

USAWC STRATEGY RESEARCH PROJECT

**MORTUARY AFFAIRS - IS USNORTHCOM AND THE  
DEPARTMENT OF HOMELAND SECURITY POSITIONED  
FOR CONTAMINATED MASS FATALITY MANAGEMENT?**

by

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This SRP is submitted in partial fulfillment of the requirements of the Master of Strategic Studies Degree. The views expressed in this student academic research paper are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

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## Report Documentation Page

*Form Approved  
OMB No. 0704-0188*

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE <b>03 MAY 2004</b>	2. REPORT TYPE	3. DATES COVERED -			
4. TITLE AND SUBTITLE <b>Mortuary Affairs: Is USNORTHCOM and the Department of Homeland Security Positioned for Contaminated Mass Fatality Management</b>		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S) <b>Joe Stewart</b>		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>U.S. Army War College, Carlisle Barracks, Carlisle, PA, 17013-5050</b>		8. PERFORMING ORGANIZATION REPORT NUMBER			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)			
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT <b>See attached file.</b>					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES <b>35</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			



## ABSTRACT

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TITLE: MORTUARY AFFAIRS - IS USNORTHCOM AND THE DEPARTMENT OF HOMELAND SECURITY POSITIONED FOR CONTAMINATED MASS FATALITY MANAGEMENT?

FORMAT: Strategy Research Project

DATE: 19 March 2004 PAGES: 35 CLASSIFICATION: Unclassified

The Global War on Terrorism has emphasized homeland defense and security as a priority for the Nation. U.S. Northern command (USNORTHCOM) recently attained its initial operational capability as the Department of Defense executive agent for Homeland Defense. Terrorists have demonstrated the ability and willingness to obtain and use Weapons of Mass destruction to further their goals. An unfortunate reality of such employment is the creation of contaminated remains. The recovery, identification, disposition of remains to include their decontamination falls within the scope of Mortuary Affairs. This is a hugely sensitive issue. As USNORTHCOM and the Department of Homeland Security grapple with their transition as lead Homeland Defense and Homeland Security agencies; a seam in policy and capabilities may exist. USNORTHCOM's ability to provide support to meet surge requirements for decontaminating and processing human remains is not articulated or properly sourced. This paper looks at the threat posed within the Nation's borders that requires a USNORTHCOM and a Department of Homeland Security synchronized response. Policies, directives, programs that highlight current government capability to handle domestic contaminated mortuary affairs incidents and potential seams will be identified. Recommendations for potential policy, training requirements, and force structure will be discussed.



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## ACKNOWLEDGEMENTS

Mortuary affairs seem to receive cyclical attention. In western culture death is a sensitive issue that is not considered a topic of polite conversation. Only when a catastrophic incident occurs or numbers of casualties are sustained are people willing to examine and discuss the issues. The inspiration for this project was the outstanding research conducted by Colonel Paul Bethke whose paper caused me to ask the question "Where are we now?" This project would not have been possible without the technical assistance, expertise, and invaluable assistance of the following individuals: Mr. John Nesler, Mr. Tom Bourlier, Mr. Doug Howard, Mr. Mark Anderson, Ms. Cynthia Gavin, Colonel Dick Kokko, Colonel William Foley and Captain Albert F. Lord Jr.





## MORTUARY AFFAIRS - IS USNORTHCOM AND THE DEPARTMENT OF HOMELAND SECURITY POSITIONED FOR CONTAMINATED MASS FATALITY MANAGEMENT?

### INTRODUCTION

Mass fatality management is a difficult, emotionally challenging, and demanding mission. The U.S. Army is the Military Services' executive agent and refers to these operations as mortuary affairs. One of the most difficult challenges that face the heroes that perform this mission is the possibility of events that require the decontamination of remains. A harbinger of these difficulties occurred in the small Russian town of Sverdlovsk in April 1979. A small amount of the biological agent anthrax was accidentally released through a lab's ventilation system. The plume traveled over the local working class neighborhood. Although many records were destroyed, those that survived recorded almost 70 civilian fatalities as a result of their exposure. Hospitals assumed responsibility for burials because families were too frightened to retrieve the bodies of their loved ones. Remains transportation was an issue due to the fear of contagion, thus individual cars were used to transport processed corpses to the local cemetery.<sup>1</sup>

This is a grim example of the swift, devastating effects that Weapons of Mass Destruction (WMD) materials can produce and an illustration of some of the challenges that those who execute contaminated mass fatality management face. While our nation has developed policies, doctrine and capabilities to enable contaminated mass fatality response we are still not properly synchronized in this area. The question of whether or not current force structure adequately supports mortuary affairs decontamination collection points is still a concern. The establishment of the Department of Homeland Security (DHS) and United States Northern Command (USNORTHCOM) were vital and necessary steps in the battle to integrate federal policy with state and local policies. Challenges, however, still remain in policies concerning contaminated mass fatalities. Senior leaders within both the Department of Defense and DHS are reluctant to include mass fatality decontamination into any exercise beyond command post exercises. Contaminated mass fatality management capabilities are not robust in either organization. An integrated mass fatality management policy down to local level does not exist. This paper will attempt to highlight some of the continuing short-comings and challenges that require renewed emphasis so that the Department of Defense is in a position to respond effectively and efficiently to domestic civil authorities' requests for assistance to meet potential surge mass fatality requirements.

