario training. During the rotation, the platoon successfully completed joint security and evidence collection training with EOD personnel, enabling the conviction of an enemy role player in a simulated criminal court.

The CBRN Reconnaissance Platoon, D Troop, 5-1 Cavalry Squadron, BTB, deployed to the Diyala Province, Iraq, in September 2008 and has successfully conducted their



**The CBRN Reconnaissance Platoon conducts hazmat sustainment training at a forward operating base in Iraq.**



**The CBRN Reconnaissance Platoon and U.S. Navy EOD personnel respond to an IED strike in Iraq.**

envisioned mission through joint operations with Navy EOD Mobile Unit 12. The platoon provides rapid; full spectrum; chemical, biological, radiological, nuclear, and high-yield explosives support to multiple battalions across an entire province twenty-four hours per day. During the past 11 months,

the platoon has conducted more than 500 combat missions, exploited more than 450 weapons caches and house-borne and other diverse IEDs, and come under contact. Specifically, the CBRN Reconnaissance Platoon, EOD, and task force WIT assets were directly responsible for evidence collection that led to the conviction of one of the brigade’s most valued targets.



**CBRN Soldiers and U.S. Navy EOD technicians prepare an enemy weapons cache for destruction in Iraq.**

The CBRN Reconnaissance Platoon, D Troop, 5-1 Cavalry Squadron, BTB, has succeeded in providing a pertinent mission set to the 1/25 SBCT. However, this success could not have been realized without organizational support and the support of many dedicated Soldiers, Sailors, Airmen, and civilians. Without their selfless commitment, nothing would have been accomplished. Their daily efforts and devotion to duty are an inspiration to all.

“Arctic Wolves!”



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*Sergeant First Class Lenore is the headquarters platoon sergeant, D Troop, 5th Squadron, 1st U.S. Cavalry Regiment, 1/25 SBCT. He has completed coursework at Western Illinois University.*

# Purple Dragons: Should the Chemical Corps Become Joint?

*By Colonel Robert D. Walk*



As military operations become more joint in nature, the following questions naturally arise: Should certain branches of each Service be severed from their parent Services to become “purple” branches? Should a joint service be created to handle functions that are required by all Services—functions such as supply, movement, security, engineering, finance, information, legal, missile defense, intelligence, human resources, acquisition, protection, communications, and health? Should the chemical, biological, radiological, and nuclear (CBRN) defense mission be unified as a joint branch? This article examines that possibility through a discussion of doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF)—beginning with personnel since everything stems from the basic Soldier, Sailor, Airman, or Marine.

## Personnel

The Army has the largest number of uniformed personnel tasked with the CBRN defense mission, totaling at least 22,000 across the Regular Army and Reserve Components. It is the only Service with a separate branch specifically designated for the job. The military occupational specialty (MOS) for Soldiers is 74D (CBRN specialist), and the area of concentration for officers is 74A (CBRN, general). The MOS for warrant officers (due to be added in 2010) has not yet been designated. The vision of the U.S. Army Chemical Corps is: “A Corps and Army capable now of countering the entire range of CBRN threats and effects to protect our Nation, operating seamlessly with military and civilian partners, while conducting simultaneous operations from civil support to war.” CBRN personnel may work in the area of traditional CBRN defense; or they may perform reconnaissance, technical escort, smoke, decontamination, or special forces CBRN duties. National Guard personnel may also perform civil support team duties.

There is no pure CBRN specialty in the Navy. Enlisted CBRN capabilities are covered under Navy Enlisted Classification 9598 (disaster preparedness operations and training specialist). These specialists focus on preparing for major accidents, natural or manmade disasters, and CBRN operations. Officer specialties, which fall under the “security and police” group of the “sciences and services” field, include Navy Officer Billet Classification (NOBC) 2715 (disaster preparedness officer) and NOBC 2765 (nuclear, biological, and chemical [NBC] defense officer).

The corresponding Air Force specialty is 3E9X1 (emergency management specialist). As the duty title indicates, these specialists are not purely CBRN specialists, but are expected to cover all aspects of emergency management.

The corresponding enlisted Marine specialty is 5711 (CBRN defense specialist), and the warrant officer specialty is 5702 (CBRN defense officer). There is no CBRN specialty for commissioned officers. The duties of Marine enlisted personnel and warrant officers are roughly analogous to those of Army Soldiers and officers. Marines are assigned to traditional CBRN defense duties as well as CBRN reconnaissance, technical escort, and chemical-biological incident response force duties. Warrant officers are drawn from the enlisted ranks, with sergeants and above who have 8 to 16 years of service eligible to apply. Marine CBRN warrant officers have an outstanding reputation.

## Doctrine

For the most part, CBRN doctrine is already joint in nature. Twenty-one of the twenty-three CBRN doctrinal elements have been jointly approved. The remaining elements are Service-specific, addressing issues such as platoon operations. However, there are some areas of disagreement among the Services—most notably a disagreement between the Army and Air Force regarding the fate of chemical contamination on buildings and the ground.

## Organization

There are three major organizations at the joint level that work on overall CBRN defense operations, and their capabilities overlap somewhat:

- Joint Requirements Office for CBRN Defense develops requirements based on Service and combatant command needs.
- Joint Program Executive Office for Chemical and Biological Defense develops materiel capabilities to meet those requirements.
- Defense Threat Reduction Agency provides intellectual, technical, and operational capabilities to meet the needs of the warfighter.

Operational-level joint task forces (JTFs) include the joint task force–civil support (JTF-CS), Fort Monroe, Virginia, and the 20th Support Command (Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives [CBRNE])—an Army unit prepared to serve as a JTF for CBRNE. The focus of the JTF-CS is domestic, while that of the 20th Support Command is primarily overseas—although subordinate units and capabilities of the 20th also support JTF-CS. Additional JTFs include U.S. Northern Command JTF–Consequence Management (East) and JTF–Consequence Management (West), which are on call for consequence management operations. Finally, each state and U.S. territory has a National Guard weapons of mass destruction–civil support team; several states also have a CBRNE enhanced response force package. These state level response elements include Army and Air National Guard personnel.

Of the Services, the Army has the largest units (up to brigade-size) focused on CBRN operations. There is one large Marine unit with a CBRN mission—the mighty Chemical-Biological Incident Response Force located at Indianhead, Maryland. The next largest CBRN Marine units are platoon-size. Neither the Navy nor the Air Force has any dedicated assets above the team level.

## Training

All Service schools are colocated—but not necessarily integrated—at Fort Leonard Wood, Missouri. The most integrated CBRN training takes place at the Chemical Defense Training Facility, where instructors from each Service are specifically assigned for use by their respective Services, but where they end up working and training together. Some integrated training also occurs at the First Lieutenant Terry CBRN Weapons of Mass Destruction Response Training Facility, where Army and Air Force hazmat classes are conducted by the same instructors. In addition, all Army and Air Force weapons of mass destruction–civil support team training is integrated and some Navy and Marine personnel occasionally join the classes.

The Army has the most focused CBRN schoolhouse—the U.S. Army Chemical, Biological, Radiological, and Nuclear School (USACBRNS). All CBRN MOS training and many

other CBRN courses are conducted at USACBRNS. Some of the USACBRNS offerings include Operational Radiation Safety, Joint Senior Leader, Fox Scout (Additional Skill Identifier [ASI] L5), NBC Reconnaissance (ASIL6), Biological Detection Systems (ASIL4), CBRN Responder, Mass Casualty Decontamination, Technical Escort (ASI L3), Dismounted Reconnaissance, and Civil Support Skills Courses.

Navy disaster preparedness operations and training specialists and officers attend their own Disaster Preparedness Operations Specialist Course and Shipboard Chemical, Biological, and Radiological Defense Operations and Training Specialist Course at Fort Leonard Wood.

Air Force emergency management specialists also attend training at Fort Leonard Wood. Their training includes Emergency Management Apprentice, Craftsman, Advanced Emergency Management, Flight Officer, and NBC Cell Operations Courses.

