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Marine Corps University  
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# ***MASTER OF MILITARY STUDIES***

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## **BUGS & DRUGS: CHEM-BIO TERRORISM and THE U.S. RESPONSE**

Submitted in partial fulfillment  
of the requirements for the degree of  
Master of Military Studies

LCDR William H. Anderson

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## PREFACE

11 September 2001 is indelibly imprinted on the memories of an entire worldwide generation. The world's only remaining superpower, the United States, was powerless to act and more importantly powerless to prevent the heinous acts of 19 individuals as they unfolded on live global television. The emotions elicited by these events range the spectrum from ambivalence to uncontrollable rage. However, they underscored the inability of the U.S. to protect her citizens from terrorism.

On that fateful Tuesday morning, I was sitting in Conference Group Four, as a student at the United States Marine Corps Command and Staff College. My fellow students and I were discussing asymmetrical terrorist threats. The College's Director, Col. Huddleston, opened the classroom door and told us to turn on CNN. At approximately 0842, I watched the smoking pillar of the World Trade Center North Tower in wondering silence. My first thoughts were for my brother-in-law, a fraternity brother, and my cousin, pregnant with her first child, all who worked in downtown Manhattan. When the second aircraft flew into the South

Tower the world was without a doubt confronted with the most horrific terrorist incident in history.<sup>1</sup>

Less than four weeks later, an even uglier face of terrorism surfaced in the form of the daily mail - ANTHRAX. Biological terrorism had come to roost in the US. In its wake were five dead, three postal workers and two unrelated deaths one in New York City, the other in Connecticut. Once again, the powerlessness of being able to predict and prevent one's attacker from inflicting damage upon the psyche of America was emphasized by this anonymous threat.

The genesis for this essay stemmed from a personal incident in which I was involved in early October. I entered my three-year old son's daycare center to discover a parent cornering the assistant manager and requesting that she place a "Spam"<sup>2</sup> email on the center's bulletin board regarding the terrorist threat. I was appalled at this woman's attempt to make such a request. I very brusquely told her that she needed to check her paranoia at the door. I told her that we expected the daycare center personnel to create a safe environment for our children, which did not include alarmist actions such as she was

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<sup>1</sup> As of the writing of this essay the combined death toll for both the World Trade Center and the Pentagon stands at approximately 3100 victims (military personnel; civilians; police and emergency workers).

<sup>2</sup> "Spam" emails are a modern version of the electronic chain letter. The emails are generally authored by anonymous individuals and distributed through the Internet.

proposing. Moreover, I pointed out that she needed to be a calming influence to her two children, who were anxiously running around, knowing that their mother was upset about something, but not quite sure what it was. I then went to collect my son from his classroom. Upon my return the woman had departed.

I was perplexed. Here was a woman, from all appearances, one of means and advanced education, being fooled by a chain letter email. In the wake of 9/11 and the anthrax attacks, I was concerned that the U.S. Government was inadequately informing the public about the biological terrorist threat.

Many people believe it is important to keep information from the public, so as not to alarm or panic. Others believe that too much information will breed complacency or worse - contempt. I believe that the American public can handle the facts and the truth about biological terrorism. There are sufficient texts and Internet websites abounding with this information, but not everyone owns a computer nor do they frequent the local public library. What the United States Government (USG) should have done within sixty days of the first confirmed anthrax attack was to publish a brochure.

I would like to acknowledge several key individuals. First, I would like to thank my wife, Kim, for her patience, and for her support in allowing me the opportunity to attend Command & Staff College after so many years of being a geographical bachelor, first in Korea and then on sea duty. Enrolling in a Master's Program took time away from my family and I wish to thank Kim, Megan, Ashley and Brian for their patience and understanding.

I would like the opportunity to thank all of my faculty advisors. To Dr. Janeen Klinger for challenging me to push past my original educational boundaries... To Lieutenant Colonel Jon Lehr for his mentoring... To Commander David Mee for his tutelage... To Mrs. Linda Rohler for enduring my incessant conversation... To Dr. Kamal Beyoghlou for helping me to focus my emotional responses regarding the subject of Chemical, Biological, Radiological and Nuclear (CBR/N) weapons into substantive analytical work... And, to my mentor, Dr. Chris Harmon for taking on my naïve attempts at delving into his area of expertise, TERRORISM, and hopefully not embarrassing either himself or myself in the pursuit of educating people about this subject.

## EXECUTIVE SUMMARY

**Title:** BUGS & DRUGS: CHEM-BIO TERRORISM & THE U.S. RESPONSE

**Author:** LCDR William H. Anderson, USN

**Thesis:** The U.S. Public is capable of assimilating the facts regarding the threat of chemical and biological terrorism; however, the United States Government (USG) has failed to systematically inform its populace about this threat to their security.

**Discussion:** This essay underscores the fact that chemical and biological terrorism are very real threats. It is not a detailed study of chemical and biological agents, nor is it an in-depth text on their use as terrorist weapons; rather it is discussion of the United States Government's role in educating the U.S. Public regarding the current threat from chemical and biological terrorism. It will critique the apparent abdication of that role in favor of allowing the private sector, in particular, the media to assume the lead in informing the public.

**Recommendation(s):** The USG should have published a 15-20 page pamphlet organized in the manner. The pamphlet would include four sections. The first section would provide a brief overview of what terrorism is and outline the events of the anthrax attacks, which occurred in October 2001. The second section would briefly describe the current status of the chemical and biological threat, which faces the United States. The third section would illustrate what steps were taken to minimize the threat from agents already dispersed. The last section would outline the U.S. Government policies enacted to provide for continuous homeland security against CHEM-BIO Terrorism. This section in particular would also emphasize educational policies aimed at raising the level of U.S. Public awareness regarding CHEM-BIO Terrorism.

## CHAPTER 1

### TERRORISM & THE CHEM-BIO THREAT

The U.S. Public is capable of assimilating the facts regarding the threat of chemical and biological terrorism; however, the United States Government (USG) has failed to systematically inform its populace about this threat to their security.

This essay is a discussion of the United States Government's role in educating the U.S. Public regarding the current threat from chemical and biological terrorism.<sup>1</sup> It will critique the apparent abdication of that role in favor of allowing the private sector, in particular, the media to assume the lead in informing the public.

The essay is divided into four sections. The first section will briefly define terrorism. In no way can this work be construed as a definitive text on the subject of terrorism. The working definition is an amalgamation. Additionally, this section will provide a brief overview of the chemical and biological weapons threat, which the United States faces today. It will also discuss the abilities of terrorist groups to deploy both chemical and biological weapons. The second chapter will describe the

U.S. Government's apparent lack of coordinated effort in informing the public. The bureaucratic inertia known to exist in the inter-agency realm is most likely the cause of this challenge; however, it should not delay or worse, impinge upon the USG telling its citizens of the threat. This discussion will illustrate the efforts of the Executive Branch and Congress in their efforts to meet this challenge head-on. The third chapter will examine the private sector response to the biological attacks, specifically the five anthrax related deaths and the numerous sick or potentially affected victims. This section will concentrate on the popularized messages because of the media's vacillation between hype and education. The final chapter will conclude with a recommendation of combining both the government's capabilities with the media access to efficiently and effectively educate the public about the threat, how to recognize the threat and what protection is being provided.

### **What is Terrorism?**

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<sup>1</sup> The original intent of this work was to cover both Chemical & Biological terrorism. Although emphasis has been placed on the biological weapons threat, the same principles apply to the chemical weapons threat.

As defined by *Webster's Dictionary*, terrorism<sup>2</sup> "is the systematic use of terror as a means of coercion or the creation of an atmosphere of threat or violence."<sup>3</sup> This printed answer is not all encompassing. It does not elicit the cold fear of whether one has become a target through no choice of their own other than the country in which they reside or of which they claim citizenry. One recent author defines terrorism as "having but one nature...the abuse of the innocent in the service of political power."<sup>4</sup> Terrorists function to bring disorder and disharmony to regulated societies.

