STRATEGY
RESEARCH
PROJECT

The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

MORTUARY AFFAIRS:
ARE WE PREPARED TO MEET THE CHALLENGE?

BY

LIEUTENANT COLONEL PAUL A. BETHKE
United States Army

DISTRIBUTION STATEMENT A:
Approved for Public Release.
Distribution is Unlimited.

USAWC CLASS OF 2000

U.S. ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013-5050
MORTUARY AFFAIRS: ARE WE PREPARED TO MEET THE CHALLENGE?

by

Lieutenant Colonel Paul A. Bethke
United States Army

Colonel Allen Frenzel
Project Advisor

The views expressed in this academic research paper are those of the author and do not necessarily reflect the official policy or position of the U.S. Government, the Department of Defense, or any of its agencies.

U.S. Army War College
CARLISLE BARRACKS, PENNSYLVANIA 17013

DISTRIBUTION STATEMENT A:
Approved for public release.
Distribution is unlimited.
Mortuary Affairs includes the search for, recovery, identification and disposition of remains of persons for whom the military Services are responsible by statutes and executive orders. It is a physically, emotionally and psychologically demanding mission. In addition to these inherent challenges, mortuary affairs involves several others that warrant careful analysis and immediate corrective action. One such challenge is the decontamination of remains. This paper looks at this extremely difficult, sensitive and critical mission. It begins with a discussion of the threat, both on the battlefield and within our Nation’s borders, that underscores the need for an improved mortuary affairs capability. Policies, directives, programs and plans are discussed that briefly outline Federal and State efforts to improve response capabilities to threats, to include the employment of Army mortuary affairs units in support of civil emergencies. An overview of Department of Defense mortuary affairs policy/doctrine is provided. It is followed by a more in-depth review of the Army’s current mortuary affairs remains decontamination capability that focuses on force structure, training and equipment issues. Shortcomings are identified which strongly support the argument that the Army must now put renewed emphasis on mortuary affairs, especially its capability to process contaminated remains.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>iii</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>vii</td>
</tr>
<tr>
<td>MORTUARY AFFAIRS: ARE WE PREPARED TO MEET THE CHALLENGE?</td>
<td>1</td>
</tr>
<tr>
<td>BACKGROUND</td>
<td>2</td>
</tr>
<tr>
<td>THE THREAT</td>
<td>2</td>
</tr>
<tr>
<td>NATIONAL POLICIES, DIRECTIVES &amp; PROGRAMS</td>
<td>4</td>
</tr>
<tr>
<td>THE FEDERAL RESPONSE PLAN</td>
<td>6</td>
</tr>
<tr>
<td>MILITARY SUPPORT TO CIVIL AUTHORITIES (MSCA)</td>
<td>8</td>
</tr>
<tr>
<td>DOD MORTUARY AFFAIRS POLICY AND DOCTRINE</td>
<td>9</td>
</tr>
<tr>
<td>THE DECONTAMINATION PROCESS</td>
<td>12</td>
</tr>
<tr>
<td>THE ARMY'S MORTUARY AFFAIRS FORCE STRUCTURE</td>
<td>14</td>
</tr>
<tr>
<td>MORTUARY AFFAIRS TRAINING</td>
<td>17</td>
</tr>
<tr>
<td>MORTUARY AFFAIRS EQUIPMENT</td>
<td>19</td>
</tr>
<tr>
<td>THE WAY FORWARD</td>
<td>20</td>
</tr>
<tr>
<td>ENDNOTES</td>
<td>23</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>29</td>
</tr>
</tbody>
</table>
ACKNOWLEDGEMENTS

Throughout history, mortuary affairs has received minimal attention during peace and only temporary emphasis during times of war. There has been little written on the need to address the challenges faced in performing this difficult and sensitive mission. For this reason, most of the information contained within this paper was obtained from personal interviews with experts who are working or have recently worked the issues. This project could not have been possible without the invaluable support and technical assistance of the following individuals: Mr. Tom Bourlier, Mr. Doug Howard, Dr. Steve Anders, Captain Renee Collingwood, USA, Mr. Harold Campbell, Lieutenant Colonel Robert Steward, USA, Sergeant First Class Thomas Jones, USA, Colonel John Radke, USA, Mr. Don Stump, Mr. Don Crissup, Ms. Loretta Blank, Lieutenant Colonel Cary Threat, USA, Lieutenant Colonel Tommy Hennessee, USA, Ms. Gerri Sollenberger, Lieutenant Edna Cummings, USA Lieutenant Colonel Dan Taylor, USA, Mr. Dale Downey, Mr. Paul Sledzick, Mr. Norman Smith, and Colonel Allen Frenzel, USA. My sincere thanks to these outstanding Americans for taking the time to share their expertise, insights, concerns and recommendations. I would be remiss if I failed to acknowledge the hard work and uncompromising dedication of the servicemen and women and the government civilians who provide critical mortuary affairs support around the world. Seldom seen, albeit by design, all too often they do not receive the recognition they justly deserve. The service these professionals provide is truly commendable, in spite of the challenges outlined within. Finally, I want to acknowledge my wife, Linda, and my two sons, Jonathan and Jason. Without their continued support and encouragement during my year as a geographical bachelor at the U.S. Army War College, this paper would not have gone to print.
MORTUARY AFFAIRS: ARE WE PREPARED TO MEET THE CHALLENGE?

In war only one thing is certain - people will die.

—Unknown

The brief but poignant statement succinctly defines the harsh reality of war. It also identifies the need to have within the military force structure personnel and units trained and ready to recover the remains of our fallen soldiers, sailors, airmen and Marines. Traditionally, the United States Army has cared for our Nation’s war dead with a level of support and respect unmatched by any other nation’s military. As a result, American’s have come to expect as a tenet of faith that the Army will take proper care of the remains of its servicemen and women. Mortuary affairs, as it is called within the Army and in joint service doctrine, includes the search for, recovery, identification and disposition of remains of persons for whom the Services are responsible by statutes and executive orders. A difficult mission that most would not assume, it is physically, emotionally and psychologically demanding. For these reasons, soldiers who work in the field – Mortuary Affairs Specialists or “92 Mikes” as they are called because of their military occupational specialty designation “92M” – are all ‘double volunteers’.2

In addition to the inherent challenges mentioned above, there are several others within the mortuary affairs field. One that warrants careful analysis and immediate corrective action is the decontamination of remains. This paper looks at this extremely difficult, sensitive and critical mission. It begins with a discussion of the threat, both on the battlefield and within our Nation’s borders, that serves to underscore the need for a capability to process contaminated remains. Policies, directives, programs and plans are then discussed that briefly outline Federal and State efforts implemented to respond to the threat, to include the employment of Army mortuary affairs units in support of civil emergencies. A short overview of Department of Defense (DOD) Mortuary Affairs policy/doctrine is provided, followed by a more in-depth review of the Army’s current Mortuary Affairs remains decontamination capability that focuses on force structure, operations tempo, training and equipment. Shortcomings are identified which strongly support the argument that the Army must now put renewed emphasis on improving its capability to process contaminated remains. Discussions regarding the management of Casualty Assistance and Mortuary Affairs Programs and the other Services’ mortuary affairs capabilities are not included in this paper. Although relevant to the processing of contaminated remains, those subjects merit study as separate topics.
BACKGROUND

Just prior to the outset of air operations in Operation DESERT STORM (ODS), the Vice Chief of Staff of the Army (VCSA) directed that a special action team be formed at West Point, New York to determine the best procedure for processing large numbers of contaminated remains on the battlefield. Like many others, the contaminated remains issue had remained unresolved for many years due to the low priority historically given to mortuary affairs, especially in peacetime. Experts from within the military and other branches of the Federal government were brought in from across the United States to consider every aspect of the problem. They included specialists in the fields of nuclear, biological & chemical (NBC) effects and treatment, medicine, mortuary affairs, law, engineering, logistics, theology, history, and public affairs. The team met for three days behind closed doors contemplating the near-term potentiality of 10,000 NBC related fatalities. The team’s recommendations to the VCSA led to the subsequent development and approval of the tactics, techniques, and procedures (TTP) for the decontamination of remains found in Appendix D. of Joint Pub 4-06, Joint Tactics, Techniques, and Procedures for Mortuary Affairs in Joint Operations.