All Marine CBRN defense specialists and officers receive training at the Marine CBRN Training and Education Center of Excellence, Fort Leonard Wood. In addition, Marines also attend the Army CBRN Captain’s Career Course, Biological Integrated Detection System Course, Fox Scout Course, and various courses held at the First Lieutenant Terry Facility.

## Materiel

The Army is the executive agent for the CBRN Defense Program. The Joint Program Executive Office for Chemical and Biological Defense is responsible for the research, development, acquisition, fielding, and life cycle support of CBRN defense equipment, medical countermeasures, and installation and force protection in support of *The National Military Strategy of the United States of America*.<sup>1</sup> Although some Service-only operations are included (such as smoke operations for the Army), the program is mostly joint in nature.

## Leadership and Education

The most advanced Army CBRN-specific courses are the CBRN Senior Leader’s Course for noncommissioned officers (NCOs) and the CBRN Captain’s Career Course for officers. There are also some CBRN-focused electives available to officers attending Army Intermediate Level Education or the Army War College. Marine warrant officers often attend the Army CBRN Captain’s Career Course. There is no CBRN-specific course for Navy senior NCOs or officers. The Advanced Emergency Management Course serves as the Air Force senior leader’s course for NCOs, but there is no professional development course for officers since they are considered generalists rather than CBRN specialists. Because senior leaders must have some knowledge of the use and hazards of CBRN and how it can affect the Nation’s strategic aims, all intermediate and senior level Service schools include some form of curriculum insert or elective that covers the strategic impact of CBRN. All Services welcome attendance and participation from members of other Services as long as space permits.

Resident and distributed learning CBRN courses are also available to members of all Services. In addition, CBRN topics are addressed in Joint Professional Military Education, Phase II, and included in the course capstone exercise, ensuring that CBRN hazards are viewed from a joint perspective.

### Facilities

As previously stated, all Service schools are colocated—but not necessarily integrated—at Fort Leonard Wood. Each Service maintains its own facilities for its own training. Most integrated training takes place at the Chemical Defense Training Facility or the First Lieutenant Terry Facility. There are no purely CBRN-focused facilities for senior level education courses, and joint courses are conducted at available facilities.

### Discussion

While the idea of a truly joint service branch is laudable, it is unlikely. It would require the creation of an entire joint personnel system, which would be infeasible for just the CBRN force structure. However, if all of the personnel/medical/financial/logistical structure were included, the resultant joint force might be of sufficient size to justify its creation. Another point to consider, though, is that Navy and Air Force CBRN personnel perform more than just CBRN operations; therefore, their extraction from the pool of trained Service specialists would be problematic for their respective Services. A third problem with the creation of a joint Service branch is that, during this time of constrained budgets, the cost of creating a new, “purple” branch from scratch would be incredible. It would divert large amounts of money from other more or less worthy programs. Consequently, without concurrence from all Services, the possibility of a joint service branch remains impractical for now.

A (slightly) better alternative might be to combine all Service capabilities into one service, such as the Army. This would make the CBRN vision pertaining to a “. . . Corps and Army . . .” somewhat more appropriate than it is now. Alas, the unforgiving budget process causes individual Services to be less likely to provide support to the other Services. And the problem with extracting Navy and Air Force CBRN personnel from the pool of trained Service specialists would remain. Therefore, this solution is also impractical.

### Path Forward

Ultimately, continuing along the current path—with each Service primarily supporting itself—is best for now.

Terminology can be standardized so that all CBRN personnel speak a common “CBRN tongue” and can train and interoperate jointly. This will improve the ability of the Department of Defense to carry out its duties to the Nation.

Jointness should be promoted through common training at the CBRN specialty training center. Where appropriate, common skills should be taught by joint instructors through joint classes. A great first step would be to combine the new Army CBRN warrant officer technical training with the Marine CBRN defense officer training program, adding “green” training as needed. Further, Army students in training for MOS 74D might share classroom space with Navy 9598 personnel, Air Force 3E9 personnel, or Marine 5700-series personnel. All Services could benefit from such cooperation; as a result, every aspect of DOTMLPF could be improved. Imagine a world where CBRN personnel from the various Services know each other and speak a common language!

The Chemical Corps Regimental Association (CCRA) might also be used to break down barriers between the Services and encourage cross-service cooperation. While the CCRA is open to all Services, it is clearly geared toward the Army. A thorough rewrite of the CCRA bylaws, making the organization less Army-focused and more joint-oriented, might attract members from other Services. The broader CCRA customer base resulting from such a transition would benefit the CCRA and the military in general. A representative from each Service could also be appointed to the board of directors. And, the color of the CBRN dragon could be changed from green (the “Army color”) to purple to signify jointness. A specifically joint CCRA award (possibly named the “Order of the Purple Dragon”) could even be established.

Remember . . . a Purple Dragon is made, not born! Let us make the first Purple Dragons! 

#### Endnote:

<sup>1</sup>*The National Military Strategy of the United States of America: A Strategy for Today; A Vision for Tomorrow*, Joint Chiefs of Staff, 2004.

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*Colonel Walk is an active U.S. Army Reserve CBRN officer assigned to Headquarters, U.S. Army Training and Doctrine Command, Fort Monroe, Virginia. He is the former Deputy Assistant Commandant for the U.S. Army Reserve, USACBRNS.*



# JCBRN Conference and Regimental Week

*By Ms. Carolyn Erickson*

Nearly 1,000 joint, interagency, intergovernmental, and multinational personnel visited the Joint Chemical, Biological, Radiological, and Nuclear (JCBRN) Conference and Regimental Week held at Fort Leonard Wood, Missouri, 22–26 June 2009.

The theme of the conference was “Celebrating the Year of the Dragon NCO,” with a focus on the past, present, and future of the Chemical Corps. “The past, present, and future are all represented here,” said Colonel (now Brigadier General) Leslie Smith, commandant of the U.S. Army Chemical, Biological, Radiological, and Nuclear (CBRN) School, speaking of conference attendees. “The challenge for us today is ‘Where do we go from here?’”

Major General Gregg Martin, commanding general of the U.S. Army Maneuver Support Center and Fort Leonard Wood, opened the conference. “This is hard stuff—coming up with how to do the hugely increased CBRN mission . . . with constrained resources,” he said. “CBRN is leading the way with very high-end, functional training.”

Many CBRN leaders took part in the conference. They attended meetings, listened to speakers, and helped plan the Chemical Corps’ next fifteen years.

National Defense Industrial Association exhibits showcased new technology and equipment that could be used in CBRN defense. Foreign nations took part in the exhibits, which included a German CBRN recovery exhibition.

In addition to the meetings, speakers, and exhibits, many of the week’s events focused on the Chemical Corps and highlighted its history.

The CBRN Regimental Room was officially opened 23 June. “There are over 120 artifacts—many of which have never been seen before—and over 100 photos,” Smith said at

the opening ceremony. “This will promote a higher degree of esprit de corps. With our Soldiers surrounded by Corps history, they’ll get [a] sense of belonging to something bigger than themselves.”

The Regimental Review took place on 24 June. Troops were reviewed, and Major General William Sibert Awards were presented to the best Active Army, Army Reserve, and National Guard CBRN companies in the Corps. Sibert Award winners were—

- **Active Army:** Company B, 110th Chemical Battalion (Technical Escort), Fort Lewis, Washington.
- **Army Reserve:** 130th Chemical Company (Biological Integrated Detection System), Bethlehem, Pennsylvania.
- **National Guard:** 792d Chemical Company (Heavy), Longview, Washington.

An “Honor our Fallen” sunrise service was conducted in Memorial Grove on 25 June, and a Hall of Fame/Distinguished Member of the Corps ceremony was held later that afternoon. (See “2009 Honorees of the U.S. Army Chemical Corps,” page 50.)

A Regimental run and combined warfighter seminar were conducted, and the week concluded with a Green Dragon Ball.

Smith summed up the goal for the week by stating, “In the Bible, it says ‘Who will go for us?’ and ‘Here am I, send me’ (Isaiah 5:8). We need to continue to be the ‘send me’ force of the Nation.”




