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FY15 BUDGET REQUEST FOR THE DEFENSE THREAT REDUCTION AGENCY AND THE CHEMICAL BIOLOGICAL DEFENSE PROGRAM: COMBATING WEAPONS OF MASS DESTRUCTION IN A CHANGING ENVIRONMENT

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EMERGING THREATS AND CAPABILITIES

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STATEMENT OF

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WEAPONS OF MASS DESTRUCTION

BEFORE THE HOUSE ARMED SERVICES COMMITTEE

INTELLIGENCE, EMERGING THREATS AND CAPABILITIES

SUBCOMMITTEE

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INTRODUCTION

Chairman Thornberry, Ranking Member Langevin, and Members of the Subcommittee, I am pleased to testify today about several of our ongoing efforts to counter the threats posed by weapons of mass destruction (WMD). The pursuit of WMD and potential use by actors of concern pose a grave threat to the security of the United States as well as our allies and partners around the world. Throughout the Department of Defense (DoD), and in concert with our interagency and international partners, we are continuously innovating to counter new and evolving threats with military and civilian solutions to ensure that we are neither attacked nor coerced by actors with WMD. Today I will highlight several examples of these initiatives as they pertain to chemical, biological, and nuclear threats.

As the Deputy Assistant Secretary of Defense for Countering Weapons of Mass Destruction, I am responsible for establishing policies and guidance to protect U.S. and Allied armed forces against a chemical, biological, radiological, or nuclear (CBRN) attack from a State actor or terrorist. I also represent the Department's interests on counterproliferation and non-proliferation policy issues, including the Biological Weapons Convention (BWC), Chemical Weapons Convention (CWC), the Nuclear Non-Proliferation Treaty (NPT), the Proliferation Security Initiative (PSI), as well as the DoD Cooperative Threat Reduction (CTR) Program.

My office develops policy and guidance for the programs and activities of the DoD CTR Program, which is implemented by the Defense Threat Reduction Agency (DTRA), under the direction of Mr. Kenneth Myers. Mr. Andrew Weber, Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, provides acquisition guidance and oversight for DTRA's work. Mr. Carmen Spencer, the Joint Program Executive Officer for Chemical and Biological Defense, was instrumental in the development of the deployable hydrolysis technology that will be neutralizing the deadliest of Syria's chemical weapons. I am pleased to be here today with these colleagues, all of whom are integral to countering the threats that I will be addressing.

COUNTERING TODAY'S GLOBAL WMD CHALLENGES

A number of State and non-State actors continue to pursue WMD, posing a persistent threat to the security of the United States, as well as our allies and partners. In addition, the constant evolution of weapons, materials, tactics and technologies will continue to challenge our ability to deter, detect, and defend against these threats. Finally, the interconnectedness of global communities means that WMD threats can proliferate at the speed of an airliner, a missile, or even the internet. Countering such complex and dynamic threats requires flexible, innovative, and agile responses. Twentieth Century solutions are not sufficient to meet the WMD challenges of the Twenty-first Century.

Our military plays a large part in countering WMD, but we must consistently look beyond military solutions and take maximum advantage of the diplomatic and non-kinetic tools

available. Countering the proliferation or use of WMD requires flexible and agile responses, capable partners, as well as “whole-of-department,” “whole-of-government,” and even “whole-of-international-community” solutions. In these times of fiscal austerity, we must make full use of partnerships, contributing where we can and avoiding unnecessary duplication. Cooperation is a force multiplier, enabling swift and comprehensive action to respond to existing and emerging WMD threats.

REDUCING CHEMICAL WEAPONS CHALLENGES

The extraordinary effort to deal with Syria’s chemical weapons (CW) program in the midst of an ongoing revolution, where many continue to strive to create a free and democratic Syria while their country is faced with instability, civil war, and an influx of terrorist elements, is a great example of how the U.S. Government and the international community are cooperating to rapidly address an emergent tangible threat.

As the crisis unfolded, the U.S. Government sought to reassure close partners and reduce the risk of cross-border proliferation of CW assets. We also began to work with Syria’s neighbors to mitigate the risk to their populations from possible CW use near their borders. Anticipating the potential need for eliminating Syria’s CW program led to the rapid development and acquisition of key capabilities, particularly with respect to transportable technology to neutralize bulk chemical agents.

After the August 21, 2013 use of chemical weapons by the Syrian Government against its population led to a threat of U.S. military intervention, the United States and Russia forged the September 14, 2013, Geneva Framework, which – together with United Nations Security Council Resolution 2118 and a concurrent decision by the Executive Council of the Organization for the Prohibition of Chemical Weapons (OPCW) – launched the international effort to eliminate Syria’s CW program. UN Security Council Resolution 2118 and OPCW Executive Council decisions also established a verifiable and transparent process by which the Syrian Government agreed to the complete destruction of its CW program by June 30, 2014. Syria has since acceded to the Chemical Weapons Convention and submitted a formal declaration, with subsequent amendments, of their chemical weapons materials and production facilities.

This effort is unprecedented in scale, speed, and complexity. Although much remains to be done, it is extraordinary how much has already been accomplished through DoD, interagency, and international partnerships. In addition to the prudent planning that is part of DoD’s genetic coding, the DoD Cooperative Threat Reduction (CTR) Program’s Middle East determination facilitated new partnerships and collaboration across DoD’s communities to support both civilian and military requirements to reduce CW proliferation risks in the region. The DoD CTR Program remains one of the leading programs partnering with the international community on chemical, biological, and nuclear security initiatives. The Program became the primary means through which the U.S. Government could provide funding, expertise, and resources to shape and implement the Syrian CW destruction plan spearheaded by the OPCW. The DoD has worked hard in recent years to ensure greater agility within the CTR Program to respond rapidly

to shifting requirements and threats worldwide. Syria represents the best example of these efforts, and Congressional support has played a significant role in enabling such success.