The NBC threat during ODS quickly brought to the attention of the senior leadership the fact that the Army lacked both the procedures and the capability to process large numbers of contaminated remains. As in other areas of the Army, the war brought a sudden increased interest and emphasis to this and other important mortuary affairs issues. Unfortunately, the war’s rapid conclusion brought an equally abrupt end to the emphasis given the contaminated remains problem – well before its resolution. Although extremely disappointing, this was not unexpected within the mortuary affairs community given the relatively low numbers of U.S. dead, Iraq’s surprising decision not to employ its NBC arsenal, and similar reactions following wars throughout history. More unfortunate, however, is the increased likelihood that today the Army may be called upon to assist civil authorities in the recovery and decontamination of remains of citizens within our own borders.

THE THREAT

I believe the proliferation of weapons of mass destruction (WMD) presents the greatest threat that the world has ever known. We are finding more and more countries that are acquiring technology – not only missile technology – and are developing chemical weapons and biological weapons capabilities to be used in a theater and also on a long-range basis. So I think that this is perhaps the greatest threat that any of us will face in the coming years.

Secretary of Defense William Cohen, January 1997

The National Military Strategy (NMS) published in 1997 states that “the potential for conflict among states (nations) and groups of states remains our most serious security challenge.” However, as
noted above, Secretary Cohen has recognized the terrible threat imposed by WMD. U.S. forces are susceptible to WMD attack anywhere in the world and in any type of operation - from promoting peace and stability in humanitarian assistance operations such as in Rwanda to defeating adversaries in major theater wars (MTW) as in Operation DESERT STORM. In order to support our national security interests, the NMS recognizes the imperative "that the United States be able to deter and defeat nearly simultaneous, large-scale, cross-border aggression in two distant theaters in overlapping timeframes, preferably in concert with regional allies." Most would likely agree that protecting our national interests in distant nations poses a serious security challenge. However, a growing number would argue that today, homeland security poses an equally serious challenge and is deserving of greater focus. The danger that some state or non-state actors might resort to the use of asymmetric means against both the U.S. military and the U.S. homeland directly is very real. Two of the most imminent threats to our homeland are seen as terrorism and the use or threatened use of WMD.

In the terrorist attack in March, 1995 in Tokyo, Japan the religious cult Aum Shinrikyo released the deadly nerve agent sarin into a crowded subway killing 12, injuring over 5,000, and terrifying millions. Had the agent been dispersed more effectively, the number of dead could have reached into the thousands. The cult took advantage of two facts. First, the formulas for blister and nerve agents are well known and can even be found in publications and on the Internet. And second, the ingredients for making the weapons are readily available because they are also used to make everyday products such as fertilizers, pharmaceuticals and pesticides. In addition to the availability of chemical and biological material that can be used in making WMD, the world has seen a rise in the number of terrorist groups. In 1999, there were more than three dozen incidents on U.S. soil of people attempting to develop or use such weapons that were investigated by the FBI's antiterrorism unit - double the number from the previous year. What the Tokyo incident and FBI statistics show is that NBC weaponry is no longer limited to the battlefield to be used exclusively by nations' war fighters.

The terrorist threat to the United States was highlighted by the United States Commission on National Security/21st Century in its September, 1999 Phase I Report on the "Emerging Global Security Environment for the First Quarter of the 21st Century". The Commission's report, entitled "New World Coming: American Security in the 21st Century", identified fourteen key conclusions about the global environment of the next quarter century. The first conclusion they presented was that "America will become increasingly vulnerable to hostile attack and our military superiority will not entirely protect us." The report further states that disaffected groups will acquire WMD and that some will use them "causing Americans to die on home soil, possibly in large numbers." The Committee will present its proposed strategy for the first quarter of the century in its Phase II report which is due out in April 2000.

Public awareness and concern is growing as a result of increased media attention. A program entitled "BIOWAR", which aired in October 1999 on the ABC television show NIGHTLINE, brought the reality of the potential threat into America's family room. It depicted a hypothetical, but very plausible scenario, similar to the attack in Tokyo in which a terrorist released anthrax in the subway of a large,
unnamed U.S. city. The program dramatized the horrific immediate and delayed effects of the attack over a one-week period – over 40,000 killed, thousands more permanently disabled, and the city's infrastructure rendered ineffective for an extended period. Between dramatizations within the program, professionals with a variety of emergency response backgrounds provided expert commentary. The program realistically portrayed the inability of the State and local agencies to deal with the magnitude of the problems encountered, including – albeit briefly – the problems associated with handling the excessive number of human remains. Although the program addressed the difficulties of treating contaminated patients, the more difficult problems that would be encountered processing contaminated versus non-contaminated remains were not stressed.

NATIONAL POLICIES, DIRECTIVES & PROGRAMS

Protecting our citizens and critical infrastructures at home is an essential element of our strategy. Potential adversaries – whether nations, terrorist groups, or criminal organizations will be tempted to ... use weapons of mass destruction against civilians.... The challenges demand the close cooperation across all levels of government ....

William J. Clinton

Since the Tokyo attack, several policies, directives and programs have been implemented to coordinate the efforts of the various Federal, State, and local agencies needed to effectively counter the domestic terrorist threat. President Clinton and Congress have clearly expressed the Federal Government's commitment and lead role in mounting a concerted nationwide effort to respond appropriately. The U.S. has formulated what appears to be a more viable and clearly stated National Security Policy (NSP) - one that should serve to help reduce the threat and better posture the Nation to respond to such incidents. The U.S. National Security Strategy for a New Century says that the United States will work to prevent the spread of nuclear, biological and chemical weapons and the materials for producing them and that it will remain dedicated to protecting its citizens from terrorism.15

Presidential Decision Directive (PDD) 39, signed by President Clinton on 21 June 1995, established the initial U.S. Policy on Counter-terrorism. It assigned specific missions to the appropriate Federal Departments and agencies – including the Department of Defense. By direction of PDD 39, Federal Lead Agency responsibility for threats or acts of terrorism rests with the Department of Justice (DOJ) and is delegated to the Federal Bureau of Investigation (FBI). The FBI has the lead in Crisis Management, which includes all measures to anticipate, prevent and/or resolve a threat or act of terrorism. These are all functions primarily associated with law enforcement.16 PDD 39 further directs that the Federal Emergency Management Agency (FEMA), with the support of all the agencies listed in the Federal Response Plan (FRP), is the Lead Agency for Consequence Management throughout the Federal response. Consequence Management includes all measures taken to protect public health and
safety, restore essential government services, and provide emergency aid to local governments, businesses and individual citizens adversely affected by the consequences of terrorism – to include mortuary affairs assistance.\textsuperscript{17} Presidential Decision Directive 62, which was signed in May 1998, specifically establishes the policy and assignment of responsibilities for responding to terrorist activities using WMD. Under PDD 62, Lead Agency responsibilities remain as set forth in PDD 39 and described above.\textsuperscript{18}

Although the Federal government provides assistance when requested by the States and authorized by the President, the laws of the United States are clear in assigning primary authority to the States to respond to the consequences of terrorism. Each State has its own laws that delegate responsibilities for emergency management within the State. In Pennsylvania for example, its Emergency Management Services Code (35 Pa. C.S. Section 7101-7707) became law in 1978 and replaced the State Council of Defense Act of 1951. The Act consolidated existing State laws and updated the role of emergency management. The law requires that every county and municipal government develops and maintains an emergency management program consistent with the State and Federal emergency management program.\textsuperscript{19} Although States have the requirement to plan for emergency preparedness, the level of planning is often severely lacking. According to Ms. Gerri Sollenberger, WMD Coordinator for FEMA Region V, "none of the Mass Casualty Plans she has reviewed included a plan to handle mass fatalities, let alone large numbers of contaminated remains. It is a common assumption among all regional and local disaster planners that the Federal government, and specifically the military, would be called in to help meet mass fatality requirements."\textsuperscript{20}