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*Ms. Erickson is a former staff writer for the Fort Leonard Wood Guidon.*



# 62d Chemical Company Training

*By Private First Class Jarrett M. Branch*

## **Outlaws Take Foxes for a Ride**

A sense of determination filled the air at Yakima Training Center, Yakima, Washington, as the “Outlaws” from the 62d Chemical Company, 23d Chemical Battalion, donned their “battle rattle.” The purpose of the day’s mission was strictly to train, but the Soldiers seemed to be preparing for actual battle. According to the acting platoon sergeant, 1st Platoon, they must be prepared for any situation, given that their duties vary from identifying possible chemical threats to providing protection during convoy operations.

Before training began, the Soldiers carefully inspected M93A1 Fox Nuclear, Biological, and Chemical Reconnaissance System vehicles. They understand that failure to properly conduct preventive maintenance checks and services on the vehicles—especially before entering a contaminated environment—could cost them their lives.

Once the crews finished the inspections, they received instructions regarding the training mission. The platoon sergeant explained that the objective was to react to contact and send an assault team to clear a building. He also explained how the situation should be handled.

After the briefing, Soldiers performed several dry runs without using the Fox vehicles. However, they conducted the drills just as if they were inside the “made for combat” vehicles. Finally, the crews mounted the Foxes and prepared for the second stage of training. As the convoy moved along the trails of the arid Yakima plains toward the training site, only a haze of dust was left behind.

The convoy continued until one of the rear gunners informed his crew of enemy contact. At that point, crews conducted defensive maneuvers and positioned themselves in response to enemy fire. Gunners then laid suppressive fire; and the assault team made its way to the building, where team members cleared a room before heading back to the vehicles.

Because successful training is the key to successful missions, the drill was repeated a number of times. According to a sergeant from the 62d, practice is just as important as the mission because quality training leads to quality Soldiers. “[Quality training] creates Soldiers who are best suited for combat,” he said.

## **Ready at All Times**

In the ever-changing face of modern warfare, improvised explosive devices (IEDs) and convoy strikes are becoming the main methods of enemy attack. Therefore, it is essential that all Soldiers—regardless of their jobs—are trained and proficient in every aspect of convoy operations. Soldiers of the 62d Chemical Company, 23d Chemical Battalion, honed their convoy skills during a three-day, live-fire convoy exercise held at Yakima Training Center, 6–8 June 2009.

According to a captain with the 62d, every Soldier—regardless of military occupational specialty—must be a convoy expert because most contact with the enemy takes place on roadways during convoy operations and because “Everyone’s on the road—everyone’s moving.” And he has firsthand knowledge of the importance of this training because he was part of a convoy that was struck by an IED in Afghanistan. The training he had received helped him overcome the hectic situation.

In preparation for the actual, live-fire exercise, the platoons performed several dry- and blank-fire runs. During these and the live-fire runs, the five-vehicle convoy encountered a number of combat situations. In one scenario, the convoy was struck by an IED. As a result, the convoy assumed a defensive position so that the medical team could begin treating injured personnel. In another scenario, one of the vehicles became disabled. A captain from the 62d explained that “One of their vehicles will become disabled, and the platoon will have to maneuver its gun trucks to support by fire as the recovery vehicle comes in and recovers the disabled vehicle.”

The Soldiers of the 62d Chemical Company recognize the importance of reacting instinctively when a convoy encounters trouble. “It’s important to build on skills that we might possibly use in the future,” said the platoon sergeant of the 2d Platoon, 62d Chemical Company. “We have a lot of nonstandard missions for nonstandard situations, so we must be ready [for convoy operations] at all times.” 

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*Private First Class Branch is a public affairs specialist with the 17th Public Affairs Detachment, I Corps and Fort Lewis Public Affairs Office, Fort Lewis, Washington.*

# DOCTRINE UPDATE

## U.S. Army Maneuver Support Center Directorate of Training Doctrine Development Division

Publication Number	Title	Date	Description
<b>Current Publications</b>			
FM 3-11 MCWP 3-37.1 NWP 3-11 AFTTP(I) 3-2.42	Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Defense Operations	10 Mar 03	A multiservice tactics, techniques, and procedures (MTTP) manual which provides commanders and staffs a key reference for the planning and execution of service chemical, biological, radiological, and nuclear (CBRN) defense operations, with focus on the passive-defense component of counterproliferation. <b>Status:</b> Under revision Fiscal Year (FY) 2010.
FM 3-11.3 MCRP 3-37.2A NTTP 3-11.25 AFTTP(I) 3-2.56	Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Contamination Avoidance	2 Feb 06	An MTTP manual for conducting CBRN contamination avoidance. <b>Status:</b> Change 1 (which implements Allied Tactical Publication [ATP]-45[C]) pending approval.
FM 3-11.4 MCWP 3-37.2 NTTP 3-11.27 AFTTP(I) 3-2.46	Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection	2 Jun 03	An MTTP manual which establishes principles for CBRN protection and addresses individual and collective protection (COLPRO) considerations for the protection of the force and civilian personnel. <b>Status:</b> Current.
FM 3-11.5 MCWP 3-37.3 NTTP 3-1.26 AFTTP(I) 3-2.60	Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination	4 Apr 06	An MTTP manual which addresses the principles and levels of CBRN decontamination operations in a tactical environment. <b>Status:</b> Current.
FM 3-6 (FM 3-11.6) AFM 105-7 FMFM 7-11-H	Field Behavior of NBC Agents (Including Smoke and Incendiaries)	3 Nov 86	An MTTP manual which addresses the battlefield influences of weather and terrain and the use of smoke and obscurants on CBRN operations. <b>Status:</b> Under revision FY10 (will be renumbered FM 3-11.6 and supersede FM 3-6, FM 3-11.14, and FM 3-101).
FM 3-11.9 MCRP 3-37.1B NTRP 3-11.32 AFTTP(I) 3-2.55	Potential Military Chemical/Biological Agents and Compounds	10 Jan 05	An MTTP manual which provides commanders and staffs with general information and technical data concerning chemical-biological (CB) agents and other compounds of military interest, such as toxic industrial chemicals (TICs). <b>Status:</b> Current.
FM 3-11.11 MCRP 3-37.2	Flame, Riot Control Agent, and Herbicide Operations	19 Aug 96 C1 10 Mar 03	An MTTP manual which describes the tactics, techniques, and procedures (TTP) for employing flame weapons, riot control agents (RCAs), and herbicides during peacetime and combat. Distribution of this manual is restricted due to the sensitive nature of the information contained in it. <b>Status:</b> Current.
FM 3-11.14 MCRP 3-37.1A NTTP 3-11.28 AFTTP(I) 3-2.54	Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Vulnerability Assessment	28 Dec 04	An MTTP manual for conducting CBRN vulnerability assessments; analyzing, managing, and assessing risks; and measuring, mitigating, and reducing vulnerabilities. <b>Status:</b> Under revision FY10 (to be consolidated with FM 3-11.6).
FM 3-11.19 MCWP 3-37.4 NTTP 3-11.29 AFTTP(I) 3-2.44	Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Reconnaissance	30 Jul 04 C1 31 Dec 08	An MTTP manual for planning and conducting CBRN reconnaissance operations to detect, define, limit, mark, sample, and identify CBRN and toxic industrial material (TIM) contamination. <b>Status:</b> Under revision FY10 (will be combined with and supersede FM 3-11.86).
<p><b>Note.</b> Current CBRN publications can be accessed and downloaded in electronic format from the Reimer Digital Library at <a href="http://www.adtdl.army.mil/">http://www.adtdl.army.mil/</a>, CBRN Knowledge Network (CKN) at <a href="https://www.us.army.mil/suite/portal.do?%p=409522">https://www.us.army.mil/suite/portal.do?%p=409522</a>, or Maneuver Support Knowledge Network (MSKN) at <a href="https://www.us.army.mil/suite/page/275589">https://www.us.army.mil/suite/page/275589</a>.</p>			

