Defending the Homeland: The Chemical Biological Radiological Nuclear Response Enterprise
In August 1992 I was serving as Chief of Staff, Army when Hurricane Andrew struck the southern United States. Dozens of people died, hundreds of thousands were left homeless and damages soared into the tens of billions of dollars—making Andrew the nation’s costliest disaster to that date. Active and reserve component units deployed to Florida’s Miami–Dade County and elsewhere to assist domestic authorities reacting to multiple crises simultaneously. Emergency responders’ immediate challenges included delivering food and temporary shelter to the displaced, providing medical support, reestablishing logistics and communications capabilities and even securing towns from looting.

The number one priority for the joint force is defending citizens in the homeland. This enduring mission—enshrined since the Army was born in 1775—is highlighted in the President’s 2012 defense strategic guidance to today’s force; it will underpin the development of tomorrow’s force for generations to come. The key to our successful response to Hurricane Andrew was the early integration of local, state and federal assets. From the first responders—police, fire and rescue personnel—to the organic resources supplied by affected and neighboring states (including National Guard military forces) to the follow-on federal forces authorized by presidential action, every available asset—civilian and military—was required and played a role. The synchronization of these myriad responders’ valuable efforts significantly reduced the disaster’s impact and saved lives. Since 1992, the nation has improved and expanded its dedicated disaster response assets; among these are forces with more specialized capabilities required in the event of a chemical, biological, radiological or nuclear (CBRN) incident within our borders. As bad as Hurricane Andrew was, a major CBRN event could pose similar emergency challenges on an even greater scale.

This latest installment of AUSA’s signature Torchbearer series examines the five organizational structures—manned primarily by Army active and reserve component Soldiers—that form the CBRN Response Enterprise. Even though the joint force has much greater capability to respond to a catastrophic event in the homeland than it did just a decade ago, we also discuss several areas in which further improvements remain to be made. We hope that you will find this report a useful resource and that you will continue to look to AUSA for thoughtful, credible analysis of contemporary national security issues.
Executive Summary

*Our number one priority is to protect our homeland... we’ve gotten serious about it and I think it’s time we did.*

General Raymond T. Odierno
Chief of Staff, Army
9 October 2013

The United States' two highest national security priorities—ensuring the survival of the nation and preventing catastrophic attacks against the homeland—are inextricably linked. In a security environment destabilized by an ever-increasing number of actors who are determined to harm Americans in a myriad of ways, it is imperative for strategic landpower—Army, Marines and special operations forces—not only to deter and prevent attacks but also to develop and maintain the ability to manage the consequences of a large-scale attack or disaster within the nation’s borders. The Department of Defense (DoD) coordinates a wide range of Title 10 (federal) and Title 32 (National Guard) forces with dedicated capability to provide prompt and sustained assistance at domestic incident sites, including several distinct types with the special capabilities required to respond effectively to a chemical, biological, radiological or nuclear (CBRN) event.

Today, U.S. Northern Command is the geographic combatant command responsible for defending the U.S. homeland. It exercises mission command over U.S. Army North, which oversees and provides headquarters for DoD CBRN response assets and collaborates with the National Guard to help train and validate Title 32 forces. Although DoD has significantly augmented its CBRN response assets and improved synchronization among them over the past decade, the current enterprise still requires further refinement.

The DoD Chemical Biological Radiological Nuclear Response Enterprise (CRE) comprises five unique organizational structures divided among federal and National Guard forces—each with a distinct role—and offers commanders scalable CBRN event response options.

- Fifty-seven weapons of mass destruction civil support teams (WMD-CSTs)—approximately one per state—each consist of 22 National Guard personnel. These remain on standby 24 hours per day and act as CBRN event first responders, helping to determine the nature of an incident and paving the way for additional support.
- Seventeen National Guard CBRN enhanced response force packages (CERFPs) are distributed across the country so that at least one is available for rapid response in each of the 10 FEMA regions—deployable within three to six hours of notification. A CERFP comprises nearly 200 personnel who provide immediate incident response capabilities such as mission command, engineer support, chemical decontamination and medical triage in support of domestic local and state authorities.
- Ten National Guard homeland response forces (HRFs) of battalion size bridge the mission command gap between initial responders and follow-on Title 10 forces and forge operational links among other federal and civilian authorities. These are also large enough to deploy approximately 200 personnel for helping local authorities create and maintain a perimeter around complex operations such as evacuation of casualties and decontamination of CBRN agents.
- The Defense CBRN Response Force (DCRF) is the primary Title 10 response asset available if state authorities request federal assistance. Composed of 5,200 active and reserve component personnel and commanded by a two-star headquarters, the DCRF can mobilize within 24 to 48 hours and provide significant operations, aviation, medical and logistics support. Its battalion task force construct permits a commander to calibrate the response package appropriately to the situation.

Two Title 10 command-and-control CBRN response elements (C2CREs) provide the headquarters, mission command and communications capacity necessary to rapidly generate a second or third DCRF if such a requirement were to emerge (for example, in the event of multiple near-simultaneous CBRN incidents). These 1,500-man units can also reinforce a federal response at a single large scene.

