



# Site Exploitation and the Chemical Corps' Future

*By Captain Brian S. Kohler*

The perceived relevance of the Chemical Corps continues to decline as more conflicts are fought without encountering significant chemical, biological, radiological, and nuclear (CBRN) threats on the battlefield. The threat of a large-scale CBRN attack seems to dwindle as the Global War on Terrorism (GWOT) continues. The decontamination units and heavy nuclear, biological, and chemical (NBC) reconnaissance vehicles designed for the Cold War are often seen as irrelevant to today's threat and are frequently misused.

This article provides recommendations on how to maintain the relevance of the Chemical Corps and includes viable missions that support today's combat missions. The Chemical Corps should be trained to provide quality forensic intelligence and evidence collection through site exploitation. They should augment combat units on all missions in order to properly collect, handle, and transfer intelligence and evidence information.

There are multiple topics that support a shift to these types of missions. First, I will lay out the case for these changes by discussing the current situation of our military, specifically in Iraq and Afghanistan. Second, I will discuss the current capabilities of the Chemical Corps and suggest supplementary capabilities. Next, I will identify the resources required to meet the added capabilities suggested. Finally, I will detail the advantages of these additional capabilities. The information provided will make it clear that this capability is definitely needed and that the Chemical Corps is in a position to execute these crucial missions.

## **Background of Current Situation**

The number of stability operations conducted by the United States continues to grow. All units in the Army are almost expected to perform as "police." Many raids and cordon-and-search missions result in multiple persons under control (PUCs). Much of the evidence that could be used to gain intelligence information and incarcerate many of these PUCs is either improperly collected or not collected

at all. The majority of the evidence that is collected properly is inadmissible during tribunals because there are no good chain-of-custody procedures. Many individuals—dangerous threats to national security—have been released to their homelands due to lack of admissible evidence.

Evidence collection and handling must be improved. US and allied forces have captured hundreds of al-Qaida terrorists and enemy combatants throughout Iraq and Afghanistan. Tribunals have already begun on many of these enemies. The defense counsels for these combatants have chosen to concentrate on discrediting the evidence presented against their clients. The evidence and intelligence gathered on the majority of these terrorists was gathered in the midst of battle. The Soldier gathering the evidence was likely tasked while at the target and was probably not trained on collecting or handling evidence. There was no distinguishable chain of custody, no photographs or video, and no documentation to verify that the evidence presented was even related to the terrorist on trial. Judges have refused to admit critical evidence and intelligence due to the lack of discernible chain-of-custody procedures.

Many detainees have been released and continue to threaten the United States and its allies. Others have been released and captured again. The military has attempted to solve this problem by providing criminal investigation support from the Military Police (MP) Criminal Investigation Command (CID). These agents are specifically trained in forensic evidence, but they are few and far between. The CID agents are usually only available to assist with high-visibility raids. The Chemical Corps would be able to augment this capability on a much larger scale. Each maneuver commander would have his own exploitation force.

The other issue plaguing forces in Iraq and Afghanistan is the inability to obtain actionable intelligence. Interrogators face numerous restrictions on the techniques they can use due to claims of abuse. The interrogators need information that they can use to manipulate the detainees



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into providing additional intelligence. This information can take the form of documents, photographs, or technical and tactical equipment. Most Soldiers are not trained on how to spot these bits of intelligence, and fewer are able to properly collect and handle it.

### Current Chemical Corps Capabilities

The Chemical Corps is currently developing training to support site exploitation operations. Site exploitation is identical to processing a crime scene, only it occurs on the battlefield. The Chemical Corps has several subject matter experts with substantial experience in exploiting suspected CBRN facilities. There are leaders throughout the Chemical Corps that have implemented the strictest chains of custody while transporting alleged and actual CBRN materials.

Exploitation specialists are trained to process a site with a fine-tooth comb. They know what to look for, what to photograph and how to photograph it, and what proper video recording techniques are required. They are trained to document the seizure of the materials and ensure that the context of the collection is well documented. These specialists ensure that the chain of custody is maintained and that the data, equipment, or documents are properly transferred to the appropriate places.

Chemical Soldiers not trained in exploitation still possess many of these skills. Sampling techniques, chain-of-custody, and reconnaissance techniques are taught at chemical courses such as NBC Reconnaissance (L5) and Technical Escort (J5). These skills can be easily adapted to search a secure site and exploit intelligence or evidence of criminal activity or other acts that threaten the United States and its allies. Once evacuated from the site, this material will be properly safeguarded, transported, and recorded by well-trained chemical Soldiers. The chain of custody remains intact, and the intelligence and evidence is credible and admissible.

Chemical Soldiers are also trained and equipped with various CBRN sampling kits. These kits can be used to take quality forensic-evidence samples using the same tactics, techniques, and procedures (TTP) used for CBRN sampling. The fundamentals of sample contamination avoidance, proper packaging, transport, and chain of custody still apply to forensic-evidence collection.

Site exploitation and forensic-evidence collection depend on the thorough collection of technical intelligence (TECHINT) and measurement and signature intelligence

(MASINT). Joint Publication (JP) 1-02 defines MASINT as the “scientific and technical intelligence information obtained by quantitative and qualitative analysis of data (metric, angle, spatial, wavelength, time dependence, modulation, plasma, and hydromagnetic) derived from specific technical sensors for the purpose of identifying any distinctive features associated with the target, source, emitter, or sender measurement of the same.”<sup>1</sup> Training involving CBRN detection and identification provides chemical Soldiers with a firm foundation to address more sophisticated MASINT requirements for site exploitation. JP 1-02 defines TECHINT as “intelligence derived from exploitation of foreign material, produced for strategic, operational, and tactical level commanders.”<sup>2</sup> Chemical Soldiers have an advantage when learning TECHINT collection and analysis due to the highly technical aspects of their military occupational specialties (MOSs).