# DOCTRINE UPDATE

U.S. Army Maneuver Support Center Directorate of Training Doctrine Development Division			
Publication Number	Title	Date	Description
<b>Current Publications (Continued)</b>			
FM 3-11.20	Technical Escort Battalion Operations	29 Aug 07	An Army-only manual which provides the TTP for the employment of technical escort battalions. Distribution of this manual is restricted due to the sensitive nature of the information contained in it. <b>Status:</b> Current.
FM 3-11.21 MCRP 3-37.2C NTTP 3-11.24 AFTTP(I) 3-2.37	Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Consequence Management Operations	1 Apr 08	An MTTP manual which provides commanders and staffs a key reference for mitigating the CBRN aspects of consequence management. <b>Status:</b> Current.
FM 3-11.22	Weapons of Mass Destruction—Civil Support Team Operations	10 Dec 07 C1 31 Mar 09	An Army-only manual which provides the suggested doctrinal TTP for use by weapons of mass destruction—civil support teams (WMD-CSTs), which are designed to provide support to local, state, and federal response systems. Change 1 expands Communication Section and Medical and Analytical Section appendices. <b>Status:</b> Current.
FM 3-11.34 MCWP 3-37.5 NTTP 3-11.23 AFTTP(I) 3-2.33	Multiservice Tactics, Techniques, and Procedures for Installation CBRN Defense	6 Nov 07	An MTTP manual which provides a reference for planning, resourcing, and executing CBRN defense of theater fixed sites, ports, and airfields. <b>Status:</b> Current.
FM 3-11.50	Battlefield Obscuration	31 Dec 08	An Army-only manual which provides TTP to plan obscuration operations and employ obscurants during or in support of full spectrum military operations at the tactical through operational levels of war. <b>Status:</b> Current.
FM 3-11.86 MCWP 3.37.1C NTTP 3-11.31 AFTTP(I) 3-2.52	Multiservice Tactics, Techniques, and Procedures for Biological Surveillance	4 Oct 04	An MTTP manual for planning and conducting biological surveillance operations to monitor, detect, sample, identify, report, package, and evacuate samples of biological warfare agents. <b>Status:</b> Under revision FY10 (to be consolidated with FM 3-11.19).
FMI 3-90.10	Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives Operational Headquarters	24 Jan 08	An Army-only tactics manual which provides the basic doctrine for the employment of a chemical, biological, radiological, nuclear, and high-yield explosives (CBRNE) operational headquarters to conduct tactical-level weapons of mass destruction elimination (WMD-E) operations or transition to a joint task force-capable headquarters for WMD-E operations to support campaigns and civil authorities. <b>Status:</b> Under revision FY10.
<p><b>Note.</b> Current CBRN publications can be accessed and downloaded in electronic format from the Reimer Digital Library at <a href="http://www.adtdl.army.mil/">http://www.adtdl.army.mil/</a>, CKN at <a href="https://www.us.army.mil/suite/portal.do?\$p=409522">https://www.us.army.mil/suite/portal.do?\$p=409522</a>, or MSKN at <a href="https://www.us.army.mil/suite/page/275589">https://www.us.army.mil/suite/page/275589</a>.</p>			
<b>Emerging Publications</b>			
FM 3-11.2	Multiservice Tactics, Techniques, and Procedures for Weapons of Mass Destruction Elimination (WMD-E) Operations	To be determined	An MTTP manual that provides the tactical doctrine and associated TTP that each Service provides in support of the joint WMD-E mission area in an effort to operate systematically to locate, secure, disable, and/or destroy a state or nonstate actor's WMD programs and related capabilities. <b>Status:</b> Under development FY10.
<p><b>Note.</b> CBRN draft publications can be accessed and downloaded in electronic format from CKN at <a href="https://www.us.army.mil/suite/portal.do?\$p=409522">https://www.us.army.mil/suite/portal.do?\$p=409522</a> or MSKN at <a href="https://www.us.army.mil/suite/page/275589">https://www.us.army.mil/suite/page/275589</a>.</p>			



# RESERVE COMPONENT UPDATE

## Professional Military Education

The courses shown in Table 1 are taught by Total Army School System chemical, biological, radiological, and nuclear (CBRN) battalions at Fort Leonard Wood, Missouri.

**Table 1. Qualification training courses**

<b>Enlisted/Noncommissioned Officer (NCO) Qualification Training Courses</b>	
<b>74D10 (Transition) Military Occupational Specialty (MOS) Course</b>	
Phase I	Students who have a reservation for Phase II are automatically enrolled in Phase I. They receive e-mail instructions from The Army Distributed Learning (dL) Program via Army Knowledge Online (AKO). Students must complete Phase I before reporting for Phase II training. An Army Correspondence Course Program (ACCP) certificate of completion (e-mailed) or other documentation must be presented as proof of Phase I completion during Phase II in-processing. Soldiers who experience problems with Phase I should telephone the ACCP at (800) 275-2872 (Option 3) or (757) 878-3322/3335. If no ACCP representative is available, they should contact Ms. Karen Campbell, 3d Brigade (Chemical), at (860) 570-7117 or <karen.a.campbell@usar.army.mil>.
Phases II and III (74D10R or 74D10R1)	These phases consist of resident training conducted at Fort Leonard Wood, and they may be completed consecutively.
Phase IV (74DR)	This is a "legacy" phase to be completed by students who have completed any portion of the previous four-phase course. Class 002 (27 March–10 April 2010) will be the last class offered. No constructive credit will be granted to students who fail to complete the previous four-phase course; those students must retake all phases.
<b>74D Basic Noncommissioned Officer Course (BNCOC)</b>	
This is a four-phase course. Phase I, which is common to all MOSs, is offered as resident training at various locations. Phases II–IV consist of 74D-specific resident training at the U.S. Army Chemical, Biological, Radiological, and Nuclear School (USACBRNS), Fort Leonard Wood.	
<b>74D Advanced Noncommissioned Officer Course (ANCO)</b>	
This is a three-phase course. There is no dL portion; the entire course is provided through classroom instruction at USACBRNS.	
<b>Officer Qualification Training Courses</b>	
<b>Reserve Component (RC) Chemical, Biological, Radiological, and Nuclear Captain's Career Course (Course Number 4-3-C23)</b>	
Phase I	This phase is waived until further notice.
Phase II	This branch-specific phase is provided through dL. Soldiers who experience problems with Blackboard while completing Phase II should telephone the Blackboard Help Desk at (800) 275-2872 (Option 2). The successful completion of Phase II is a prerequisite for Phase III attendance.
Phase III (February 2010)	This branch-specific phase consists of two-week resident training conducted at USACBRNS. The focus of this phase is on radiological operations; live, toxic-agent training; hazmat awareness and operations level training and certification; and the basics of the Joint Warning and Reporting Network used within the Maneuver Control System.
Phase IV	This common-core phase consists of 59.2 hours of dL instruction. The successful completion of Phase IV is a prerequisite for Phase V attendance.
Phase V (February 2010)	This phase consists of two-week resident training conducted at USACBRNS. The focus of this phase is a computer-aided exercise that includes additional Joint Warning and Reporting Network and Maneuver Control System training, culminating in a military decisionmaking process exercise using state-of-the-art battle simulation equipment.
<b>Joint Senior Leader Course (Course Number 4K-74A/494-F18)</b>	
This is a four-day course in which senior leaders are presented with critical CBRN subject matter such as operational- and strategic-level aspects of CBRN defense. Participants also receive toxic-agent training at the Chemical Defense Training Facility. In addition, the Joint Senior Leader Course forum offers a unique opportunity for senior military leaders, civilian government agency leaders, and leaders representing allied and coalition partners to exchange ideas.	
<b>CBRN Precommand Course (Course Number 4K0F4)</b>	
This is a six-day course that prepares Regular Army and RC officers who have been selected for command of a CBRN battalion or brigade or a CBRN position in a division. Each student receives instruction in the application of Field Manual (FM) 7-0 and FM 7-1 concepts to the battalion training management process.	
<b>Note.</b> Additional information is available on the Army Training Requirements and Resources System at < <a href="https://www.atrrs.army.mil/">https://www.atrrs.army.mil/</a> > (School Code R031).	