To date, the DoD CTR Program has allocated approximately \$160 million to support the Syria CW elimination effort, including by providing equipment to the United Nations/OPCW Joint Mission to facilitate the safe removal of the chemicals from Syria, as well as to support the vast majority of the effort to prepare, use, and eventually demobilize the Motor Vessel (M/V) CAPE RAY for the mission to neutralize Syria's most dangerous chemicals. Congressional action authorizing the DoD CTR Program's authority to accept contributions from foreign partners has enabled us to allow international partners to share the financial burden for these considerable efforts. In fact, in 2013 and 2014, the DoD CTR Program has received more than \$19 million in combined contributions from Germany, the United Kingdom and Canada to assist in our threat reduction efforts in Syria, Libya, Jordan, Iraq, and Georgia. We will continue to seek additional contributions from our international partners for these efforts.

Today, thanks to the tremendous efforts of so many contributors, Syria's CW program is on the path to elimination. The international coalition to remove and destroy the components of Syria's chemical weapons program is in place. Technical and policy experts within DoD have contributed to the OPCW's destruction and operational planning groups, offering their expertise on the safest and most efficient ways to conduct the mission. The maritime task force spearheaded by our Danish and Norwegian allies and supported by the United Kingdom, Finland, Russia, and China has enabled the removal from Syria of almost half of the chemicals associated with the Syrian CW program. The centerpiece of the U.S. contribution, the motor vessel (M/V) CAPE RAY, is ready to neutralize the most dangerous chemicals in the Syrian arsenal in a safe, secure, and environmentally sound manner. This maritime Ready Reserve Force vessel is outfitted with DoD's recently-developed Field Deployable Hydrolysis Systems (FDHS) and manned by the finest experts from our operational and technical communities. This unprecedented international effort demonstrates the ability of DoD, other U.S. departments and agencies, and our international partners to develop innovative solutions to complex problems. This type of creative, collaborative approach to a WMD challenge must become the norm.

Another CW elimination effort spearheaded by the Department and concluded this past year is the destruction of the chemical weapons stockpile that Libya's new government discovered after the ouster of Moamar Qaddafi. Following nearly two years of close cooperation with the Libyan Government, Libya announced in January of this year that it had completed destruction of its chemical weapons munitions. This success was due in large part to the DoD CTR Program's provision of approximately \$52 million in training, security upgrades, advice, equipment, and destruction support. The German Government also made a significant contribution to this effort by providing funds directly to the DoD CTR Program through our external contributions authority.

CW elimination efforts are critical not just in responding to today's crises, but to prepare to respond to future threats. Success in the destruction of the Libyan and Syrian CW programs will

not eliminate the WMD proliferation risks in the Middle East. Non-State actors interested in obtaining and using CW remain a concern to our forces and partners around the globe. We must continue to leverage the capabilities and partnerships we have established and are now better positioned to respond more effectively to the next challenges that emerge. It is important to recognize that many of these requirements were not, and could not have been, predicted in advance, but rather were addressed rapidly as they emerged.

The Syrian CW elimination effort is just one testament to how swiftly the whole of the U.S. Government, in coordination with the international community, can work together to solve complex challenges that threaten global security. As we look to two other high-priority counter-WMD issues – countering biological threats and enhancing global nuclear security – we are seeing similar payoffs from such national and international-level collaborations.

REDUCING BIOLOGICAL AGENT RISKS

Biological agents pose serious risks to the United States due to the emergence and spread of new pathogens and the rise of drug-resistant ones and the potential acquisition and use of biological agents by hostile State and non-State actors. These risks are further exacerbated by the globalization of travel and the food supply; the advancement and increasing accessibility of biological science capabilities; and the existence of unsecured pathogens of concern. These are all conditions that present increasing opportunities for hostile State and non-State actors to cause catastrophic strategic consequences.

The potential severity and complexity of biological incidents and the risks they can pose to our forces anytime, anywhere demands close attention both at the strategic and tactical levels. During the past year, we conducted what we have termed a “Bio Stock-take.” Designed to develop longer-term, bio-specific strategic guidance for the department, this process has already informed our recently-released 2014 Quadrennial Defense Review (QDR). Specifically, the QDR highlights the confounding challenge of advancing biotechnology and the potential for use of agents that evade detection and countermeasures, and directs us to pursue global prevention, detection, and response efforts. Additionally, it directs us to help our allies and partners build capacity so they can join us in countering proliferation and use of WMD.

Also as a result of the stock-take, we have identified some key areas for further work, such as preventing strategic surprise, enhancing early warning, raising proliferation barriers, and engaging partners, all in support of a strategy to prevent and dissuade the malicious use of biological agents. Should prevention fail, however, we understand that we must be prepared to respond and mitigate threats from the use of biological agents quickly, and many of those capabilities will be discussed today by my colleagues representing the Chemical and Biological Defense Programs and DTRA. As was the case with the Syria CW challenge, holistic approaches that leverage interagency partnerships and international collaborations are the most efficient and pragmatic way to address the biological agent risks we face today.