## THE DANGER

"The gravest danger to freedom lies at the crossroads of radicalism and technology. When the spread of chemical and biological and nuclear weapons, along with ballistic missile technology --- when that occurs, even weak states and small groups could attain a catastrophic power to strike great nations. Our enemies have declared this very intention, and have been caught seeking these terrible weapons. They want the capability to blackmail us, or to harm us, or to harm our friends--- and we will oppose them with all power."<sup>2</sup>

President George W. Bush, June 2002

The National Security Strategy recognizes the asymmetric threat terrorism poses to the nation. It states that "Our immediate focus will be those terrorist organizations of global reach and any terrorist or state sponsor of terrorism which attempts to gain or use weapons of mass destruction (WMD) or their precursors."<sup>3</sup> America has already endured one such terrorist use in the autumn of 2001 when anthrax spores contained in sealed envelopes were distributed through the Postal Service. Public awareness and concern exploded and as a result, security programs focusing on identification, detection, and protection capabilities flourished.

In the Quadrennial Defense Review Report, Secretary of Defense Donald H. Rumsfeld made a very telling observation. "The attack on the United States and the war that has been visited upon us highlights a fundamental condition of our circumstances: we cannot and will not know precisely where and when America's interests will be threatened, when America will come under attack, or when Americans might die as the result of aggression."<sup>4</sup> Secretary Rumsfeld recognized that it is impossible to attain complete protection against asymmetric attacks and some citizens may perish as a consequence. It is not an illogical extrapolation then to recognize that a very real potential of mass fatalities exists where aggressors use chemical, biological, radiological, nuclear, or high yield explosive (CBRNE) within our homeland.

Terrorists face obstacles in obtaining WMD but they are not insurmountable. Chemical agents may be developed by the determined. "The ingredients and equipment a group would need to produce these agents are readily available because they are also the same items that are used to make various commercial items that we use everyday---from ballpoint pens to plastics to ceramics to fireworks."<sup>5</sup> Biological agents are much more strictly controlled and monitored today but total access control is in no way attainable. Terrorists could approach one of the five hundred culture collections worldwide, some of which carry lethal strains of biological pathogens to gain access.<sup>6</sup> Terrorists using high yield explosives could also conceivably target industrial chemical sites that could produce numbers of contaminated fatalities.

Our administration recognizes that this is a no-fail mission as outlined in our National Strategy to Combat Weapons of Mass Destruction. "Weapons of mass destruction (WMD)—

nuclear, biological, and chemical—in the possession of hostile states and terrorists represent one of the greatest security challenges facing the United States”.<sup>7</sup> “The requirements to prevent, deter, defend against, and respond to today’s WMD threats are complex and challenging. But they are not daunting. We can and will succeed in the tasks laid out in this strategy; we have no other choice.”<sup>8</sup>

The Department of Homeland Security also recognizes the fact that terrorists are not the sole catalysts of lethal catastrophic incidents. The initial National Response Plan states that the “threats cross a broad spectrum of contingencies from acts of terrorism to natural disasters to other man-made hazards (accidental or intentional). Because all carry the potential for severe consequences, these threats must be addressed with a unified national effort.”<sup>9</sup>

#### **DEPARTMENT OF HOMELAND SECURITY**

The national dialog about the use of weapons of mass destruction (WMD) by terrorists has caused Americans to examine the nation’s consequence management response readiness. Though the management of remains does not elicit the same hope and optimism as does the caring for casualties and saving lives, how we care for the dead has come to reflect our value and compassion for the living and respect for the deceased. It is clear that no one wants to consider the impact of having to deal with the numerous remains left by a catastrophic incident, but the truth is it may be one of the most demanding responses we are left with after a man-made or naturally occurring event.<sup>10</sup>

---The National Mass Fatality Strategic Concept

President George W. Bush created the DHS to correct perceived inadequacies in the federal government’s structure highlighted by the terrorist attacks of September 11, 2001. America was violently reminded of the fact that the science and technological advances that have effectively shrunk the global community in economic, informational, and travel arenas have also enabled America’s enemies to more effectively execute acts of violence within the nation. DHS organized 22 domestic entities with critical homeland security missions under a single federal department for the first time.<sup>11</sup>

DHS is the lead federal agency for implementing the National Strategy for Homeland Security. It has the responsibility to “streamline relations with the federal government for our state and local governments, private sector, and the American people.”<sup>12</sup> Towards this end DHS produced an initial National Response Plan with a goal of establishing a new model for to establish an integrated all hazard response plan.