In the aftermath of a CBRN incident in the homeland, people’s lives hang in the balance of (1) how rapidly help arrives, (2) what capabilities are immediately present at the scene and (3) how well the emergency responders can manage and adapt to the complexity of such an incident. Several steps should be taken to mitigate strategic risk; some issues can be resolved rather easily, but some are complex.

It is a significant challenge to provide the right manpower to populate the CRE structures. Fiscal challenges are preventing headquarters from filling their organic positions, and it can be difficult for both active and reserve component personnel to mobilize rapidly enough in response to an incident. Although major improvements have been made, determining the ideal size and structure for the various response units is difficult; few metrics exist for establishing precisely how much capability would be required in a real CBRN environment. Integrated and collective CRE training—focusing particularly on interoperability with civilian partners—must be a priority because of the geographical dispersion of response assets and the strict timelines required for CBRN response to be effective. Equipment standardization and compatibility across the active and reserve component elements of the CRE are continuing challenges, and critical enabler shortfalls exist in areas such as ground transportation, maintenance, fuel distribution and supply support.

If the nation ever does have to call upon its military to respond to a catastrophic domestic CBRN event, the expectations for its response forces will be immense. It is imperative that the forces comprising the CRE are properly structured, manned, trained and resourced to conduct their mission efficiently and effectively. Some specific actions toward this end that should be taken immediately include returning to providing defense resources in a timely and predictable fashion; articulating the nation’s expectations for a whole-of-government response to an incident involving weapons of mass destruction and assigning specific responsibilities among departments; identifying specific levels of capability required of Title 10 and Title 32 forces in the event of a CBRN event to guide future force development; identifying additional regional training sites that can accommodate the unique training requirements of CRE elements; and funding more substantive deployment readiness exercises to better validate CRE units’ ability to arrive at incident scenes according to prescribed timelines.

The CRE enterprise is postured to deliver rapid response to any disaster in any environment and maintains relationships with the numerous other civilian agencies and resources who share their mission. Protecting Americans at home is a nonnegotiable mission; timely and predictable funding is required to ensure that the Army can help the nation keep its promise to its people.
Defending the Homeland: The Chemical Biological Radiological Nuclear Response Enterprise

The American people have an expectation we will take care of the homeland. That’s our number-one mission—protecting and preserving our way of life here.

Lieutenant General Perry L. Wiggins
Commanding General, U.S. Army North (Fifth Army)
Remarks given at the AUSA Annual Meeting, Washington, DC, 23 October 2013

Introduction

One fundamental reason for maintaining a professional U.S. Army is the requirement to protect American citizens and their homeland. The United States’ geography has enabled it to avoid the recurring clashes between untrusting neighbors frequently seen in other parts of the world, but modern technology has shrunk the globe, making it more difficult by the day to guard the nation. The instability and uncertainty that define the global security environment today—including but not limited to complex terrorist networks, miniaturized weapons of mass destruction (WMD) and threats that emanate from even the most benign environments—now require the United States to prepare to respond to widely varying contingencies on its home soil.

Implicit in the concept of strategic landpower—Army, Marines, special operations forces—is the ability to manage the consequences of a large-scale disaster or attack against the homeland. Such capability mitigates the direct effects of incidents and helps deter potential adversaries from harming Americans. In the immediate aftermath of a chemical, biological, radiological or nuclear (CBRN) event, a capable response would also inspire confidence in citizens that their government will prevail. However, the ensuing chaos can be overwhelming for even the most experienced and highly trained personnel. A successful response can be measured by the amount of time required for help to arrive, what forms of assistance are available, how much throughput the responders can provide and how well commanders can apply mission command in support of civilian authorities to create order out of chaos.

According to Chairman of the Joint Chiefs of Staff General Martin Dempsey, six enduring national security interests are informing the ongoing 2014 Quadrennial Defense Review (QDR) analysis: survival of the nation; prevention of catastrophic attacks on the United States; protection of Americans abroad; security of the U.S. economy and global economic system; secure and reliable allies and partners; and the preservation and extension of universal values. In pursuit of the first two—prevention and survival of large-scale attack—the Department of Defense (DoD) coordinates a wide range of Title 10 (federal) and Title 32 (National Guard) forces with dedicated capability to provide prompt and sustained assistance at domestic incident sites. These forces have undergone significant evolution and augmentation over the past decade, but preparation for a CBRN incident requires constant vigilance and reassessment.

U.S. Northern Command is the geographic combatant command responsible for defending the U.S. homeland. It exercises command and control over several service component commands—including U.S. Army North, which oversees and provides headquarters for DoD CBRN response assets. Among these, U.S. Army North has operational control of Joint Task Force Civil Support (JTF-CS), the nation’s only standing CBRN joint task force. To validate Title 10 CBRN response forces, U.S. Army North annually hosts joint exercise...
Exercise Vibrant Response: Enhancing CBRN Readiness

From late July through early August 2013, elements of U.S. Army North under the direction of U.S. Northern Command conducted Exercise Vibrant Response to confirm the readiness of Title 10 CBRN response units.

The scenario—employing both live and virtual training with units dispersed across the United States—modeled the significant challenge of responding to simultaneous detonations of improvised nuclear devices in two major U.S. cities. The exercise consisted of approximately 5,200 DCRF and C2CRE participants deployed from throughout the United States as well as HRF forces from Washington state and WMD–CSTs from Alaska, Indiana, Ohio and Michigan.

