Shifts in the Army and the Chemical Corps: *Our Relevancy and the Way Ahead*

By Captain Sarah E. McKay

When the Fukushima Daiichi nuclear reactor disaster occurred as a result of the 11 March 2011 Tōhoku earthquake and tsunami off the eastern coast of Japan, my husband sent me an e-mail message with the subject of "Your branch just became relevant again." He has questioned the relevancy of the Chemical Corps before, and I'm sure he will again. Many of my peers in other branches have similar questions; they ask what I do besides unit status reports. While they may think they're being funny, I usually take offense. As the Army's smallest—but most versatile—branch, why do we continue to be misunderstood and misused?

Since the inception of the Chemical Corps during World War I, we have continually adapted and changed—something most other branches have not been able to accomplish. The Chemical Corps continues to shift with the changing times, and our shifts tend to correlate with shifts in the Army—whereas branches such as those of the engineer and infantry do not change much in size along with the Army's downsizing or increase in troops. The engineers continue to build bridges and the infantry continues to march, while the Chemical Corps adapts and changes. Chemical, biological, radiological, and nuclear (CBRN) Soldiers are constantly challenged with changes in enemy tactics and civilian disasters, yet no one seems to know what the smallest branch in the Army really does.

By War Department authority, the Chemical Warfare School was established at Edgewood Arsenal, Maryland, in September 1920. The true origin can be traced, though, to Lakehurst Proving Ground, Lakehurst, New Jersey, where the first course was held from 5 January to 31 March 1920. The Chemical Warfare School revised its curriculum in 1942 to include the Unit Gas Officer's Course for aviation assets, the Unit Gas Officer's Course for line units, and naval chemical courses, which were offered only in the spring and fall. Each course was 4 weeks long, and Soldiers from fire and police departments were trained in defending against chemical attacks.[1]

The Engineer and Infantry Branches have been around for many more years than the Chemical Corps, but both their missions have remained similar in theory and practice. The Engineer Corps was established with the goal of producing engineer officers who were well versed in civil engineering and in the tactics and techniques of engineers. The main objective was to increase the effectiveness of combat troops by improving routes of communication, creating and destroying obstacles, and aiding in the construction of protective works. All of these tasks are comparable to tasks currently taught at the Engineer School. Engineers continue to create and destroy obstacles and provide construction assets as needed. Route reconnaissance has now been incorporated as an engineer function; however, even that could be considered "improving routes of communication."[2]

Meanwhile, the Infantry School curriculum originally included courses on battalion command and staff officers, rifle and heavy-weapons company officers, and officer motor maintenance. The objectives of the school were to teach detailed infantry tactics and techniques and to present a working familiarity with the tactics and techniques of the associated arms to build competent leaders for all infantry units and to provide qualified instructors as needed. These objectives are almost identical to those of the Infantry School today, which are to "educate, train, and inspire infantry lieutenants so that, upon [Infantry Basic Officer Leadership Course] graduation, they demonstrate the competence, confidence, physical and mental toughness, and moral/ethical fiber necessary to lead platoons in any operational environment."[3]

The Chemical Corps did not exist before the start of World War I, but after the first German use of chlorine gas on British and French troops on 22 April 1915, the United States realized a need for some sort of specialized chemical branch, as the infantry had no way of combating this new type of warfare. The Chemical Warfare Service (CWS) was created on 2 June 1918. It is estimated that, by the end of World War I, 91,198 Soldiers—including some Americans—died as a result of chemical weapons.[4] However, between World War I and World War II, this death toll became irrelevant; and the Chemical Corps was nearly disbanded. The United States had successfully won a war against the German Empire and no longer saw a need for large numbers of Soldiers, so the CWS underwent its first reduction. A lower budget and threats of cutting the program altogether would have rendered the United States crippled against future chemical threats. Fortunately, the Army elected to keep the CWS with the hopes of experimenting on offensive and defensive chemical weapons.[5]

By World War II, CWS troops were using smoke operations and flame weapons in the European and Pacific Theaters. The Japanese continued to use biological weapons against the Chinese, while the Germans were quickly developing nerve agents that could kill within minutes. The infantry could not combat these new threats. The Army needed to adapt to meet the possible threats from the enemy, and they needed the help of a branch of service that was equally adaptable. Once again, they looked to the smallest branch for assistance. Infantry and armor units depended on smoke-generating units to provide cover for crossings and troop movements. The CWS was again expanded to manage the growing demand. This may have been a turning point for the Army and the Chemical Corps—a point where the Chemical Corps would continue to change and evolve as the Army's mission and tactics changed and evolved.