Since prevention, detection, and response often rely heavily on public health infrastructure, harnessing the power of the international community to reduce biological risks is best done by building bridges between the security and public-health sectors. This approach is the lynchpin of the Administration's Global Health Security (GHS) Agenda, which outlines nine priority objectives for U.S. Government departments and agencies, and advances the goal of working with international partners to accelerate progress in improving capacity to prevent, detect, and respond to outbreaks of infectious disease threats, no matter the source. Although the Department of Health and Human Services is the U.S. lead for this Agenda, DoD supports the GHS Agenda through existing missions and activities, such as force health protection, threat reduction, and biodefense. These activities, resourced and conducted to meet DoD's military objectives, provide benefit toward the achievement of GHS Agenda objectives while we continue to prioritize capabilities that counter operationally significant risks to our forces.

One example of a DoD program that supports the GHS Agenda is the Chemical and Biological Defense Program, which develops and fields diagnostic devices that benefit both U.S. forces and GHS partners in improving detection of, and response to, infectious disease outbreaks. Additionally, it is developing several medical countermeasures and improved electronic surveillance tools that will enable better protection against, detection of, and situational awareness of infectious disease outbreaks, which support key objectives of the GHS Agenda.

We are also aligning our security mission with Public Health assets in new and robust ways that benefit both our forces and promote global health security. The Armed Forces Health Surveillance Center and the DoD Global Emerging Infections Surveillance and Response System, in partnership with the DoD OCONUS laboratories located strategically in six locations throughout the world, collaborate with international partners to improve capacity for disease prevention, detection and response through enhanced surveillance networks and diagnostic capabilities to facilitate better and earlier force health protection measures.

Finally, recognizing the potential risk of non-State actor-based threats, the DoD CTR Program is a key tool in our prevent strategy, as well as in supporting the security objectives of the GHS agenda. This program is specifically concerned with terrorist organizations that are seeking to acquire pathogens of security concern for use in biological attacks. To address the diverse and rapidly changing global biological threat, the Cooperative Biological Engagement Program (CBEP) has active engagements in Africa, South and Southeast Asia, as well as the Middle East. The CBEP is focused on enhancing partner countries' capability to identify, consolidate, and secure collections of pathogens of security concern as well as strengthening their capability to survey, detect, diagnose, and report rapidly and accurately biological incidents and outbreaks of pathogens of security concern. As an example of the holistic, whole-of-government approaches that CBEP is utilizing, the Program will partner with the Malaysian government, the Federal Bureau of Investigation (FBI), the Centers for Disease Control and Prevention (CDC), and U.S. academic partners this spring to conduct one of

a series of intersectoral workshops on building a robust bio-risk management system for Malaysia.

As we turn our focus to enhancing global nuclear security, the spirit of collaboration with our national and international partners has resulted in similar successes.

REDUCING NUCLEAR THREATS

Nuclear threats also remain a prominent concern. Unless arrested and reversed, the nuclear ambitions of countries like North Korea and Iran can imperil the interests of the United States and our allies and partners around the world, create instability, and increase the likelihood that other nations will seek to become nuclear-armed States. In addition, the growing number of nuclear-armed States increases the chances that terrorists may acquire nuclear materials, or even weapons.

The ongoing spread of advanced nuclear technology knowledge, potential new enrichment techniques, and improved weaponization also contribute to new types of challenges, especially when coupled with long-range ballistic missile and other delivery capabilities. Moreover, the global distribution of weapons-useable nuclear material in non-nuclear weapons States continues to provide additional opportunities for terrorists to obtain material to produce a nuclear weapon. Reports of insufficient security standards at some sites and continued nuclear-material trafficking demonstrate that threats are still present. The combination of vulnerable nuclear materials and non-state actors seeking to acquire WMD capabilities presents a grave threat to U.S. security and that of our allies and partners.

Preventing access to essential materials and technology significantly inhibits the ability of State and non-State actors to acquire nuclear capabilities. By reducing the availability and accessibility of weapons-usable nuclear materials worldwide, promoting a culture of security, and sustaining robust interdiction efforts, the nuclear ambitions of State and non-State actors will remain difficult to realize.

DoD is taking action to reduce nuclear threats by working with partner countries, in close coordination with the National Nuclear Security Administration (NNSA) and the Department of State, to secure nuclear weapons and vulnerable nuclear materials, contributing to the Nuclear Security Summit process, and by promoting global best practices in nuclear security.

The Nuclear Security Summit is a world summit that seeks to prevent nuclear terrorism around the world. The broad goals of the Nuclear Security Summit process are for participating countries and international organizations to come to a common understanding of the threat posed by nuclear terrorism, to agree to effective measures to secure nuclear material, and to prevent nuclear smuggling and terrorism. DoD also plays a role and has worked closely with interagency partners to support the Nuclear Security Summit process. Since the 2012 Nuclear Security Summit, DoD has participated in at least seven domestic exercises to increase capabilities in nuclear preparedness, response, recovery, and resilience. We intend to continue to conduct safe

and secure shipments of spent nuclear fuel containing highly enriched uranium for disposition and more secure storage, as well as modify casks to use to transport the fuel from submarines with unique reactor designs.

DoD will continue to build on its partnerships with other U.S. Government departments and agencies, support critical international organizations such as the International Atomic Energy Agency, and collaborate with countries that can contribute resources and expertise--all to help build a more robust, comprehensive global nuclear security system.