The courses shown in Table 2 are required by CBRN consequence management response force; chemical, biological, radiological, nuclear, and high-yield explosives enhanced response force package; and civil support team units and for MOS qualification.

**Table 2. Functional training courses**

<b>CBRN Defense Course (School Code R031, Course Number 031-NBC)</b>
This twelve-day course, which is conducted by Total Army School System battalions at various locations, is designed to provide Regular Army and RC officers and noncommissioned officers (NCOs) with the knowledge and skills necessary to perform the additional duty of CBRN officer/NCO at company and detachment levels. The course is taught in a combination classroom/field environment and is supplemented with training videotapes. The extensive use of hands-on training ensures that Soldiers master the requisite skills.
<b>Mass Casualty Decontamination Course (School Course Number 031, Course 4K-F25/494-F-30)</b>
This ten-day course is appropriate for chemical, biological, radiological, nuclear, and high-yield explosives enhanced response force package and domestic-response casualty decontamination team members. Students who successfully complete the course receive certification at the hazmat awareness and operations levels.
<b>CBRN Responder Course (School Code 031, Course 4K-F24/494-F29)</b>
This ten-day course is appropriate for CBRN consequence management response force members. Students who successfully complete the course receive certification at the hazmat awareness, operations, and technician levels.
<b>Civil Support Skills Course (School Code 031, Course 4K-F20/494-28)</b>
This eight-week course is typically attended by Army National Guard civil support team members, but members of all Services and components may attend. Students receive advanced training in hazmat technician and incident command and CBRN survey, point reconnaissance, and sampling operations in support of an incident commander at a weapons of mass destruction incident. The course provides specialized training on a variety of military and commercial CBRN detection equipment and self-contained breathing apparatus.
<b>Note.</b> All students who successfully complete hazmat training are awarded certificates issued by the International Fire Service Accreditation Congress and the Department of Defense. Additional copies of certificates can be obtained from < <a href="http://www.dodffcert.com">http://www.dodffcert.com</a> >.

## USACBRNS RC Personnel

There are twenty authorized drilling individual mobilization augmentee positions throughout USACBRNS, with twelve officer slots (O-3 through O-5) and eight NCO slots (E-7 through E-9). Some of these slots are currently open. The mission is to expand the USACBRNS training base in the event of full mobilization.

If you are a field grade RC officer and want to transfer into the Chemical Corps, contact the USACBRNS Deputy Assistant Commandant–Reserve Component (DAC-RC) for specific branch qualification information.

### Contact Information

Colonel Jon M. Byrom (DAC-RC), (573) 563-8050 or <[jon.byrom@us.army.mil](mailto:jon.byrom@us.army.mil)>.

Lieutenant Colonel Scott Fowler (DAC-NG), (573) 563-7676 or <[scott.fowler1@us.army.mil](mailto:scott.fowler1@us.army.mil)>.

Master Sergeant Mark Vasquez (USAR Proponency NCO), (573) 563-7757 or <[margarito.vasquez@us.army.mil](mailto:margarito.vasquez@us.army.mil)>.

Master Sergeant Robert Wheat (ARNG Proponency NCO), (573) 563-7667 or <[robert.a.wheat@us.army.mil](mailto:robert.a.wheat@us.army.mil)>.

Ms. Sandy Meyer (DAC Administrative Assistant), (573) 563-6652 or <[sandy.meyer@us.army.mil](mailto:sandy.meyer@us.army.mil)>.

# 2009 Honorees of the U.S. Army Chemical Corps

By Ms. Christy Lindberg

## Hall of Fame Inductees

The U.S. Army Chemical Corps Hall of Fame award is the highest form of recognition offered by the Regiment. This coveted award honors those who have made landmark contributions to the overall history and traditions of the Chemical Corps or continue to work in ways that benefit the Corps. These individuals have distinguished themselves through advances in science and technology, a lifetime of service and devotion to the Corps, or gallantry in battle. The ranks of the Hall of Fame are inundated with scientists who tirelessly worked to protect the force through innovations and with Soldiers who exemplified the tenets of courage and honor. The following individuals were inducted into the Hall of Fame on 25 June 2009:



*Command Sergeant Major Peter L. Hiltner (Retired)*

Command Sergeant Major Peter L. Hiltner was born 19 October 1950 in Freeport, Minnesota. He joined the Minnesota National Guard as a combat infantryman in 1969. He completed basic and advanced individual training at Fort Lewis, Washington. In 1975, Hiltner received an honorable discharge; but he returned to active duty in 1978. He completed one station unit training at the U.S. Army Military Police School, Fort McClellan, Alabama, and was reclassified to the Chemical Corps in 1982.

Throughout his career, Command Sergeant Major Hiltner consistently excelled as a leader and Soldier mentor. As the command sergeant major of the 23d Area Support Group, Camp Humphreys, Korea, he was the senior advisor to the commander and program manager for more than 1,000 Soldiers providing maintenance and ordnance support to the U.S. Armed Forces in Korea. While serving as the command sergeant major of the 23d Chemical Battalion, Camp Carroll, Korea, Hiltner was responsible for the development and execution of chemical defense procedures and waste management training for more than 300 multinational personnel. As the command sergeant major of the 82d Chemical Battalion, Fort Leonard Wood, Missouri, he was responsible for the program of instruction and management of basic and advanced individual training in nuclear, biological, and chemical (NBC) defense. He was also the first sergeant of the 4th Chemical Company, Camp Casey, Korea, and the 11th Chemical Company and Chemical

Noncommissioned Officer (NCO) Academy, Fort McClellan. Command Sergeant Major Hiltner's other assignments included NBC NCO, 46th Engineer Battalion, Fort Rucker, Alabama; inspector, VII Corps Inspector General's Office, Stuttgart, Germany; instructor, Technical Escort Course, Redstone Arsenal, Alabama; smoke platoon sergeant, 4th Chemical Company; NBC NCO, C Company, 82d Engineer Battalion, Bamberg, Germany; senior military policeman, 79th Military Police Detachment, Fort McCoy, Wisconsin; and military policeman, 55th Military Police Company, Camp Market, Korea. Command Sergeant Major Hiltner completed two tours of duty in Germany and four tours of duty in Korea. He also participated in the defense of Saudi Arabia, the defense and liberation of Kuwait, and the Southwest Asia cease-fire campaigns.

Command Sergeant Major Hiltner completed the U.S. Army Sergeants Major Academy and the Command Sergeants Major Designee, First Sergeant, Battle Staff, Technical Escort, Inspector General, Advanced NCO, Chemical Basic Transition, and Primary Leadership Development Courses. He consistently exceeded course standards and graduated with honors. In addition, Hiltner earned a bachelor's degree in police administration from Columbia College and a master's degree in management from Webster University.

Command Sergeant Major Hiltner's awards include the Legion of Merit with two oak-leaf clusters, Bronze Star Medal, Meritorious Service Medal (3d award), Army Commendation Medal with six oak-leaf clusters, Army Achievement Medal with six oak-leaf clusters, Good Conduct Medal (8th Award), National Defense Service Medal with two service stars, Korean Defense Service Medal, Humanitarian Service Medal, Liberation of Kuwait Medal, Overseas Service Ribbon (5th award), NCO Professional Development Ribbon (4th award), Southwest Asia Service Medal, Honorable Order of the Dragon, and Ancient Order of the Dragon.

Command Sergeant Major Hiltner served as the 9th Chemical Regimental Command Sergeant Major from November 2002 to February 2004 and was subsequently named the 2d Honorary Sergeant Major of the Chemical Corps Regiment in July 2004. He also serves as the Vice Chairman, Chemical Corps Regimental Association (CCRA). In addition, he is an active member of the Fort Leonard Wood/Mid-Missouri Chapter of the Association of the U.S. Army and a member of the Fort Leonard Wood Sergeants Major Association.

Command Sergeant Major Hiltner (Retired) is currently the Director, Emergency Management and Chemical, Biological, Radiological, and Nuclear Programs for MacAulay Brown (MacB), Incorporated, Fort Leonard Wood.