“Incident management cannot be event driven. The new paradigm must be approached through increased awareness, preventive measures, and robust preparedness. Preventing an incident from ever occurring reaps far more dividends

than simply reducing the costs of post-incident response and recovery. Consequently, in this new Plan, awareness, prevention, and preparedness efforts will be given similar emphasis to that traditionally afforded to the response and recovery domains. To make the response and recovery aspects of our nation's readiness system as efficient and effective as possible, a cooperative national effort is essential, one with a unified approach to incident management and with the ultimate goal of a significant reduction in our nation's vulnerability over time. Successful implementation of this new paradigm is critically dependent on information-sharing, consistent and timely communication between all institutions that are party to the National Response Plan, and a common planning framework that captures valuable best practices across the spectrum of contingencies."<sup>13</sup>

Regardless of how adroitly the DHS accomplishes this mission, the potential for a catastrophic incident that produces appreciable casualties will always be present. Also, the DHS' phrasing indicates a flawed assumption that response and recovery policies were well along the acceptable path of integration and deconfliction. This is simply not the case.

Fatality management has always been a sensitive issue. Psychologically we prefer to focus on the effort to recover potential survivors and the capabilities and means required to accomplish this objective. Fatality management urgency is rightly secondary, but no less critical a mission. The political, religious and operational constraints associated with the proper search, recovery, identification, and disposition of remains are a complex problem. If the source of incident is CBRNE in nature then the problem is further compounded.

Each state is unique in its composition of medical examiners or coroners; however, most states hold them legally responsible for operations and procedures associated with fatality management. State statutes concerning disposition of remains are neither uniform nor intuitive.<sup>14</sup> This presents a significant problem in synchronizing mass fatality management as the system is fragmented. Many states do not currently have any specific statutes to address treatment of contaminated remains. Whether this is an oversight or intentional omission is not known. An argument for oversight is the general lack of scientific specific data involving the decomposition of contaminated remains.<sup>15</sup>

The Federal Emergency Management Agency, now subordinate to DHS, is still a key player in coordinating federal assistance. The Federal Emergency Management Agency (FEMA) produces The Federal Response Plan (FRP), current as of January 2003, which allocates federal assistance along 12 functional lines. The intent of this plan is to facilitate the implementation of the Robert T. Stafford Disaster Relief and Emergency Assistance Act as well as coordinate augmentation to overwhelmed state and local governments.<sup>16</sup> This is a key point as FEMA brings the most desired resource to the catastrophe, access to federal resources. While volunteers may donate time and some services, the costs of feeding, transportation,

consumable replacement, etc., quickly overwhelm the local/state government's associated capability.

The FRP Emergency Support Function #8 (Health and Medical Services), under the Health and Human Services oversight, addresses the task of "victim identification/mortuary services"<sup>17</sup> It further assigns the responsibility to DHS' National Disaster Medical Systems (NDMS) for this task.

"Lead Agency: Department of Homeland Security/NDMS, in coordination with Department of Health and Human Services (HHS)/ Assistant Secretary for Public Health Emergency Preparedness (ASPHEP). Assist in providing victim identification and mortuary services, including NDMS Disaster Mortuary Operational Response Teams (DMORTs); temporary morgue facilities; victim identification by fingerprint, forensic dental, and/or forensic pathology/anthropology methods; and processing, preparation, and disposition of remains."<sup>18</sup>

NDMS provides nationwide victim identification and mortuary services augmentation by means of their DMORTs. DMORTs possess the necessary knowledge to accomplish mass fatality operations. While DMORTs may be requested directly by a state, DHS normally deploys the team in response to a request for assistance and a Presidential declaration that the incident is classified as a disaster. There is one team comprised of 40 to 50 volunteer citizens with expertise in victim identification and mortuary procedures for each of the ten FEMA regions in the United States.<sup>19</sup> The functions the DMORTs accomplish while not all inclusive include: mobile morgue operations, performing autopsies, identification of remains, tracking of remains, Deoxyribonucleic Acid (DNA) retrieval, family assistance center operations, ante-mortem data collection, and final disposition preparation.