Although our goal remains to prevent proliferation and the loss or acquisition of nuclear material, components, or weapons themselves, DoD also will continue to work closely with U.S. interagency and foreign partners to enhance our crisis planning and capabilities for responding to a nuclear terrorism threat or incident. We recognize that successfully executing DoD's roles and responsibilities in the response to this type of crisis requires effective coordination with other U.S. government agencies and international partners. Our ongoing efforts will thus continue to focus on working with our partners to provide the capacity for a robust ability to respond to and mitigate this type of WMD threat or incident.

Consistent with other proactive steps we are taking to reduce WMD threats, we cannot wait for an act of nuclear terrorism before working together to improve our collective nuclear security culture, share our best practices, and raise our standards for nuclear security. Through its Global Nuclear Security (GNS) program, the DoD CTR Program is the Department of Defense's primary mechanism to support and implement President Obama's objectives for nuclear security, at a site-, country-, and global-level. The GNS program conducts projects and activities to increase the nuclear security of partner nations, including establishing Centers of Excellence and conducts technical exchanges with partner countries to enhance training capabilities. The program also works to decrease the vulnerability of nuclear weapons-usable material based upon the latest threat assessments.

Finally, even as we focus on the highest-priority nuclear threats, we must remain mindful of the potential for radiological dispersal and exposure devices that may become increasingly attractive to actors of concern. Although these devices do not generate the same destructive effects associated with nuclear weapons, they can produce significant health, psychological, and economic effects and increase the cost of addressing them due to the wide areas they may affect. DoD will continue to refine our planning and build partnerships to address this significant threat.

ANTICIPATING FUTURE THREATS

Despite progress over the last year, much work remains to ensure our continued security. Syria and other recent events have given us great insight into how we may have to look at problems differently, enabling us to prepare for and tackle these and other threats more effectively as they emerge. We will continue to manage the risks through close coordination and consultation with

the international community and, most importantly, we will remain steadfast in our commitments to innovation and cooperation with our allies and partners worldwide.

In the increasingly interconnected global environment, the threat from WMD extends well beyond State actors and we cannot take our eye off the terrorism risk. Although the threat to the Homeland from core al-Qa'ida has been degraded in recent years, there has been an increase in activity by other networks of like-minded extremists. The conflict in Syria is generating new extremists who could eventually turn their attention elsewhere if they are not confronted by the United States, our allies, and our partners. As the diffusion of threats continues, the challenges we face will only increase as terrorist networks continue to demonstrate interest in obtaining WMD. We must continue our vigilant efforts to prevent the proliferation of WMD, including by expanding adherence to international agreements and norms, dismantling State programs where possible, and interdicting transfers when necessary.

Our Countering WMD efforts center on preparing and posturing our military to address future challenges that may emerge and escalate quickly. DoD's Countering WMD strategy also places a premium on enhancing efforts to prevent threats and reduce risks before our homeland, citizens or interests can be threatened. Prevention, detection and intervention are all areas that require the sustained involvement in Proliferation Security Initiative (PSI).

Since PSI began in 2003, it has had a real, practical, and significant impact on interdiction. From the beginning, DoD has played an important role by serving as the U.S. Government lead in the Operational Experts Group (OEG); supporting PSI-related exercises and other engagements; and providing technical advice and assistance to endorsing nations as appropriate. These exercises demonstrate the will of the PSI community to take action to prevent and, if necessary, to stop illicit shipments. PSI is a vital part of the international tapestry of countering WMD programs that enhance global security, and is another example of how the whole-of-government, working in collaboration with the international community, can affect meaningful progress in combatting the threat of WMD.

We must bring these programs I have described and other solutions to bear as new challenges surface, leveraging partnerships and lessons learned to respond quickly and decisively. I thank you for your support for our Fiscal Year 2015 budget request and look forward to our continued partnership.

Statement of Mr. Kenneth A. Myers III
Director, Defense Threat Reduction Agency
And
Director, U.S. Strategic Command Center for
Combating Weapons of Mass Destruction
On

The FY15 Budget Request for the Defense Threat
Reduction Agency and the Chemical Biological Defense
Program: Combating Weapons of Mass Destruction in a
Changing Global Environment

Before the

Intelligence, Emerging Threats and Capabilities
Subcommittee
Committee on Armed Services
United States House of Representatives

8 April 2014

Director Kenneth Myers
HASC Testimony
April 8, 2014

Chairman Thornberry, Ranking Member Langevin, and Members of the Subcommittee, it is an honor to be here today to share with you the work being done to counter the threats posed by the proliferation and use of weapons of mass destruction (WMD). There are three entities co-located at our facilities at Fort Belvoir: the Defense Threat Reduction Agency (DTRA), the United States Strategic Command Center for Combating Weapons of Mass Destruction (SCC-WMD) and the United States Strategic Command Standing Joint Force Headquarters for Elimination (SJFHQ-E). Each one of these entities has different mission areas, authorities, requirements, and funding, but they are all located together and intertwined in order to leverage expertise from each other and coordinate efforts. These three entities, as one Team, are engaged in nonproliferation, counterproliferation and consequence management missions throughout the world -- addressing the full spectrum of WMD threats.

Why We Exist- The Threat

Our combating weapons of mass destruction (CWMD) efforts are driven by the threats we face today. A terrorist attack utilizing WMD can result in enormous loss of life, negatively impact economies, constrain national budgets, create political unbalance in geographic regions, and most certainly promote additional proliferation and terrorist activity around the world.