The Defense Against Weapons of Mass Destruction Act of 1996 (Public Law 104-201) which was sponsored by Senators Nunn, Lugar and Domenici mandated the enhancement of the domestic preparedness and response capabilities to terrorist incidents involving NBC weapons. It provided the funding necessary to improve the capabilities of the Federal, State and local emergency response agencies to prevent and, if necessary, respond to domestic incidents involving WMD.\textsuperscript{21} The Secretary of Defense appointed the Secretary of the Army as the Executive Agent for DOD program implementation. The Secretary of the Army directed that the Reserve Components (RC) be integrated into a consequence management response for domestic WMD incidents. A special study group called a "Tiger Team" was established in November 1997 to study DOD's capabilities to provide assistance and to incorporate the capabilities of the RC into the plan.\textsuperscript{22}

In January 1998 the Tiger Team published its "Department of Defense Plan for Integrating National Guard and Reserve Component Support for Response to Attacks Using Weapons of Mass Destruction". It concluded that DOD was insufficiently prepared to perform tasks it would likely be called upon by other Federal agencies to perform within consequence management. The team found that there was a significant void in the NBC assessment capability. Under its charter, the Tiger Team established Rapid Assessment and Initial Detection (RAID) Teams (recently renamed WMD Civil Support Teams – WMD
CST\textsuperscript{23} comprised of RC personnel which would assist with agent identification and appropriate hazard mitigation in the affected areas of WMD release.\textsuperscript{24} There are 15 elements within each WMD CST, each with a designated area of responsibility. The Mortuary Affairs Element is given the mission of providing mortuary support to include the identification, processing, storage and disposition of remains following a mass casualty WMD incident.\textsuperscript{25} Unfortunately, not much has been done with regard to developing the Mortuary Affairs Elements except to identify the requirement for them. In its findings, the Tiger Team failed to address the processing of contaminated remains as an area of concern. The Consequence Management Program Integration Office within the Director of Military Support (DOMS), in the Army's Office of the Deputy Chief of Staff for Operations (ODCSOPS), has the oversight mission of training the WMD CST's. The office has acknowledged the shortfalls and the need to resolve them.\textsuperscript{26}

The Domestic Terrorism Program was established to integrate the capabilities and the assets of the various Federal agencies and departments, including DOD, in support of the FBI and FEMA. The program's goal is to reach the objective of building a viable program for first responders in the Nation's 120 largest cities by 2002. When training in these cities is completed, it will be exported to other cities via videos, the Internet, and CD ROM.\textsuperscript{27} The WMD CST's are a key part of the Domestic Terrorism Program.

THE FEDERAL RESPONSE PLAN

In 1988, Public Law 93-288 was amended by Public Law 100-707 and re-titled the Robert T. Stafford Disaster and Emergency Assistance Act (Public Law 93-288, as amended). The Stafford Act provides the authority for the Federal government to respond to disasters and emergencies in order to provide assistance that will save lives and protect the public health, safety and property.\textsuperscript{28} FEMA's Federal Response Plan (FRP) is the document agreed to by 27 Federal departments and agencies and the American Red Cross. It provides the system for delivering Federal assistance to State and local governments when the requirements of emergency response exceed both State and local capabilities.\textsuperscript{29}

The FRP identifies 12 Emergency Support Functions (ESF) and assigns Lead Agency responsibility to various Federal agencies. FEMA, as the Lead Agency for Consequence Management under PDD 39, is also assigned the lead for ESF #5 – Information and Planning. Lead Agencies do not have all the assets needed to perform all tasks associated with their respective ESF. They require the assistance of several supporting agencies. The Department of Health and Human Services (HHS) for example, is designated as the Lead Agency for ESF #8 – Health and Medical. HHS is supported by a dozen other agencies in performing this function, two of which are FEMA and DOD. Under the lead of HHS, the National Disaster Medical System (NDMS) provides a nationwide medical response system to supplement the State and local medical resources during disasters or emergencies. It also provides back-up medical support to the DOD/Veterans Administration care systems during an overseas conventional conflict. The NDMS has in addition to its many medical responsibilities, the tasks of victim
identification and mortuary affairs. These functions are performed by its Disaster Mortuary Operational Response Teams, or DMORT's as they are more commonly referred.30

There are only 10 DMORTs within the United States – one in each of the FEMA Regions. The teams are comprised of private citizens from within their respective Region, each with expertise required in the victim identification and mortuary response process. Team members are federalized when the team is activated for a disaster response mission. When deployed to a disaster location, the DMORT typically works under the jurisdiction and guidance of the local medical examiner/coroner, a local law enforcement office, or a Federal/State agency. The DMORTs are comprised of about 50 specialists who perform the team’s 17 critical mortuary related functions. The functions include, but are not limited to, search and recovery, forensic identification, scene documentation, embalming/casketing, data collection, and mobile morgue operations. DMORTs can operate two processing lines and fully process 35-40 remains per day. Difficult remains, such as those involving severe dismemberment, slow the process considerably. In the past five years, DMORTs deployed or pre-deployed in support of over a dozen disasters or major events. Teams actually performed their mission at several air crashes, but only pre-deployed to other locations as a precautionary measure. The recent Papal visit to the city of St. Louis was one such precautionary deployment. The DMORTs are accustomed to working with the FBI and have tailored their procedures to facilitate evidence collection at known and suspected crime scenes. Nationwide the teams have access to three mobile morgues, however, only one unit that is stored in Rockville, Maryland is under their constant control. The other two mobile morgues are on ‘stand-by’ with the private organizations that own them. They may not be readily available in the event of an emergency.31

None of the Regional DMORTs have the mission or capability – expertise and equipment - to process contaminated remains. There is, however, one specially structured DMORT that is capable of processing contaminated remains - the DMORT NBC Special Operations. Headquartered in Region IV, but comprised of experts from all FEMA Regions, the team has nationwide responsibility for responding to incidents with contaminated remains. The DMORT NBC Special Operations can be on site and operational within 2-3 days of call-up, depending on the location of the incident. The team is specially trained in the use of chemical protective gear and utilizes remains decontamination procedures similar to those outlined in Appendix D., Joint Pub 4-06. As with the standard DMORTs, its processing lines are front-loaded with evidence collection personnel. The team is capable of operating two lines that can decontaminate and partially process (i.e., tentative identification only) a total of 8 remains per hour – 96 total in a 12-hour day. Full processing of the remains (i.e., positive identification and remains preparation) would decrease the number of remains completed in a day to well below that of a standard DMORT. The team’s preference is to focus on the decontamination process only, turning the decontaminated remains over to the Regional DMORT or local authorities for the more routine mortuary related processing. The DMORT NBC Special Operations has been in existence for just over two years, but has yet to be deployed for an actual incident involving NBC contaminated remains. Mr. Dale Downey,
Team Commander of the DMORT NBC Special Operations stated, "In the event of an incident involving a large number of contaminated remains, the DMORT NBC Special Operations will be incapable of meeting the requirement without assistance. The problem would be magnified if multiple incidents occur simultaneously. In either eventuality, the team would request military support through established channels to assist in the decontamination of remains." 32

MILITARY SUPPORT TO CIVIL AUTHORITIES (MSCA)

Requests for military support follow the procedures established in the FRP and DOD Directive 3025.1, “Military Support to Civilian Authorities”. As a Support Agency to HHS for ESF #8, DOD is tasked to “provide assistance in managing human remains including victim identification and disposition.” 33 DOD will only provide support when other resources are not available and only if the support does not interfere with its primary mission or ability to respond to operational contingencies. 34 If the consequences of the incident have exceeded the capabilities of the State/local emergency responders and the DMORT NBC Special Operations, the Federal Coordinating Officer (FCO), in coordination with the State Coordinating Officer (SCO), can request military support through the on-site Defense Coordinating Officer (DCO). The DCO is responsible for coordinating all Federal military assistance provided in a consequence management response. The DCO submits the specific requirement to the Office of the Director of Military Support (DOMS) for validation. DOMS tasks available unit(s) to provide support through proper command channels. When available, support is usually provided on a cost reimbursable basis. 35

