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MASTER OF MILITARY STUDIES

RELEVANCE OF THE U.S. ARMY CHEMICAL CORPS

SUBMITTED IN PARTIAL FULFILLMENT
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Executive Summary

Title: Relevance of the U.S. Army Chemical Corps

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Thesis: To better support the nation's CBRNE defense and combating WMD efforts, the Army must facilitate a paradigm shift with regard to CBRN defense training, improve the image of the Chemical Corps and CBRN Soldiers, reorganize its CBRNE assets into a CBRNE branch, and provide better CBRN support to maneuver forces.

Discussion: The US Army Chemical Corps historically has not performed its primary mission in combat and instead executed countless "in lieu of" (ILO) missions. While there are a few select assets within the Chemical Corps that routinely perform CBRN functions during combat deployments and in support of civil authorities, the vast majority of the branch executes provisional missions that include convoy security, base defense, force protection and detention facility operations, personal security detail (PSD), operation centers, and general logistical support. Decades of not providing CBRN support to Commanders in combat, highlighted by the current operations in Afghanistan and Iraq, raise legitimate questions about the Chemical Corps' relevance to the U.S. Army.

The historical complacency throughout the entire Army with regard to CBRN defense and the Chemical Corps' failure to adapt adequately to the contemporary operational environment have contributed to a branch with little relevance to the operational Army. To reverse the trend of complacency and develop a relevant CBRN branch, the Army must reconsider in its entirety how it integrates CBRN training and personnel throughout its operational forces. Examples of initiatives that would facilitate such change include a significant paradigm shift in CBRN defense training, the consolidation of EOD, Chemical Corps and Functional Area 52 into a CBRNE branch, and the introduction of CBRN warrant officers to infantry and armor battalions and brigades throughout the Army.

Conclusion: Fundamentally reconsidering how the Chemical Corps integrates CBRN training and personnel throughout the Army would make the Chemical Corps a relevant branch to the operational Army, reduce the stigma of CBRN defense training, and ultimately improve Soldier readiness to survive in a CBRN environment. Without significant changes in how the Army approaches CBRNE defense, the Chemical branch will find itself continuing to explain why CBRN readiness is failing throughout the Army.

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DISCLAIMER

THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENT AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

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Preface

Based on the education and training the Army has provided me, as well as my personnel experience as a commander, technical escort team leader, and staff officer, I believe the Chemical Corps lacks relevance to the maneuver forces within the operational Army. The reader should note that such a statement is not a dismissal of immense threat posed by weapons of mass destruction. On the contrary, I am attempting to convey the reality the Chemical Corps and CBRN Soldiers face within the Army and offer realistic options to enhance the Army's CBRN defense preparedness. Only through a paradigm shift in how Chemical Corps integrates Soldiers and CBRN training into the Army, can we finally stop asking why nobody cares about CBRN defense.

My research would have been incomplete if it were not for the input of Dr. Francis Marlo, my civilian faculty advisor at the Marine Corps University, and COL Barry Lowe, a mentor and Ranger buddy. Additionally, several senior CBRN leaders within the Army provided immense guidance and support, while attempting to keep me grounded in reality. To my remarkable wife Jordan, thank you for making me a better person and teaching me how to be a strong father.

This paper is dedicated to the Chemical Soldier whose life consists of running chow and ammunition for the first sergeant, putting together the USR and QTB, executing FOB security, guarding detainees, washing the brigade's vehicles and all the great things we do to remain critical members of the units and staff we're assigned to.

INTRODUCTION

The U.S. Army Chemical Corps historically has not performed its primary mission in combat: defend the Army and Nation against a Chemical, Biological, Radiological, and Nuclear (CBRN) threat. Instead, it has executed countless “in lieu of” (ILO) missions. While there are a few select assets within the Chemical Corps that routinely perform CBRN functions during combat deployments and in support of civil authorities, the vast majority of the branch executes provisional missions that include convoy security, base defense, force protection and detention facility operations, personal security detail (PSD), operation centers, and general logistical support. Decades of not providing CBRN support to Commanders in combat, highlighted by the current operations in Afghanistan and Iraq raise legitimate questions about the Chemical Corps’ relevance to the U.S. Army. An examination of the current operating environment and anticipated threats against the United States indicates that the U.S. Army’s Chemical, Biological, Radiological, Nuclear, and High Yield Explosives (CBRNE)ⁱ defense and efforts to combat weapons of mass destruction (WMD) are not structured or employed to maximize its effectiveness in defeating a top strategic threat as outlined in the March 2006 National Security Strategy (NSS).¹

The few changes the Chemical Corps has made over the last several years fall far short of the changes necessary to become more germane to the Army. However, to its credit, the Corps has made some strides toward improved relevancy: the creation of CBRN Reconnaissance Platoons, the establishment of a CBRN Warrant Officer Branch, the addition of a second technical escort battalion, and the removal of battlefield obscurants and flame field expedients

ⁱ The author uses the acronyms CBRN and CBRNE to differentiate between the U.S. Army Chemical Corps Soldiers, units and missions, and the broader Department of Defense WMD defense programs and missions. The acronym CBRN is used only to refer to U.S. Army Chemical Corps and associated personnel and missions. The acronym CBRNE is used for all other aspects of WMD defense throughout DOD.

(FFE) as core missions. Despite these changes, the branch has neglected to structure its forces and personnel properly in support of CBRNE defense operations and combating WMD.

The Chemical Corps' lack of relevancy is not solely of its own making. Historically, there has been complacency throughout the entire Army with regard to CBRN defense. However, this does not excuse the Chemical Corps' failure to adapt adequately to the contemporary operational environment for more than four decades. Without more significant initiatives and a major transformation, the Army's CBRNE defense community will continue the status quo, ultimately having no impact on altering the complacent mind-set or fixing previous mistakes.