Training occurred primarily at the Camp Atterbury Joint Maneuver Training Center, the Muscatatuck Urban Training Center and surrounding sites in Indiana. The training area was sophisticated and provided realism through the employment of a 180-acre reservoir and urban infrastructure including a hospital, dormitories, light industrial structures, residential dwellings and more than nine miles of roads and streets. The joint simulation included a broad array of incident response missions such as ground and air search and rescue, medical triage and ground evacuation, movement of relief supplies, communications support, route clearance, casualty decontamination, contaminated material disposal and numerous other tasks.

The exercise validated several strengths of the response forces. The battalion task force concept employed by the DCRF has proved effective. Premission training of National Guard units assigned to the C2CREs played a major role in their success, and ongoing integration and collaboration among Title 32, state and federal agencies continues to improve. In future exercises, military forces and interagency partners will keep refining comprehensive joint training plans and find ways to more clearly track the status and capabilities of the myriad response units that would deploy in a genuine emergency.

Vibrant Response, which simulates a joint emergency response to a CBRN incident in a major U.S. metropolitan area. U.S. Army North collaborates with the National Guard to help train and sustain the readiness of Title 32 CBRN response forces.3

We could be called out to do our mission at any time . . . [w]e have to be trained, equipped and ready to go on a moment’s notice.

Major General Jeff W. Mathis III
Commander, Joint Task Force Civil Support
19 April 20134

Background

The evolution of U.S. military capability to respond to domestic CBRN incidents has occurred in two distinct phases over the past 20 years. The first phase followed the collapse of the Soviet Union, the CBRN challenges emerging from the Iran–Iraq War, the Gulf War and the 1993 (first) World Trade Center bombing. The Defense Against Weapons of Mass Destruction Act of 1996 and the Nunn–Lugar–Domenici amendment to the 1997 National Defense Authorization Act directed DoD to enhance the capabilities of federal forces to prevent and respond to terrorist attacks involving WMD. In response, U.S. Atlantic Command coordinated the establishment of JTF-CS in late 1999 to plan and execute military assistance to civil authorities for WMD consequence management. At the same time, new National Guard response forces, WMD-Civil Support Teams (CSTs), were established to ensure that local and state authorities possess rapid-response capabilities to employ in advance of federal forces. In addition, in 2004 the National Guard established 12 CBRNE Enhanced Response Force Packages (CERFPs) to meet evolving CBRN requirements and in 2006 Congress codified an additional five teams for a total of 17 teams.

In 2008, DoD established the CBRN Consequence Management Response Force (CCMRF) as its first dedicated asset to respond to CBRN incidents within the United States. (Prior to 2008, JTF-CS assumed command and control of Title 10 DoD forces only upon incident occurrence.) Then, the 2010 QDR reanalyzed national CBRN response forces and recommended a rebalance among active and reserve component capabilities to reduce response times and enhance the throughput of assistance while increasing flexibility. Accordingly, DoD has spent the past several years establishing new National Guard Homeland Response

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Forces (HRFs) and significantly reinvesting in a more capable brigade-sized federal asset—the Defense CBRN Response Force (DCRF)—dedicated to supporting civil authorities. This investment has resulted in greater overall capability and improved synchronization among Title 10 and Title 32 forces. Though considerably more capable than the CBRN response forces from a decade ago, the current enterprise still requires further refinement; few official studies exist and little guidance has been established for assessing whether the nation’s CBRN response enterprise is sized adequately or organized optimally.

**CBRN Response Enterprise**

The requirements identified in the 2010 QDR for improved CBRN response capabilities drove the development of the force structure in place today. The DoD Chemical Biological Radiological Nuclear Response Enterprise (CRE) comprises five separate organizational structures divided among federal and National Guard forces; these include WMD-CSTs, CBRN enhanced response force packages, homeland response forces, the Defense CBRN Response Force and command-and-control CBRN response elements. The 18,000 active and reserve component servicemembers who populate them offer to local and state incident responders both lifesaving capabilities and CBRN expertise. Each organization is designed to complement the others and provides a unique contribution to emergency response; for example, some CRE forces provide relatively small, local force packages within the first few hours of an emerging incident while others bring to bear a greater total amount of lifesaving capability over a longer period of time. This flexible response structure, intended to deliver widely varying capabilities spread throughout the timeline of an extended contingency, maximizes the ability of DoD personnel and state National Guard forces to support civilian federal, state, tribal or local first responders as dictated by circumstances on the ground.

**Weapons of Mass Destruction Civil Support Teams.**

In the aftermath of the first terrorist bombing of the World Trade Center in 1993, the nation took several steps to improve its response capabilities. In 1998 Congress approved the creation of DoD weapons of mass destruction civil support teams (WMD-CSTs) to help deliver immediate support to civil authorities and first responders at the earliest stages of a contingency.\(^5\)

WMD-CSTs are joint 22-person teams who remain on standby 24 hours per day. They can deploy an advance team to the site of a domestic CBRN incident within 90 minutes and the balance of the team is required to respond within three hours. In all probability, a WMD-CST team will be the first military force to arrive at the site of a domestic incident. They detect and identify CBRN substances, assess immediate and projected consequences, advise on response measures and assist with appropriate requests for additional follow-on state and federal military forces. WMD-CSTs are also capable of providing immediate response to intentional or unintentional hazardous material releases and to disasters that could result in catastrophic loss of life or property. In short, they help local civilian incident commanders (such as police, fire and rescue) to determine the nature and extent of an attack or incident, provide expert technical advice on WMD response operations and pave the way for additional state and federal military response assets.