September 11<sup>th</sup>, 2001 redefined how the United States views its ability to protect its citizens. Nineteen terrorists boarded four separate civilian airliners. Two of the planes toppled both of the World Trade Center Towers in New York City. A third plane crashed into the Pentagon. And the passengers successfully stopped the fourth plane from striking its intended target--the Presidential retreat at Camp David.

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<sup>2</sup> *Webster's Third New International Dictionary of the English Language-Unabridged*, ed. Philip Babcock Gove (Springfield, MA: Merriam-Webster INC., Publishers, 1993), p. 2361.

<sup>3</sup> *Webster's*, p. 2361. Terror is defined as a state of intense fright or apprehension; a cause of anxiety: worry. An advocate or practitioner of terror to cause coercion or anxiety is a terrorist.

<sup>4</sup> Christopher C. Harmon, *Terrorism Today* (London: Frank Cass, 2000), p. xv. See also the formal definition he adopted for his work on p. 1.

Less than four weeks later the United States Senate became the target of an even more insidious threat - BIOLOGICAL TERRORISM - in the form of **anthrax**. Some individual or group of individuals perpetrated the unthinkable; they conducted a biological terrorist attack on U.S. soil. Moreover, their method was simple, straightforward, innocuous, making it all the more insidious - they used the U.S. Mail. A letter addressed to Senator Tom Daschle from an elementary school class in New Jersey delivered to his office contained a powdery white substance. What was opened that day was less a letter than Pandora's Box.

Whatever the motivation behind this attack, or from wherever the source may reside, the United States was, and is, still limited in its ability to predict or prevent the same or different attackers from inflicting damage upon the psyche of America as emphasized by the anonymity of the threat. It is extremely difficult to identify terrorists and curtail their efforts prior to an attack. Determined individuals will accomplish seemingly improbable actions in their desire to wield power over the innocent.

#### **The CHEMICAL-BIOLOGICAL Threat**

"Chemical and biological warfare makes use of chemicals and biological microorganisms to poison, kill, or incapacitate an enemy.... Warfare, however

labeled, is deadly and indiscriminate. The innocent as well as the principal participants suffer the consequences of man's ingrained humanity to man."<sup>5</sup>

One conjures up visions of artillery shells exploding, releasing clouds of choking gas across the fields of Ypres, France, in April 1915, when the Germans first introduced the world to chemical warfare. The U.S. used defoliants, such as Agent Orange in South Vietnam to deny the enemy cover and concealment. On the biological "front", plague-ridden bodies were catapulted over the walls of medieval cities to force the residents to surrender, and the exploits of the Japanese Imperial Army UNIT 731 in Manchuria during WW II were infamous. Each of these examples has national actors or states engaged in warfare against one another. But what of non-state actors?

America's experience with *germs* began with a biological attack in 1984, in of all places Oregon. Followers of the Bhagwan Shree Rajneesh Cult unleashed a systematic salmonella outbreak among the local population in The Dalles, Oregon. The Tokyo Subway was the scene of a *sarin* attack in 1995 by the Aum Shinrikyo Cult, a well-financed, organized and technically proficient religious cult. "With nerve gas in Tokyo (1995), a religious cult

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<sup>5</sup> Eric. R. Taylor, *LETHAL MISTS: An Introduction to the Natural and Military Sciences of Chemical, Biological Warfare and Terrorism* (New York: Nova Science Publishers, Inc., 1999), p. 2.

demonstrated that in an 'unlimited war' upon the world, there are no limits on weaponry."<sup>6</sup>

And now an anonymous individual or group of individuals has conducted an *anthrax* attack against both the government and the media in the United States.<sup>7</sup> Popularized visions of raging fevers, oozing corpuscles, gaunt, emaciated victims foaming at the mouth, morgues piled high with bodies, and hospitals overrun with the dying do nothing more than foment panic. These are the vivid images of chemical and biological attacks from such sources as the recent film OUTBREAK or the novel The Hot Zone. Are these images the U.S. Government wants to leave in the minds of its citizens? Is it not the responsibility of the government to dispel such gothicized visions?

Both the U.S. and the former Soviet Union spent billions of dollars in researching how to "mobilize disease for war."<sup>8</sup> After the demise of the USSR, the greatest biological threat came from the Soviet facilities, its former germ warfare specialists, and most importantly the stockpiled germs themselves. At the high point of the Cold War, the U.S.S.R. employed over 60,000 personnel at more than one hundred different locations in their biowarfare

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<sup>6</sup> *Terrorism Today*, p. 166.

<sup>7</sup> *GERMS*, pp. 15-33 and 151-154.

directorate BIOPREPART.<sup>9</sup> In Stepnogorsk, Kazakhstan, the Soviets built one of their most advanced germ warfare facilities. In one particular building, specifically, Building No. 221, an American observer team discovered ten fermentation vats that towered four stories, each capable of holding 20,000 liters of fluid which in turn could produce 300 tons of anthrax in just seven months.<sup>10</sup> **"Disease by the ton was its industry."**<sup>11</sup>

Moreover, all of this chemical and biological warfare research and production capability was accomplished in the wake of the Soviet Union being a signatory to the Biological and Toxin Weapons Convention (BWC).<sup>12 13</sup>

The BWC:

"is a toothless wonder, full of good intentions but utterly lacking in the key components of effective arms control: transparency, power of inspection, verification, and enforcement."<sup>14</sup>

## The Agents

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<sup>8</sup> Judith Miller, Stephen Engelberg, and William Broad, *GERMS - Biological Weapon and America's Secret War* (New York: Simon & Schuster, 2001), p. 166.

<sup>9</sup> *GERMS*, p. 135-137.

<sup>10</sup> This is a paraphrase of material found in *GERMS*, p. 166.

<sup>11</sup> *GERMS*, p. 166.

<sup>12</sup> "The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (1972)," *Marine Corps Research Center*, URL: <http://www.tufts.edu/departments/fletcher/multi/texts/BH596.txt>, Accessed on 26 October 2001.

<sup>13</sup> Stepnogorsk was built in 1973 (See *GERMS* p. 167.)

<sup>14</sup> Garrett, 498.

While this work is not a comprehensive, in-depth study into the details of chemical and biological warfare production, storage, and deployment, it must be addressed so that the reader will understand whether or not a given terrorist organization could produce these agents to pose a threat to the unsuspecting public.

The military weaponization<sup>15</sup> of both chemical and biological agents has become quite sophisticated during the latter half of the twentieth century. The Soviet Union perfected the capability to mass produce both CHEM-BIO weapons of all varieties from artillery shells to Inter-Continental Ballistic Missiles (ICBMs), from hand grenades to aerial bombs, in direct contravention to the 1972 BWC. Even though the U.S. destroyed its stockpile of offensive biological weapons after signing the BWC, it still retained enough biological agents to conduct defensive research.

While "officially" out of the offensive chemical and biological warfare arena, the U.S. private sector in the area of chemical corporations and biological research facilities continued to conduct experimentation with these types of agents for the production of detection devices, protective systems, such as personnel over-garments and

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<sup>15</sup> This word has come to be misunderstood and misconstrued in the parlance of the post-Anthrax attack U.S. media. Numerous "experts" have oversimplified and

shipboard counter-measures systems, as well as the creation of vaccinations to protect the military personnel on the battlefield.

The private sector laboratories, pharmaceutical companies, and the chemical industry continued their research and production lines in the noble pursuit of scientific advancement. However, the creation of an easily mass-produced vaccine to combat smallpox is the other side of the coin from producing a more virulent strain of smallpox. The same equipment used to ferment and grow bacteria for benign legitimate research is identical to that need to conduct offensive chemical and biological agent production. "Indeed the prospects of chemical and biological terrorism will increase with the spread of dual-use technology."<sup>16</sup> What it all boils down to is the question of whether or not a terrorist organization can produce and deploy chemical and biological agents in private without the sophistication of laboratories such as those found at the United States Army Medical and Research Institute for Infectious Diseases (USAMRIID), located at Fort Detrick, Maryland, or the Chemical Defence

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led the public to believe that weaponization is achievable with a "Five-n-Dime" chemistry set and a high school chemistry/biology text.