Our mission is further complicated given the complex nature of countering weapons of mass destruction. During the Cold War, most of our focus was on nation states. We were worried about huge stockpiles of nuclear, chemical, and biological materials. And while there is no question that these stockpiles are still a threat today -- and some of my testimony will describe our efforts in these areas -- the more difficult area for us to track and address is terrorist acquisition of WMD materials that can be modified, grown, or enhanced for use as a weapon. The footprint is smaller in these cases, harder to track and thus harder to find and disrupt. We are not talking about huge factories or facilities in most of these cases; sometimes it is a small

laboratory that could fit inside a bathroom. Given this reality, no region of the world is impervious to potential chemical, biological, radiological or nuclear threats.

Our focus is to keep WMD out of the hands of terrorists and other enemies by locking down, monitoring, and destroying weapons and weapons related materials. We also assist Combatant Commanders with their plans and responses to WMD events and develop and deliver cutting-edge technologies to assist with all of these endeavors.

Who We Are

There is no other country or government that is focused on combating weapons of mass destruction 24 hours a day, 7 days a week. Every day, 2000 people from our organization come to work in locations around the United States and around the world focused on one thing, and that's safeguarding the American people against these threats. Our success is determined by what didn't happen –what we prevented, what we helped to interdict, what we eliminated, what we mitigated, and how prepared we are to respond. That is the basis of the shield that we can provide across the full threat spectrum -- chemical, biological, radiological, nuclear and high yield explosives (CBRNE).

Regardless of the time or day, our building is buzzing with activity and with a diverse and remarkable collection of talented workers. As you enter our building and walk through the hallways, you encounter personnel with highly advanced technical degrees and skills related to physics, chemistry, microbiology, and nuclear engineering. They are working right alongside those with expansive experience with program management, logistics, planning, special operations, targeting and military operations. Our operation is often described as unique in this way, and it is true.

The reason why is simple. Subject Matter Experts in the WMD field are highly specialized and hard to find. There simply are not enough experts to adequately staff the Services and Commands. And even if you did, you would not have the right type of coordination and

synchronization which is critical for WMD planning. The most effective way to utilize this expertise is to locate it in one place and provide efficient communication channels for collaboration.

One of the reasons we are successful is because of the breadth of services that we can provide. We combine our operational side of the house with our research and development side focusing all our assets on the issue at hand. Let me give you an example, when a Command or other customer calls into our Operations Center a watch officer takes the call. This officer represents the whole Team, the operations side, planning, and the research and development side of the house. The watch officer's job is to stay abreast of what is taking place throughout the Agency/Center and be able to quickly leverage the diverse expertise on our staff. If the watch officer recognizes that there's some technical complexity to the question, they will go straight to our Technical Reachback personnel. The whole process literally takes seconds. And throughout the response process, operational and technical subject matter experts are engaged. This set-up allows us to fully answer questions from all aspects of a WMD problem, anticipate the needs of the various Commands and special customers, and properly prepare in case there is any follow-up. Timing is critical when dealing with WMD and our Operations Center is organized for collaboration and time sensitive requests. Last year we responded to 947 Technical Reachback requests from our customers.

How We Are Structured

As a Combat Support Agency, we are available 24 hours a day, seven days a week, to support the Combatant Commanders and Services in responding to any WMD threat. This requires us to not only address current needs but also to anticipate future threats to our warfighters. In our Defense Agency role, we manage a research and development portfolio to develop tools and capabilities. In fact, DTRA provides the Special Operations Command with all of their counter proliferation Science and Technology. As a USSTRATCOM Center, we support USSTRATCOM's synchronization of Department of Defense planning efforts to counter weapons of mass destruction. And the complementary Standing Joint Force Headquarters for

Elimination provides both steady state CWMD planning support and can be deployed to provide direct operational support for US Military task forces in hostile environments.

While I am pleased to walk through individual programs with the Committee members and their staff, I would like to use my testimony today to highlight four real-world examples of our activities and the roles that different parts of our Team played in these challenges.

Syria

Beginning in 2011, we began looking at ways to address the CWMD challenges in Syria. The U.S. Government (USG) and international community were alarmed by the continuing civil war in Syria and particularly concerned about the threats of chemical weapon use and proliferation. DTRA's CWMD planners and intelligence officers worked closely with USCENTCOM to evaluate the WMD threats and options for the destruction of these weapons and materials. This analysis was coordinated with DTRA's research and development directorate who began the process of evaluating technologies to destroy these materials. Our Technical Reachback personnel provided modeling and analysis of the potential threats we faced. We were even able to utilize our expertise and knowledge of treaty implications to help shape and steer the Department's actions to respond. And, our Team led the synchronization effort within the Department of Defense and across the interagency to bring the right expertise to the technology review. This was truly a Team effort that allowed us to utilize our capabilities and expertise.

The conclusion that we came to was that we simply did not have a good way to get rid of bulk chemical agents in a foreign land, in particular hostile environments where we did not have a cooperative relationship. After reviewing a number of options, we were the first organization to invest in a prototype Field Deployable Hydrolysis System (FDHS), a capability that is suitable for the destruction of industrial quantities of bulk chemical agent. The FDHS was developed in fewer than six months and was designed to be transportable for rapid deployment in a variety of environments.