There are 57 WMD-CSTs authorized by law: one in each state; a second team in New York, California and Florida; and one each in the District of Columbia, Puerto Rico, Guam and the U.S. Virgin Islands. All WMD-CSTs—each comprised of a commander, deputy commander, first sergeant and 19 expert personnel—consist

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\(^5\) WMD-CSTs were originally named and implemented as Rapid Assessment and Initial Detection Teams (RAID); the name was changed to its current form in 2000.
entirely of members of the Army National Guard and Air National Guard in Title 32 Active Guard Reserve status—meaning they are dedicated to this mission as members of the National Guard’s full-time manning force that is on duty 24/7. Because the teams are “state-owned” resources, state adjutants general may employ WMD-CSTs under the command and control of state governors; the teams do not require a Presidential Disaster Declaration to deploy. They can also be directed by their respective state governors to support another state’s response under a supported governor. In this way, each state has federally resourced, trained and certified CBRN emergency responders available for immediate use at its governor’s discretion.

A WMD-CST traditionally deploys using its own organic vehicles, but the entire unit can be airlifted if necessary. In addition to several general-purpose vehicles, each team has a specialized communications vehicle (or
“unified command suite”). The unified command suite provides a broad spectrum of secure communications capabilities and ensures interoperability of the various communications systems employed by civilian and military responders at a scene. Each team is also equipped with an analytical laboratory system vehicle; analytical laboratories contain a full suite of equipment to support field analysis of CBRN agents and other unknown hazards. Furthermore, each team also receives a high degree of joint and interagency support through advanced training—more than 650 hours per individual—from agencies such as the Department of Energy, the Department of Justice, the Environmental Protection Agency and the Federal Emergency Management Agency (FEMA).

The capabilities of the WMD-CSTs are in high demand. During Fiscal Year 2012, units responded to no fewer than 684 immediate response and standby mission support requests. Immediate responses included 70 CBRN incidents, 27 manmade incidents and four natural disasters. Units were prepositioned to support (among others) the Asian Pacific Economic Conference, the Democratic and Republican national conventions and numerous special security events and sports venues.

**CBRN Enhanced Response Force Packages.** After congressional approval (in 1998) of WMD-CSTs, the National Guard also introduced (from 2004 through 2006) a more comprehensive CBRN response element to employ in support of civilian authorities. This new structure came to be known as the Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) Enhanced Response Force Package (CERFP).

A CERFP is organized from existing units of both the Army National Guard and Air National Guard. Each team consists of 197 traditional National Guard personnel (M-Day) who remain ready to deploy to a domestic disaster site within three to six hours of notification. Because they too are federally resourced but state-owned assets—under the command and control of state governors and able to deploy without a Presidential Disaster Declaration—they are most likely to be the second CRE force to arrive at an incident site (provided an emergency management assistance compact exists between the providing and receiving states).

The CERFP mission—essentially an additional duty to the currently assigned military tasking for each National Guard unit—is to provide immediate incident response capabilities in support of domestic local and state authorities. These capabilities include searching collapsed buildings and structures, locating and extracting trapped casualties in contaminated environments, providing mass decontamination of patients and casualties, performing emergency medical triage and initial treatment to stabilize patients for transport to medical facilities by the incident commander and recovering incident fatalities. CERFP personnel are specifically trained, equipped and certified to perform these tasks in contaminated environments.

Each CERFP comprises five operational elements staffed by personnel from established, legally constituted National Guard units in Army National Guard Modified Tables of Organization and Equipment (MTOE) or Air National Guard Unit Manning Documents (UMD):

- The mission command element directs the planning activities of the CERFP before contingencies occur and directs the missions of the entire team—coordinating the team’s efforts with the respective state joint task force and local civilian incident commander as necessary.
- Normally an Army National Guard engineer company or Air National Guard Red Horse engineer squadron leads the search-and-extraction element. They conduct casualty search-and-rescue operations, use heavy equipment to lift and move structural debris and shore up collapsed structures and prevent cave-ins.
- Usually an Army National Guard chemical company performs the decontamination element—establishing processes for both ambulatory and
Chemical Biological Radiological Nuclear (CBRN) Response Enterprise

As of 1 October 2013 for Fiscal Year 2014

Sources: National Guard Bureau, U.S. Army North

* Map not drawn to scale
nonambulatory casualties, conducting casualty accountability procedures and monitoring casualty wash/rinse operations.

- An Air National Guard medical group comprises the medical element responsible for performing medical triage, coordinating the movement of injured civilians (or responders) and assisting the search-and-extraction teams to immediately assess and treat casualties’ injuries.

- An Air National Guard Fatalities Search and Recovery Team (FSRT) carries out search-and-recovery missions, transferring remains to the incident command system.

If elements of the National Guard CERFP are from more than one state, Memorandums of Agreement (MOAs), a clear chain of command and activation authority are established.