The Army must reconsider in its entirety how it integrates CBRNE training and personnel throughout its operational forces. To better support the nation's CBRNE defense and combating WMD efforts, the Army must [1] facilitate a paradigm shift with regard to CBRN defense training, [2] improve the image of the Chemical Corps and CBRN Soldiers, [3] reorganize its CBRNE assets into a CBRNE branch by merging the Chemical Corps, Explosive Ordnance Disposal (EOD), and the Operation Support Career Field – Nuclear and Counter Proliferation Operations (Functional Area 52), and [4] provide better CBRN support to maneuver forces.

In an effort to offer viable and realistic solutions, this study will begin with a review of CBRNE defense doctrine and the Chemical Corps' role. Furthermore, a brief review of reports by the Government Accountability Office (GAO) on CBRN defense readiness and the Chemical Corps' century-long struggle to remain a branch within the Army will provide a background on why little has changed since Americans first entered World War I (WWI). After analyzing the Chemical Corps' role in combat operations since the end of the Vietnam War, this study will

conclude with potential solutions to the significant problems that plague the Chemical Corps and its role within the Army.

REVIEW OF JOINT AND ARMY CBRNE DOCTRINE

The National Security Strategy, published in March 2006, outlines key strategic threats against the United States. Preventing enemies from threatening our nation and its allies with Weapons of Mass Destruction (WMD) is considered one of the greatest risks.² The National Defense Strategy, published in June 2008, further outlines the objective of preventing adversaries from acquiring or using WMD by breaking it down into three key elements: [1] **Non-Proliferation (NP)** efforts to deny WMD and their components to adversaries; [2] active efforts to defend against and defeat WMD and missile threats before they are unleashed (**Counter Proliferation, CP**); [3] improved protection against WMDs in order to mitigate their consequences (**Consequence Management, CM**).³

The Department of Defense (DOD) Joint Publication (JP) 3-40, Combating Weapons of Mass Destruction, dated 10 June 2009, translates the guidance from the National Defense Strategy into an operational approach to Joint Force Commanders (JFC). This publication provides JFCs eight military mission areas (MMA) to combat weapons of mass destruction:

1. WMD security cooperation and partner activities (activities to improve or promote defense relationships and capacity of allied and partner nations to execute or support the other MMAs to combat WMD through military-to-military contact, burden sharing arrangements, combined military activities, and support to international activities)

2. Threat reduction cooperation (activities undertaken with the consent and cooperation of host nation (HN) authorities in a permissive environment to enhance physical security, and to reduce, dismantle, redirect, and/or improve protection of a state's existing weapons of mass destruction program, stockpiles, and capabilities)

3. WMD interdiction (operations to track, intercept, search, divert, seize, or otherwise stop the transit of WMD, its delivery systems, or related materials, technologies, and expertise. In peacetime, WMD interdiction operations are planned and executed in order to intercept dual-use materials and expertise in transit aboard nonmilitary transports)

4. WMD offensive operations (actions to disrupt, neutralize, or destroy a WMD threat before it can be used, or to deter subsequent use of such weapons improves or promotes relationships and capacity)

5. WMD elimination (actions undertaken in a hostile or uncertain environment to systematically locate, characterize, secure, and disable, or destroy WMD programs and related capabilities)

6. WMD active defense (active measures to defeat an attack with chemical, biological, radiological, or nuclear weapons by employing actions to divert, neutralize, or destroy those weapons or their means of delivery while en route to their target)

7. CBRN passive defense (passive measures taken to minimize or negate the vulnerability to, and effects of, chemical, biological, radiological, or nuclear attacks causing a high order of destruction or mass casualties. This mission area focuses on maintaining the joint force's ability to continue military operations in CBRN environments)

8. WMD consequence management (actions authorized by the Secretary of Defense to mitigate the effects of a WMD attack or event and restore essential operations and services)⁴

The Chemical Corps' role in the mission to combat WMD is outlined in Department of Army Pamphlet 600-3, Commissioned Officer Professional Development and Career Management. "... is a combat support branch ... and is focused primarily on war fighting operations and training that supports all aspects of combating weapons of mass destruction (WMD): nonproliferation, counter proliferation, and consequence management."⁵ By providing the Army and JFCs a trained corps of CBRN experts to advise commanders and staffs at all levels in the DOD on operations and training to support CBRN defense, the Chemical Corps doctrinally supports the national mission to combat WMD.

The reality is significantly different. Despite the Chemical Corps' designation as the Army's lead for combating WMD, it directly supports only three of the eight military mission

areas which are: WMD elimination, CBRN passive defense, and WMD consequence management. Areas of expertise within the Chemical Corps that specifically support WMD elimination include CBRN hazard characterization, disablement, and elimination support operations. The Chemical Corps supports passive defense through CBRN vulnerability assessment, CBRN reconnaissance, and WMD force protection programs. Lastly, the military mission area of WMD consequence management is supported through CBRN foreign and domestic consequence management, CBRN sensitive site exploitation, CBRN decontamination, and CBRN military support to civil authorities.⁶

The remaining five MMA are directly supported by the United States Army North (ARNORTH), the United States Army Special Operations Command (USASOC) and select personnel from the Explosive Ordnance Disposal career field, and the Operation Support Career Field – Nuclear and Counter Proliferation Operations. The Chemical Corps' lack of direct support to the remaining five MMA is a result of the Chemical Branch's failure to adapt to the contemporary operating environment and establish itself as an integral partner in the mission to combat WMD.