***Private First Class Richard  
Hamilton Griffin***

Private First Class Richard Hamilton Griffin was born in 1925, and he grew up in the Blue Ridge Mountains of Asheville, North Carolina. As a child, Griffin was an active outdoorsman who belonged to the Boy Scouts of America. He and his two brothers were also model airplane enthusiasts. The Junior Birdmen of America chose them as their national poster boys, and President Franklin D. Roosevelt personally presented them with their brass wing pins.

Griffin obtained permission and volunteered to join the Army at the age of seventeen. He was assigned to B Company, 83d Chemical Mortar Battalion, which was attached to the Seventh Army (Europe) under the command of General George S. Patton. From 3 to 20 December 1944, the 83d supported the 36th Infantry Division, whose mission was to hold the entire right flank of the Seventh Army during the German Ardennes-Alsace campaign (also known as the Battle of the Bulge). The bulk of the defense rested with the 83d and their mortars. B Company participated in the repulse of four massive enemy counterattacks in the vicinity of Riquewihr (pronounced *reek-veer*), France. (For more information on the 83d, see page 31.)

During the early morning hours of 12 December, the entire front was attacked by the enemy and Griffin's platoon was surrounded. When the mortar positions of his platoon were threatened by a large force of enemy infantry, Private First Class Griffin rushed forward to man a machine gun outpost located 200 yards from his squad position. He calmly waited until the enemy column was within 100 yards and then opened fire—killing 10 enemy soldiers with his initial burst. His deadly fire forced the enemy to deploy and attempt to surround him. Despite the intense small arms, automatic-weapon, and light-mortar fire directed at him, Griffin clung to his position and continued firing. When he was hit by small arms fire in the right side of his body, he rolled over and began firing his machine gun with his left hand. Although hit a second time, he continued firing until his position was finally overrun by the enemy and he was killed. Through his courage and unselfish sacrifice, Private First Class Griffin gave his own life while saving the lives of many of his comrades. He was also instrumental in blunting the drive of superior enemy forces that threatened the security of a large sector of the front near Riquewihr.

Private First Class Griffin was posthumously awarded the Distinguished Service Cross—the highest medal for valor earned by a chemical Soldier in the history of the Regiment—for his extraordinary heroism in action. He was also awarded two Purple Hearts as a result of wounds he sustained while making the supreme sacrifice. In addition, Private First Class Griffin

received the European-African-Middle Eastern Campaign Medal and the World War II Victory Medal.

As a veteran of World War II, Private First Class Griffin was a member of what is known as the “Greatest Generation.” As a Soldier, he epitomized the concept of a hero and a warrior. Private First Class Griffin knowingly and willingly made the ultimate sacrifice while defending his comrades, displaying the highest ideals of the Warrior Ethos and Army values more than fifty years before they were adopted as bedrock principles of the U.S. Army. Although his inclusion in the Hall of Fame is long overdue, his valor and sacrifice in the face of death should never be forgotten; rather, his actions should be brought to the attention of modern warriors to be recognized and emulated as our Soldiers fight the War on Terrorism with the knowledge that one of their own lives on in the U.S. Army Chemical Corps Hall of Fame.

**Distinguished Members of the  
Chemical Corps Inductees**

Five names were added to the list of outstanding individuals serving the U.S. Army Chemical Corps. The award of the Distinguished Member of the Chemical Corps title means that these individuals have not only served a lifetime of service in the Corps, but also support the Chief of Chemical in implementing his vision of what the Corps is and where it is going in the future. The following individuals were inducted into the 2009 Distinguished Members of the Chemical Corps on 25 June 2009:



***Lieutenant Colonel Michael C. Lanphere  
(Retired)***

Lieutenant Colonel Michael C. Lanphere was born 18 April 1954 in Patterson, California. He entered the U.S. Army in 1978, and his first assignment was as the commander of a basic combat training company at Fort Dix, New Jersey. In addition to the responsibilities associated with command, such as the welfare of assigned Soldiers and oversight of training, Lanphere also served as the battalion executive officer and operations and training officer (S3). At the division staff level, Lieutenant Colonel Lanphere was responsible for the NBC Warning and Reporting Cell and he served as the Operations and Plans (G-3) Emergency Deployment Readiness Exercise project officer. He also served as a brigade chemical officer, brigade training officer, and brigade operations officer while assigned to brigade and staff positions at Fort Ord, California, and as a brigade chemical officer with the 205th Military Intelligence Brigade, V Corps, Frankfurt, Germany. As the force development officer with the Directorate of Combat Development, U.S. Army Chemical School, Fort McClellan, Lieutenant Colonel Lanphere assisted in directing and coordinating the redesign of the chemical force structure. He coordinated team efforts to test new designs and develop new doctrine, and he represented the Chemical School in making decisions regarding the downsizing and redesign

of the Army to meet the changing threat. As the executive officer of the Chemical School, Lieutenant Colonel Lanphere was responsible for the battalion staff; he also coordinated the needs of five training companies and executed the command plan for the battalion. In addition, he worked extensively with the U.S. Department of State, U.S. Arms Control and Disarmament Agency, U.S. National Security Council, and Office of the Secretary of Defense on the development of the U.S. Government's position on treaties and agreements. Other areas of expertise included chemical weapons demilitarization and disposal, nonstockpile of chemical weapons, U.S. Army Intelligence and Security Command inspections in Iraq, and annual chemical/biological intelligence reports to Congress. As the nonproliferation staff officer for the Joint Chiefs of Staff, Washington, D.C., Lieutenant Colonel Lanphere worked extensively with Congress and the Office of the Secretary of Defense on chemical/biological issues related to national security; he was also responsible for reviewing and writing joint NBC defense publications and updating Chairman of the Joint Chiefs of Staff NBC defense publications. Finally, Lieutenant Colonel Lanphere served as the director of the Joint Service Integration Group Executive Office at Fort McClellan, where he was responsible for coordinating and integrating the NBC Defense Program.

Lieutenant Colonel Lanphere's military education includes Officer Candidate School, Field Artillery Officer Basic Course, Chemical Officer Basic Course, Combined Arms and Services Staff School, Command and General Staff College, U.S. Air Force Air Command and Staff College, and Joint Forces Staff College. In addition, he holds a bachelor's degree in history from California State University, Stanislaus.

Lieutenant Colonel Lanphere has received the following awards and honors: the Defense Meritorious Service Medal, Meritorious Service Medal (4th award), Army Commendation Medal with four oak-leaf clusters, Army Achievement Medal with three oak-leaf clusters, National Defense Service Medal, Good Conduct Medal, and Honorable Order of the Dragon. He was also nominated for a Presidential award that recognized volunteers in the military.

Lieutenant Colonel Lanphere (Retired) is currently a senior analyst/program manager with OptiMetrics, Inc., Anniston, Alabama. He continues to serve the Corps as president of the McClellan Chapter of the CCRA—the most active, most productive chapter of the CCRA.



*Command Sergeant Major James A. Barkley (Retired)*

Command Sergeant Major James A. Barkley was born 29 May 1958 in Columbus, Ohio. He enlisted in the U.S. Army in September 1976.

Command Sergeant Major Barkley has held numerous leadership positions. His final active duty assignment was as the last chemical senior enlisted advisor and command sergeant major of the U.S. Army Soldier

Biological and Chemical Command, Aberdeen Proving Ground, Maryland. He also served as the 8th Chemical Regimental Command Sergeant Major. Other previous assignments include commandant of the III Corps NCO Academy, Fort Hood, Texas; command sergeant major of 2d Chemical Battalion, Fort Hood; faculty advisor, U.S. Army First Sergeant Course; NCO in charge, V Corps NBC Course; first sergeant, 44th Chemical Company, 4th Infantry Division, Fort Hood; first sergeant, 54th Chemical Troop, 11th Armed Cavalry Regiment (ACR), Fulda, Germany; first sergeant, Maintenance Troop, 11th ACR; first sergeant, 89th Chemical Company, 3d ACR, Fort Bliss, Texas; decontamination platoon sergeant, 89th Chemical Company; NCO in charge, 503d Chemical Detachment, Germany; and drill sergeant and drill instructor, 2d Basic Training Battalion, Fort McClellan.