While the ten regionally aligned DMORTS have deployed in support of several disasters within recent years, none of the teams possess the capability or the expertise to process contaminated remains. This capability exists in the single existing WMD Team commanded by Mr. Dale Downey who must provide nationwide response for contaminated remains management. The WMD DMORT was previously known as the DMORT NBC Special Operations. Prior to 2001 the team was formed in an ad hoc manner by hand-picking regional DMORT members to execute this unique mission. This is no longer the case. The DMORT WMD has 75-100 private citizens who are specially trained and validated to serve as a team volunteer. Special training includes the use of commercial Level A personal protective equipment (PPE). Civilian PPE is constructed to meet either National Institute for Occupational Safety and Health or the National Fire Protection Agency requirements and Occupational Safety Health Administration (OSHA) standards. OSHA has four levels of PPE with the highest being Level A and the lowest being Level D. Level A includes positive-pressure suits and self-

contained breathing apparatus while level D is limited to coveralls and a face shield.<sup>20</sup> Team members also are instructed in domestic contaminated remains processing that uses "remain decontamination procedures similar to those outlined in Appendix D. Joint Pub 4-06."<sup>21</sup> In short, the volunteers use the same procedures domestically that our mortuary affairs units use on the battlefield, but with a lower throughput rate. The DMORT WMD is theoretically capable of operating two lines that can optimally decontaminate and tentatively identify a total of eight remains per hour or approximately 40 contaminated remains per day, but this is not the team's standard configuration. The team typically operates and is fully equipped for a single line with a processing total of 20 remains per day. This assumes the remains are generally complete. Full identification and processing would lower this number appreciably. It is also unlikely that the team would be able to sustain this rate for more than a few days due to the intensity and rigor of processing requirements.<sup>22</sup> In a moderate to large scale contaminated remains incident remains processing requirements will quickly overwhelm the unit throughput capability. Regional DMORTs can assist in processing bodies once decontaminated, but it is highly probable that the DHS will request assistance from Department of Defense mortuary affairs units.

#### **DEPARTMENT OF DEFENSE**

"But there is an overriding and urgent mission here in America today, and that's to protect our homeland. We have been called into action, and we've got to act."<sup>23</sup>

-- President George W. Bush, July 10, 2002

The Department of Defense established USNORTHCOM in October 2002 to consolidate under a single unified command homeland defense and civil support missions that were previously executed by other military organizations. Its primary mission is to conduct homeland defense operations to deter, prevent, and defeat threats and aggression aimed at the United States, its territories, and interests within the assigned area of responsibility. Its secondary mission is to provide military assistance to civil authorities including consequence management operations as directed by the President or Secretary of Defense.<sup>24</sup> Regardless of which mission USNORTHCOM is executing, they must plan for potential situations where they must provide military mortuary affairs capability to accomplish contaminated remains processing.

A CBRNE catastrophic event occurring on a United States Department of Defense installation is a homeland defense issue. Such events are likely to produce appreciable contaminated casualties that will require decisions to be made concerning interim burial and decontamination. If this is a deliberate event, such as a terrorist attack, the lead federal agency

is the Department of Justice/Federal Bureau of Investigation. This is due to the criminal nature of the event and the need to preserve evidence. The base commander retains overall command of the installation and may receive assistance from local and state authorities through mutual aid agreements (MAAs).<sup>25</sup>

Very few, if any, bases currently have agreements that address the potential issues involving contaminated remains. Department of Defense Directive 1300.22, "Mortuary Affairs Policy" holds commanders responsible for "the recovery, evacuation, preliminary identification, and further disposition of remains and personal effects under the jurisdiction of the Military Services"<sup>26</sup> command responsibilities. While temporary interment is a consideration of last resort, "The geographic Commander of the Combatant Command should approve temporary interments when remains are contaminated from a nuclear, biological and chemical event and decontamination is not possible without endangering other personnel. Remains will be disinterred as soon as possible based upon operational and safety requirements."<sup>27</sup> Without the appropriate MAAs and lacking the integrated local and state contaminated mass fatality policy, a potential problem exists where disinterment may not be allowed to meet family final disposition desires. Some State statutes do not allow a body that died of an infectious disease to be disinterred. Compounding this problem is the fact that many federal installations have liaison officers or students from other countries.

"The disposition of combatant or non-combatant host-nation or third-country remains will likewise be given the same dignity and respect afforded U.S. personnel. Coordination for hand-over to the host nation will reside with the geographic Combatant Commander in coordination with and conjunction with the Department of State through the host-nation embassy or the International Red Cross, as appropriate."<sup>28</sup>

Department of Defense and Department of State will face issues concerning the transportation of a formerly contaminated body. There is no international accord for decontamination and countries who may not concur with our definition of decontamination may be concerned allowing remains that perished from highly infectious diseases to fly over their country.