<sup>16</sup> *Terrorism with Chemical and Biological Weapons: Calibrating Risks and Responses*. Monograph. Ed. Brad Roberts (Alexandria, VA: The Chemical and Biological Arms Control Institute, 1997), p. 6.

Establishment, at Porton Down, Wiltshire, in the United Kingdom.<sup>17</sup> The simple answer is yes.

Today, many chemicals formerly considered weapons of the past are now labeled as industrial chemicals produced for commercial use. Many are used for pesticides, industrial cleaners and solvents. Their production is legal, and while many are highly toxic and they are supposed to be shipped (at least in the U.S.) under relatively rigorous safety standards.

Just as with chemical agents, there are examples of legitimate biological agents, such as those that are used in the clean up of oil spills, which are produced and shipped for commercial purposes.

The access to information pertaining to the production, as well as, the technology to aid in that production is generally not restricted. If, for example, an individual or a group (as in the case of the Cult in Oregon) were to incorporate themselves as a medical research firm, they would be able to purchase both the necessary equipment and cultures required to produce both chemical and biological weapons. All it requires is money. Until quite recently, The American Type Culture Collection (ATCC), a private germ bank located in the Washington, DC

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<sup>17</sup> Sean Murphy and others, *No Fire, No Thunder: The Threat of Chemical and*

area, sold its specimens, including such cultures, as anthrax, tularemia, and smallpox to private enterprises with relatively little oversight. "Even unstable regimes would most likely resist providing NBC weapons to terrorist groups or would deny them sanctuary."<sup>18</sup>

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*Biological Weapons* (New York: Monthly Review Press, 1984,) p. 10.

<sup>18</sup> *Terrorism with Chemical and Biological Weapons: Calibrating Risks and Responses*, p. 15.

## CHAPTER TWO

### THE U.S. GOVERNMENT RESPONSE

#### **The Office of Homeland Security**

On October 8, 2001, by Executive Order, President George W. Bush created the Office of Homeland Security (OHS).<sup>19</sup> Situated in the White House, its director is Governor Tom Ridge. Under his tutelage, the Office's mission is "to develop and coordinate the implementation of a comprehensive national strategy to secure the United States from terrorist threats or attacks."<sup>20</sup> The OHS is the umbrella organization for all issues that affect the internal security of the United States. Important bureaucratic matters must be resolved for some of those issues already taken care of by the Department of Defense (DoD) or the Department of State or the Department of Justice (DoJ).

OHS coordinates across the entirety of governmental bureaucracy from the federal to the state and down to the local/municipal level. It is creating policy to focus these activities on six distinct areas - 1) Detection; 2) Preparedness; 3) Prevention; 4) Protection; 5) Response and

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<sup>19</sup> [www.whitehouse.gov/new/releases/2001/10/20011008-2.html](http://www.whitehouse.gov/new/releases/2001/10/20011008-2.html), accessed on 27 February 2002.

Recovery; and 6) Incident Management. While there are already numerous, and often believed, too many, competing organizations with overlapping areas of responsibility, OHS is attempting to streamline the federal level and utilize it as an example for state and local governments to follow. Governor Ridge is making proposals, which will break with traditional roles. While change is inevitable, in this case it is definitely not going to be simple. Governor Ridge is treading in the grey area of federalism where the checks and balances, especially in the area of *implied powers*, will be tested on their constitutional merit.<sup>21</sup>

The Office of Homeland Security is tasked to provide a comprehensive plan sometime in the next few months.

"It will be a national plan for securing the nation's borders, improving intelligence gathering and sharing of information by federal agencies, and beefing up law enforcement agencies' efforts to detect and apprehend terrorists seeking to harm U.S. citizens and property. The plan (will) have a profound impact on government, industry and the lives of the average citizens, yet it will not be subject to congressional approval... The final decision on the details will be left to (President) Bush."<sup>22</sup>

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<sup>20</sup> [www.whitehouse.gov/new/releases/2001/10/20011008-2.html](http://www.whitehouse.gov/new/releases/2001/10/20011008-2.html), accessed on 27 February 2002.

<sup>21</sup> <[www.whitehouse.gov/response/faq-homeland.html](http://www.whitehouse.gov/response/faq-homeland.html)>, Accessed on 27 February 2002.

<sup>22</sup> Eric Pianin, "Homeland Security Team's Key Members Announced," *Washington Post*, November 21, 2001, p. A21.

"The use of intelligence not to fight the enemy but to erect a bodyguard of misimpressions around incompetent policy is not a sign of brilliance."<sup>23</sup>

One of the problems, in October 2001, with U.S. Health policy towards the bioterrorism threat stemmed from the lack of leadership at most of the major U.S. Health agencies. The National Institute of Health (NIH), the Food and Drug Administration, and other bodies at the federal level did not have their duly appointed leadership in place [during the crisis].<sup>24</sup> "The bottom line is that when the country is trying to mobilize for a huge new effort to fight bioterrorism, there aren't any generals for the battle said Senator Ron Wyden (D-Ore.)."<sup>25</sup>

At the time, it appeared as though Tommy Thompson was running Health and Human Services (HHS) almost single-handedly. In October 2001, he was still without an assistant secretary since the Bush Administration had taken office in January 2001. He personally negotiated a Cipro contract and made the sole determination to offer the anthrax vaccination to thousands of affected personnel. While this hands-on leadership is refreshing in times of

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<sup>23</sup> Angelo M. Codevilla, "VICTORY - What It Will Take to Win," *Claremont Review* (Claremont, CA: Claremont Institute for the Study of Statesmanship and Political Philosophy), Vol. 2 No. 1, Fall 2001, p. 14.

<sup>24</sup> Ceci Connolly, "Leadership Void Slows Top Health Agencies," *Washington Post*, January 10, 2002, pp. A1 and A7.

<sup>25</sup> *Washington Post*, January 10, 2002, p. A1.

crisis, it had its disadvantages. "During the anthrax crisis, a rotating cast of politicians, doctors and mid-level researchers presented what many viewed as a confusing, often contradictory, public health message."<sup>26</sup>

### **Decontamination**

The ongoing process of decontaminating the Hart Senate Office Building and the Brentwood Postal Facility in Washington DC, has been viewed by the public as something of a comedy of errors. It points to the woeful inadequacy of the decontamination procedures for facilities in general. More to the point, the decontamination of these two facilities represents a real-world challenge rather than a notional exercise threat. In this case, people must eventually return to these two buildings to resume their professional lives. The U.S. Government must make these two buildings the centerpiece of their decontamination effort because they represent the initial recovery from the first bioterrorism threat. The decontamination procedures used in the case of the Hart Office Building - the fumigating of the entire building with chlorine-dioxide gas poses only a slight health risk. "It is a mild irritant

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<sup>26</sup> *Washington Post*, January 10, 2002, p. A7.

which if inhaled by an individual would cause a runny nose and burning, watery eyes."<sup>27</sup>

The DoD and Office of Homeland Security are wrestling with how best to contribute to the overall requirement of securing America's borders, skies, streets and waterways.<sup>28</sup> DoD is creating a new geographical area of responsibility - Northern Command or NORTHCOM. It will be responsible for all landmass from the Southern Border of Mexico to the North Pole and all waters contiguous to these landmasses out to 200 nautical miles. NORTHCOM will work with the combined US/Canadian NORAD (North American Defense Command), so as to reduce redundancy. However, there is an overall reluctance to increase the role of the U.S. Military Services with respect to the homeland defense mission. This reluctance stems from the encroachment by federal troops on civil liberties and the rights of US citizens protected by several Amendments to the U.S. Constitution. Governor Ridge considers the military as a "ready reserve, not a force provider of first resort."<sup>29</sup> Yet, this is in direct juxtaposition to past and current efforts of establishing "dozens of emergency units for

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<sup>27</sup> Steve Twomey, "Mail Official Predicts Brentwood's Return - Hart Fumigation Offers Lessons to Postal Service," *Washington Post*, January 9, 2002, p. A11.