Military units supporting civil disaster response efforts work closely with other Federal agencies under the jurisdiction of the designated local authorities. They must remain extremely flexible when working with local civil authorities as each locality may vary on the procedures it uses to accomplish the mission. For a variety of reasons, civil authorities are typically very protective of their jurisdiction. 36 The issue of jurisdiction is a particularly sensitive one with county medical examiners and coroners. These local professionals insure proper protocol is followed and standards are met as they orchestrate the remains recovery and processing efforts. Through experience gained providing support at various incident locations, DMORTs have become exceptionally adept in working with local officials and can provide valuable instruction to the Army specialists. 37

Fortunately to date, Army mortuary affairs support to civil authorities in response to WMD incidents has been limited due to the lack of incidents. Following the April 19, 1995 terrorist bombing of the Alfred P. Murrah Federal Building, a team from the Army’s only active duty mortuary affairs unit, the 54th Quartermaster Company (QMC) from Fort Lee, Virginia, deployed to Oklahoma City to assist in recovery efforts. Mortuary Affairs Specialists (92 Mikes) from the unit, performed tasks assigned by the local authorities and the DMORT within the temporary morgue established adjacent to the incident site. Army mortuary affairs units have not had to perform the decontamination of remains mission as outlined in Joint
Pub 4-06 in either an MSCA or standard military operation. This is fortuitous for two reasons. First, the requirement to perform the mission would have meant that an incident occurred that caused a significant loss of life. And second, prohibitive shortfalls exist within Army mortuary affairs that severely limit its current decontamination of remains capability. The latter is addressed in subsequent paragraphs.

DOD MORTUARY AFFAIRS POLICY AND DOCTRINE

One of the greatest impediments to resolving many of the existing mortuary affairs challenges has been the lack of integrated, comprehensive policy/guidance within DOD. Current DOD policy consists of numerous Memorandums from the Chairman, Joint Chiefs of Staff (CJCS) and the Acting Secretary of Defense, DOD Instructions and Directives, Joint Publications, and various sections within the United States Code. Some of the policy/guidance, which was intended to be a 'temporary fix' pending creation of a comprehensive DOD policy, has at times conflicted with longstanding individual Service policy/practices. Under Title 10 of the United States Code, the Services are responsible for the care and disposition of their deceased personnel. In the past, individual Services have disagreed with certain decisions that were based on interpretation of the existing DOD guidance. As a result, they often used Title 10 authority to act independently and in accordance with policy/procedures set forth in their respective Service policy, regulations and field manuals.

On May 31, 1990 the CJCS published Memorandum of Policy (MOP) 16 that set forth policies and guidance to the unified commands and the Services on mortuary affairs. The directive also established the Central Joint Mortuary Affairs Office (CJMAO) for the purpose of providing a coordinating group of Service representatives to coordinate mortuary affairs policy and procedures for DOD. On March 15, 1991 the Deputy Secretary of Defense (DEPSECDEF) published Memorandum "Executive Agent for Mortuary Affairs" designating the Secretary of the Army (SECARMY) as the DOD Executive Agent for Mortuary Affairs and directing him to prepare a DOD Mortuary Affairs Directive. In a March 30, 1991 memorandum, SECARMY designated the Executive Agent responsibilities to the Assistant Secretary of the Army for Manpower and Reserve Affairs (ASA (M&RA)). Pending the publication of the DOD Mortuary Affairs Directive, on October 19, 1992 the Acting ASA (M&RA) published a memorandum that declared CJCS MOP 16 as the Interim DOD Policy for Mortuary Affairs. The only exception was the stipulation that all references to the Chief of Staff, Army (CSA) be replaced with SECARMY. The memorandum further stated that the interim policy would remain in effect until revoked by the ASA (M&RA) or upon approval of a DOD directive for mortuary affairs. CJCS MOP 16 continues to remain the interim DOD policy for mortuary affairs, nearly nine years after the tasking to develop a consolidated policy.

The appointment of an Executive Agent for Mortuary Affairs is in keeping with the guidance set forth in the Unified Actions of the Armed Forces (UNAAAF) which directs that "all components of the
Department of Defense...coordinate on matters of common or overlapping responsibility. General responsibilities of an Executive Agent as outlined in the UNAAF include:

- Implement and comply with the relevant policies and directives of the SECDEF.
- Ensure proper coordination among the Military Departments, the combatant commands, the Joint Chiefs of Staff (JCS), the Joint Staff, the Office of the SECDEF (OSD) and the Defense agencies and DOD field activities as appropriate for the responsibilities and activities assigned.
- Issue directives to other DOD components and take action on behalf of the SECDEF, to the extent authorized in the directive establishing the executive agent.
- Make recommendations to the SECDEF for actions regarding the activity for which the executive agent was designated, including the manner and timing for dissolution of these responsibilities and duties.
- Perform such other duties and observe such limitations as may be set forth in the directive establishing the executive agent.

In addition to the responsibility for developing the DOD Mortuary Affairs Directive, SECARMY (ASA (M&RA)) as the DOD Executive Agent for Mortuary Affairs, has additional responsibilities which are set forth in the March 15, 1991 DEPSECDEF memorandum. They include, but are not limited to, the following:

- Maintain a mortuary affairs force structure capable of providing support to Army units and backup general support to the other Military Services as required. Provide technical assistance to the other Military Services as required.
- Maintain a CJMAO and appoint a Chairman. In peacetime the CJMAO will meet at least twice a year or at the direction of the Chairman in support of special incidents. During wartime or special incidents, the CJMAO will become the functional body that will provide guidance on mortuary affairs matters.
- Develop and obtain the CJCS approval of joint military doctrine and training material to be used by the Military Services.
- Establish and maintain a Doctrine and Training Integration Center for Joint tactics, techniques and procedures (TTP).

The long awaited DOD Directive that will finally establish a comprehensive DOD Mortuary Affairs Policy has been approved by the Services and is currently in the office of the DEPSECDEF for review before it is submitted to the SECDEF for approval. The proposed Directive references existing policy and, as agreed by the Services, either supercedes or incorporates it. The Directive provides guidance and assigns responsibilities to the Under Secretary of Defense for Personnel and Readiness, SECARMY,
Secretary of the Air Force, CJCS, Secretaries of the Military Departments, the Armed Forces Medical Examiner (AFME), the Geographic Combatant Commanders, and the Commander-in-Chief, U.S. Transportation Command. It retains the SECARMY as the DOD Executive Agent for Mortuary Affairs and the CJMAO as the coordinating body for mortuary affairs policy, procedures, mobilization planning, and recommendations on mortuary services during military operations. The Directive delineates the support provided by the DOD Mortuary Affairs Program across the spectrum of operations from humanitarian assistance to war. Operations include the search for, recovery, identification, evacuation, and, when required, temporary interment, disinterment, decontamination, and reinterment of deceased US military personnel, US noncombatants, and allied, coalition partner, and enemy personnel. And finally, the Directive also provides overarching policy guidance that complements Joint Pub 4-06.\textsuperscript{49}

Although the proposed DOD Directive should resolve many of the existing policy concerns, additional actions are also needed. First, the Directive should be amended to also include the responsibilities of the recently formed Joint Forces Command (JFCOM) with regard to Joint mortuary affairs doctrine. As outlined in the 1999 Unified Command Plan (UCP), JFCOM has the mission to support the Joint doctrine program and provide recommendations to the CJCS on the development, assessment, distribution and maintenance of joint TTP and doctrine publications.\textsuperscript{50} The responsibilities should include JFCOM's relationship to the CJMAO and the Mortuary Affairs Center (MAC), Fort Lee, Virginia which serves as the Doctrine and Training Integration Center for Joint TTP. In its capacity as the DOD principal planning and operating agent for all DOD components in the 48 contiguous states and the District of Columbia, JFCOM is currently developing mortuary support plans to provide available military support to civil authorities.\textsuperscript{51}

A second action that is needed is for the CJMAO to meet as directed in both the existing policy (MOP 16) and the proposed Directive. The CJMAO is required to meet at least twice each year to promote uniform Service policies, procedures, plans and records for the disposition of remains and personal effects for DOD. The group can also form in the event of emergencies at the discretion of the Chairman. However, between 1995 and November 1999, the CJMAO met only one time – an ad hoc meeting called in response to an emergency in October 1999.\textsuperscript{52} This is not sufficient. Improvements in mortuary affairs, especially in regards to the decontamination of remains issue, cannot be accomplished without the active coordination and support of the CJMAO.