At present, 17 CERFPs are organized, trained and certified as fully operational—enough so that each of the 10 FEMA regions of the country has at least one resident CERFP available for rapid response.

**Homeland Response Forces.** The 2010 QDR recognized that although the CERFP structure is fundamentally sound, a major CBRN incident could require far more resources in its first critical hours than even the company-sized CERFP elements can deliver. Therefore, the 2010 National Defense Appropriations Act authorized the creation of 10 Homeland Response Forces (HRFs) within the National Guard.

HRFs are assigned the additional mission to execute search and extraction of victims from contaminated environments, perform mass patient/casualty decontamination and provide stabilizing medical treatment to patients prior to their evacuation—exactly the same core competencies as CERFP teams. They too are aligned with the nation’s 10 FEMA regions; they too can be transported with their equipment by air if necessary; and they too comprise existing Army National Guard and Air National Guard units, enabling rapid and early mobilization by state authorities.

The significant differences between HRFs and CERFPs, however, are their size and total capability. Each HRF consists of approximately 577 personnel (nearly three times the size of a CERFP team) with a mix of full-time equivalent and traditional M-Day National Guard members. Each HRF is required to remain ready for deployment in less than 12 hours after notification—which means reaching incident sites just hours behind the CERFP teams and rapidly scaling up the CRE response to a contingency in its opening stages. Because of their greater size, HRFs can assume missions that smaller formations are not equipped to handle. For example, each HRF team is set up to deploy approximately 200 personnel for controlling crowds, helping local authorities create and maintain a perimeter around complex operations such as evacuation of casualties and decontamination of CBRN agents. HRF personnel are also equipped with logistics capabilities to sustain ongoing operations—unlike CERFPs that typically sacrifice sustainability to achieve a more rapid initial response.

Another critical benefit of the HRFs’ larger scale is that such a force provides significantly improved mission command as a contingency evolves. The headquarters element of each HRF is capable of providing brigade- and battalion-level coordination of numerous responding units such as WMD-CSTs and CERFPs. HRFs can help to create an improved common operating picture for various military assets rushing to the incident and to ensure that response efforts are directed as efficiently as possible. The result is a much more flexible mix of capable forces that can adapt to circumstances as they emerge. Capabilities are better matched

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6 Congress has not authorized additional Active Guard Reserve strength to administer these units as they did for the CERFP; this activity is handled through Active Duty Operational Support orders—individuals from the units are brought on to active duty.
to requirements. Furthermore, as the largest of the National Guard CRE forces, HRFs perform critical roles forging operational links among federal, state and local civilian authorities—bridging the mission command gap between initial National Guard responders and follow-on Title 10 forces.

All 10 planned HRFs are now fully operationally capable. As a result, about 98 percent of the U.S. population now resides within five hours of either a CERFP or a HRF. These capable units combine to deliver on the 2010 QDR requirement to develop CBRN response forces that are simultaneously more flexible, deliver more robust lifesaving capability and answer the call more rapidly.

Defense CBRN Response Force. In 2008, Congress authorized not only the National Guard CERFP teams described previously (as immediate-response, state-owned resources) but also an active-duty, operational standing joint force headquarters (JFHQ) for consequence management response operations (including CBRN or natural disasters). In the event that a state governor declares a state of emergency and requests federal assistance, the President also has the authority to mobilize Title 10 forces to provide immediate aid. Only in extreme circumstances would National Guard capabilities be federalized.

JTF-CS is a two-star headquarters under the operational control of U.S. Army North and U.S. Northern Command whose primary mission is to provide mission command of federal forces mobilized in response to a presidentially declared disaster. Including enablers, the headquarters totals about 350 personnel—comprising both active and reserve component servicemembers from the Army, Navy, Air Force, Marines and Coast Guard—who manage the consequences of a CBRN incident. This headquarters is designed to begin deploying to an incident within six hours of notification and to be fully operationally capable within 48 hours.

However, the greatest game-changing response capability that can be delivered rapidly by federal forces is provided by the Defense CBRN Response Force (DCRF). The DCRF—another outcome of the 2010 National Defense Appropriations Act informed by the 2010 QDR—consists of approximately 5,200 active
and reserve component personnel from the joint services. Although DCRF units do not constitute a single, permanent force, they are currently stationed in 31 active duty installations dispersed throughout the United States. Elements of this force can begin to be brought under the operational control of JTF-CS and, depending upon the incident location, can be scaled to respond to contingencies within 24 to 48 hours.

DCRF units are focused on the following core capabilities: mission command, hazard identification and detection, search and rescue, mass decontamination of casualties and noncasualties, medical triage, medical evacuation by air and ground, and logistics support components—similar to Federal Urban Search and Rescue teams. This added capability can be an important force multiplier when combined with the capabilities of the National Guard response teams.

Comprising four task forces, the DCRF is unique in other aspects as well. The core of the DCRF is the operations task force—a brigade-sized element consisting of three battalion joint task forces. Each battalion task force is primarily composed of engineer, chemical and general purpose personnel. The battalion task force construct allows the scaling of DCRF forces depending on the size and scope of the event. One method of employment would be for two battalions to conduct operations simultaneously while a third would operate independently or in support of the other two (enabling operations to continue around the clock). Supporting the operations task force are the other three task forces: aviation, including large CH-47 Chinook helicopters plus several general-purpose and rescue helicopters; medical, including several ground ambulance companies and forward surgical teams; and logistics, including line haul transportation, warehousing and processing capability for fuel and water. The entire organization is divided into two force packages; the first, with the majority of the lifesaving capability, is expected to deploy within 24 hours of notification and the second within 48 hours.