<sup>28</sup> Bradley Graham and Bill Miller, "Pentagon Debates Homeland Defense Role - Sept. 11 Attacks Challenge Reluctance to Use Troops for Civil Law Enforcement," *Washington Post*, February 11, 2001, A6.

<sup>29</sup> *Washington Post*, February 11, 2001, A6.

responding to attacks involving nuclear, chemical and biological weapons," - units comprised of National Guard and Reserve Component personnel.<sup>30</sup> However, in the interim, DoD, working in conjunction with several federal agencies, among them the U.S. Customs Service, the U.S. Immigration and Naturalization Service, and the U.S. Border Patrol, deployed military personnel to augment these agencies until they can hire additional officers to meet the growing homeland security commitments.

"The decision to let federal troops come under the command of the agencies will enable the Pentagon to remain in compliance with an 1878 law - the Posse Comitatus Act - which bars uniformed personnel from making domestic arrests and conducting searches and seizures."<sup>31</sup>

### **Treating the Exposed**

The U.S Government is not doing well with regards to the corrective and preventive health measures instituted for those people exposed in New York, New Jersey, Washington, DC, and Florida, approximately 5100 at last count. While these people have been administered the prescribed doses of Ciprofloxin, Tommy Thompson, Secretary for Health and Human Services, stepped forward in late December 2001 and offered the anthrax vaccine, which is currently administered to the military, as an additional

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<sup>30</sup> *Washington Post*, February 11, 2001, A6.

precautionary measure. Only 152 out the total 5100 people exposed have agreed to be vaccinated.

"I don't think they should have offered this if they weren't going to give a recommendation. If you don't think a treatment will be useful, you shouldn't bring it up."

- C.J. Peters, former Director of Pathogens for the Centers for Disease Control (CDC)<sup>32</sup>

In any case treatment of exposed populations numbering in the thousands would come under the cognizance of both the state and federal government. This treatment would be normally prophylactic in nature and require release of supplies from the National Pharmaceutical Stockpile (NPS) under the guidance of consequence management teams.<sup>33</sup> The first use of the NPS occurred during the attacks on the World Trade Center, when the CDC released one of its eight regionally based 12-Hour Push Packages.<sup>34</sup>

### **The Cost of Not Sharing Information**

In April 2001, Canadian researchers conducted experiments on anthrax disseminated through the mail.

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<sup>31</sup> *Washington Post*, February 11, 2001, A6.

<sup>32</sup> Ceci Connolly, "Workers Exposed to Anthrax Shun Vaccine," *Washington Post*, January 8, 2002, p. A6.

<sup>33</sup> Government Accounting Office, *COMBATING TERRORISM: Considerations for Investing Resources in Chemical and Biological Preparedness*, GAO-02-162T, 17 October 2001, p. 8.

<sup>34</sup> Government Accounting Office, *BIOTERRORISM: The Centers for Disease Control and Prevention's Role in Public Health Protection*, GAO-02-235T, 15 November 2001. p. 11.

However, the United States Government did not make sure that all the key agencies, outside of those in the military and the Intelligence Community (IC), namely the Centers for Disease Control and Prevention (CDC), had that information before the first anthrax letter was opened on October 4, 2001, by a news media editor in Florida. The glacial bureaucracy of the USG prevented and hampered the dissemination of vital information. Would it have made a difference? That is a question, which can never be answered. However, it is likely that if the CDC did have the knowledge they might have approached the October 15, 2001, anthrax attack of the Senate Hart Office building with a better plan. Instead, they quickly scrambled to assemble "biological warfare" expertise and decide upon a course of action after the fact.<sup>35</sup>

### **Opposing Forces**

The difficulty of achieving unity of effort on crises such as these is the simple fact that most chemical and biological attack scenes are also associated with criminal investigations. The law enforcement plan of attack is to tape off the area and collect evidence for potential future

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<sup>35</sup> David Brown, "Agency With Most Need Didn't Get Anthrax Data - CDC Unaware of Canadian Study Before Attacks," *Washington Post*, Monday, February 11, 2002, p. A3.

prosecutorial efforts. Unfortunately, in a biological attack this may not be the best course of action due the inability to determine the actual size of the "hot zone" (the actual area of contamination). So not surprisingly, the USG's first response to a biological terrorist attack was disjointed and uncoordinated. Lack of information(both in facts and in sharing what was available), lack of specialized training, and reliance on the private sector medical community stemmed from the fact that the United States was ill prepared to respond.

In testimony before several Congressional subcommittees, Janet Heinrich, the Director, Public Health Care - Public Health Issues, commented that, "despite the formulation of interagency working groups and agreements to combat terrorism, there was still evidence that coordination remains fragmented."<sup>36</sup> "Civilian vulnerability to NBC terrorism has not been systematically addressed - the focus has been NBC threats to military forces."<sup>37</sup>

"Civilian crisis management organizations do not now have the experience, resources, or political leverage to effectively respond to NBC terrorism, and the military

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<sup>36</sup> Government Accounting Office, *COMBATING TERRORISM: Comments on Counterterrorism Leadership and National Strategy*, Testimony, GAO-01-556T, 27 March 2001. This same statement is repeated in the following GAO reports: GAO-02-129T, p. 7.; GAO-02-141T, p. 9.; and GAO-02-149T, p. 9.

<sup>37</sup> *Terrorism with Chemical and Biological Weapons: Calibrating Risks and Responses*, p. 16.

continues to have misgivings about getting involved in this mission."<sup>38</sup>

"Although the federal government has an interagency working group on NBC terrorism, and major cities such as New York and Los Angeles have developed their own contingency plans, there has been relatively little coordination between federal and local levels."<sup>39</sup> This stems from the conflicting statutory checks and balances that exist between the municipal, state and federal governments. The democratic system of bureaucracy does not facilitate communication among domestic governmental agencies.

In response to the Aum Shinrikyo Sarin attack in the Tokyo subway system the United States Marine Corps created the Chemical and Biological Incident Response Force or CBIRF. Its primary mission was to respond to Chem-Bio incidents at USN/USMC installations overseas. In fact, CBIRF was on the fiscal chopping block on September 10, 2001.<sup>40</sup> By October 4, 2001, CBIRF was not only alive and well funded, but in fact was responding to the anthrax

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<sup>38</sup> *Terrorism with Chemical and Biological Weapons: Calibrating Risks and Responses*, p. 16.

<sup>39</sup> *Terrorism with Chemical and Biological Weapons: Calibrating Risks and Responses*, p. 106.

<sup>40</sup> *Terrorism with Chemical and Biological Weapons: Calibrating Risks and Responses*, p. 107.

attack against Senator Tom Daschle in the Senate Hart Office Building.

### **Lack of Coordinated Response**

In January 2001, the United States Government (USG), completed work on comprehensive interagency framework to be used in time of crisis, known as the Federal Response Plan (FRP). In this contingency plan or CONPLAN, it divides an emergency into two distinct stages - first, crisis management and second, consequence management. During the crisis stage, the Federal Bureau of Investigation (FBI) is the lead federal agency. They are tasked to coordinate all other agencies across the federal, state and local levels to address the crisis at hand. After the crisis has been stabilized, and the situation is no longer considered a crisis, the FBI passes the lead to the Federal Emergency Management Agency (FEMA). It is FEMA's responsibility to coordinate all the agencies during the cleanup and recovery phases of a situation. Most importantly, FEMA is required to capture all of the lessons learned to help prevent such a situation from happening in the future, or should it happen, how to more effectively and more efficiently handle both the crisis and consequence management functions.

Not only did the USG, not use the FRP during the 11 September incident, it did not enact the FRP during the anthrax attacks. Why did the USG not follow its own prescribed plan? Bureaucracy!

The President's Office of Science and Technology, headed by Dr. Marburger, was directed to coordinate the response to the anthrax attacks. While the FBI did respond for the criminal investigatory aspect, it did not take the lead during the crisis phase. The Office of the United States Senate's Sergeant-At-Arms in coordination with the Washington, DC, Metropolitan Police Department and Fire Department was and still is in charge of the anthrax attacks and subsequent decontamination of the Senate Hart Office Building. The lead consequence management (CM) agency for recommending courses of action in decontaminating the Hart Building has been the Environmental Protection Agency (EPA), not FEMA.