The Syrian chemical attacks on 21 August 2013 were a turning point for the international community. DTRA planners provided technical expertise to Department of State and White House-led diplomatic efforts at every step, including the seminal meetings between Secretary Kerry and Russian Foreign Minister Lavrov in Geneva. After the U.S.-Russia Framework and Syria's accession to the Chemical Weapons Convention, DTRA's Nunn-Lugar program was prepared to support the extremely rapid effort to destroy Syria's declared chemical materials. The Nunn-Lugar program provided the Joint (UN/OPCW) Mission with the majority of the logistics equipment to move chemicals out of Syria.

When the international community failed to identify a nation willing to host destruction operations for the most dangerous chemicals, a full court press was employed to develop a ship-based destruction option with only 60 days from the word "go". And with full cooperation across the interagency and Commands, we were able to deliver a sea-based destruction capability. I am proud to say that the Motor Vessel Cape Ray, the ship that houses the two field-deployable hydrolysis systems, stands ready to begin destruction of a large portion of these chemicals once the materials are taken out of Syria.

Building Partner Capacity

I would also like to share with the Committee our efforts to build partnership capacity in the countries surrounding Syria. It was clear in 2012 that the countries neighboring Syria both wanted and needed improvements to their military and civilian response sectors to counter the possible illicit WMD-related trafficking coming from Syria. Beginning in 2012, DTRA started working with USCENTCOM and the whole of the US Government to build the CWMD capacity of the Governments of Jordan, Turkey, Iraq, and Lebanon. In these countries, to varying degrees we train, equip, and exercise with the military and civilian sectors so they can address non-proliferation, counter-proliferation and consequence management issues.

One of our biggest projects is in Jordan which has hundreds of thousands of refugees from Syria. The Jordanians are concerned about Syrian WMD coming across its borders along with the

refugees. Working with USCENTCOM and our inter-agency partners, DTRA's Nunn-Lugar program is building a 247 mile long security system that runs along the northern and eastern border. To put this in perspective, 247 miles is the distance from Washington, DC to Raleigh, NC. We are building the system in 29 months and should be at full operation by August of 2015. The system is designed to detect a person from 5 miles away and provides the Jordanians with a capability to safely detect, inspect, and apprehend someone suspected of smuggling WMD.

We also trained and equipped the Jordanian military and civilian first responders, approximately 1000 key personnel, to operate in a CBRNE environment. We have helped the Jordanians develop a National Response Plan for potential chemical attacks. We have conducted exercises to synchronize their efforts, reinforce and improve the operational implementation of their newly acquired capabilities.

DTRA's Nunn-Lugar program was the only Department of Defense solution that had the right expertise, authorities, and funding to respond to this emerging requirement in a timely manner. Our subject matter experts have decades of experience training international partners in border security and nonproliferation techniques. Through the Middle East Determination in October 2012, the Secretary of Defense and the Secretary of State were able to quickly approve and re-notify funding toward this urgent end.

The Nunn-Lugar effort was enhanced by DTRA's CBRN Preparedness Program (CP2) and their ongoing engagements with USCENTCOM in the region. However, the CP2 work was limited in authorities under Title 10. Fortunately, last year Congress granted relief by authorizing the Secretary of Defense, with the concurrence of the Secretary of State, to provide assistance to the military and civilian first responder organizations of countries that share a border with Syria. This was a significant step because not all nations have their response capabilities resident within their military organizations. With the Congress' continued support, we plan to immediately use this authority and work within the Department to expand the authority to provide such assistance to other countries. This year, using both this new authority and our existing Title 10 authority, we will build CBRN preparedness and response capacity in approximately 34 countries – thus creating stronger partners for a safer world.

CDC

Building partnership capacity is a good transition into discussing our cooperative relationship with the Centers for Disease Control and Prevention (CDC). The missions of DTRA/SCC-WMD and CDC touch in many places, and we often pursue global health security projects together internationally.

DTRA is well known for its successful projects in the former Soviet Union. But what may not be well known is that these types of projects are now being tracked alongside smaller, yet equally critical biological material projects in sub-Saharan Africa, the Middle East, and Southeast Asia. Why? The threat has changed. Because of our success in eliminating access to materials in the former Soviet Union, groups and states seeking WMD have shifted their attention to other geographic areas and potential WMD sources. We are evolving to address these threats and expanding our areas of cooperation to stay one step ahead.

In most cases, our new partners have no WMD aspirations. But, pathogens for endemic diseases can be weaponized and are not constrained by geographic or political boundaries. Pathogens for deadly diseases like Ebola, Marburg, and Anthrax that have been used to make biological weapons are being safely secured as part of the Cooperative Biological Engagement Program, now the largest activity within the Nunn-Lugar Program. For a relatively small investment, the program is reducing access to biological materials and expanding international partnerships to better counter natural and man-made biological events.

We are working closely with these countries to improve awareness, improve security, to train them in biological safety, consolidate dangerous pathogen collections into fewer facilities with better security, better safety standards, and better diagnostic equipment so we can get early warning of disease outbreaks – regardless if it is a result of a naturally occurring or a deliberate attack. Not only is this important for nonproliferation efforts but also for force protection and public health.

This is where our partnership with the CDC comes in. The CDC handles public health issues, but they are not tasked to address the security threats posed by deadly pathogens. This is a different mission altogether. The CDC has great experience and networks operating in Africa and Southeast Asia where many of these biological agents can be found. We can leverage their expertise by bringing the DoD security culture together with CDC's public health work. This allows us to see a pandemic problem from both sides.