Soldiers wear early model gas masks.

At the end of World War II, the CWS was redesignated as the Chemical Corps and chemical and biological weapons improvements continued. More improvements, such as "people sniffers" and thicker fuel flames, were made during the Korean War. The fuel was reportedly used to clear large areas for mines and booby traps and to prepare areas for helicopter landings,[6] much like the route clearance operations that engineers conduct today. Not only were chemical Soldiers responsible for hiding troop movements, they were apparently also responsible for clearing the way prior to movement. How much more versatile could such a small organization be? It is difficult to imagine that the Chemical Corps could be considered irrelevant.

The post-Vietnam era presented yet another threat of shutdown for the Chemical Corps. As the extensive number of drafted troops were let go, the size of the Army shifted downward. And so, too, did the size of the Chemical Corps—but, again, too soon. The subsequent Russian threat brought the Corps back to life; and, once again, we met the Army's need to defend—this time, against our Cold War enemy. Figure 1 illustrates the high degree of threat that would have been posed by the Russians had a chemical or biological agent been released. While the Army found new ways to protect the United States from a possible Russian nuclear attack, the Chemical Corps found possible ways to combat ever-growing Russian chemical and biological weapon capabilities. As the United States ended all offensive aspects of the chemical-biological (CB) weapons program in the late 1960s to mid-1970s, the Chemical Corps continued to develop tactics, techniques, and procedures to protect the force.

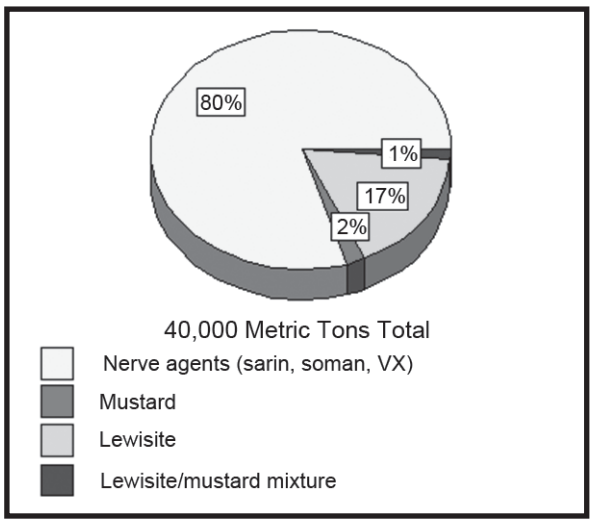

Figure 1. Chemical agents in the Russian stockpile

The end of the Cold War brought some relief to the Chemical Corps, but domestic chemical threats still loomed. In 1982, several young adults were struck ill with cyanide poisoning after ingesting tainted Tylenol® capsules. Similar incidents occurred in 1986 with packages of Sudafed® and Lipton Cup-a-Soup™. These incidents could not be fought with traditional tactics. The need for specialized teams was recognized, and civil support teams were established to protect U.S. citizens from such attacks.

Shortly after these incidents, the Army began to transform once again—this time, to enter Iraq in support of Operation Desert Storm. The importance of the Chemical Corps was realized before the invasion, since a chemical attack similar to that mounted by the Germans in World War I was possible—but this time, the technology was predicted. Saddam Hussein, the president of Iraq, was known to have used chemical weapons against the Kurdish people in northern Iraq in 1988. If Hussein would use chemical weapons on his own people, what would stop him from using them on American troops? Again, the smallest branch in the Army became more relevant among the

force. Extensive training prepared the troops for the fight; fortunately, the training was not necessary. The second invasion of Iraq would be quite different.