In cases where domestic CBRNE catastrophes overwhelm state and local capabilities a request for assistance will be generated as outlined in the 2003 Interim Federal Response Plan, pending an approved and integrated NRP, and Department of Defense directive 3025.1 "Military Support to Civilian Authorities" provides procedures and guidance. If the request is validated, Department of Defense is will be tasked as required, "to provide assistance in managing human remains, including victim identification and disposition."<sup>29</sup>



USNORTHCOM plans, organizes, and executes homeland defense and civil support missions, but has few permanently assigned forces. The command will be assigned forces whenever necessary to execute missions as ordered by the President.<sup>30</sup> In October 1999, Joint Task Force Civil Support (JTF-CS) was established. Its mission is “to manage military assets in civil disasters and to establish command of designated Department of Defense forces. JTF-CS focuses on chemical, biological, radiological, nuclear, or explosive (CBRNE) incidents or accidents, and will deploy a command and control element to support the Lead Federal Agency. Management of human remains is one of JTF-CS’ primary tasks when called upon to coordinate military assets in a WMD incident.”<sup>31</sup> JTF-CS has no permanently assigned forces beyond their headquarters. Like USNORTHCOM, the command will be assigned forces as required.

The Department of Defense mortuary affairs assets to available to JTF-CS are limited, however. Mr. John Nesler, JTF-CS Senior Planner, estimates that approximately 900-1000 skilled mortuary affairs people exist within the Department of Defense structure. They include three U.S. Army Mortuary Affairs (MA) Companies, the U.S. Air Force Dover Port Mortuary, the Armed Forces Medical Examiners Office, the Armed Forces Institute of Pathology, the Air Force Forensic Dental, and as a last resort the U.S. Marine Corps Chemical Biological Incident Response Force (CBIRF) due to their limited personnel decontamination capability.<sup>32</sup>

JTF-CS most versatile assets for mortuary affairs are the U.S. Army MA companies. One company, the 54<sup>th</sup> Quartermaster (QM) Company, exists in the active force structure and is based in Fort Lee, Virginia. The remaining MA companies, the 311<sup>th</sup> and 246<sup>th</sup> QM Companies, are reserve units located in Puerto Rico.

The companies based on type are configured to establish mortuary affairs collection points (MACPs), personal effects depot, and theater mortuary evacuation points. One MACP has the capability to process 20 remains in a 12 hour period.<sup>33</sup> The 54<sup>th</sup> QM Company has the capability to establish 20 MACPs and is therefore capable of processing 400 uncontaminated remains per day. The 311<sup>th</sup> QM Company is similarly organized and can also process 400 uncontaminated remains per day. The 246<sup>th</sup> QM Company is organized differently and can only establish five MACPs and process 60 uncontaminated remains. Each unit is also capable of establishing and operating a Mortuary Affairs Decontamination Collection Point (MADCP).<sup>34</sup> I will discuss MADCP operations as a part of decontamination.

The Air Force Port Mortuary is perhaps the center of gravity for mortuary affairs.<sup>35</sup> “When there are large numbers of remains, the Armed Forces Medical Examiner Office (AFME) processes them at the Dover Port Mortuary at Dover Air Force Base, Delaware. This mortuary has the capacity to process hundreds of remains and has a surge capacity to accommodate

even larger numbers. There are limitations though, as personnel assigned to Dover are not fully prepared to manage contaminated remains.”<sup>36</sup>

The ability of JTF-CS to respond to a USNORTHCOM mass fatality mission is largely contingent upon the availability of these assets. In May 2000 U.S. Army War College Student, LTC Paul Bethke, remarked that this force structure was insufficient to support the 2000 National Security Strategy.<sup>37</sup> This observation has not changed. The 54<sup>th</sup> QM Company remains the only active asset in the force structure and is subject to worldwide deployment in support of other regional combatant commanders as the nation reacts to situations that require military forces to swiftly defeat the effort or win decisively against enemy forces. Activation and deployment of reserve units requires time and in may be problematic in a case where the mission is support to a civilian authority. Normally reserve units may only voluntarily be activated to support such missions even though exception procedures exist.

Another recent addition to Department of Defense’s fatality management as it relates to contaminate remains is the U.S. Army Soldier and Biological Chemical Command (SBCCOM). SBCCOM established the Military Improved Response Program (MIRP) to “conduct scientific research, workshops, and technical investigations centering on enhancing and improving the capability of civilian emergency responders to safely and effectively respond to a potential terrorist incident that involves the use of chemical and/or biological warfare agents.”<sup>38</sup>

The MIRP has already produced information concerning mass casualty decontamination and is using the expertise and knowledge available as a result of the Domestic Preparedness Program, to enable Department of Defense’s WMD response.<sup>39</sup> The members of this program have almost completed a comprehensive capstone document that will for the first time offers state and local agents with mortuary affairs guidance for responding to a mass fatality situation following a WMD terrorist incident.<sup>40</sup> The impact of this document is tremendously important as Department of Defense’s military mortuary affairs planning advisory support resources are limited to less than 30 individuals.<sup>41</sup>