Finally, a semi-annual mortuary affairs conference should be held to discuss doctrinal issues as well as other key mortuary affairs issues such as remains joint doctrine (i.e., decontamination procedures), training, equipment, joint lessons learned, and new technologies. The last, major mortuary affairs conference was conducted at the MAC in 1996. Although productive, it was not as successful as the conference conducted in September 1991 following ODS. In addition to MAC personnel, attendees at the 1991 conference included representatives from CJMAO, JCS J4, U.S. Central Command (CENTCOM) J4, U.S. Forces Command (FORSCOM) J4, AFME, U.S. Army Deputy Chief of Staff, Logistics (DCSLOG), Combined Arms Support Command (CASCOM), each Service's Mortuary
Affairs/Casualty Assistance Office, Natick Laboratory, Headquarters, Third Army, U.S. Army Chemical School, U.S. Army Quartermaster Center and School, Combat Developments Division, 54th QM Company (Mortuary Affairs), 1st Corps Support Command (COSCOM), and the Academy of Health Sciences. Many important issues were discussed including ODS mortuary affairs lessons learned, joint doctrine, the decontamination of remains, and DNA identifications to name a few. Future conferences should be coordinated by the CJMAO and, in addition to the 1991 attendees, should also include the Joint Mortuary Affairs Officers (JMAO) from the combatant commands and representatives from JFCOM and the other supporting unified commands. Process Action Teams formed at the conference can address critical issues and make recommendations to the CJMAO.

THE DECONTAMINATION PROCESS

As mentioned earlier, Appendix D., Joint Pub 4-06 contains the military’s joint TTP for the decontamination of human remains and precautions necessary to protect personnel involved in the process. It also identifies the responsibilities of the combatant commanders and the Service component commanders as well as the procedures for establishing and operating a Mortuary Affairs Decontamination Collection Point (MADCP). Joint Pub 4-06 points out that each NBC event will be different and emphasizes the fact that exact procedures for each eventuality cannot be addressed. The procedures presented are general in scope and should be tailored for each incident.

The procedures that appear in Appendix D. are a revision of the procedures developed just prior to ODS for use in the event of mass fatalities as a result of an NBC attack. In the field, each unit commander is responsible for decontaminating individual remains and escorting them to the nearest Mortuary Affairs Collection Point (MACP) for processing. When the number of contaminated remains exceeds the decontamination capability of the unit, a MADCP is requested through procedures established by the JMAO. When the tactical situation permits, the MADCP deploys to the contaminated area to recover, decontaminate and evacuate the remains. When the number of contaminated remains exceed the MADCP’s capability to process them in an expedient manner, the remains are temporarily interred until they can be safely processed. Temporary interment is used only as a last resort and only upon approval of the theater combatant commander.

During the initial testing of the decontamination procedures at Fort Lee, life size mannequins with simulated surface contamination were used in lieu of remains. Even under ideal conditions, the MADCP process was found to be extremely labor and time intensive. The MADCP, which is comprised of 38 personnel, including 13 mortuary affairs, 4 NBC and 2 medical specialists, and 19 specialty immaterial personnel, can only process an estimated 30-48 remains in a 12 hour period. Actual performance will depend on several factors including the weather, terrain, condition of the remains and the threat. Operating in very high temperatures while wearing chemical protective clothing poses obvious
challenges. If contaminated remains are dispersed in rocky, mountainous terrain, temporary interment and subsequent decontamination would prove extremely difficult. The MADCP also requires a large amount of water for use in the decontamination process. Operations in a desert or extremely arid environment where water is at a premium would prove a difficult logistics challenge. The problem would be greatly exacerbated if the enemy has contaminated the local water sources or still has the capability of targeting the area.

Manning of a MADCP in a theater of operations should prove to be another difficult challenge. A MADCP does not exist as a separate, standing unit within the military force structure. In the event of an NBC attack within theater that results in a large number of contaminated remains, the JMAO would recommend to the unified commander the formation of a MADCP from the assets available in theater. This would require taking personnel and equipment out of the established MACPs, thereby degrading their effectiveness. The JMAO would also have to request NBC and medical specialists to form the MADCP. These low-density personnel would have to come from units that most likely will be stretched to the limits “supporting the living”. There is also the sensitive issue of obtaining and using specialty immaterial personnel as litter bearers. Even trained mortuary affairs specialists and medical personnel can be psychologically and emotionally affected when working with remains. For this reason alone, the use of specialty immaterial personnel who are not accustomed to working with remains should be reconsidered. The process of identifying and obtaining personnel to round out the MADCP, both in a theater of operations and in support of MSCA operations, must also be coordinated well in advance if the MADCP is expected to be responsive.

In addition to the personnel required to operate the MADCP, safe operation of the site requires support from several experts from within and outside the theater. In the Quality Control Section of the MADCP special monitoring systems will be required to verify that the remains have been thoroughly decontaminated. The devices required are state-of-the-art, contractor-owned and operated systems. Purchasing these systems and training military personnel on their operation would be cost prohibitive. A contract for both the systems and the operators would have to be established in advance. The Theater Command Surgeon would be required to determine the proper mix for the decontamination solution used for decontaminating biologically contaminated remains. Joint Pub 4-06 provides the addresses for subject matter experts that “in response to an NBC event ... should be contacted for expert subject matter advice and recommendations in addition to the normal military NBC defense personnel and companies.” Although most would want to immediately contact these experts by phone, message or e-mail in the event of an emergency, the required information is not provided. A supplement to Joint Pub 4-06 should be distributed to the field with this critical information.

The MADCP also requires some very large pieces of equipment and an extensive assortment of expendable supplies making it a significant deployment challenge. Four partial sets of the MADCP supplies and equipment that were procured for ODS are currently stored in Operation Project Stocks (OPS) at Rock Island Arsenal, Illinois. A significant amount of these items are now unserviceable due to
expiration of their shelf life or lack of maintenance while in storage.\textsuperscript{58} Approximately 40% of the equipment required to field a MADCP, including a majority of the major end items such as vehicles, trailers, and refrigeration units, is not included in the OPS. These items will have to come from the MACPs’ assets or other sources within the theater. Likewise, unserviceable OPS items will have to be procured before deployment. At present, it is extremely doubtful that the Army has the equipment/supplies needed to field even one complete MADCP. Should there be an NBC incident that requires the immediate services of a MADCP, whether in support of an MTW in a distant land or a WMD incident within the United States, the Army is not ready to perform its decontamination mission.\textsuperscript{59}

In addition to the above, there are concerns as to whether the decontamination procedures in Joint Pub 4-06 will render the remains free of contamination and safe to handle – especially in the case of certain and chemical and biological agents. Although the decontamination process may adequately remove all surface contamination, questions still exist as to the possibility that contaminants might remain within the deep tissue, muscles and internal organs that could pose a potential threat to mortuary and funeral home personnel. When queried about the efficacy of the procedures contained in Joint Pub 4-06, the Armed Forces Medical Examiner’s (AFME) Office responded only that they had not reviewed the procedures.\textsuperscript{60} This is quite surprising considering that the AFME is a member of the CJMAO and is responsible for providing forensic pathology services to DOD and scientific expertise related to the identification of remains.\textsuperscript{61} As a matter of interest, the AFME is also listed in Joint Pub 4-06 as one of the subject matter experts to contact for questions concerning NBC contamination.\textsuperscript{62}

As recently as October 1999, a Process Action Team (PAT) met at the Mortuary Affairs Center (MAC) – which is also the Doctrine and Training Integration Center - to review and revise/revalidate the procedures in Joint Pub 4-06. The PAT determined that the procedures are adequate as written. Although the AFME was not represented on the PAT, the Director, MAC stated that the AFME would be invited to future meetings.\textsuperscript{63} At the meeting, the PAT also discussed alternate forms of decontamination that might someday replace the current labor and equipment intensive process. One commercial enterprise currently markets decontamination foam that it contends is quite effective. Another procedure that is still in the experimental stages involves the use of a fluoroscope type device to decontaminate the remains.\textsuperscript{64} Given the challenges discussed, working to find a viable alternative to the existing procedures should be given a top priority.