As a result, we have worked very closely with the CDC over the last several years. However, we also realized that there was still a good amount of duplicative work being done by our two agencies. I am proud to announce that earlier this year, DTRA and the CDC's Center for Global Health signed two documents: (1) a Memorandum of Understanding and (2) a Strategy for joint work. The Memorandum of Understanding formalizes DTRA/SCC-WMD's relationship with the CDC and establishes a joint steering committee that will review and advise on future work the agencies pursue together. The Strategy document outlines the types of work that DTRA/SCC-WMD and the CDC will pursue together. The two agencies will work together on three broad biosecurity/global health goals: (1) Prevent, (2) Detect, and (3) Respond. Working on these three goals together, DTRA and CDC hope to (A) improve and expand a global network of international partners that can provide accurate and timely awareness of biological threats; and (B) build a reliable and sustainable capacity to detect, prevent, attribute, report, respond, and recover from CBRNE threats, as early as possible, for the United States and international partners.

This joint effort matters because timing is everything with biodefense. We have American military personnel, foreign service personnel, and other government personnel operating in every corner of the world right now. Improved biosecurity, safety, and surveillance is essential for their safety and the performance of their missions. And the better we can address a problem away from our shores, the safer our country will be. Our continued strong relationship with the CDC improves our odds of success, and sits at the center of the United States's contribution to the Global Health Security agenda, launched in February with 28 international partners.

Libya

Finally, I would like to share with the Committee that we are on the verge of another milestone in Libya.

In response to Operation Odyssey Dawn, DTRA/SCC-WMD deployed experts to Stuttgart, Germany to support USAFRICOM. The deployed personnel provided key planning and liaison support to U.S. and NATO operations in Libya. We made sure that any plans for action considered the consequences associated with chemical weapons. We also worked to make sure that the chemical weapons stored in the desert remained secure.

Subsequently, we played an integral role in the interagency effort to develop courses of action for security and destruction of the chemical weapons (CW) stockpile. Beginning in January 2012, the Nunn-Lugar team joined the interagency dialogue on action in Libya, and began discussions with the Government of Libya regarding security improvements at the storage site and technical options for CW destruction. Fast forward to today, weaponized mustard agent destruction is complete. Working with the Libyans, we destroyed 517 mustard-filled 130mm artillery rounds; eight 500lb mustard-filled aerial bombs; and 45 mustard-filled tubes we believe were to be used in other bomb types as mustard filled inserts into the bomb casings. To put this into context, just one of the 500lb mustard-filled aerial bombs, detonated in an urban setting, could cause significant damage. The mustard agent would likely be dispersed as an aerosol, which could have a devastating impact depending on the environment and location. Now all of the declared Libyan chemical weapons have been destroyed and the team is helping Libya to rapidly eliminate the residual mustard agent.

FY15 DTRA Budget Request Overview

Our budget request for Fiscal Year 2015 (FY15) is \$1.27 billion and comprises Defense-wide Research, Development, Test and Evaluation; Operations and Maintenance; Procurement; and Nunn-Lugar Cooperative Threat Reduction (CTR) appropriation accounts. In addition, DTRA executes the \$407.3 million Science and Technology (S&T) portion of the DoD Chemical and Biological Defense Program (CBDP) and serves as the funds manager for the remainder of that

program's funding, \$980 million. Therefore, the total DTRA resource portfolio is approximately \$2.66 billion. Details and highlights for these requests follow.

Operations and Maintenance Funding

O&M funding directly supports the warfighters and national missions as it pays for planning, training, exercises, and other means for collaboration across DoD and the USG, and with international partners. O&M funding is the fuel that enables us to reach out to our components and personnel, the warfighters, and international partners across the globe.

The requested O&M funding would be applied as follows:

** Nonproliferation Activities (\$58.8 million) for arms control activities including the conduct of USG inspections of foreign facilities, territories, or events; coordination and conduct of the escort of inspection teams for inspections or continuous monitoring activities in the U.S. and at U.S. facilities overseas; and the acquisition and fielding of technology capabilities required to implement, comply with, and allow full exercise of U.S. rights and prerogatives under existing and projected arms control treaties and agreements.

** WMD Combat Support and Operations (\$176.4 million) for a wide range of combat and warfighter support to the Joint Chiefs of Staff, the Combatant Commanders, and military forces as they engage the WMD threat and challenges posed to the U.S., its forces and allies. DTRA supports the essential WMD response capabilities, functions, activities, and tasks necessary to sustain all elements of operating forces within their area of responsibility at all levels of war.

** U.S. Strategic Command Center for Combating WMD (\$11.3 million) for DTRA direct support to the SCC-WMD including providing strategic and contingency planning, policy, and analytical support; developing interagency relationships; and working closely with USSTRATCOM partners to establish the means for assessing and exercising capabilities to combat WMD.

** Core Mission Sustainment (\$167.9 million) for a wide range of enabling capabilities which include information management; resource management; security and asset protection;

acquisition and logistics management; strategic planning; leadership and professional development; and provide the safety, security, and efficiency necessary for mission success.

Nunn-Lugar Cooperative Threat Reduction

The request of \$365.1 million for this important program would be used as follows:

** Strategic Offensive Arms Elimination (\$1.0 million) for elimination activities of ICBMs, SLBMs, and land-based launchers to the Russian Federation in 2014. Elimination of ballistic missile submarines will continue under the recently signed bilateral protocol to the Multilateral Nuclear Environmental Programme in the Russian Federation (MNEPR). DoD will fully transition remaining responsibility for elimination activities to the Russian Federation in 2014.

** Chemical Weapons Destruction (\$15.7 million) for technical expertise and resources to support the UN OPCW joint mission to remove CW from Syria. It is also providing support for CW destruction of materials removed from Syria and providing technical advice and assistance in other Regions.