Dr. Knutsen, LTC, USA (ret.) was the one of the individuals responsible for researching and validating the need for anthrax vaccination in the United States Military during the early 1980s. He currently works for United States Uniformed Health Service (USUHS). The United States Postal Service (USPS) turned to him to discover a solution to decontaminating the mail from the affected Brentwood

Mail Distribution Center in Washington, DC. He recommended irradiation because it was the decontamination process with the highest assurance of success.

Experts in virology and the public health sector have had to endure naïve and uninformed questions regarding anthrax. The author's critical commentary centers on the creation of this naïveté as the abdication by the USG of its responsibility in educating both elected leaders and the public about the anthrax threat and moreover what the response has been, is, and will be to that threat.

#### **HHS Response or Lack Thereof**

In the spring of 1999, HHS requested \$230 million dollars to combat biological terrorism. However, in testimony before the House Appropriations Committee, Henry Hinton, the Assistant Comptroller General for the National Security and International Affairs Division noted that:

"HHS has not yet performed a documented, formal, methodologically sound threat and risk assessment with a multidisciplinary team of experts to derive, prioritize, or rank-in accordance with the most likely threats the nation will face-the specific items it plans to have researched, developed, produced and stockpiled."<sup>41</sup>

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<sup>41</sup> Government Accounting Office, *Combating Terrorism: Observations on Biological Terrorism and Public Health Initiatives*, Testimony, GAO/T-NSIAD-99-112, 16 March 1999, p. 3.

Mr. Hinton's chief complaint regarding HHS was the necessity to utilize a tiered approach to constructing effective policy. In the aftermath of the Cold War, numerous government agencies have turned to the use of the risk management to mitigate unnecessary planning and expenditure on worst-case possible scenario driven events. In order to appropriately use risk management, "the likelihood that a threat will harm an asset (the U.S. populace) with some severity of consequences- and deciding on and implementing actions to reduce it."<sup>42</sup> Mr. Hinton further stated that the most important underpinning of risk assessment and management is having a highly defined threat assessment.

### **Congressional Involvement**

In the last six months since the events of 9/11 and the anthrax mail attacks, there have been a number of hearings before Congress on the status of the Federal Government's capability to respond to a terrorist attack. When sifting through this material, especially the testimony from hearings held in early October 2001, just as the anthrax attacks were occurring, there is a "soft soaping" of the true state of preparedness.

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<sup>42</sup> *Combating Terrorism: Observations on Biological Terrorism and Public Health*

During the course of one hearing Senator Kennedy states that the "committee has been ahead of the curve" and yet, in the same transcript Senator Frist makes the statement that "we're vulnerable not because we are unprepared, but because we are under-prepared."<sup>43</sup> What is of concern is the political double-speak with which our duly elected public overseers gloss over how truly unprepared the United States is - at all levels - federal, state and local in its ability to deal with a bioterrorist attack. The Senators are perhaps deliberately cautionary in their orations because they do not wish to reveal any further vulnerability to a would-be terrorist waiting in the wings.

Yet these vulnerabilities have already been exploited - airline security and the mail - to the maximum advantage. Where Congress plays the greatest role is the allocation of resources to protect and defend these "gaps". Congress has approved a \$50 billion plus-up of the Defense budget in its war on terrorism. The HHS budget has seen an increase of an additional twenty billion dollars to fund the training and equipping of America's First Responders.<sup>44</sup> What must now occur is the allocation of resources focused on

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*Initiatives*, p.5.

<sup>43</sup> HHS and Education Subcommittee, Committee Hearing on Bioterrorism, 3 October 2001, <http://www.nexis.com/research>, Accessed on 16 April 2002. pp. 5 & 8.

educating the American People as to the parameters of the chemical and biological terrorist threat and more importantly what the U.S. Government is doing to counter that threat. Testimony buried in reprints of the Congressional record or in obscure GAO reports is not getting the word to the average person on the street. These tomes barely see the light of day and are only rarefied in print by academicians and purposeful students.

What has occurred since early October 2001 is the reliance on media "sound bites" and hyper-sensationalism. By not getting the official word out to the U.S. Public the federal government both the Executive and Legislative Branches have not lived up to their responsibilities of informing their electorate in a meaningful manner.

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<sup>44</sup>HHS and Education Subcommittee, Committee Hearing on Bioterrorism, p. 21.

## CHAPTER THREE

### THE PRIVATE SECTOR RESPONSE

#### Public Advocacy

It would seem that the private sector, and in particular the medical industry - medical supply companies, medical advertising companies, patient advocacy groups, professional associations, etc. - have taken on the task of educating their consumers, the public. They have leaped into the vacuum left by the U.S. Government. Governor Ridge's Office of Homeland Defense has not stepped forward to assume the responsibility of informing the public, nor have they apparently worked with the media to produce a single, cogent response to the anthrax attacks and biological terrorism in general. The USG has to harness the resources of the public media and work with it to enlighten the public, not hide behind "no comment" or "we are taking it under advisement and looking into the matter."

Maureen Regan of Regan, Ward and Campbell - a New York City based medical advertising firm - moved to create an Internet Website "www.btresponse.org". The impetus for the idea came from an interview with a bioterrorism "expert" who "emphasized the importance of medical professionals

being aware of the symptoms.”<sup>45</sup> The Website is updated daily and links to other important sites such as the Center for Disease Control (CDC) in Atlanta and the Journal of American Medical Association (JAMA). While this is not being done in an “official” capacity, pioneers like Regan are mobilizing the private sector resources because they realize the enormity and difficulty that chemical and biological attacks pose the United States Public Health Care system.

To say the least, the U.S. Public Health Care System is a shambles. Decades of budget cutting and downsizing have contributed to the creation of “a vast decentralized” architecture: albeit one that the nation is dependent upon as “the first response” to a chemical and biological terrorist attack.<sup>46</sup>

The book GERMS illuminates the disaster looming on the horizon. The authors illustrate both a real world case, the New York City West Nile Virus outbreak, in 1999, and move their argument to the lack of connectivity and lack of simple communications networks, which would allow for the quick and efficient transfer of information regarding an outbreak of a biological threat.<sup>47</sup> “One of the things the

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<sup>45</sup> Allison Fass, “Advertising”, *The New York Times*, 27 December 2001.

<sup>46</sup> *Washington Post*, p. A-3, 7 April 2002.

<sup>47</sup> *GERMS*, p....

events of 11 September really pointed out," said Dr. Michael Fleming, "is the inadequacy of the public health infrastructure in our country."<sup>48</sup>

The underlying premise of these efforts is to educate and inform, not alarm. "We had to make people concerned without making them alarmed," said Brendan Ward, the creative partner of Regan Campbell. "We didn't want to be perceived as using scare tactics."<sup>49</sup> "The information on the Website is vetted and pedigreed by a committee of doctors, clinical content editors and writers."<sup>50</sup>

### **Capitalism & Homeland Security**

"With President Bush proposing to spend nearly thirty-eight billion dollars next year as a 'down payment' on protecting the country against more terrorist attacks, private corporations and all levels of government are poised to grab their shares of the federal spending expected over the next decade."<sup>51</sup>

Hilton Technologies Ltd. is selling computer software aimed at creating disaster plans, Raytheon is promoting both mobile emergency command centers and weapons to shoot down terrorist aircraft, and Lockheed Martin "designed a product to detect anthrax and other biohazards in mail, hoping to enhance an already well established relationship with the

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<sup>48</sup> Fass, "Advertising", *The New York Times*, p.

<sup>49</sup> Fass, "Advertising", *The New York Times*, p.

<sup>50</sup> Fass, "Advertising", *The New York Times*, p.