Command Sergeant Major Barkley's military education includes the Primary Leadership Development Course, Basic NCO Course, Advanced NCO Course, Jungle Warfare Course, Master Fitness Course, Drill Sergeant School, Air Assault School, NBC Reconnaissance Course, Battle Staff Course, First Sergeant Course, Sergeants Major Academy, Command Sergeants Major Course, and more than 100 hours of other military and civilian training courses. He holds a bachelor's degree in management from Excelsior College, Albany, New York.

Some of Command Sergeant Major Barkley's awards include the Legion of Merit, Bronze Star Medal, Meritorious Service Medal (4th award), Army Commendation Medal with two oak-leaf clusters, Army Achievement Medal with six oak-leaf clusters, National Defense Service Medal, Kuwait Liberation Medal, Southwest Asia Medals, Drill Sergeant Identification Badge, Order of St. George, Ancient Order of the Dragon, and Honorable Order of the Dragon.

Command Sergeant Major Barkley is a lifetime member of the CCRA. He is also an annual member of the NCO Association, Association of the U.S. Army, and National Education Association.

After his retirement in 2004, Command Sergeant Major Barkley joined the U.S. Army North (ARNORTH) Civil Support Readiness Group. He served as a senior trainer and evaluator for weapons of mass destruction (WMD) civil support teams from 2004 to 2006 and as an operations officer from 2006 to 2008; he has served as the deputy team chief and operations officer for C Division since 2007. In his current position, Command Sergeant Major Barkley (Retired) designs, develops, and coordinates readiness training for fifty-five National Guard civil support teams; twelve National Guard chemical, biological, radiological, nuclear, and high-yield explosives (CBRNE) enhanced response force package units; and twenty-five U.S. Army Reserve decontamination reconnaissance and casualty decontamination companies in the ARNORTH area of operations. These organizations are engaged in CBRNE detection, identification, mitigation and, in some instances, elimination. Barkley does not just train chemical, biological, radiological, and nuclear (CBRN) Soldiers—he mentors and coaches them. He continues to

instill pride in members of the Chemical Corps. Through his leadership, Barkley has improved communication between the U.S. Army CBRN School and ARNORTH leaders regarding issues that affect CBRN Soldiers across the Regular Army and Reserve Components.



***Command Sergeant Major Larry "Ken"  
Fisher (Retired)***

Command Sergeant Major Larry "Ken" Fisher was born 12 August 1959 in Boonville, Indiana. He entered the U.S. Army in June 1977 and died 12 July 2008.

Command Sergeant Major Fisher served as a rifleman, gunner, team leader, and squad leader with B Company, 1st Battalion, 325th Parachute Infantry Regiment, Fort Bragg, North Carolina. He was reassigned to the Chemical Corps in 1981, with his significant assignments including company NBC operations NCO, 522d Engineer Company, Fort Knox, Kentucky; battalion and brigade NBC operations NCO, 1st Brigade, 3d Armored Division, Fort Campbell, Kentucky; NBC operations NCO, 3d Brigade, 3d Armored Division, Germany; NBC operations NCO, 3d Brigade, 101st Airborne Division, Fort Campbell; and platoon and first sergeants, 63d Chemical Company, Fort Campbell. As the first sergeant of the 63d Chemical Company during Operation Desert Shield/Desert Storm, Fisher deployed to Southwest Asia. Following his return, he served as NBC operations NCO, 4th Special Forces Group, Fort Campbell, and was again deployed to Southwest Asia. Fisher also served as operations sergeant and first sergeant, U.S. Army Chemical Activity, Pacific, Johnston Atoll, and as NBC operations NCO, 160th Special Operations Aviation Group, Fort Campbell (from which he was deployed to Southwest Asia a third time). He then returned to the U.S. Army Chemical Activity, Pacific, as command sergeant major. His final military assignment was as Command Sergeant Major, 3d Chemical Brigade, Fort Leonard Wood.

Command Sergeant Major Fisher excelled in some of the most difficult U.S. Army Chemical Corps positions in some of the U.S. Army's most elite units. He was named NCO of the month, quarter, and year five times at battalion, brigade, and division levels.

Command Sergeant Major Fisher's military education started with the Infantry Basic Course and U.S. Army Airborne School. He also completed the Primary Leadership Development Course, Jumpmaster Course, Basic NCO Course, Advanced NCO Course, Air Assault School, First Sergeant Course, Defense Language Institute (where he learned Persian and Farsi), Technical Escort Course, Battle Staff NCO Course, Sergeants Major Academy, and Command Sergeants Major Course. In addition, he completed more than twenty other military courses that were forty hours or more in length. He also earned an associate's degree in general studies from Park University and was working toward a bachelor's degree in emergency management at the time of his death.

Command Sergeant Major Fisher's awards and decorations include the Legion of Merit, Bronze Star Medal, Meritorious Service Medal (6th award), Joint Service Commendation Medal, Army Commendation Medal with four oak-leaf clusters, Army Achievement Medal with six oak-leaf clusters, National Defense Service Medal with two service stars, Army Service Ribbon, Overseas Service Ribbon (3d award), NCO Professional Development Ribbon (4th award), Good Conduct Medal (7th award), Southwest Asia Service Medal with three service stars, Kuwait Liberation Medal, Army Superior Unit Award, Senior Parachutist Badge, Air Assault Badge, Egyptian Airborne Wings, Honorable Order of the Dragon, and Ancient Order of the Dragon.

Mr. C. Ray Nagin, the mayor of New Orleans, Louisiana, proclaimed a "Special Day of Honor" for Command Sergeant Major Fisher for his role as operations chief on the Mayor's Advisory Council for Citizens With Disabilities—a role in which he assisted persons with disabilities in the aftermath of Hurricane Katrina.



***Sergeant Major Kimberly J. Garrick  
(Retired)***

Sergeant Major Kimberly J. Garrick was born 13 June 1958 in Jefferson Township, New Jersey. She entered the U.S. Army in April 1977.

During her military service, Sergeant Major Garrick held numerous leadership positions. She was the first female in the Chemical Corps to achieve the rank of sergeant major. Her last active duty assignment was as the personnel proponenty sergeant major of the U.S. Army Chemical School, Fort Leonard Wood. As the sergeant major of the Directorate of Training, U.S. Army Chemical School, Fort McClellan, Garrick administered the successful relocation of the Chemical School from Fort McClellan to Fort Leonard Wood. She also served as the first sergeant for Headquarters Company, 4th Combat Aviation Brigade, Hanau, Germany, and as the first sergeant for Headquarters and Headquarters Detachment, 180th Transportation Battalion, Fort Hood—a position from which she deployed with her unit in support of Operation Desert Shield/Desert Storm two weeks after her appointment. Sergeant Major Garrick completed five overseas tours and devoted more than twenty-four years of service to the U.S. Army.

Sergeant Major Garrick completed the Sergeants Major Academy and the Technical Escort, Chemical Operations Specialist, Primary Leadership Development, Telecommunications Center Operations, Battle Staff, and First Sergeant Courses. She holds a bachelor's degree in education and a master's degree in educational administration from Jacksonville State University, Alabama.

Sergeant Major Garrick (Retired) is a member of the National Education Association and Alabama Education Association. She has also mentored young people through the

Legacy Club Advisor Program and the Enrichment Services Program in Anniston, Alabama. As a member of the CCRA, she has delivered numerous speeches to military organizations and has served as a Chemical Corps spokesperson.

Sergeant Major Garrick's military awards include the Legion of Merit, Bronze Star Medal, Meritorious Service Medal (2d award), Army Commendation Medal with six oak-leaf clusters, Army Achievement Medal with nine oak-leaf clusters, Meritorious Unit Commendation, Good Conduct Medal (8th award), National Defense Service Medal, Overseas Service Ribbon (4th award), Southwest Asia Service Medal with three service stars, the Kuwait Liberation Medal, and the Honorable Order of the Dragon.