To be the Army's primary branch for combating WMD, the Chemical Corps must fundamentally change the way it integrates itself into operational units. Historically, many in the Chemical Corps have blamed the Army for lack of attention to the potential threat posed by WMD. In reality, given the Chemical Corps' 90 year struggle to survive, it is more reasonable to argue that it is the Corps' failure to integrate effectively and establish its own relevance that has allowed this situation to become institutionalized within the Army. The failure to put emphasis on CBRN defense is highlighted in Government Accountability Office (GAO) reports surveying CBRN defense readiness within the Army over the last two decades.

GAO REPORTS ON CBRN DEFENSE READINESS

The Government Accountability Office has conducted several studies on numerous aspects of combating WMD and CBRN defense within the armed forces. Commissioned by the U.S. Congress over concerns of a lack of focus on WMD preparedness, the studies routinely found shortcomings in the Army CBRN defense programs. For example, in a 1996 report, the GAO study on Chemical and Biological Defense within the DOD highlighted that maneuver units within the Army were inadequately trained to operate in a contaminated environment. Commanders from battalion level through Combatant Command almost unanimously responded to the GAO that “chemical and biological defense training is a low priority relative to their other needs.”⁷

A decade later in a 2005 GAO report of CBRN training at the Army and Marine Corps Combat Training Centers (CTC), the vast majority of units and individual Soldiers were inadequately prepared to respond to basic tasks (Skill Level 1) when attacked with notional chemical or biological agents. Basic tasks included contamination avoidance, individual protection, and individual decontamination.⁸ Lastly, a 2007 GAO report on the preparedness of Army Chemical units highlighted the “misalignment between the high priority DOD places on chemical and biological defense and the current low level of preparedness characterizing Army chemical units.”⁹ Despite repeatedly being made aware of these shortfalls, the Army has done little to change or improve CBRN defense training and integration into maneuver exercises. Furthermore, future GAO reports are likely to detail similar findings.

The Chemical Corps must accept the “misalignment” of DOD priorities and funding as the norm and stop spending manpower and resources attempting to change an established

unofficial policy that has existed for almost a century. The operational Army is not going to change its training concepts because it is possible there is a chance some unit will someday be attacked with WMD. A solution to ensuring Soldiers can execute the basic tasks to survive in a hazardous environment can only be found by the Chemical Corps spearheading a comprehensive reconsideration of how to integrate CBRN training and personnel throughout the Army. First however, it is necessary to study why CBRN defense has always remained a low priority during the tenuous 90-year history of the U.S. Army Chemical Corps.

THE CHEMICAL CORPS' 90-YEAR STUGGLE FOR SURVIVAL

Immediately following WWI, many leaders in the Army viewed the likelihood of future warfare involving chemical weapons as a remote possibility and also viewed chemical defense training as a distraction to preparing for future conflicts. As a result, the Army began the process of disestablishing the Chemical Warfare Service (CWS). If it were not for U.S. Congress and the industrial and political connections of General Amos Fries, the 'father' of the CWS, the U.S. Army would have abolished the Chemical Warfare Service in 1922. According to Dr. Burton Wright in his article "A Fight for Survival – The U.S. Army Chemical Corps and the Inter-War Years," GEN Fries along with his allies in the chemical industry used strong propaganda on the potential effects of chemical weapons to convince members of Congress to stop the Army from disestablishing the CWS. Additionally, strong rhetoric similar to what GEN Fries and his supporters used may have been why the Gas Protocol, which disavowed Chemical Warfare, was added to the 1925 Geneva Convention. Ironically, had the U.S. become a signatory to the convention and to the way it limited chemical warfare defense, it may have forced Congress to eliminate the U.S. Army Chemical Warfare Service.¹⁰

Four decades later in 1960, Colonel John M. Palmer, commander of the Chemical Corps Training Command, expressed concerns over the lack of chemical and biological defense training at the unit level. "Unfortunately, for 40 years, an aimless approach has largely characterized unit chemical warfare training in the U.S. Army. Much of the Army still appears to visualize chemical warfare, and related biological warfare training, as an annoying distraction from normal combat training."¹¹

A view of the Chemical Corps as an extraneous branch and chemical warfare training as a distraction from normal combat training has even made its way to the Chief of Staff of the Army (CSA). In his article for the Army Historical Foundation, "The US Army Chemical Corps: Past, Present, and Future," Al Mauroni summarizes the significant impact and obvious opinion General (GEN) Creighton Abrams had on the Chemical Corps when he became Chief of Staff of the Army (CSA).

On the same day that he was sworn into office (16 October 1972), the new Chief of Staff (GEN Abrams) fired off a memorandum to the Deputy Chief of Staff for Personnel to chair an ad hoc study group with the purpose of developing options to consolidate the Chemical Corps into other branches of the Army, with a deadline of 30 November 1972. The group's final recommendations included reducing the Chemical Corps as a special weapons department under the Ordnance Corps, moving the smoke and flame mission to the Engineers, and the protective clothing mission to the Quartermaster Corps. The Chief of Staff accepted these recommendations on 15 December, and Secretary of the Army Robert F. Froehlke agreed. The announcement to disestablish the Chemical Corps came on 11 January 1973.