U.S. Postal Service (USPS)."<sup>52</sup> "Hilton Technologies new software 'StaySafe' enables city officials to simulate or actually respond to disasters ranging from nuclear and chemical leaks to airborne biological agents."<sup>53</sup>

### **Public Level of Concern**

Should the U.S. public at large be concerned about being at the epicenter of a chemical or biological terrorist attack? Most likely not, however, do not rule out the possibility that when in a city such as Washington, DC, given its high profile and that an attack has already occurred there, it is more likely to happen again. "There is no question it is a potential threat and it has to be dealt with. But, people need to keep their fears in check...cultivating bioagents and using them as weapons is extremely difficult."<sup>54</sup> Should the public store ready-to-use doses of antibiotics, such as Ciprofloxin? Medical professionals state that this is not a good plan.

"There is a finite amount of antibiotics in the system now, and might have a legitimate need for them that isn't terrorism... If everyone starts taking it (antibiotics) randomly, then it develops this whole

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<sup>51</sup> Bill Miller and Eric Pianin, "Corporations Target Homeland Security - Patriotism and Capitalism Meet in Rush to Cash in on New Funds for Solutions," *Washington Post*, February 11, 2002, A7.

<sup>52</sup> *Washington Post*, February 11, 2002, A7.

<sup>53</sup> *Washington Post*, February 11, 2002, A7.

<sup>54</sup> *Washington Post*, October 9, 2001, <http://www.washingtonpost.com/wp-dyn.articles/A28240-2001Oct8.html>.

resistant strain of organism, people would get sick from things they wouldn't normally get sick from."<sup>55</sup>

What do parents do, during and in the immediate aftermath, about their children attending school? "The best place for a child might very well be the school itself...they are under supervision...putting them on the roads and streets is not a wise idea...it also keeps the roads clear for essential emergency traffic instead of cars."<sup>56</sup>

Local municipalities are relying on private physicians to come forward and provide their expertise on chemical and biological agents and their associated illnesses. This is an integral part of the "first response" to a CHEM-BIO terrorist attack. Especially with biological weapons, whose incubation period can often be measured in days or weeks, physicians, the first seriously ill victim or death may often be the precursor/indicator of a more widespread problem. In a recent discussion, with a virologist, he stated that unfortunately, "there will most likely be at least one death before the United States realizes that it is under biological attack." Chemical attacks are telegraphed by their symptoms, which range from blistering skin to almost instantaneous death. However, chemical

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<sup>55</sup> *Washington Post*, October 9, 2001, <http://www.washingtonpost.com/wp-dyn/articles/A28240-2001Oct8.html>.

<sup>56</sup> *Washington Post*, October 9, 2001, <http://www.washingtonpost.com/wp-dyn/articles/A28240-2001Oct8.html>.

weapons are technologically difficult to employ in such a manner as to create a mass destruction scenario.<sup>57</sup> Whereas, the employment of biological weapons is indiscriminate and does not act on a "controlled" timeline.

### **Vaccinations May Not Be the Solution**

Ken Alibek, a former Soviet biological weapons scientist, states that vaccinations are not a proven preemptive consequence management tool against chemical and biological terrorism.<sup>58</sup> The number of "bugs and drugs" available to the terrorist outnumbers the arsenal of prepared vaccinations. And even if there were a vaccination for each and every chemical or biological weapon, vaccination still carries a statistical mortality rate. It would be improbable that the human immune system would be able to assimilate all the vaccinations simultaneously or chronologically.

As stated in Chapter 1, anthrax is a naturally occurring biological substance, which can remain active in the soil for decades. Even given this fact, in the period January 1955 to December 1999, there were only 236 reported cases of anthrax, most of them cutaneous, in 30 states and

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<sup>57</sup> The Defense Threat Reduction Agency (DTRA) defines a Weapon of Mass Destruction (WMD) as one, which has the capability of injuring or killing at least 1,000 personnel in a given incident.

the District of Columbia. The anthrax vaccination series given to military service members is not a shield against all forms of anthrax. Dr. Gregory Knudson, LTC, Medical Service Corps, USA, was one of the biochemists responsible for producing the anthrax vaccination.<sup>59</sup> In a recent discussion he stated that the current anthrax formulae is not effective against the strain of anthrax deployed against in Florida, Washington, DC, or New York City.

In the wake of the Brentwood Mail Distribution Facility contamination, several thousand USPS workers were offered the anthrax vaccination as an additional treatment to the already prescribed antibiotics, such as Ciprofloxin, and yet they rejected the offer out of hand. The past disaffection with the military experience over this experimental vaccination has tainted the US psyche. Public citizens potentially infected with anthrax have been offered a medically viable solution and have not chosen to exercise this option.

More alarming in the private sector is the inability to effectively and efficiently mass produce vaccinations. It is a costly procedure and one, which is fraught with risk--the risk of research and development capitalization,

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<sup>58</sup> *Biohazard*, n.p.

<sup>59</sup> Weapons of Mass Destruction Elective Seminar held at Command and Staff College in March 2002.

as well as, the risk of potential litigation resulting from fatalities due to vaccination failure.

#### **CHAPTER FOUR**

##### **WHERE TO FROM HERE?**

This essay underscores the fact that chemical and biological terrorism are very real threats. Terrorists are capable of producing these weapons and possess the "political will" to deploy them against non-combatants, you the reader. It does not take a highly developed, technologically advanced laboratory to produce either chemical or biological agents. The garden variety store terrorist with a modest effort of both resources and time can produce enough chemical or biological agents to have crossed the threshold into the realm of a Weapon of Mass Destruction (WMD). However, production of these agents may be more simplified than first believed, the deployment becomes another matter.

Chemical agents are often unstable in variable environmental conditions. They are affected by temperature and moisture differentials, as well as by the wind. The deployment of chemical agents is often fickle and can be thwarted by Mother Nature. However, biological agents are less affected by environmental factors and can often

contaminate the natural environment in which they are deployed for decades. Anthrax spores can and have remained active in the soil for over 75 years. Biological agents are indiscriminatory. They know no borders or boundaries. They can attack the attacker or the intended target with the same veracity.

This essay is not a detailed study of the laundry list of CHEM-BIO agents that exist in the world today, nor is it an in-depth text on their use as terrorist weapons. The first chapter is a vehicle to get to the crux of the matter - the apparent inability or desire on the part of the US Government to inform the public as to the extent of the danger of chemical and biological terrorism.

This essay began as a search for an explanation as to why the United States Government did not and continues not to adequately, in an official manner, address the anthrax attacks in October 2001. Since those events, the USG has seemingly left the job of educating the public to the media and to the private sector. This is wholly unconscionable and without merit.

The USG cannot allow hired "experts" to continuously parade across the world's television sets and speak on its behalf. Some argue that the USG allowed its bureaucratic inertia to impede the educational process. It allowed

inter-agency rivalries to become roadblocks to informing the U.S. Public of the threat of chemical and biological weapons and the abilities of terrorists to produce and deploy them against major population centers in the United States.

Others argue that the USG did not step forward with good reason - so as not to cause widespread panic. The US government waited in the wings and allowed the media to disseminate the overall picture, one of slow measured, sometimes stumbling progression for two distinct reasons. The first is simple the USG did not have a cogent, well defined, well planned response to a chemical or biological threat. The second can only be surmised that due to the lack of a systematic response the USG chose not to step into the information vacuum for fear of alarming the populace to panic.

This essay illustrated some of the efforts made by the US government since the 1995 Aum Shinrikyo *sarin* gas attack in the Tokyo Subway system. However, when the USG did not follow its own established inter-agency Federal Response Plan (FRP) when the attacks occurred. Instead of allowing FEMA to take the lead, the targeted body, namely the Senate, called on numerous agencies among them DoD, the EPA, HHS, and its own Office of the Sergeant-At-Arms, the

Washington DC Metropolitan Police Department, and others to address the situation. If the USG had acted in a coordinated and consolidated manner, the consequence management of the anthrax attacks would not have looked like a rerun of the Marx Brother's movie *Alphabet Soup*.