After her retirement, Sergeant Major Garrick volunteered with the Anniston school system and the American Red Cross. Then, she transformed her ability to mentor young people into a career in education—first by teaching second and fourth grades and now as the interim principal of Constantine Elementary School in Anniston.

Sergeant Major Garrick has made tremendous contributions above and beyond the normal scope of her duties. She has voluntarily spoken to countless men, women, and children about her experiences and accomplishments in the Chemical Corps. And she has never forgotten her predecessors. In one interview, Garrick stated, "The reason I was able to accomplish my successes was because of the women in the service who went before me and paved the way." Throughout her career and following her retirement, Sergeant Major Garrick has enhanced the cohesiveness, legacy, and esprit de corps of military members and civilians by mentoring, advising, and coaching them to be better U.S. citizens.



*Dr. Peter J. Stopa*

Dr. Peter J. Stopa was born 26 March 1953 in Newark, New Jersey. He earned an American Chemical Society-certified bachelor's degree in biochemistry in 1975 and a master's degree in 1977 from the University of Scranton, Pennsylvania. He then continued graduate study in analytical chemistry at Northeastern University, Boston, Massachusetts, and the University of New Hampshire. In 1999, he successfully defended his dissertation on "The Use of Flow Cytometry for the Detection and Identification of Biological Warfare Agents" before the scientific board of the Military Institute of Hygiene and Epidemiology, Warsaw, Poland, earning a doctorate degree in microbiology. He was the first American to obtain a doctorate degree in microbiology in this manner.

At the time of his death in 2006, Dr. Stopa was a physical scientist with the U.S. Army Research, Development, and

Engineering Command, Edgewood Chemical Biological Center, Aberdeen Proving Ground. He was assigned to the Engineering Directorate, where he made significant contributions to the Department of Defense Biological Defense Program. During his most recent project, he served as the technical coordinator for the Military Applications in Reconnaissance and Surveillance Program, designing experimental payloads for biological detection and identification using robotic platforms. Dr. Stopa also supported the Office of Defense Cooperation at the U.S. Embassy in Warsaw by serving as the informational exchange officer for a U.S.–Poland biological defense information exchange program. In addition, he was a certified instructor for the Edgewood Chemical Biological Center Homeland Defense Program and he taught several courses on WMD. He was instrumental in the development and fielding of the first biological warfare capability for the U.S. Army during Operation Desert Shield/Desert Storm. The technologies that were developed, tested, and fielded during this effort were incorporated into biological defense systems that support warfighters who are in the field today. In addition to participating on the team that developed technologies which were later fielded in the nondevelopmental item and P31 Biological Integrated Detection System units, Dr. Stopa initiated efforts to provide first responders with the capability to sample for, and detect the presence of, biological agents in suspect samples. This effort (which was in response to the Aum Shinrikyo sarin attack on the subway system in Tokyo, Japan) led to the development of the Biological Detection Kit, which integrated sampling and detection equipment for use by first responders at a possible biological WMD site. Dr. Stopa's previous positions included research chemist, U.S. Army Medical Research Institute of Infectious Diseases, Fort Detrick, Maryland; immunochemist, Becton, Dickinson, and Company, Hunt Valley, Maryland; and research technician, Eudowood Division, Pediatric Infectious Diseases, Johns Hopkins University School of Medicine, Baltimore, Maryland.

Dr. Stopa received numerous awards and accolades for his contributions to the defense against WMD. Among them are two Technology Transfer Program awards, the Commander's Award for Civilian Service, fourteen performance awards, six Special Act or Service Awards, four quality step increases, and an incentive cash award. In addition to these awards, Dr. Stopa was a prolific WMD researcher and writer, contributing more than twenty articles to professional journals and other professional venues.

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*Ms. Lindberg is the assistant historian at the U.S. Army CBRN School History Office, Fort Leonard Wood, Missouri.*



Chemical Corps Regimental Association

## 2010 CCRA Nominations for Hall of Fame and Distinguished Member of the Corps

Nominations are being accepted for the 2010 Chemical Corps Regimental Association (CCRA) Hall of Fame and Distinguished Member of the Corps honors.

- **Hall of Fame.** This award is extended to chemical, biological, radiological, and nuclear personnel (living or deceased) who have spent their professional careers serving the Chemical Corps or have performed a significant act of heroism. Their service to the Corps must be extraordinary.
- **Distinguished Member of the Corps.** This award is extended to living members who served the Corps in their professional lives and continue to serve it in their personal lives. Active Army military and current (nonretired) federal civilian personnel are not eligible for the program. The nominations are limited to personnel who have been retired from active federal service (military and/or civilian) for at least two years.

For nomination criteria and submission requirements, see <http://www.chemical-corps.org/honors.htm>. Nomination packets should be sent to:

Commandant  
U.S. Army Chemical, Biological, Radiological, and Nuclear School  
Regimental Historian  
ATTN: ATSN-CM-H  
Fort Leonard Wood, MO 65473-8926

All packets must arrive before **5 May 2010**. For more information, call (573) 563-7339 or e-mail [david.chuber@us.army.mil](mailto:david.chuber@us.army.mil) or [christy.lindberg@us.army.mil](mailto:christy.lindberg@us.army.mil).

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### *Care to Comment?*

The *Army Chemical Review* welcomes letters from readers. If you have a comment concerning an article we have published or would like to express your point of view on another subject of interest to chemical, biological, radiological, and nuclear Soldiers, let us hear from you. Your letter must include your complete address and a telephone number. All letters are subject to editing for reasons of space or clarity.

Our mailing and e-mail addresses are—

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# Army Chemical Review Writers' Guide



*Army Chemical Review* is a professional-development bulletin designed to provide a forum for exchanging information and ideas within the Army chemical, biological, radiological, and nuclear (CBRN) community. We include articles by and about officers, enlisted Soldiers, warrant officers, Department of the Army civilian employees, and others. Writers may discuss training, current operations and exercises, doctrine, equipment, history, personal viewpoints, or other areas of general interest to CBRN Soldiers. Articles may share good ideas and lessons learned or explore better ways of doing things.

Articles should be concise, straightforward, and in the active voice. If they contain attributable information or quotations not referenced in the text, provide appropriate endnotes. The text length should not exceed 2,000 words (about eight double-spaced pages). Shorter, after action type articles and reviews of books on CBRN topics are also welcome.

Include photographs (with captions) and/or line diagrams that illustrate information in the article. Please do not insert illustrations or photographs in the text; instead, send each of them as a separate file. Do not embed photographs in PowerPoint or Microsoft Word. If illustrations are in PowerPoint, avoid using excessive color and shading. Save digital images in a TIF or JPG format at a resolution no lower than 200 dpi. Images copied from a Web site must be accompanied by copyright permission.

Provide a short paragraph that summarizes the content of the article. Also include a short biography (full name, rank, current unit, job title, and education), your mailing address, a fax number, and a commercial daytime telephone number.

Articles submitted to *Army Chemical Review* must include a statement from your local security office stating that the information contained in the article is unclassified, nonsensitive, and releasable to the public. *Army Chemical Review* is distributed to military units worldwide, is offered online at <http://www.wood.army.mil/chmdsd>, and is available for sale by the Government Printing Office. As such, it is readily accessible to nongovernment and foreign individuals and organizations.

We cannot guarantee that we will publish all articles, photographs, or illustrations. They are accepted for publication only after thorough review. If we plan to use your article in an upcoming issue, we will notify you. Therefore, it is important to keep us informed of changes in your e-mail address or telephone number. All articles accepted for publication are subject to grammatical and structural changes as well as editing for style.

*Army Chemical Review* is published biannually in June and December, and articles are due by 1 March and 1 September. Send submissions by e-mail to [leon.mdotaacr@conus.army.mil](mailto:leon.mdotaacr@conus.army.mil), or send an electronic copy in Microsoft Word on a compact disk and a double-spaced hard copy of the manuscript to—

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