THE ARMY’S MORTUARY AFFAIRS FORCE STRUCTURE

The capability to perform any mission is dependent upon having the proper force structure – both the units and the personnel to fill them. The mortuary affairs mission is no exception. Because of recognized shortfalls in the Army’s ability to provide mortuary affairs support to its armed forces, the
mortuary affairs force structure underwent a major redesign in the last decade. Two major deficiencies required correction. Under the old structure, no active duty mortuary affairs capability existed to provide direct support to the divisions and the existing mortuary affairs units were organized and equipped to support obsolete doctrine. The approval in April 1994 of the Operational Concept (OC) by the Commander, Combined Arms Support Command (CASCOM) solved both. The OC has four advantages over the previous structure. First, it provides division commanders their own mortuary affairs assets upon deployment. Second, it provides support consistent with our National policy of returning remains as quickly as possible for disposition by their families. Third, it provides the combatant commander flexibility as to how mortuary affairs assets are used. And finally, it provides a mortuary structure to support the Army of the future.  

The OC provides for the placement of a Mortuary Affairs Collection Company (Corps) (MACC-C) in each corps to operate MACPs from the corps rear area to the brigades. These MACPs receive remains from the maneuver units, conduct search and recovery operations, and arrange for the evacuation of remains to a mortuary or temporary burial site. The level of processing performed in the MACPs is dependent on the number of remains passing through each point. The higher the number, the lower the level of processing and faster the remains are evacuated back to the theater evacuation point or theater mortuary if one has been established. The MAC-C has the capability of operating 20 MACPs each with the capability of processing 20 remains in a 12-hour period. This gives the company the capability of processing and evacuating 400 remains per day.  

The OC also calls for a Mortuary Affairs Company (Echelon Above Corps – EAC) or MAC-EAC. This company can perform a variety of functions depending on the theater mortuary affairs structure. It can organize in basically three ways. The first includes operating two Theater Mortuary Evacuation Points (TMEP), one Personal Effects Depot (PED), and five MACPs in support of a return program from the theater. The TMEPs are located at major aerial ports and process remains for direct evacuation to a Continental United States (CONUS) port of entry mortuary. The second option has the individuals who operate the TMEPs reorganize to staff an in-theater mortuary. This may be required in the event of widespread NBC contamination. In the event the theater commander determines that the return program cannot be supported due to operational contingencies, temporary burial may be necessary. In this event, the third option of operating two temporary interment sites plus the five MACPs and a PED would be used. Only one of the options can be in operation at one time. The MAC-EAC can prepare and evacuate 400 unembalmed remains per day to CONUS – with the ability to surge higher. If an in-theater mortuary is operational, it could embalm and evacuate 50 remains per day. If temporary interment is implemented, two temporary interment sites could each process 200 remains in a day.  

Under the OC, providing mortuary affairs support in support of a major theater war (MTW) on the scale of ODS would require the employment of two MACC-Cs and one MAC-EAC. As stated previously, there is currently only one active duty mortuary affairs unit within the Army – the 54th QMC at Fort Lee, Virginia. It is force structured as a MACC-C and, as it is the only active company, it has a worldwide
deployment mission. There are two other mortuary affairs units within the force structure – both Reserve units located in Puerto Rico. The 311th QMC, like the 54th QMC, is a MACC-C. The 246th QMC is the only MAC-EAC within the Army’s force structure. Unlike the 54th QMC, which typically remains at or above its authorized strength, both of these Reserve units are critically understaffed and non-mission capable.\(^6\) Even if all three units were brought to full strength, together they could only support one two-corps MTW. With the likely requirement to field several MADCPs throughout the theater of operations using assets from these units, it is apparent that even these three units would require some form of augmentation. This augmentation could come from a combination of Individual Ready Reserve personnel, U.S. contracted personnel or host nation support (HNS). Due to the sensitivity of the mission, use of the latter would be limited to support functions such as assisting in the establishment of temporary interment sites and/or a PED.\(^6\)

No capability exists to support a second, nearly simultaneous MTW as required in National Security Strategy and National Military Strategy. Headquarters, Department of the Army, Office of the Deputy Chief of Staff, Logistics (HQDA ODCSLOG) has identified this shortfall in the Joint Monthly Readiness Review (JMMR) process. Currently Component 4 (COMPO 4) recognizes the requirement for four additional mortuary affairs companies - two additional MACC-Cs and two MAC-EACs. COMPO 4 units by definition are identified as required, but not resourced. To meet the two MTW scenario requirement, ODCSLOG recommended that two of the COMPO 4 MACC-Cs and one of the COMPO 4 MAC-EACs be resourced in either COMPO 1 (active duty) or COMPO 3 (Reserve). The ODCSLOG recommendation was not approved which means that in the JMMR process the Army has accepted the risk of an inadequate mortuary affairs force structure.\(^6\) Without the mortuary affairs force structure to support even the two MTW scenario, the Army will be hard pressed to support any military operations other than war (MOOTW) - whether in support of peacekeeping, humanitarian assistance or MSCA operations. This at a time when the threat of mass fatalities from a WMD is very real and civil authorities and Federal emergency response agencies have expressed an expectation that they will receive a high degree of support from the Army in the form of mortuary affairs capability.

If additional force structure is not approved, senior planners must look at options for performing both the standard mortuary affairs operations and the decontamination of remains mission. The augmentation of existing units as discussed above is one option. Another would be to totally contract out specific areas of the mortuary affairs mission to U.S. commercial activities. Army 92 Mikes could be used forward in the theater to operate the brigade MACPs and conduct search and recovery missions, while the contractors performed the rear operations. Planners must discuss capabilities with potential contractors to identify existing capabilities and current/future risk.
MORTUARY AFFAIRS TRAINING

Having adequate force structure to meet operational requirements is critical, but not a solution in and of itself. Personnel must be properly trained to perform their individual soldier tasks and units their assigned missions. In addition to their core tasks, every unit within the Army has the responsibility to perform certain limited mortuary affairs functions. These include recovering the unit’s deceased, performing individual decontamination of contaminated remains (if required)\(^7^0\) and evacuating the remains to the nearest MACP. There are four Mortuary Affairs Specialists (92M) within each division tasked with the mission of coordinating mortuary affairs training. Divisions can also request teams from the 54\(^{th}\) QMC to assist in providing training.\(^7^1\) As stated earlier, one of the advantages of the OC restructuring is that it allows elements of the MACC-C to be force aligned with a particular division for deployment. This concept should also carry over to training, but unfortunately this is not always possible given the 54\(^{th}\) QMC’s numerous commitments and training schedule conflicts.\(^7^2\)

As discussed previously, the 54\(^{th}\) QMC is based at Fort Lee, Virginia. This has several advantages. Probably the greatest is the mutual benefit received by being co-located with the U.S. Army Quartermaster Center and School (USAQMC&S), Mortuary Affairs Center (MAC). The MAC has the mission of training soldiers to become 92Ms through the Advanced Individual Training (AIT) Program. It also provides follow-on training to the 92M non-commissioned officers (NCO) in the Basic and Advanced NCO Courses – BNCOC and ANCOC. Two other MAC courses are a two-week Joint NCO Course and a two-week Mortuary Affairs Officers Course. The latter awards graduates an additional skill identifier (ASI) of Mortuary Affairs Officer (4V). Personnel from the 54\(^{th}\) QMC assist the MAC in its training mission benefiting the MAC, the students and the soldiers of the unit. Personnel of the 54\(^{th}\) QMC also take advantage of the affiliation the MAC has established with the Richmond, Virginia Morgue and the Norfolk, Virginia Medical Examiner’s Office where the soldiers are given the opportunity to work with remains and stay proficient in their skills. Another benefit is that graduates from the AIT program can be directly assigned into the 54\(^{th}\) QMC and conversely, members of the 54\(^{th}\) QMC can more easily transition into the MAC training. Both options save the Army funds in travel and provide additional stabilization for many soldiers and their families. As the Doctrine and Training Integration Center for Mortuary Affairs, the MAC also develops and tests doctrine and training before it is exported to the field. 54\(^{th}\) QMC personnel can and do assist the MAC by participating in the training and TTP testing/evaluation process. In 1992, members of the 54\(^{th}\) QMC supported the testing and evaluation of the prototype procedures for the MADCP that led to recommendations that were subsequently adopted.\(^7^3\)