This essay also illustrated how the media took the lead in informing the public. First believing it their responsibility to the First Amendment and secondly, because the USG was not systematically briefing the public, they filled the void with available sound bites. Watching the public broadcasts did not inform. They raised more questions than they answered. The media delivered critical commentary hoping to garner higher ratings, instead of aspiring to a higher platform of journalistic integrity.

The President can be commended on the one hand for quickly establishing the Office for Homeland Security (OHS), to become the focal point for all US internal security issues. However, he can be criticized for not providing more specific guidance and shorter time lines when developing both the overall strategy and answers to the specific anthrax attacks of October 2001.

The USG has an abundance of information regarding chemical and biological agents, terrorism, and the capabilities of terrorists to produce and use such weapons.

What the USG should have done was to publish a pamphlet, approximately 15-20 pages in length, which outlined the above information. The USG should have published that pamphlet within sixty to ninety days of the first anthrax death - approximately mid to late December 2001.

The pamphlet would include four sections. The first section - the Introduction - would provide a brief overview of what terrorism is and outline the events of the anthrax attacks, which occurred in October 2001. The second section would briefly describe the current status of the chemical and biological threat, which faces the United States. This section would detail the symptomology of how various CHEM-BIO agents (those most likely to be employed) affect the human body and what, if any, prophylactic measures can be taken to prevent or mitigate the symptoms. The third section would illustrate what steps were taken to minimize the threat from agents already dispersed (e.g. efforts made to determine the source; decontaminate both personnel and facilities; and efforts made to provide sustained medical treatment to affected populations). The last section would outline the U.S. Government policies enacted to provide for continuous homeland security against CHEM-BIO Terrorism. This section in particular would also

emphasize educational policies aimed at raising the level of U.S. Public awareness regarding CHEM-BIO Terrorism.

The pamphlet would be designed to reach a broad audience. It would be written in a clear positive tone designed to elicit human curiosity with regards to the subject material, not be alarmist in nature. Irrational behavior or panic is borne out of ignorance or fear of the unknown. The purpose of this pamphlet would be to arm the public with the knowledge about CHEM-BIO Terrorism in such a fashion as to prepare and empower them.

To date this has not happened. There are numerous updated websites for specific government agencies; however, none represent a consolidated, coordinated official public statement regarding the biological attacks against the United States. It is the intention of this essay to conclude that the United States Government did not honor the stated and implicit responsibilities bestowed upon it by the Constitution of protecting its citizenry from "all enemies both foreign and domestic."

## GLOSSARY<sup>60</sup>

- Anthrax An infectious, usually fatal disease of warm blooded animals caused by the *Bacillus anthracis* bacteria, which can be transmitted to humans.
- ATCC American Type Culture Collection
- Bacillus anthracis* Gram positive, spore forming, aerobic bacterium that is the causative agent of anthrax.
- Biological Warfare (BW) The use, for military or terrorist purposes, of living organisms or material derived from them, which are intended to cause the death or incapacitation in man, animals or plants.
- Blister Agent A chemical agent that can cause blistering of the skin and extreme irritation of the eyes and lungs; although primarily an incapacitant, it can cause death in large doses. Examples are sulfur mustard, nitrogen mustard, and Lewisite.
- Blood Agent A chemical agent that acts on hemoglobin in blood cells, thus preventing oxygen from reaching cells. Examples are hydrogen cyanide and cyanogen chloride.
- Botulinum toxin Highly poisonous toxin produced by the bacteria *Clostridium botulinum*.
- Botulism Poisoning characterized by weakness, headache, dizziness, double vision, muscle paralysis and death, resulting from exposure to botulinum toxin.
- Brucellosis A disease characterized by fever, headache, fatigue, depression, and weight loss due to infection by *Brucella suis*.

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<sup>60</sup> The technical definitions are referenced directly from the glossaries of *The Worldwide Biological Warfare Weapons Threat*--Appendix C and *The Biological & Chemical Warfare Threat*. The majority of the acronyms are in common usage.

CB Chemical & Biological or Chem-Bio

CBRN Chemical, Biological, Nuclear & Radiological

CBIRF Chemical & Biological Incident Response Force

CDC Centers for Disease Control and Prevention

Choking Agent A chemical agent that is typically a nonpersistent, heavy gas. It irritates the eyes, throat and when inhaled, can lead to pulmonary edema, resulting in death from lack of oxygen. Examples are chlorine and phosgene.

CM Crisis or Consequence Management

Chemical Warfare (CW) The military or terrorist use of toxic substances such that their chemical effects on exposed personnel, animals or plants result in incapacitation or death.

CONPLAN Contingency Plan

Cutaneous Pertaining to the skin.

DoD Department of Defense

DTRA Defense Threat Reduction Agency

Ebola A Virus of the filovirus species that causes hemorrhagic fever, resulting in respiratory distress, severe bleeding, shock, and usually death.

Encephalitis Inflammation of the brain, usually caused by a virus; symptoms include headache, neck pain, drowsiness, nausea, and fever.

EPA Environmental Protection Agency

FBI Federal Bureau of Investigation

FEMA Federal Emergency Management Agency

Filovirus            A family of hook-shaped RNA viruses that include the Ebola and Marburg viruses

FRP                Federal Response Plan

G-Series Nerve Agents      Chemical agents of moderate to high toxicity developed in the 1930s that act by inhibiting a key nervous system enzyme. Examples are tabun (GA), sarin (GB), soman (GD), and GF.

GPO                Government Printing Office

Hemorrhagic Fever      A disease caused by viral infection characterized by sudden onset, fever, aching, bleeding in the internal organs, and shock.

HHS                Department of Health and Human Services

JOC                Joint Operations Center

LD50                The dose (LD is lethal dose) that will kill 50 percent of the exposed population.

Marburg Virus      A filovirus that causes hemorrhagic fever.

NBC                Nuclear, Chemical, & Biological

Nerve Agent        A chemical agent that acts by disrupting the normal functioning of the nervous system.

Non-lethal Agents      Chemical agents that can incapacitate but which, by themselves, are not intended to cause death. Examples are tear gas, vomiting agents, and psychochemicals such as BZ and LSD.

NIH                National Institute of Health

NPS                National Pharmaceutical Stockpile

OHS Office of Homeland Security

Plague A disease caused by the *Yersinia pestis* bacterium transmitted to humans by fleas from infected rats and characterized by high fever, chills, and enlarged, painful lymph nodes.

Psychochemical Agents An agent that incapacitates by distorting the perceptions and cognitive processes of the victim.

Pulmonary Edema The excessive accumulation of fluid in the lung tissue.

Q Fever An infectious disease caused by the rickettsiae *Coxiella burnetii* that is characterized by fever, malaise, and muscular pains.

Ricin A poisonous protein extracted from the castor bean which, upon exposure, results in decreased blood pressure and death due to heart failure.

Rickettsiae Obligate intracellular parasites that cause a variety of diseases including typhus and Rocky Mountain Spotted Fever.

Riot Control Agents (RCAs) Substances, usually having temporary effects, which are typically used by government authorities or law enforcement.

SAC Special Agent in Charge (FBI position)

Smallpox A highly contagious and fatal disease caused by a poxvirus and characterized by high fever, aches, and blistering papules.

Tularemia A disease caused by the bacterium *Francisella tularensis* that is characterized by intermittent fever and swelling of the lymph nodes.

USA United States Army

USAMRIID United States Army Medical Research Institute of  
Infectious Diseases

USG United States Government

USMC United States Marine Corps

USN United States Navy

USPS United States Postal Service

USUHS United States Uniformed Health Service

Vectors An animal, insect, or other organism that carries  
or transmits a microorganism.

Virus A submicroscopic infectious agent consisting of a  
core of nucleic acid surrounded by a protein coat  
and unable to replicate outside  
the host.

V-Series Nerve Agents A class of chemical agents  
developed in the 1950s  
that act by inhibiting a key  
nervous system enzyme. They are  
generally persistent and have a  
moderate to high toxicity.  
Examples are VE, VG, VM, VS, and  
VX.

WMD Weapons of Mass Destruction

## Bibliography

### Books

Douglass, Joseph D., Jr., and Neil C. Livingstone. *America the Vulnerable: The Threat of Chemical and Biological Warfare*. Lexington, MA: Lexington Books, 1987.