### Resources Required for Additional Capability

The majority of the resources required for the Chemical Corps to meet the requirements of a forensic-collection capability are minimal. There are training and equipment requirements, but the courses and equipment are already in the military inventory; they are not abstract concepts that need to be developed. The doctrine and TTP also exist in multiple documents. These documents simply need to be merged into a conglomerate manual.

Site exploitation is only a collateral activity, not a mission for most chemical units. There are only a few detachments (Special Forces, technical escort units, and civil support teams) that specialize in this activity, but their experience is immense and easily shared. The Chemical Corps can easily draw this experience into their training regimen and make site exploitation a mission-essential task for conventional chemical units. This would fill the void in this crucial task.

The US Army Chemical School is colocated with the US Army MP School. The Criminal Investigation Course is taught by the MP School. The Chemical School can easily revise the MP program of instruction (POI) to meet the needs of the Chemical Corps. The POI would need to cover several subjects. Soldiers must learn how to enter a site and how to deliberately search that site for important information and evidence. The Soldiers must have a complex understanding of explosives, munitions, and scientific equipment. They must be trained on the proper collection techniques for forensic evidence, to include



fingerprinting, DNA samples, gunshot residue (GSR) samples, explosives swipe samples, and shell casings. The more senior chemical personnel must be trained in how to analyze this data. Additionally, the Soldiers will need training on chain-of-custody procedures. Finally, Soldiers will need advanced training in marksmanship, small-unit tactics, close-quarter battles, and combatives since they will be conducting direct action raids with assault forces.

The additional equipment required for the Chemical Corps to add new capabilities is negligible. The sampling kits that are currently used for CBRN sampling can be tweaked to meet the needs of forensic sampling (this will change depending on the environment and the threat). These kits can also add tweezers, swabs, bags, seals, ink, and paper for DNA testing and fingerprinting. Handheld retinal scanners are also available, allowing for the creation of a biometric database of suspected enemy personnel.

Explosives detection can be added to chemical detection equipment to provide identification information on individuals that are experimenting with improvised explosive devices (IEDs). These devices are handheld and lightweight. The look and feel of the apparatus, as well as the TTP used to operate them, are almost identical to the improved chemical-agent monitor. These devices must only be used to detect the presence of explosive materials. The identification, render safe, and removal of IEDs must remain an explosive ordnance disposal (EOD) task.

GSR detection kits will be able to confirm if a person has recently fired a weapon. These kits are small and simple. The operator needs only to swipe the hands of a suspected combatant, spray the swipe with a compound,

and read the resulting color. Positive swipes are documented and packaged as evidence.

Recording and documenting gear is essential to proper collection techniques. Teams conducting site exploitation will need high-quality cameras (both still and video), as well as training on proper techniques. The chain-of-custody documents, inventory sheets, and other documentation are already in the military's inventory. Additionally, these teams may be equipped with special equipment for entry into hazardous areas. Chemical Soldiers are already trained to operate in hazardous environments such as confined spaces and chemically contaminated areas. This capability can be improved with detectors for explosive environments (lower explosive limit/higher explosive limit), oxygen detectors, and corrosives detectors. Supplied air systems, such as a self-contained breathing apparatus (SCBA), would allow entry into zones with depleted oxygen levels or areas contaminated by chemicals that may penetrate military protective masks.

The final resource requirement is integration into other government agencies, such as the Federal Bureau of Investigation and the Central Intelligence Agency. These organizations have access to databases that are vital to the analysis of the data collected.

## Advantages of Added Capability

The advantages of the Chemical Corps developing these capabilities are too numerous and vital to ignore. As stated earlier, an added quality forensic-sampling resource will provide stronger evidence for tribunals against threats to national and global security. Less evidence will be labeled inadmissible, and more guilty parties will be incarcerated.

Chemical Soldiers will be able to collect expended shell casings from weapons fired at coalition forces. These casings can be put into a ballistics database. If a suspect is captured with a weapon that is known to have fired on coalition forces, this adds to the evidence against the suspect.

DNA sampling, fingerprinting, and retinal scanning will provide a definitive biometric database. There is currently much confusion with identifying PUCs. There are no reliable forms of identification on most persons captured in Iraq and Afghanistan. Witnesses are used to provide names, and the spellings often vary. It is nearly impossible to determine if a PUC has been captured in the past and released. The biometric database will resolve this issue.



**Site exploitation specialists package a sample for extraction during a training exercise.**



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An explosives detection capability will allow for more technical exploitations during cordon-and-search missions. It will identify persons involved in handling explosives, as well as persons that have recently fired weapons. The technology is inexpensive, reliable, and easy to use.

Finally, this capability will provide Soldiers trained in site exploitation and ready for almost every imaginable mission. These Soldiers will tear through a target quickly and pull all vital information, evidence, and intelligence. This information will be processed and will eventually lead to more actionable intelligence and the incarceration of national security threats.

### Summary

It is evident that quality forensic sampling is a necessity on today's battlefield. It is clear that the Chemical Corps can meet this requirement with minor modifications to

structure, personnel, training, and equipment. If the Chemical Corps pursues this capability, it will make us a viable combat multiplier on any battlefield, whether there are CBRN hazards or not. ☺☺☺

### References

<sup>1</sup>JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 12 April 2001 (As Amended Through 9 January 2003). The date of the current publication is "As Amended Through 31 August 2005."

<sup>2</sup>JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 12 April 2001 (As Amended Through 31 August 2005).

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