Mortuary affairs training within divisional units is not as effective as desired. This is not as much a reflection on the type of training or the quality of the 92Ms assigned as it is on the level of emphasis mortuary affairs is given in tactical units. Traditionally, units give such training a low priority. One reason is that it competes with core mission training. Another is that mortuary affairs tasks receive little or no emphasis during unit evaluations. At the National Training Center (NTC), there is no mortuary affairs
However, at the Joint Readiness Training Center (JRTC), there is an effort to test both mortuary affairs and personnel replacement tasks. Units are required to evacuate their 'casualties' to a MACP before replacements can be obtained. Although this process demonstrates to the units that there is a connection between the two, the exercise ‘play’ is not as realistic as it could be. Current protocol has units evacuating their dead on trucks to the MACP. These casualties typically ride as passengers and exit vehicles under their own power, thereby eliminating the logistics challenge of physically carrying litters. In addition, the 'deceased' often verbally provide required data to the MACP personnel instead of the unit providing the necessary documentation. As a result, both the units and individuals from the 54th QMC who support the exercise lose a potentially valuable training opportunity. In addition, the capabilities of the MACP are greatly exaggerated. In one 12-hour day a JRTC MACP processed as many as 200 remains. This is ten times the actual capacity of a MACP.

One of the greatest unit readiness shortfalls made evident by units that have gone through a JRTC rotation is the lack of NBC preparedness. The JRTC incorporates within each rotation NBC events that typically last about 8 hours. With few exceptions, units are typically unprepared to properly respond to the NBC incidents and the resulting effects. At present, decontamination of contaminated remains is not evaluated at the JRTC. A move is underway, however, to incorporate echelon above division (EAD) level units into the rotations. This could eventually give the 54th QMC – a corps level asset – the opportunity to set up and operate several MACPs and even a MADCP - if the equipment is made available.

In garrison, 54th QMC personnel routinely practice procedures used to decontaminate individual remains. But because there is no MADCP at Fort Lee, personnel cannot train on the decontamination procedures found in Appendix D., Joint Pub 4-06. As a result, no unit in the Army has hands-on experience with the MADCP or is trained to perform the mass decontamination of remains mission. This is a significant shortcoming that should have been resolved years ago. When the proposal was made in 1991 to place the ODS MADCP systems in Operational Project Stocks (OPS), one of the goals was "to locate one (MADCP) section at or near the 54th QMC ... to allow accessibility of the equipment for training and rapid deployment of the unit if required." Efforts are currently underway at the MAC to establish a MADCP mock-up within a warehouse that will allow students and members of the 54th QMC the opportunity to view the system. This will be an improvement over the current method of teaching 92Ms the MADCP operation - classroom instruction that includes a video of the initial MADCP test. It will, however, in no way match the benefit of having a complete system on-hand for use by the 54th QMC in training and emergency deployments. Ideally, a MADCP should also be positioned in Puerto Rico for use by the two Reserve mortuary affairs companies.

In addition to having the means to train – funding, facilities, equipment and realistic scenarios – units must also have the time. For the 54th QMC this is a difficult challenge. As the only active mortuary affairs company, the unit has a very high operations tempo (OPTEMPO). There has not been a time in the past several years that the unit has not had elements deployed somewhere in the world supporting
some type of contingency operation. In addition to the JRTC rotation support, the 54th QMC also deploys teams to support unit training at various installations, sends teams to Germany to assist at the mortuary, augments U.S. Army Central Identification Laboratory, Hawaii (CILHI) teams on search and recovery missions, and provides personnel to support exercises. As one of the biggest sources of personnel on Fort Lee, the unit is constantly tasked to provide personnel for installation support missions—post ecology and beautification, burial team details, fall clean-up and the USAQMC&S monthly field training exercise—LOG WARRIOR—to name a few. On a good day in GREEN cycle the unit has about 140 of its 221 assigned personnel in formation with the remainder accounted for. On a ‘bad day’ in the RED cycle there are 60 people in formation and the rest accounted for. Given the unit’s critical strategic response mission, these personnel availability numbers are too low. Adding another MACC-C to the active force structure would serve to reduce the OPTEMPO, improve the quantity and quality of training, and greatly enhance the Army Mortuary Affairs’ capability to support the two MTW contingency and future MSCA requests. In his May 1998 commencement address at Annapolis, President Clinton announced a comprehensive strategy to protect the civilian population from the consequences of biological weapons. He addressed four critical areas of focus, one of which was that "our emergency response personnel must have the training and equipment to do their jobs right…. (W)e will help insure that Federal, State, and local authorities have the resources and the knowledge to deal with a crisis." As changes to the force structure do not occur quickly, efforts must be taken now to train the 54th QMC on MADCP procedures and provide them the necessary equipment.

MORTUARY AFFAIRS EQUIPMENT

In addition to the poor quality of the MADCP Operational Project Stocks (OPS) and the lack of MADCP training/deployable systems within the existing mortuary affairs units, several other mortuary affairs equipment issues need to be resolved. As the Executive Agent for the Joint Mortuary Affairs Program, the SECARMY is also responsible for centrally managing common mortuary affairs equipment for the Services. SECARMY has tasked the Army ODCSLOG to "serve as the centralized manager for human remains pouches (HRP—often inappropriately referred to as ‘body bags’), transfer cases, and other key mortuary affairs support materiel." The Services are required to provide the ODCSLOG an annual report of requirements, on-hand stockage levels, and shortages of mortuary affairs supplies and equipment stocked to support joint operations and MOOTW. These reports have not been submitted in the past several years and as a result, there is no DOD-wide visibility of these critical assets. Lack of visibility of these items will result in delayed support and possible over-procurement. The reporting process outlined in Joint Pub 4-06 should be immediately implemented. As previously stated, equipment issues should be addressed both within the semi-annual CJMAO meetings and joint mortuary affairs conferences.
In the event of mass casualties, such as would result from a WMD incident, the Army would normally issue mortuary affairs equipment from OPS materiel? Because this area has not been funded for nearly ten years, the assets are not available to support mass casualties. For example, the combined CONUS and OCONUS HRP requirement (as estimated by the unified commands) is 13,348 while only 3,342 are available. Refrigerator units (for remains storage) in stock are inoperable due to chiller failures.\textsuperscript{83} Fiscal year (FY) 2000 funding should help rectify this shortfall as nearly $5 million is identified for the maintenance or refurbishment of the chillers and the purchase of HRPs and other consumable supplies.\textsuperscript{84} If a mass fatality incident occurred today, an emergency procurement action would be required. It would take the current vendor three weeks to produce the first 1,000 HRPs and one week for each subsequent 1,000.\textsuperscript{85} This assumes that sufficient raw materials are available. To correct the existing shortfall, the ODCSLOG must first revalidate projected peacetime and wartime HRP requirements. It must then verify the number and serviceability of HRPs in the possession of the wholesale supply system, the Services and the unified commands. Finally, the shortfall should be immediately procured and distributed to the field or stored in OPS stocks as appropriate.

THE WAY FORWARD

This paper discussed the mortuary affairs challenges that the Army must address as it moves into the 21\textsuperscript{st} Century. The first challenge looked at was the threat and the Army's mortuary affairs force structure ability to meet it. The Army does not have enough mortuary affairs units to support two nearly simultaneous MTWs and provide the MSCA needed and expected by Federal and State emergency responders in the event of WMD incidents at home. There is only one active mortuary affairs company in the current force structure. Its high OPTEMPO and numerous support requirements adversely impact its strategic mission readiness. In addition, the two Reserve mortuary affairs units in Puerto Rico are non-mission capable due to lack of personnel. Efforts must be taken to expand the mortuary affairs force structure and/or identify - where possible - sufficient contractor support capable of augmenting existing assets.