## **DECONTAMINATION**

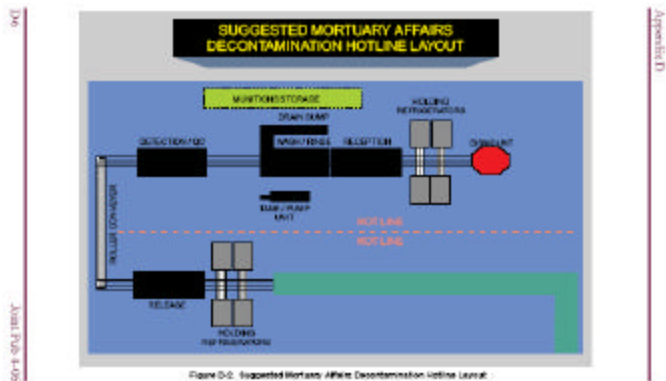
Decontamination is performed to remove or render inert a chemical, biological, or nuclear hazard. The process prevents the spread of the contamination and is essential in minimizing risk. On the battlefield, it is a necessary step to maintaining operational tempo (OPTEMPO) and combat power.

Department of Defense units responding to mass fatality decontamination requirements establish a MADCP using the guidance contained in JP 4.06, Appendix D. The current

procedures were a slight revision of the process developed to manage contaminated mass fatalities based on the Iraqi WMD capability in Operation Desert Storm. Each theater designated a chemical company to support the mortuary affairs unit in conducting remains decontamination at the MADCP, but a MADCP was never established.<sup>42</sup> MADCP operations are complex and ad hoc in nature. It will be labor, resource and time intensive. JP 4.06 lists the organization strength at 38 people that includes 13 mortuary affairs specialists, 4 NBC specialists, 2 medical specialists, and 19 personnel requiring no particular specialty.<sup>43</sup> This is misleading as additional logistical, engineer, security, and chemical needs raise the number to as much as 100 people for proper execution.<sup>44</sup>

The equipment is also specialized. "The MADCP has unique equipment which is maintained as kits in operational project stock (OPS). The mortuary affairs unit assigned the decontamination mission maintains the OPS equipment when issued from theater stock."<sup>45</sup> This equipment was positioned in Rock Island War Reserve. The status of this equipment is at best poor. Mr. Tom Boulter, Director, Mortuary Affairs Center, supports this assessment. Evidence of this is the fact that for Operation Iraqi Freedom (OIF) two sets of commercial off the shelf equipment were procured by the Department of Defense. One set was shipped in theater and the other to the mortuary in Germany. Unfortunately, Iraqi irregular forces raided the train with the OIF set and destroyed it. The only viable set that now exists is the one in Germany.<sup>46</sup>

The MADCP layout and process is not inordinately complex, but is not a task most people would want to accomplish without previous practical application. The MADCP is approximately 250 meters long and 100 meters wide. The figure from JP 4.06 provides a graphic of this layout.



The process begins as remains are rinsed with a soapy water solution. Full chemical decontamination involves scrubbing and cleansing all body orifices with a 5% bleach solution. The remains are then monitored for any vapor hazard. In cases of gross contamination where remains have open cavities or fragments, the remains may have to be repeatedly decontaminated or even immersed in a tank of the decontamination solution.<sup>47</sup> In domestic situations the DMORT WMD and military units must adjust the JP 4.06 guidance concerning waste liquid collection. Instead of using a sump, all waste liquids must be collected by pumping it into a blivet.<sup>48</sup> It is still treated and disposed of as hazardous materials, but the environmental and logistical burdens on operations are increased. A single iteration will take approximately 15 minutes to complete and is labor intensive. A recent process using a chemical called Sandia Foam would have lessened the time of chemical decontamination to three minutes and neutralized the agent leaving only a biodegradable residue. Unfortunately, it did not pass all the approval criteria for acceptance.<sup>49</sup>

Biologically contaminated remains are much more problematic. MADCP decontamination solutions do not decontaminate these agents. Temporary interment may be required to mitigate the health hazard posed by the remains. Department of Defense and civilian literature recommend cremation as an option for eliminating the threat of pathogens such as smallpox as it is the only method that mitigates 100% of the transmission threat.<sup>50</sup> However, no national policy concerning cremation currently exists.<sup>51</sup>

Cremation is the only current method to obtain 100 percent decontamination of biological agents. Cremation, as a final means of disposition, is selected by approximately 27 percent of

American citizens and is estimated to reach approximately 36 percent by 2010.<sup>52</sup> The political and religious impact of a decision to cremate a foreign national's remains, such as an Orthodox Jewish Israeli citizen, is just one issue that arises. Also, cremation is more complicated than the layman may first think. Cremation normally requires approximately three hours.<sup>53</sup> Civilian crematoriums are required for both battlefield and non-battlefield environments, so base commanders must ensure their medical MAAs with local or state governmental agencies allow for their use in the case of contaminated remains. A key requirement is that the crematorium designated to process such remains must have a retort system. The retort system captures and burns all particulates in the smoke that results from cremation before it is released into the atmosphere.<sup>54</sup> Without a retort system a biological agent could inadvertently escape and create pose the same transmission threat as the Sverdlovsk incident in 1975.