Garrett, Laurie. *Betrayal of Trust: The Collapse of Global Public Health*. New York: Hyperion, 2000.

Guillemin, Jeanne. *ANTHRAX - The Investigation of a Deadly Outbreak*. Los Angeles, CA: University of California Press, 1999.

Harmon, Christopher, C. *Terrorism Today*. London: Frank Cass Publishers, 2000.

Livingstone, Neil, C., and Joseph D. Douglass, Jr. *CBW: The Poor Man's Atomic Bomb*. Washington, DC: Corporate Press Inc., 1984.

Miller, Judith, Stephen Engelberg and William Broad. *GERMS - Biological Weapons and America's Secret War*. New York: Simon & Schuster, 2001.

Murphy, Sean and others. *No Fire, No Thunder: The Threat of Chemical and Biological Weapons*. New York: Monthly Review Press, 1984.

Sidell, Frederick R., M.D., and others. *CHEM-BIO Handbook*. Alexandria, VA: Jane's Information Group, 1998.

Taylor, Eric R. *LETHAL MISTS: An Introduction to the Natural and Military Sciences of Chemical, Biological Warfare and Terrorism*. Commack, NY: Nova Sciences Publishers, Inc., 1999.

*The New Terror - Facing the Threat of Biological and Chemical Weapons*. Eds. Sidney D. Drell and others. Stanford, CA: Hoover Institute Press, 1999.

## Government Publications

- Government Accounting Office. *BIOTERRORISM: Federal Research and Preparedness Activities*. GAO-01-915. September 2001.
- Government Accounting Office. *BIOTERRORISM: Coordination and Preparedness*. Testimony. GAO-02-129T, 5 October 2001.
- Government Accounting Office. *BIOTERRORISM: Public Health and Medical Preparedness*. GAO-02-141T, 9 October 2001.
- Government Accounting Office. *BIOTERRORISM: Review of the Public Health Preparedness Programs*. GAO-02-149T, 10 October 2001.
- Government Accounting Office. *BIOTERRORISM: The Centers for Disease Control and Prevention's Role in Public Health Protection*. GAO-02-235T. 15 November 2001.
- Government Accounting Office. *Combating Terrorism: Observations on Biological Terrorism and Public Health Initiatives*, Testimony. GAO/T-NSIAD-99-112. 16 March 1999.
- Government Accounting Office. *COMBATING TERRORISM: Comments on Counterterrorism Leadership and National Strategy*. Testimony. GAO-01-556T, 27 March 2001.
- Government Accounting Office. *COMBATING TERRORISM: Comments on H.R. 525 to Create a President's Council on Domestic Terrorism Preparedness*. Testimony. GAO-01-555T, 9 May 2001.
- Government Accounting Office. *COMBATING TERRORISM: Considerations for Investing Resources in Chemical and Biological Preparedness*. GAO-02-162T. 17 October 2001.
- Government Accounting Office. *COMBATING TERRORISM: Critical Components of a National Strategy to Enhance State and Local Preparedness*. GAO-02-548T. 25 March 2002.

Government Accounting Office. *COMBATING TERRORISM: Intergovernmental Cooperation in the Development of a National Strategy to Enhance State and Local Preparedness*. GAO-02-550T. 02 April 2002.

Government Accounting Office. *HOMELAND SECURITY: Progress Made; More Direction and Partnership Sought*. GAO-02-490T. 12 March 2002.

*Proliferation: Threat and Response*. Office of the Secretary of Defense. Washington, DC: Government Printing Office (GPO), January 2001.

*The Biological & Chemical Warfare Threat*. Revised Edition. United States Government. Washington, DC: GPO, 1999.

### **Internet Websites**

Centers for Disease Control and Prevention. "Anthrax - Technical Information." <http://www.cdc.gov>. Accessed on 19 April 2002.

Dixon, Terry C., and others. "Anthrax," Review Article, 9 September 1999, *The New England Journal of Medicine*, Vol. 341: 815-826, No. 11, *Marine Corps Research Center*, URL: <http://content.nejm.org/cgi/content/full/341/11/815>>. Accessed on 26 October 2001.

Federation of American Scientists (FAS). "Special Weapons Primer: Biological Weapons," 8 November 1998, *Marine Corps Research Center*, URL: <<http://www.fas.org/nuke/intro/bw/intro.htm>>. Accessed on 26 October 2001.

Federation of American Scientists (FAS). "Special Weapons Primer: Chemical Weapons," 8 November 1998, *Marine Corps Research Center*, URL: <<http://www.fas.org/nuke/intro/cw/intro.htm>>. Accessed on 26 October 2001.

OPCW. "Chemical Warfare Agents," 29 April 1997, *Marine Corps Research Center*, URL: <<http://www.opcw.nl/chemhaz/cwagents.htm>>. Accessed on 26 October 2001.

OPCW. "Definition of Chemical Weapons," 29 April 1997, *Marine Corps Research Center*, URL: <http://www.opcw.nl/cwc/defini.htm>. Accessed on 26 October 2001.

"The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (1972)." *Marine Corps Research Center*. URL: <http://www.tufts.edu/departments/fletcher/multi/texts/BH596.txt>. Accessed on 26 October 2001.

[WWW.WhiteHouse.gov/news/releases/2001/20011008-2.html](http://WWW.WhiteHouse.gov/news/releases/2001/20011008-2.html). Accessed on 27 February 2002.

[WWW.Whitehouse.gov/response/faq-homeland.html](http://WWW.Whitehouse.gov/response/faq-homeland.html). Accessed on 27 February 2002.

### **Monographs**

*Terrorism with Chemical and Biological Weapons: Calibrating Risks and Responses. Monograph. Ed. Brad Roberts. Alexandria, VA: The Chemical and Biological Arms Control Institute, 1997.*

### **Newspapers**

*New York Times*, October 2001 - April 2002.

*Washington Post*, October 2001 - April 2002.

### **Papers**

Parker, Henry S. *Agricultural Bioterrorism: A Federal Strategy to Meet the Threat*. Washington, D.C.: Institute for National Strategic Studies, National Defense University McNair Paper 65, 2002.

"The Continuing Threat From Weapons of Mass Destruction." Information Paper. N.p., n.d. Provided in March 1996 By Dr. Gordon C, Oehler, Director of the Nonproliferation Center to the Senate Armed Services Committee.

HHS and Education Subcommittee. Committee Hearing on Bioterrorism. 3 October 2001.  
<<http://www.nexis.com/research>>. Accessed on 16 April 2002.

### Reports & Studies

Barnaby, Frank. *Weapons of Mass Destruction: A Growing Threat in the 1990s?* Research Institute for the Study of Conflict and Terrorism (RISCT) Conflict Study No. 235. United Kingdom: RISCT, No. 235, October/November 1990.

Cilluffo, Frank J., Sharon L. Cardash and Gordon N. Lederman. *Combating Chemical, Biological, Radiological and Nuclear Terrorism - A Comprehensive Strategy*. Washington, DC: Center for Strategic and International Studies, May 2001.

Joseph, Robert G. and John F. Reichart. *DETERRENCE AND DEFENSE in a Nuclear, Biological and Chemical Environment*. Washington, D.C.: Center for Counterproliferation Research - National Defense University, 1999.

Purver, Ron. *Chemical and Biological Terrorism: New Threat to Public Safety?* Research Institute for the Study of Conflict and Terrorism (RISCT) Conflict Study No. 295. United Kingdom: RISCT, December 1996/January 1997.

*Strategic Assessment 1999 - Priorities in a Turbulent World*. Washington, D.C.: Institute for National Strategic Studies, National Defense University, 1999.

*The Worldwide Biological Warfare Weapons Threat*. United States Government. Washington, DC: GPO, 2001.

Wilkinson, Paul. *Terrorist Targets and Tactics: New Risks to the World Order*. Research Institute for the Study of Conflict and Terrorism (RISCT) Conflict Study No. 236. United Kingdom: RISCT, December 1990.