The DCRF represents a significant improvement in total capability and responsiveness over the previous structure—the CBRN consequence management response forces (CCMRFs)—which existed until 2010. Compared to the capabilities that were resident in a CCMRF, the DCRF increased engineering capability by 150 percent. Search-and-rescue capability increased from one to four elements. The number of ambulances increased from 16 to 80. There are now two Level III
hospitals, four new forward rescue/surgical teams and 12 operating-room tables instead of two. The DCRF has four supply companies rather than the one organic to the CCMRF. Ground capability has increased from 38 light mobile tactical vehicles to 108 and palletized load systems from 12 to 24. The new structure—and particularly the battalion task force construct within the operations task force—permits the commander to calibrate the response package appropriately to the situation and support the civilian primary agency with myriad capabilities.

**Command and Control CBRN Response Element.** At the same time that Congress created the DCRF to enhance federal forces’ incident response capabilities, it also reorganized the two remaining CCMRFs into Title 10 Army forces with broad flexibility. These are known as command-and-control CBRN response elements (C2CREs).

The first of these new response elements, C2CRE–A, was activated in 2011. It comprises both active and reserve component Soldiers assigned to U.S. Army North and led by U.S. Army North’s deployable contingency command post, Task Force 51. The second, C2CRE–B, consists entirely of Army National Guard forces and was validated during 2012. Each of the two response elements is manned by approximately 1,500 personnel and commanded by a two-star headquarters. The service-members in each response element are organized into five task forces (not unlike the other state and federal military structures already discussed) including operations, aviation, sustainment, medical and special troops. Each element also possesses one initial-response force specializing in decontamination, search and rescue and medical triage—enabling each C2CRE to deliver immediate lifesaving capability if necessary.

Although the C2CREs are not the largest of DoD’s Title 10 resources and are unlikely to be the first federal forces to respond to an incident, they still provide capability not found elsewhere within Title 10 forces. First, they provide the headquarters, mission command and communications capacity necessary to rapidly generate a second or third DCRF if such a requirement were to emerge (for example, in the event of multiple near-simultaneous CBRN incidents). Follow-on forces could be attached quickly to these existing headquarters to provide additional support; even without augmentation by follow-on forces, the C2CREs’ organic disaster response capability is substantial—including CBRN assessment, search and extraction, decontamination, Level II medical, engineering, logistics and transportation units—and enables federal forces to have an initial impact at more than one site simultaneously. In another scenario, the C2CREs’ organic units can reinforce the DCRF and states’ Title 32 forces at a single large scene. Finally, U.S. Army North and U.S. Northern Command collaborate with the Chief, National Guard Bureau and the states’ adjutants general to help provide federal training and validation of National Guard assets that comprise other elements of the CRE.7

**What Is Needed**

The five Title 10 and Title 32 organizations described in this report constitute most of the military’s total lifesaving capacity dedicated to domestic CBRN response operations when local authorities become overwhelmed. In the event of a severe military or terrorist attack against the homeland, these forces would be primarily responsible for meeting the American people’s requirements for immediate assistance. In the aftermath of a CBRN event in the homeland, people’s lives hang in the balance of (1) how rapidly help arrives, (2) what capabilities are immediately present at the scene and (3) how well the emergency responders can manage and adapt to the complexity of such an

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7 WMD-CSTs are validated by U.S. Army North (ARNORTH) with participation from the National Guard Bureau (NGB); CERFP/HRFs are validated by NGB with participation from ARNORTH.
incident. There are several steps that should be taken to mitigate strategic risk; some issues can be resolved rather easily, but others are complex.

One major challenge for the future is simply providing enough manpower—and the right manpower—to populate the organizations already in existence. For example, JTF-CS (the headquarters for DoD’s most capable response element, the DCRF) is presently authorized 138 full-time military and civilian personnel augmented with 35 contractors. Current fiscal challenges (especially sequestration) prevent the organization from being able to completely fill these 173 structural positions even though the CBRN response mission is considered one of DoD’s most critical in the 2012 defense strategic guidance. However, manpower analysis studies conducted between 2004 and 2008 determined that JTF-CS requires approximately 285 personnel to conduct its mission effectively—and that was before the 2010 QDR mandated the increases in CBRN response flexibility and rapidity that drove the creation of the DCRF and C2CREs. To compensate for the drastic shortfall, JTF-CS uses reserve component support to help fill approximately 28 percent of the headquarters staff. Consequently, JTF-CS is compelled to work shorthanded during the most critical phases of a response operation, dramatically reducing its operational effectiveness at saving lives and alleviating suffering in the hours and days following a catastrophe. What is needed is a comprehensive review which reinforces these joint assignments as priority-fill positions for all services.