Research is ongoing; however, no "silver bullets" are immediately apparent. The current effort is pursuing the possibility of irradiating remains to eliminate the biological transmission threat. Approval of the method, training programs and equipment that accomplish this are far from approval at this time.

Radiological decontamination from the effects of a "dirty bomb" is also something of a misnomer. The contamination is not neutralized as it is during chemical decontamination. It is merely relocated from the remains. Irradiated material is removed from the remains using hot soapy water to clean hair, and body cavities as the bleach solution is not needed. However, if the contamination resides inside the lungs in sufficient amounts the remains produce an exposure threat to the living. "No permissive safe radiation exposure amount is set for remains. Any remains registering contamination regardless of the level must not leave the decontamination station."<sup>55</sup>

It is important to note when discussing MADCP that the MADCP team will have at least 38 members who will require detailed decontamination at the end of their 12 hour shift as they will have become contaminated during the process. This will be accomplished by a squad from the chemical company that normally augments such operations. This process is no different from that provided to units that become contaminated in the field. However, in mass fatality situations the operators may have to refine their procedures as their decontamination apparatus may have been adjusted to meet the increased gallons per minute required to support the remains rinse solution requirements.<sup>56</sup>

## **TRAINING**

A challenge USNORTHCOM faces in mass fatality management is that of unit training. The 54<sup>th</sup> QM Company routinely conducts training at Fort Lee and practices the procedures required to decontaminate remains. As previously stated, the OPS at Red Stone are obsolete and the commercially existing procured stocks remain in Germany. This does not enable full blown MADCP training with all the multi-functional elements which is required for maintaining proficiency in perishable skill sets or validating synchronization. In short, it is safe to conclude that no Army unit has current MADCP experience in the mass decontamination of remains. "The last MADCP exercise was conducted in 1997. It was remembered for its lack of coordination and great operational difficulties."<sup>57</sup> I believe this challenge to JTF-CS and USNORTHCOM's response capability is also a significant challenge for all Department of Defense forces as MADCP operations are even more critical in battlefield operations as it is in domestic catastrophic events. As the forces required to establish a domestic MADCP are not assigned, training readiness observation is required of units' training programs so that emphasis can be correctly applied.

The current decontamination program of instruction taught at the U. S. Army Chemical School does not address remains decontamination or MADCP operations in any thing but the most cursory detail. There is no established detailed decontamination site at Fort Leonard Wood and environmental constraints that were in effect until 2001 prevented any effort to establish such a site. This omission manifests in company level chemical units whose training schedules or training exercises never address this mission. It is also not an evaluated portion of the chemical units at any of the combat training centers.

While not directly a training concern, the personal protective equipment used by DMORT WMD and civilian first responders differs from the military's battle dress overgarments and the Joint Service Lightweight Integrated Suit Technology (JSLIST). JSLIST provides adequate protection for MADCP operations and is comparable to OSHA Level C protection. While DHS and local governments must address the training rigor of their personnel to maintain their CBRNE response capability, Department of Defense must accept the fact it is very probable that they may be requested to decontaminate this equipment. Inadvertent damage is very likely if military and local responders do not participate in hands-on training exercises to refine tactics, techniques and procedures for MSCA decontamination missions.

## CONCLUSION

In this paper I have attempted to highlight some of the short-comings and challenges facing DHS and USNORTHCOM regarding mass fatality management. One challenge that creates a seam in DHS and Department of Defense homeland defense and security efforts is the ability of the current mortuary affairs force structure to respond to mass fatality situations. No change has occurred since CY 2000 when LTC Bethke pointed out its inadequacies<sup>58</sup>. The 54<sup>th</sup> QM Company remains the only quick reaction mortuary affairs available to JTF-CS that can establish a MADCP operation. With the projected high OPTEMPO to missions in Afghanistan and Iraq and the potential requirement to support other regional combatant commanders it is quite logical to assume USNORTHCOM may not be able to support MSCA requests for MADCP operations. A full scale doctrine, training, leader development, organization, materiel, personnel, and facilities analysis by Department of Defense and USNORTHCOM concerning contaminated mass fatality management is required. The DHS would benefit from a similar analysis, but as a minimum should consider establishing a second DMORT WMD to improve efficiency and throughput capability. The teams could be assigned response areas of eastern and western region, perhaps using the Mississippi River as the boundary. SBCCOM may be in a position to assist in this effort due to the MIRP progress in the Domestic Preparedness arena.