Several of my close friends participated in the 2003 invasion of Iraq, and every single one of them complains about the days they spent wearing joint-Service, lightweight, integrated suit technology with an M40 gas mask on their hip, ready for any sign of a chemical attack. A few of them experienced brief moments of panic when some chlorine tanks exploded; but thankfully, the vapor burned off too quickly to cause damage. The fact that the terrorists knew that chlorine vapor clouds would be deadly to the troops revealed their knowledge of modern-day chemical warfare. They attempted to defeat our troops by using tanks and homemade chemical explosives. Although CBRN training has traditionally taken a backseat to infantry tactics, I believe that CBRN training is equally important.

It is difficult to recognize and find the current enemy. And because advances in technology are making it easier to activate and use chemical weapons with only a basic knowledge of toxic industrial chemicals, these terrorists are capable of crippling our forces. While the widespread use of chemical weapons is not a critical concern at this point, is the Army willing to wait until it is a concern to realize the importance of the CBRN Soldier?[7] Yet, CBRN Soldiers are being taken from our companies; we are being downsized.

Today, we are dealing with a CBRN crisis—not in a combat zone, but in an area of the world in which we have worked for more than 60 years. The Fukushima Daiichi nuclear reactor disaster brought the realities of CBRN defense to the surface in a major way. Most of our peers and colleagues do not even know what CBRN stands for—let alone that CBRN Soldiers handle radiological events. However, Operation Tomodachi—which was carried out in hopes that injuries and secondary hazards could be limited and fixed—included members of CBRN programs from all military branches. Many of our peers and colleagues were shocked when the Army sent a chemical unit from Hawaii to help support the operation.[8] But what other branch of the Army is capable of providing the extensive support and aid that the Chemical Corps can?

CBRN threats are found in every corner of the globe, and the Chemical Corps has the means to combat these threats. More Regular Army CBRN Soldiers should be trained on how to handle domestic and international CBRN incidents such as the disaster that occurred in Japan, making our troops more versatile. Advanced individual training and basic officer leader's courses should not be limited to military-focused training, but should cover full spectrum CBRN operations so that Soldiers can improve their knowledge base and gain greater versatility. We will not move forward until the Army understands the vital daily importance of the Chemical Corps in garrison and combat environments.

As conflicts end, we historically experience a downward shift in numbers; yet at the beginning of the next conflict, we again rise to meet the demand. Doesn't our Corps deserve to remain at constant strength? The Army has now begun downsizing following our most recent conflict; and as always, the Chemical Corps will soon follow. However, removing Soldiers from company level units not only limits those units, but the Army as a whole. And when our expert knowledge is lost, we become even more irrelevant in the eyes of other branches. Let's try to change that attitude. Let's keep pace with the changing times through continued research and constant CBRN training. After all, the threats will only get worse as time goes on; advances in antibiotic-resistant bacterial strains—some of which can be weaponized—will continue.

Elementus, regamus, proelium! Let us rule the battle by means of the elements—a motto that could not be more appropriate, especially today. While the Army cannot afford to downsize one of its most useful branches, it will. So, I'm anticipating the moment when I walk into my office and am greeted by one of my colleagues who says, "Hey Chemo, how does this mask thing go on?"

Endnotes:

[1]*The Officers Guide*, 8th edition, Military Service Publishing Company, Harrisburg, Pennsylvania, 1942.

[2]Ibid.

[3]Infantry Basic Officer Leadership Course (IBOLC) Web site at *<http://www.benning.army.mil/infantry/199th/ibolc/index.htm>*, accessed on 25 October 2011.

[4]"Chemical Weapons," Federation of American Scientists, *<http://www.fas.org/nuke/guide/usa/cbw/cw.htm>*, accessed on 25 October 2011.

[5]"U.S. Army Chemical Corps History," Chemical Corps Regimental Association, *<http://www.chemical-corps.org/cms/ history/ cml-corps.html*>, accessed on 25 October 2011.

[6]Ibid.

[7]James A. Romano, Jr. et al., editors, *Chemical Warfare Agents: Chemistry, Pharmacology, Toxicology, and Therapeutics*, CRC Press, Boca Raton, Florida, 2008.

[8]"Timeline: A Nuclear Crisis Unfolds In Japan," *National Public Radio*, 1 May 2011, *<http://www.npr.org/2011/04/04 /134798724/timeline-a-nuclear-risis-unfolds-in-japan>*, accessed on 25 October 2011.

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