General Abrams apparently felt the Chemical Corps was too technically focused and was not providing any relevant support to the Army as a Combat Support Branch. The U.S. Congress however did not agree with this recommendation, but tabled the issue until 1976 when, out of

concerns over Soviet chemical weapons development, Congress ordered Secretary of the Army Martin Hoffman to reestablish the Chemical Corps.¹²

At approximately the same time, Lieutenant Colonel Douglas Guiler wrote an article in *Army Magazine* entitled, "Chemical Corps: A Branch In Search of an Identity." LTC Guiler highlights in his article that the Chemical Corps has been fighting for survival and relevance since the end of the First World War and continues to struggle with this into the late 1970s, over half a century later. He points to lethal chemical weapons having only been used tactically once in the last 60 years (World War I) as a possible reason why the Chemical Corps struggles to remain a branch in the Army. Finally, he concludes by stating the Chemical Corps could be its own worst enemy. An example is the excessive emphasis on CBRN defense preparedness by chemical officers and noncommissioned officers. These Chemical Soldiers have a propensity to exaggerate the threat or the importance of conducting extensive CBRN training during exercises or pre-deployment training.¹³ By repeatedly and persistently pushing CBRN defense training within maneuver units in the Army, Chemical Soldiers alienate themselves and erode the possibility of conducting any such training. By reducing the number of CBRN defense training requirements and dropping the excessive emphasis on the threat from WMD, chemical officers and noncommissioned officers are far more likely to integrate the few essential CBRN defense tasks into unit training, a topic explored in greater detail later in this study.

While there have been periods of higher level of WMD threats, such as plans developed by the Soviet Union in the 1960s to use chemical and biological weapons, the threat has been excessively emphasized by CBRN defense personnel. In the case of the U.S. Army Chemical Corps, the embellishment of the likelihood and threat posed by WMD that LTC Guiler addresses in his article has more to do with the checkered history of the Chemical Corps than an actual

threat from chemical or biological weapons. Members of the Chemical Branch have an interest in promoting their occupation given the Army-wide lack of focus on CBRN defense and previous attempts to disestablish the Chemical Corps. Unfortunately, this ideology of exaggerating the threat has persisted since the end of World War I (WWI) and is repeatedly reinforced in the minds of every service member who passes through the U.S. Army CBRN School (USACBRNS) at Fort Leonard Wood, MO. With the events of WWI as a historical reference, the USACBRNS inculcates in CBRN Soldiers the dogma of using persistent and relentless pressure on Commanders throughout the Army to incorporate CBRN defense into training and maneuver exercise.

Leaders in the Army have routinely responded by treating operations in a CBRN environment as a separate form of warfare, and not worth the training resources to prepare for the potential threat.¹⁴ The lack of concern for CBRN readiness can be traced all the way back to WWI and even existed on battlefields where chemical weapons were actually being used! In March of 1918, while visiting an Army Expeditionary Force (AEF) Infantry Regiment engaged in combat with the German Army, a Chemical Warfare Service officer wrote in his report:

Many soldiers and officers were found without proper gas protection, that is, the respirators either not in the 'alert' position or no respirators at all. None of the dugouts were properly protected against gas.... No first aid appliances for the treatment of gassed men were observed.¹⁵

This attitude has endured among maneuver units and leaders in the Army. In recent decades, despite the perceived threat of chemical or biological weapons during the Soviet-Afghan war, Iran-Iraq war, Desert Storm in 1990-1991, and especially in light of the failed attempt to find WMD in Iraq in 2003, commanders across the Army continue to view CBRN defense training as a distraction to preparing for current and future conflicts.

If the Army cannot get its Soldiers to prepare and defend themselves in combat, as experienced in WWI, how can it ever expect to do it in limited engagements or even peacetime? The solution to this problem is twofold. First it involves a paradigm shift in the way CBRN training is handled and integrated in unit level exercises and secondly, it involves acknowledging and educating Soldiers about the possibility and likelihood of a CBRN threat.

PARADIGM SHIFT IN UNIT CBRN DEFENSE TRAINING

The reality, albeit unpopular within the CBRNE defense world, is that Soldiers given the CBRN defense equipment available to military service members can survive an attack by an adversary and operate in a chemical, biological, or radiological contaminated environment with little to no training. An attack on U.S. forces would likely cause inconvenience rather than high numbers of casualties. While world history is replete with examples of **unprotected** individuals becoming casualties from exposure to chemical, biological, or radiological contamination, current equipment, as well as emerging material solutions such as the M50 and M53 protective masks issued to service members throughout the DOD, offer adequate protection from any likely chemical, biological, or radiological threat. Due to the low likelihood of a WMD attack against U.S. Forces (as evidenced by the two recent wars in Iraq and other foreign military engagements over the last 90 years), the ample protection offered to every service member, and, the minimal training required to survive in these environments, it is imperative that Soldiers are educated on the actual threat from WMD. This education should include teaching Soldiers that current CBRN defense equipment and the basic tasks of contamination avoidance, individual protection, and individual decontamination are adequate for surviving in any credible and real threat that U.S. forces face today. Continuing to exaggerate the risk or the value of conducting extensive

CBRN training during exercises or pre-deployment training dissuades Army leaders from conducting any training, dilutes the actual threat, and is overall a disservice to the entire Army.