A related but distinct challenge is to properly determine ideal size, structure and optimal locations for the various response units—with realistic assumptions about their expectations—and then resource them adequately. When the DCRF was established in 2011, even though it represented a much more capable force than had previously existed, its size was not designed intentionally to satisfy a specific desired effect or national planning scenario for mass evacuation and casualty estimates. As only one example, no metrics were established at the outset for determining how much decontamination throughput capability is required in a real CBRN environment. JTF-CS performed its own mission analysis and determined that the DCRF remains too small to accomplish its primary mission. (In other words, it seems apparent that if an American city sustained a significant WMD attack, even the brigade-sized operations task force resident in the DCRF would in all likelihood require reinforcement.) The same assessment determined that, under realistic conditions in a CBRN environment, the force would struggle to sustain round-the-clock operations over time. Even though it has been significantly increased, the current organic logistics capability is primarily designed to sustain the DCRF’s own activities; U.S. Army North and FEMA would provide additional logistics support to augment the DCRF. Significant work remains to accurately forecast efficient response requirements for a large-scale disaster in an American city.

Training CBRN response forces involves some unique complexities—and these are being exacerbated by fiscal uncertainty and sequestration cuts. The geographical dispersion of forces and assets that characterizes most of the contingency response capabilities is both a blessing and a curse: some response capability probably resides near any potential incident scene in the United States, but the units’ competing missions, together with available time for training, limit collective training. Once certified, many units do not receive follow-on funding to perform sustainment training to keep perishable technical skills and qualifications current. The challenge is made worse because of the nature of the mission—unlike many combat forces accustomed to assembling and preparing for a mission at a forward staging base, CBRN response forces should assemble at their organic location, move to the incident scene and begin executing their mission as soon as possible. These factors can make it difficult for the Title 10 units to achieve stringent response timelines.
with heavier equipment and plans that require pre-assembling dispersed units at a common debarkation location first. Simplifying task organization and locations of dispersed unit capabilities are essential to improving opportunities for deliberate training and exercises. Integrated and collective CRE training—focusing particularly on interoperability with civilian partners—must be a priority.

CRE forces require highly mobile, light equipment sets designed specifically for easy and rapid employment. Heavy equipment, designed for kinetic combat operations—in which forces are often methodically staged before being employed very deliberately—does not always lend itself well to the agile response requirements of CRE forces. For example, the mission of the CRE creates unique demands on communication among military units and civilian partners. Mission command among disparate emergency response assets is complex given the limitations of existing communications architecture and the scarcity of training opportunities between Title 10 and Title 32 CRE assets under budget sequestration. As another example, although Title 32 forces can often reach incident sites rapidly with their lighter, organic transportation, geographically dispersed federal forces are significantly constrained by their reliance on strategic airlift or commercial line haul transportation to reach a scene. Creative force packaging allows the most critical lifesaving equipment to be staged at points of embarkation first, but greater attention is still required in this area.

Policy and standards of deployment for warfighting activities—i.e., joint reception, staging, onward movement and integration (JRSOI) and use of aerial ports of embarkation (APOEs) and debarkation (APODs)—must be adapted for the domestic environment to ensure timely response to civilian authorities. In addition, equipment standardization and compatibility across the CRE (Title 10 and Title 32) is an enduring challenge. Until CRE-specific equipment is agreed upon, standardized and adopted across the CRE (Title 10 and Title 32), existing clothing and equipment could be procured more consistently through standard lifecycle replacement and commercial off-the-shelf procurement. The National Guard and the Army are sharing ideas on determining standards for use of lighter, more agile equipment. In many instances, where feasible, the states have begun to provide their National Guard units specialized, commercially procured equipment that suits the mission based on previous experiences.

Finally, despite the progress already made to increase and improve logistics capabilities, challenges exist in ground transportation, maintenance, fuel storage and distribution and supply support. Originally, as the DCRF was organized, it was intended that the designated theater sustainment command would augment the organic capabilities of Title 10 response forces during theater-opening operations. What is needed is additional analysis to determine the viability of this approach.

**What Must Be Done**

If the nation ever does have to call upon its military to respond to a catastrophic domestic event, the expectations for its CBRN response forces will be immense. **It is imperative that the forces comprising the CRE are properly structured, manned, trained and resourced to conduct their mission efficiently and effectively.** They exist not only to save lives and alleviate suffering directly but also to help restore faith in local, state and federal governments in the event of a disaster—and every challenge should be viewed through this lens. In addition to the broad challenges of manning, sizing, training, equipping and enabling the joint response forces, the Army has also been working through the more detailed improvements required—such as developing consequence management experts within its own ranks, updating doctrine, aligning mission-essential tasks, synchronizing mission-essential equipment and refining specific training goals. Even though the developments described in this
report represent significant progress and CRE forces are much more capable today than they were only a few years ago, much more work still remains to be done to be truly ready to respond to a real WMD attack or other CBRN event.