Arguably one of the toughest mortuary affairs challenges is the decontamination of remains mission. None of the Army's mortuary affairs units are trained on the current decontamination of remains procedures outlined in Joint Pub 4-06. Finding the additional personnel in theater to staff the current MADCP during a contingency operation, to include the NBC and medical specialists and the required technical equipment operators, will prove very difficult. Today, the equipment needed to establish a MADCP for performing the decontamination mission is not readily available either for training or deployment. Equipment/supplies in the OPS required/programmed to round out the four MADCPs procured for ODS are unserviceable. The Joint TTP outlined in Joint Pub 4-06 are untested, except in prototype tests. It is not known whether the TTP will adequately meet requirements and there are
concerns regarding the logistical supportability of the MADCP. The procedures must be tested, units need to be trained on the processes, and current efforts to identify a more logistically supportable decontamination process should given top priority.

For too many years, DOD has been operating without integrated, comprehensive mortuary affairs policy/doctrine. As the joint group responsible for coordinating mortuary affairs policy and procedures for DOD, the CJMAO has not met as often as it should. This must change. In the past, mortuary affairs conferences provided an invaluable forum for the joint mortuary affairs community to meet to discuss vital issues. Unfortunately, these conferences have been too few and far between. This must also change. Ongoing efforts to finalize the joint doctrine and develop joint mortuary affairs plans should reduce existing Service parochialism and, as a result, resolve many of the longstanding areas of concern.

Without the continued support from senior leaders, to include increased funding for personnel, training and equipment, many of the challenges addressed above will remain unresolved. Increasing the active mortuary affairs force structure, especially at a time of diminishing resources, poses a particularly difficult challenge. However, it is a requirement that must be given careful consideration. The Army must take immediate steps to improve its OPS equipment posture and position MADCP sets at Fort Lee and in Puerto Rico for both training and future deployments. Until the 54th QMC is trained on the MADCP procedures, the unit’s non-mission requirements should be reassigned. In addition, the Army should coordinate with Federal and State civil emergency responders to discuss their mortuary affairs requirements and expectations – particularly in the area of remains decontamination. Actions currently being taken to improve joint doctrine, policy and planning should go a long way toward enhancing mortuary affairs capabilities within DOD.

Since the birth of our Nation, through times of both war and peace, thousands of men and women have dedicated themselves to performing the difficult and sensitive mission of caring for their fallen comrades. They have given unselfishly of themselves to perform their solemn and highly sensitive task. Mortuary affairs is a profession which requires strict protocols that must be carefully followed. Mistakes cannot be made. We owe it to the soldiers performing the mission, and more importantly, to those who made the ultimate sacrifice, to insure that our mortuary affairs units are adequately structured, properly trained and equipped to provide only the best care possible. Anything less is not acceptable.
ENDNOTES


2. Tom Bourlier, Director, United States Army Quartermaster Center & School, Mortuary Affairs Center (MAC), Fort Lee, Virginia, interview by author, 5 November 1999. During Operation DESERT STORM (ODS), Mr. Bourlier served as the Deputy, Director of the MAC and was personally involved in the development of the procedures outlined in Joint Pub 4-06 for processing NBC contaminated remains on the battlefield. He is recognized as one of the Army's foremost experts in the field of mortuary affairs.

3. Steven Anders, Phd, Historian, United States Army Quartermaster Center & School, Fort Lee, Virginia, interview by author, 5 November 1999. Dr. Anders was a member of the VCSA special action team which met at West Point prior to the outset of ODS to develop procedures for processing NBC contaminated remains on the battlefield. He provided the team a detailed historical summary of mortuary affairs support throughout history.

4. Ibid.

5. Bourlier.


8. Ibid., 15.


13. Ibid.


15. Ibid., 5.

17 Ibid.

18 Clinton, 19.


21 Cohen, 7.

22 Ibid.


24 Cohen, 5.

25 Ibid., 33.


27 Clinton, 19.


29 Ibid., 2.

30 Dale Downey, Commander, Disaster Mortuary Operational Response Team (DMORT), NBC Special Operations, Department of Health and Human Services, telephone interview by author, 21 December 1999.

31 Downey.

32 Ibid.


34 Ibid., 11.

36 Bourlier.

37 Downey.

38 Captain Renee Collingwood, Commander, 54th Quartermaster Company, Fort Lee, Virginia, interview by author, 5 November 1999. Captain Collingwood is the commander of the only active mortuary affairs company within the United States Army.


41 Chairman, Joint Chiefs of Staff, Memorandum of Policy Number 16, “Joint Mortuary Affairs Policy”, 31 May 1990.


43 Daniel Taylor, Lieutenant Colonel, U.S. Army, Action Officer, Mortuary Affairs Policy, Sustainability, Mobilization and Plans Division, Office of the J-4, the Pentagon, interview by author, 11 January 2000.

44 Ibid.


46 Ibid., II-3.

47 Acting Secretary of Defense.

48 Taylor.

49 Ibid.


52 Campbell.
Chairman, Joint Chiefs of Staff, Joint Tactics, Techniques, and Procedures for Mortuary Affairs in Joint Operations, D-D-1.

Ibid., I-2.

Ibid., D-18.

Ibid., D-20.

Ibid., D-D-1 & 2.

Donald Stump, U.S. Army, Office of the Deputy Chief of Staff for Logistics (ODCSLOG), the Pentagon, telephone interview by author, 17 November 1999. Mr. Stump is the former Branch Chief, Troop Support Services, ODCSLOG. His responsibilities included management of the Army’s mortuary affairs equipment and supplies.

Ibid.

Christopher Kelly <KELLY@afip.osd.mil>, “Processing of Contaminated Remains” electronic message to Paul Bethke <logman@pa.net>, 18 November 1999.


Chairman, Joint Chiefs of Staff, Joint Tactics, Techniques, and Procedures for Mortuary Affairs in Joint Operations, D-D-2.

Bourlier.

Ibid.

Ibid.

Ibid.

Ibid.

Ibid.

Ibid.


Units only decontaminate remains that they bring to the MACPs. The decontamination would involve removal of surface contamination on individual remains. When there are a large number of contaminated remains that exceed the unit’s ability to decontaminate them, the remains would be left in the contaminated area and reported through channels set forth in the theater Joint Mortuary Affairs Policy.

Collingwood.
Tommy Hennessee, Lieutenant Colonel, U.S. Army, U.S. Army War College, Carlisle Barracks, PA, interview by author, 13 January 2000. Lieutenant Colonel Hennessee served as the Combat Service Support Senior Observer Controller at the Joint Readiness Training Center (JRTC), Fort Polk, LA, prior to attending the U.S. Army War College. In this capacity he monitored the performance of units as they went through their evaluations at the JRTC.

Collingwood.


Donald Crissup <Donald.Crissup@hqda.army.mil>, "Mortuary Affairs OPROJ," electronic message to Paul Bethke <logman@pa.net>, 22 November 1999. Mr. Crissup works in the ODCSLOG and monitors the War Reserve and Operational Project Stock requirements based on Operations Plans from the Unified Commands.
BIBLIOGRAPHY


Anders, Steven, Historian, United States Army Quartermaster Center & School, Fort Lee, Virginia. Interview by author, 5 November 1999.


Bourlier, Tom, Director, United States Army Quartermaster Center & School, Mortuary Affairs Center (MAC), Fort Lee, Virginia. Interview by author, 5 November 1999.


Crissup, Donald <Donald.Crissup@hqda.army.mil>. "Mortuary Affairs OPROJ." Electronic message to Paul Bethke <logman@pa.net>. 22 November 1999.


Downey, Dale, Commander, Disaster Mortuary Operational Response Team (DMORT), NBC Special Operations, Department of Health and Human Services. Telephone interview by author, 21 December 1999.


Kelly, Christopher <KELLY@afip.osd.mil>. "Processing of Contaminated Remains." Electronic message to Paul Bethke <logman@pa.net>. 18 November 1999.