Leaders in the Chemical Corps and Army should instead focus on those critical tasks essential to survival in a CBRN environment. The June 2009 edition of the Army Soldier's Manual of Common Tasks – Warrior Skills Level 1 (STP 21-1-SMCT) outlines 15 CBRN related tasks on which every Soldier in the Army must train semi-annually or annually.¹⁶ These tasks include:

1. Decontaminate Yourself and Individual Equipment
2. Respond to Depleted Uranium
- 3 – 4. React to Chemical, Biological, or Nuclear Hazard/Attack
5. Mark CBRN-Contaminated Areas
- 6 – 10. Service and Operate the AN/VDR-2, VDR-13, PDR-77, ICAM
- 11 – 12. Maintain and Use the Protective Mask
13. Detect Chemical Agents using M8 or M9 Detection Paper
14. Change Protective Equipment in a Contaminated Environment
15. First Aid for Nerve Agent Injury

Additionally, the September 2008 Soldier's Manual of Common Tasks – Warrior Leader Skills Level 2, 3, and 4 (STP 21-24-SMCT) provides nine additional tasks on which every sergeant, E-5 through senior non-commissioned officer must train on-top of the 15 outlined in STP 21-1-SMCT.¹⁷ These include:

1. Identify Chemical Agents using M256A1 Kit
2. Conduct Unmasking Procedures
- 3 – 4. Submit CBRN Reports 1 and 4
5. Supervise Marking CBRN-Contaminated Areas
6. Conduct Mask Fit Test with M41 Protection Assessment Test System (PATS)
7. Implement Mission Oriented Protective Posture (MOPP)
8. Cross a Contaminated Area
9. Prepare for a CBRN Attack

In actuality, few units train on any of these 24 tasks on a semi-annual, or even an annual basis, instead leaders prioritize what are perceived as more important training requirements. As

a consequence of the excessive number of tasks placed on Soldiers and the norm of low priority for CBRN defense, when units do execute CBRN training it results in nothing more than Soldiers going through the motion. Little if any retention or experience is gained from most unit level CBRN exercises. A potential solution to this problem is to reduce significantly the CBRN defense training requirements placed on Soldiers and units.

Because of the limited threat posed from WMD as discussed above in the previous paragraphs, the need to conduct extensive CBRN training is overstated. Minimum training requirements should focus on higher priority tasks that are essential to survival, such as contamination avoidance, individual protection, self/buddy aid and individual decontamination. Moreover, depending on the specific mission assigned to a brigade or battalion, other CBRN tasks can be trained to a higher level of proficiency.

Reducing the standard requirements would limit training to only six skill level 1 tasks:

1. Decontaminate Yourself and Individual Equipment
- 2 – 3. React to Chemical, Biological, or Nuclear Hazard/Attack
- 4 – 5. Maintain and Use the Protective Mask
6. First Aid for Nerve Agent Injury

Doing so would also reduce to two the number of skill level 2 tasks required:

1. Identify Chemical Agents using M256A1 Kit
2. Submit CBRN Reports 1

In addition to the Soldier's Manual of Common Tasks, the August 2008 Rifle Marksmanship Training Manual (FM 3-22.9) outlines the requirement to fire 20 rounds from a weapon semi-annually while wearing full MOPP ensemble as a familiarization exercise.¹⁸ Unfortunately, a familiarization exercise with 20 rounds of ammunition twice a year provides no benefit to Soldiers and reinforces the frustration by commanders and leaders when deciding between CBRN training and other obligations. When units do execute weapons firing in MOPP,

it becomes a finger drill and is the quintessential example of checking the box to meet established training requirements. If being proficient at firing a weapon while in full MOPP ensemble is the expectation, a Soldier would need to fire 30-60 rounds at least once a week. Firing 20 rounds twice a year is significantly short of what is necessary.

Reducing the CBRN training requirements placed on Soldiers and units would have two significant impacts. First, CBRN personnel throughout the Army would be asking unit commanders and leaders for considerably fewer training resources to execute critical CBRN training. Secondly, by adjusting the training requirements CBRN personnel must implement in their units, they gain credibility with their leaders, peers and subordinates. This second benefit cannot be overstated. One area of major concern with the Chemical Corps is a lack of credibility within the Army, which is discussed in further detail later in this study. Reducing the burden CBRN Soldiers place on their leaders and units would make large inroads to improving the perception of chemical officers and NCOs throughout the Army. For the Army to continue to push extensive CBRN training and turn a blind eye to what actually takes place at the unit level is foolish and is the very reason maneuver commanders' emphasis on CBRN defense training has not changed in the last 90 years.

THE ROLE OF CHEMICAL UNITS IN THE MODERN ARMY

In the decades following the Vietnam War, the threat of tactical nuclear and chemical weapons by the Soviet Union grew considerably larger and as a result the Army attempted to put more emphasis on CBRN defense training, exemplified by the reinstatement of the Chemical Corps in 1976. However, actual combat operations conducted by U.S. forces in the last 40 years rarely involved the Chemical Corps executing CBRN related missions. With the exception of

the first Gulf War and the lead up to Operation Iraqi Freedom, the Chemical Corps has played an insignificant role in the Army's training, operations and deployments since the end of the Vietnam War.

During the Operations Desert Shield and Desert Storm, the lack of proficiency at CBRN defense tasks was evident across the Army. Forward deployed units were given an opportunity to rectify this by executing chemical and biological defense training in the six months between August 1990 and the ground invasion in February 1991. Additionally, the Gulf War highlighted the severe lack of CBRN defense equipment and vaccine stocks available to Soldiers and Marines deploying to the Middle East.¹⁹ Following the Gulf War, major strides were made in CBRN defense equipment stocks and logistical support throughout DOD.²⁰ However, prior to the start of OIF, in March 2003, while CBRN defense equipment stocks were plentiful and able to support the combatant commander, training had once again taken a low priority.

During the buildup of forces in Kuwait prior to the start of Operation Iraqi Freedom, chemical units were tasked to execute numerous menial tasks in lieu of CBRN passive defense operations and training for the impending invasion.²¹ Even in the face of the perceived possibility of chemical or biological attacks from Iraq, maneuver commanders elected to use chemical units for everything except CBRN tasks. While some units and individual Soldiers attempted to integrate CBRN defense into their pre-deployment training, it quickly became of little concern for commanders or their Soldiers within the opening days of the ground invasion into Iraq.