Congress and the administration must:

• repeal the untargeted sequestration cuts that introduce an unacceptable level of risk to the CRE enterprise in all areas of manning, equipping and training;

• return to providing defense resources in a timely and predictable fashion;

• fully fund technology, equipment, training, personnel manning and critical infrastructure, thereby enabling the Army to support homeland defense missions;

• fully fund training, equipment readiness and operational deployments necessary for WMD civil support teams, CBRN enhanced response force packages, homeland response forces, the Defense CBRN Response Force and command-and-control CBRN response elements;

• authorize and fund Army reserve component full-time manning requirements and Army civilian workforce authorizations at 100 percent;

• increase funding to conduct more substantive deployment readiness exercises to validate CRE units’ ability to arrive at incident scenes according to their prescribed response timelines;

• appropriate specific funding to conduct combined training of the technical support forces in the CRE prior to their participation in joint confirmatory exercises;

• articulate the nation’s expectations for a whole-of-government response to a complex catastrophe and assign specific responsibilities among departments; and

• identify specific levels of capability required of DoD forces in the event of a CBRN event in the United States to guide future force development.

The Department of Defense must:

• develop CRE-specific Title 10 structure and doctrine to standardize response forces’ personnel, equipment and training procedures;

• consolidate DCRF units by region (where possible) to increase collective training opportunities and speed their deployment upon notification;

• construct designated CRE equipment sets to help further reduce response times and ease movement of emergency responders;

• increase signal, intelligence and logistics planning support to improve the speed and interoperability of defense assistance packages;

• prioritize joint assignments within JTF-CS to increase operational effectiveness in the early stages of a catastrophe; and

• identify additional regional training sites that can accommodate the unique training requirements of CRE elements.

As the 21st century advances, the range, frequency and scale of threats to the American homeland—both natural and manmade—will grow. The CRE enterprise is postured to deliver rapid response to any disaster in any environment and maintains relationships with the numerous other civilian agencies and resources who share their mission. However, a real large-scale crisis would stretch existing forces to their breaking point; cooperative relationships must be expanded to provide the depth and flexibility necessary to confront a broad array of potential contingencies. CRE forces must receive appropriate resources to remain effective and agile in the face of increasing mission demands. Protecting Americans at home is a nonnegotiable mission; timely and predictable funding is required to ensure that the Army can help the nation keep its promise to its people.
Torchbearer Message

U.S. military capability to respond to domestic chemical, biological, radiological or nuclear (CBRN) incidents has evolved in two distinct phases over the past 20 years. The first phase occurred after a series of international shocks including the Iran–Iraq War, the Gulf War and the 1993 (first) World Trade Center bombing and yielded specific legislation that produced the first dedicated capability to manage the aftermath of CBRN events. The second phase, developing primarily over just the past five years, has been an outgrowth of lessons learned since 9/11. Although these recent improvements have been significant, it remains difficult to determine whether the nation’s CBRN response enterprise is sized adequately or organized optimally.

The CBRN response force structure in place today consists primarily of five separate organizational structures divided among federal and National Guard forces. This design is flexible, intended to deliver widely varying capabilities spread throughout the timeline of an extended contingency, and creates numerous options to support civilian federal, state, tribal or local first responders as circumstances dictate.

• Weapons of mass destruction civil support teams (WMD-CSTs) detect and identify CBRN substances, assess consequences, advise on response measures and assist with appropriate requests for follow-on state and federal military forces.

• Company-size CBRN enhanced response force packages (CERFPs) are distributed across the country to deliver immediate response support to domestic local and state authorities.

• Battalion-size homeland response forces (HRFs) improve the common operating picture for various military assets rushing to an incident, augmenting CERFPs’ organic capabilities and preparing the way for follow-on Title 10 forces if required.

• The 5,200 personnel of the Defense CBRN Response Force (DCRF) can respond under federal direction with several battalion joint task forces and deliver needed aviation and logistics support over extended periods.

• Command-and-control CBRN response elements (C2CREs) can reinforce the DCRF at a single large incident site or form the nucleus of additional DCRFs with follow-on forces if necessary.

Despite the many steps already taken in recent years to increase CBRN response capabilities and organize units more effectively, the nation can still do more to enable the Army and the other services to deliver support more rapidly, with the right equipment and with greater flexibility. Specific disaster response roles of various state and federal forces (and federal civilian agencies) could be better defined, and dedicated CBRN response headquarters such as Joint Task Force–Civil Support are chronically undermanned—particularly so under budget sequestration. Few common standards exist for evaluating capability or readiness of disparate CBRN response units. Forces’ geographical dispersion limits their opportunities for integrated, collective training even though their mission demands the highest levels of readiness so that response operations can commence at a moment’s notice. Standardization and compatibility of equipment—particularly of communications equipment across different types of units and among civilian partners—continue to be major challenges. Much remains to be done to continue to build upon the progress made to date.

Even so, the numerous response options available to U.S. Northern Command for CBRN contingencies are flexible and scalable. The evolution of this specialized capability since 9/11 has ensured that Army forces stand ready to provide assistance wherever it is needed in the homeland within a few hours of notification. But it is imperative that these forces are properly structured, manned, trained and resourced to conduct their mission efficiently and effectively. Timely and predictable funding is the cornerstone to providing the specialized capabilities that are required for defense of the homeland.
U.S. Northern Command, in close cooperation with the National Guard Bureau and our other military and civilian partners, has made significant progress improving our ability to respond in the aftermath of a CBRN incident by increasing the overall readiness of the nation’s CBRN Response Enterprise. . . . Important work remains to be done to realize the full potential of the enterprise.

General Charles H. Jacoby, Jr.
Commander, U.S. Northern Command
Testimony before the Senate Armed Services Committee, 19 March 2013