It is likely that even with this analysis that expansion of the mortuary force structure is not a realistic option. The Army only recently obtained approval to for a thirty thousand soldier increase to support continued OIF requirements with the additional desire to reduce the activation requirements on the reserve components. A more realistic solution may be for this capability to be cultivated in the civilian sector. It is evident by our decision to procure commercial OPS stock material to support OIF that resources exist. The competition of market based service system would push contractors maintain their personnel's training and equipment while also increasing local and state government's capability to meet the surge demands of a contaminated mass fatality incident.

USNORTHCOM senior leaders need to renew the emphasis in mortuary affairs and mass fatality management. The establishment of both agencies was a positive and necessary step for our nation's homeland security and homeland defense progress. However, the momentum on many required policy integration and revision issues has to various degrees taken an "Operational Pause". This is a predictable result as the transition from initial operational capability into true operational capability occurs within the DHS and a new combatant

command. It is not acceptable to keep using transition as an excuse for the void in policy integration and revision.

SBCCOM's MIRP efforts in completing and publishing the Capstone Document: "Mass Fatality Management for Incidents Involving Weapons of Mass Destruction" must receive Department of Defense encouragement and assistance in expediting approval. The information within this document is targeted to assist state and local government medical examiners and responders in establishing integrated WMD mass fatality plans. It would also greatly enable USNORTHCOM in planning and preparation. Since MIRP is a Department of Defense agency the guidance contained in the document is not mandatory but it is essential for an effective National Defense Plan. DHS is in a position to encourage compliance via the Federal Response Plan or National Response Plan.

Other policy directives are in desperate need of update and revision. The U.S. Army Chemical School should consider revising its Chemical Officer Career Course (Captain's Course) and Advanced Non-commissioned Officer Courses programs of instruction to more adequately address mass fatality decontamination. These students are the officers and NCOs most likely to be in key leadership positions that provide support to MSCA requests for MADCP operations. Additionally, Joint Pub 4.06 must be updated and revised. The information in this regulation is eight years old and does not include tactics, techniques, and procedures learned from recent operations. During OIF the concerns about biologically contaminated remains and cremation constraints resulted in a recommended course of action that advocated coupling cremation with in country burial of the remains. The course of action would have allowed the military to offer a choice of remains cremation or interim burial until the remains attained a state that they were safe to transport.<sup>59</sup> This can be interpreted as only bone tissue remaining. While this recommendation was rejected and only interim burial was considered an option, the seeds of a future doctrinal policy are present in the recommendation. If cremation is too controversial to address then at the very least the regulation should include an annex that more fully addresses civil support response to mortuary affairs. In fact, given the complexity of MADCP operations I would encourage future military and civilian leaders consider the issue of how the military can best coordinate and conduct MADCP operations as a research topic.

The lethality of CBRNE materials and terrorist groups' willingness to use them against innocents make mass fatality events a more realistic probability in the future. Our capability to administer to those who made the ultimate sacrifice is a no fail mission. The Mortuary Affairs Center often uses a quote by William Ewart Gladstone in their courses to translate this fact to their soldiers.



“Show me the manner in which a nation cares for its dead, and I will measure with mathematical exactness, the tender mercies of its people, their loyalty to high ideals, and their regard for the laws of the land.”<sup>60</sup>

WORD COUNT= 6,074

## GLOSSARY

AFIP	Armed Forces Institute of Pathology
AFME	Armed Forces Medical Examiners Office
ASPHEP	Assistant Secretary for Public Health Emergency Preparedness
CBIRF	U.S. Marine Corps Chemical Biological Incident Response Force
CBRNE	Chemical, Biological, Radiological, Nuclear, or High Yield Explosive
DHS	Department of Homeland Security
DMORT	Disaster Mortuary Operational Response Teams
DMORT WMD	Disaster Mortuary Operational Response Teams Weapons of Mass Destruction
DNA	Deoxyribonucleic Acid
ESF	Emergency Support Function
FEMA	Federal Emergency Management Agency
FRP	Federal Response Plan
HHS	Department of Health and Human Services
JSLIST	Joint Service Lightweight Integrated Suit Technology
JTF-CS	Joint Task Force Civil Support
LFA	Lead Federal Agency
MA	Mortuary Affairs
MAA	Mutual Aid Agreements
MACP	Mortuary Affairs Collection Point
MADCP	Mortuary Affairs Decontamination Collection Point
MIRP	Military Improved Response Program
MSCA	Military Support to Civilian Authorities
NDMS	National Disaster Medical Systems
NRP	National Response Plan
OIF	Operation Iraqi Freedom
OPS	Operational Project Stock
OPTEMPO	Operational tempo
OSHA	Occupational Safety Health Administration
PPE	Personal Protective Equipment

QM	Quartermaster
SBCCOM	U.S. Army Soldier and Biological Chemical Command
USNORTHCOM	United States Northern Command
WMD	Weapons of Mass Destruction

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