As of early 2010, aside from a technical escort company executing remediation and hazardous response missions in Iraq and one conventional chemical company in Kuwait providing decontamination support to U.S. Central Command (CENTCOM) area of

responsibility (AOR), chemical units continue to deploy to conduct in lieu of missions. For example, throughout a recent deployment to Afghanistan, the 23d Chemical Battalion conducted base defense and executed route security patrols. For the CBRN reconnaissance platoons, conducting CBRN-related missions is the exception, not the norm, during deployments to the CENTCOM AOR.²² In Afghanistan during a recent deployment, the CBRN reconnaissance platoon assigned to the 3rd Brigade Combat Team, 10th Mountain Division executed detainee operations.²³

These ILO missions were assigned to chemical units due in large part to the lack of a CBRN threat in the AOR. Moreover, every branch in the Army has been forced to adapt and transform to increase relevance in the contemporary environment in Afghanistan and Iraq. The Chemical Corps must also be flexible and able to work outside its primary occupation specialty, just like the rest of the Army has been forced to do. However, if the Chemical Corps only has two companies forward deployed executing CBRN defense operations, while the remainder of the branch provides support to the Army in roles other than the primary occupation, it brings into question the relevance of the organization.

CREDIBILITY OF CHEMICAL CORPS SOLDIERS

COL Anthony Skinner argues in his U.S. Army War College Strategy Research Project, “it will take a disaster of monumental proportions before CBRN readiness and preparedness will ever be adequately addressed.” He continues by arguing “if Saddam Hussein had employed chemical or biological weapons against U.S. forces, emphasis and training readiness would no longer be an issue.”²⁴ This premise is flawed. The lack of interest in CBRN defense over the last 90 years suggests that commanders and Army leaders are not going to raise the priority of

CBRN defense even if the threat is high. In the case of the initial invasion of Iraq in 2003, had an Army or Marine unit been hit with chemical or biological weapons, it is safe to assume the response by CENTCOM to remediate the contaminated unit would have been swift, given the number of coalition forces and resources in Kuwait and Iraq. While such a scenario would have caused an immediate heightened sense of awareness among coalition forces in theater, any increased interest would have been short-lived. History has proven that the U.S. Army has little interest in CBRN defense, and to assume that an attack by a modern adversary would change the Army's longer-term priorities is excessively optimistic. Regrettably, the Chemical Branch and its leadership embrace this rhetoric and encourage CBRN Soldiers to be excited about providing non-CBRN support to units, because 'one day their time will come when their unit really needs them in their trained occupation.'

COL Skinner goes on to address the reduction in grade of authorized chemical officer positions at senior levels of the Army such as division and corps commands. Positions once filled by Colonel, O-6 are now staffed with Lieutenant Colonel, O-5. He offers the assessment that this reduction in rank reflects the lack of emphasis, and to a degree respect, in Chemical military occupation specialty (MOS) authorizations throughout DOD.²⁵

While the Chemical Corps has been focused on elimination, passive defense and consequence management, it is, according to AR 600-3, the Army branch primarily focused on supporting all aspects of combating weapons of mass destruction (WMD), to include counter proliferation.²⁶ However, assignments to major DOD commands responsible for CBRNE defense and combating WMD reflect the lack of emphasis on Army CBRN specialists, especially when compared to the Nuclear and Counter Proliferation Operations career field. For example, in the U.S. Strategic Command (STRATCOM), an organization of over 2000 personnel

responsible for integrating and synchronizing DoD's efforts for combating WMD, the FA 52 career field has authorizations for 13 personnel, compared to only six for the Chemical Corps. At the Defense Threat Reduction Agency (DTRA), the DOD combat support agency for countering WMD, authorizations for Nuclear and Counter Proliferation Operations personnel sit at 76, while the Chemical Corps has increased authorizations in the last three years to a total of only 19 personnel. Lastly, in the U.S. Northern Command (NORTHCOM), responsible for the coordination with civil authorities in the event of a domestic incident, to include CBRNE event response, the Chemical branch has authorizations for three personnel,²⁷ while FA 52 has twice that number.²⁸

COL Skinner is correct when he states there is a lack of respect for CBRN personnel. Specifically, within the Army, there is a systemic problem with how chemical personnel are viewed by other branches and Army leaders. Simply put, the Chemical branch has an image problem that has had and continues to have a direct impact on the personnel assessed into the branch, as well as an enormous impact on the emphasis placed on CBRN defense and training by unit commanders. The lack of respect for the Chemical branch is evident by the low percentage of ROTC cadets requesting to be Chemical Officers. For the last four years, within the Army's Maneuver, Fires, and Effects (MFE) branches, the Chemical Corps has had the lowest popularity among ROTC cadets. The disparity is astounding. The MFE branches have an average of 113% when comparing the number of allocated positions with the number of cadets requesting assignment to those positions. Unfortunately for the Chemical Corps, that same comparison sits at just 22.6%.²⁹

Maneuver, Fires and Effects (MFE) Branch Popularity 2007-2010			
Officer Branches	Allocated Positions	Cadets Requesting the Branch as their first choice	Ratio of positions available to positions requested
Chemical	243	55	22.6%
Armor	477	873	183.0%
Aviation	529	954	180.3%
Infantry	972	1646	169.3%
Military Police	381	551	144.6%
Engineers	664	841	126.7%
Field Artillery	784	347	44.3%
Air Defense Artillery	304	109	35.9%
		MFE Average	113.3%

The United States Military Academy (USMA), the largest commissioning source for officers coming into the Army, on average commissions only eight or nine cadets each year into the Chemical Corps. When compared to the 1,100 cadets that are commissioned at USMA into the Active Army, these eight or nine make up less than one percent of the entire graduating class.³⁰ The Chemical Corps has an image problem that continues to negatively impact the number of future leaders that are interested in serving as Chemical officers.

Finally, when Army CBRN personnel exaggerate the threat and likelihood of a CBRN threat, they lose credibility with their commanders and superiors, further eroding the view of the Chemical Corps. The approach of embellishing the threat and over emphasizing the requirement to conduct CBRN defense training, often results in unit commanders and senior staff dismissing CBRN personnel and relegating them to remedial duties and non-CBRN staff work. If it wants to become relevant, the Chemical Corps needs to reevaluate the role of its Soldiers on staff within the Army and DOD and how they integrate into the nation's defense.

CREATING A CBRNE BRANCH

A potential solution to transform how CBRN personnel are integrated into the operational Army and to improve how Soldiers and leaders view CBRN defense training would be to create a CBRNE branch within the Army and a CBRNE Center of Excellence at Fort Leonard Wood, MO. A CBRNE branch would evolve by integrating the Chemical Corps, the U.S. Army Explosive Ordnance Disposal (EOD), and Operation Support Career Field – Nuclear and Counter Proliferation Operations (Functional Area 52) into a single community. This combination would more effectively combat the spread of weapons of mass destruction (WMD) and defend the nation against a CBRNE threat.

The Army has already addressed some of the CBRN defense deficiencies highlighted above within the deployable forces by creating the 20th Support Command (SUPCOM) (CBRNE). The new command, established in October 2004, is staffed and organized with chemical, EOD and FA 52 Soldiers and units, simplifying the Army's ability to respond operationally to CBRNE threats. The 20th SUPCOM continues to propagate the concept of consolidation with the proposed creation of CBRNE brigades by transforming the 52d EOD, 71st EOD, and 48th CM BDE into CBRNE units. The proposed mission statement for a CBRNE brigade is:

CBRNE Brigade Headquarters provides command and control of assigned and attached organizations to conduct expeditionary full spectrum operations to defeat, reduce, or eliminate Weapons of Mass Destruction (WMD), Unexploded Ordnance (UXO), or Improvised Explosive Devices (IED) incidents in order to support Operational Forces and National Combating WMD Objectives.³¹

As highlighted earlier in the study, the Chemical Corps is supposed to be the Army's operational-response capability against CBRN threats and the branch primarily focused on

supporting all aspects of combating WMD. The explosive ordnance disposal occupation is assigned to the Ordnance Corps, a functional branch within the Logistics Corps and provides the Army an operational-response capability for weaponized CBRNE. EOD Soldiers plan, develop, advise, integrate, and execute the render safe operations of chemical, biological, radiological, nuclear, and Explosive Ordnance Disposal.³²

The EOD occupation is assigned to the Ordnance Corps due to the historical ties to ammunition handling, ammunition supply point (ASP) support, and combat support operations. However, due to the outsourcing of almost all ammunition management within the Army, EOD personnel have become the small, but highly popular, stepchild to the predominantly maintenance-focused Ordnance branch. Additionally, EOD Soldiers are predominantly executing missions in combat as members of maneuver units and not combat support units. Several previous attempts to consolidate chemical and EOD into a single branch may have been thwarted by senior ordnance and logistics officers because of historical lineage and the popularity and notoriety EOD missions bring to the ordnance branch.

As the Ordnance branch has become more maintenance-focused and has been absorbed by the Army Logistical Corps, the EOD connection with ordnance has become nonexistent. The lack of a correlation between EOD and ordnance has become painfully evident for EOD officers who attend the Combined Logistics Captains Career Course (CLC3) at Fort Lee, Virginia. Unfortunately, because EOD officers are not logisticians, CLC3 does not provide any instruction specific to their career field and does nothing to further enhance an EOD officer's operational readiness. It is worth noting that merging the chemical branch and EOD has already happened twice in history in April 1941 when the EOD specialty was created by the Department of War, and in 1972 when the Chemical branch was disestablished.³³

Finally, the FA 52 personnel provide knowledge and expertise in nuclear-related combating weapons of mass destruction (WMD) mission areas to support the development of national and military strategy, plans and policy.³⁴ With the creation of a CBRNE branch, it is important to maintain FA 52 as an Operation Support Career Field with leadership and oversight provided by the CBRNE Branch Commandant. Sustaining FA 52 as a separate functional area supporting the CBRNE branch would continue to provide interested officers an opportunity to serve outside their basic branch, while earning graduate level education and participate in the Nuclear and Counter Proliferation Operations field. A great example of a similar relationship already exists between ISCF Strategic Intelligence (FA 34) and the military intelligence branch. The Commanding General, U.S. Army Intelligence Center and Military Intelligence Branch, serves as the proponent for FA 34.³⁵ Since 1995 there have been several initiatives to integrate FA 52 with the Chemical Corps, but due to conflicting requirements and the personalities of the branch leaders, these attempts were unsuccessful. Ultimately, if the Army can merge the deployable and operational CBRNE forces, it would also be beneficial to amalgamate the administrative, doctrinal, and training CBRNE assets as well.

By creating a single CBRNE branch, MOS and supporting institutional support career field, the Army will have a single career field and center of excellence for all matters relating to combating WMD and CBRNE defense. Additionally, a single branch establishes one commandant to coordinate and influence all doctrine supporting CBRNE operations and training, and ensures all CBRNE Soldiers speak a common language within a very technical field. The resulting standardization of doctrine, organization, training, material, leadership, personnel, and facilities (DOTMLPF) solutions to counter CBRNE threats will eliminate redundancy and

establish one standard for all CBRNE training and operations, creating the best possible defense for the Army against threats from WMD.³⁶

Proposed missions for the newly established CBRNE Branch missions would include:

1. War fighting operations and training in support of CBRNE defense of Joint Forces.
2. Army WMD force protection, interdiction, and elimination programs.
3. CBRNE munitions technology and management.
4. The identification, locating, rendering safe, handling, removal, and disposition of U.S. and foreign unexploded conventional, nuclear, and chemical munitions.
5. Support to civil authorities with CBRNE domestic protection programs.
6. WMD threat reduction cooperation with host nation authorities

These six mission areas would establish the proposed CBRNE branch's role in all eight combating WMD military mission areas outlined in JP 3-40, while facilitating better communication and consistent effort between all Army organizations charged with combating WMD. Simply stated, a single branch expanded to encompass the broad scope of CBRNE threats and defense would provide missions of critical national importance, and a relevant corps of personnel to tackle these asymmetric threats.

Additional benefits from consolidating two branches and a functional area are the consolidation of three Training and Doctrine Command (TRADOC) training centers currently located at Fort Belvoir, VA, Fort Leonard Wood, MO, and Redstone Arsenal, AL, and the elimination of redundancy at the Human Resources Command (HRC). These resulting benefits would allow the Army to reallocate positions to better support manning shortages in the brigade combat teams, as well as potentially providing significant cost savings for TRADOC and HRC.

CHANGES TO CBRN SUPPORT TO THE OPERATIONAL ARMY

There are several key changes that can be made to the Chemical Corps for it to become a more relevant branch to the operational Army. In addition to reducing the training requirements placed on Army units, it would further enhance the credibility of CBRN officers within battalions and brigades if commissioned officers were replaced with warrant officers. The Chemical branch has already implemented plans to replace commissioned officers with warrant officers in non-maneuver units such as aviation, field artillery, and military intelligence. Making a similar change in Infantry and Armor units would be a sensible option. The impetus for changing the grade of CBRN officers assigned to battalions and brigades in maneuver units is the technical and CBRN expertise, as well as the continuity, which warrant officers offer to the various staffs. Additionally, most warrant officers have 8-10 years of enlisted experience as combat leader, trainer, and advisor.³⁷ Such experience is more likely to be openly received and considered by commanders and fellow staff. Warrant officers obviously do not outrank lieutenants; however, like senior noncommissioned officers, unit commanders and operations officers are much more willing to accept the recommendations of a CBRN Soldier with 8-10 years of experience than a new lieutenant out of the officer basic course. Providing units this type of personnel would go a long way to assist in better integrating CBRN defense training into unit training schedules and enhance the credibility of CBRN officers within the operational Army.

Other viable options that would enhance Chemical Corps or proposed CBRNE branch support to the operational Army would be the introduction of equipment such as the Expeditionary Analytical Capability (EAC). This equipment set provides CBRNE personnel the

means to do sensitive site assessment (SSA) in austere locations with limited resources. The Expeditionary Analytical Capability was developed by U.S. Special Operations Command (SOCOM) and is currently in use by U.S. Army Special Forces Chemical Reconnaissance Detachments (CRD). An additional skill the Chemical Corps or proposed CBRNE branch could adapt and develop is the mission of post-nuclear detonation ground debris collection. This capability, referred to as National Technical Nuclear Forensics (NTNF), provides the DOD leadership with accurate forensic evidence for attribution purposes.³⁸ By becoming an integral piece in the emerging science of post-nuclear detonation ground debris collection, the Chemical Corps would further expand its relevance and provide DOD a unique capability.

Lastly, the Chemical Corps should take the lead in developing CBRN personnel protective equipment (PPE) technology to further ensure a Soldier's survivability in a hostile environment. While potentially a long term option, serious emphasis, funding, and research should continue to be placed on an initiative to develop a combat uniform that provides personal protection against such threats, similar to the Natick Research Labs Future Soldier Initiative.³⁹ Using nanotechnology and other emerging sciences, a solution is within the realm of possible and a viable option ensuring that Soldiers constantly wear their CBRN protective ensemble. Comparable to the introduction of body armor to the modern Army and Marine Corps, issuing a combat uniform with embedded CBRN protective qualities would ensure PPE becomes as ubiquitous as the Interceptor Body Armor, continuously worn by every Soldier in combat and in training.

CONCLUSION

Fundamentally reconsidering how the Chemical Corps integrates CBRN training and personnel throughout the Army would provide viable and realistic solutions toward making the Chemical Corps a relevant branch to the operational Army, as well as reducing the stigma of CBRN defense training. The efforts described above are not a panacea to fix all the problems that exist within the Army's support to the national mission of countering WMD; nor will these changes instantly improve the way CBRN officers and enlisted are utilized by their chain of commands. However, they would represent significant, if not dramatic, strides to enhancing the quality of CBRNE specialists serving throughout the Army and assigned to joint billets, while improving or reinforcing Soldier readiness to survive in a CBRN environment.

Several of these changes will require Army senior leadership to prioritize efforts, requirements and capability development across the spectrum of CBRNE in order to establish effectively a new branch and better prepare our Army to counter WMD threats. Ultimately, the creation of a CBRNE Corps would maximize the capability within the Army to better support the National Security Strategy and the nation's efforts to combat WMD. Without significant changes to the Army's approach to CBRNE defense, 90 years from now the GAO will still be studying why CBRN readiness is so low, and the Chemical branch will still be lamenting its irrelevance.

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