** Global Nuclear Security (\$20.7 million) for improving nuclear material security, including security for nuclear warheads and weapons-usable nuclear material. This program also assists in the secure transport of nuclear warheads and other qualifying nuclear material to dismantlement facilities, secure storage areas, or processing facilities for disposition.

** Cooperative Biological Engagement (\$256.8 million) for combating the threat of state and non-state actors acquiring biological materials and expertise that could be used to develop or deploy biological materials and weapons. This program destroys or secures biological agents of security concern at their source, and works in partnerships to ensure a secure disease surveillance system. This program works closely with other US Government departments and agencies, international partners and the private sector.

** Proliferation Prevention (\$40.7 million) to enhance the capability of non-Russian, Former Soviet Union (FSU) states and other partner countries to deter, detects, report, and interdict illicit

WMD trafficking across international borders. Beginning in fiscal year 2013, the Proliferation Prevention Program began expansion outside of the FSU to Southeast Asia and the Middle East.

** Threat Reduction Engagement (\$2.4 million) to develop active and positive relationships between the defense, military, and security establishments of the United States and the states of Eurasia and Central Asia. This program engages military and defense officials in activities that promote regional stability, counter-proliferation, and defense reform; build security cooperation with the partner states; and promote exchanges that enhance interoperability with U.S. and North Atlantic Treaty Organization (NATO) forces for multinational operations.

** Other Assessments/Administrative Support (\$27.8 million) to ensure that DoD-provided equipment, services, and related training are fully accounted for and used effectively and efficiently for their intended purposes. This account also funds Nunn-Lugar- program travel, logistics, translator/interpreter support, and other agency support.

Research, Development, Test, and Evaluation

DTRA RDT&E programs respond to the most pressing CWMD challenges including stand-off detection, tracking, and interdiction of WMD; modeling and simulation to support weapons effects and hazard predictions; classified support to Special Operations Forces; defeat of WMD agents and underground facilities; and protection of people, systems, and infrastructure against WMD effects.

DTRA RDT&E is unique in being focused solely on CBRNE; tied closely with the agency's Combat Support responsibilities; has a top-notch in-house field test capability; relies upon competitive bids, the national labs, industry, and academia rather than an in-house laboratory infrastructure, allowing for a "best of breed" approach to performer selection; and is nimble and responsive to urgent needs.

The agency has a comprehensive, balanced CBRNE S&T portfolio that supports DoD goals and is well connected with DoD customers, as well as interagency and international partners. Our RDT&E approach balances the need for near-term pay-off with the need for long-term

technology and capability development, knowledge and expertise, and is centered upon the following programs: Basic Research (6.1), Applied Research (6.2), Advanced Research (6.3), and System Development and Demonstration (6.5). The requested RDT&E funding includes \$37.8 million in Basic Research to provide for the discovery and development of fundamental knowledge and understanding by researchers primarily in academia and world-class research institutes in government and industry. The DTRA Fiscal Year 2015 request also includes \$151.7 million for WMD Defeat Technologies Applied Research, which is used to translate fundamental knowledge into useful materials, technologies, and concepts that address recognized CWMD needs. Our \$283.7 million budget request for Proliferation Prevention and Defeat Advanced Research funds development of systems, subsystems, and component integration to build, field and test prototypes to assess utility and feasibility of technology solutions to well-defined CWMD requirements. Finally, \$6.9 for WMD Defeat Capabilities System Development and Demonstration funds development, operational testing, and initial deployment of mature technologies and systems.

Chemical and Biological Defense Program S&T

The Department's CBDP S&T programs support DoD-wide efforts to research, develop, and acquire capabilities for a layered, integrated defense against CBRNE agents; better understand potential threats; secure and reduce dangerous materials whenever possible; and prevent potential attacks. Although funding for the CBDP is not part of the DTRA budget request, the agency executes the S&T portion of this program, for which the Department has requested approximately \$407.3 million in FY15. The agency also manages funding execution in support of CBDP advanced development and procurement.

Conclusion

I would like to thank the Committee for this opportunity to share some of our recent efforts and accomplishments. What I hope has become clear is that how we are structured, the breadth of services we provide, the mix of authorities which we can utilize, and the depth of our subject matter expertise is just as important as the strong funding allocated by Congress. We are not just a set of programs, agreements, or funding streams -- we are much more than that. We are a

problem-solving tool, a unique capability. Former Senator Richard Lugar describes us as a national security engine that can be utilized around the world.

We hope that we will continue to earn the Committee's trust and support in meeting these threats and ensuring our security. Thank you, again, for the opportunity to be here today. I would be pleased to respond to your questions.

RECORD VERSION

STATEMENT BY

MR. CARMEN J. SPENCER
JOINT PROGRAM EXECUTIVE OFFICER FOR
CHEMICAL AND BIOLOGICAL DEFENSE

BEFORE THE

HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON INTELLIGENCE, EMERGING THREATS AND CAPABILITIES

SECOND SESSION, 113TH CONGRESS

ON

THE FISCAL YEAR 2015 BUDGET REQUEST FOR
THE DEPARTMENT OF DEFENSE AND
COMBATING WEAPONS OF MASS DESTRUCTION
IN A CHANGING GLOBAL ENVIRONMENT

APRIL 8, 2014

NOT FOR PUBLICATION UNTIL RELEASED BY THE
COMMITTEE ON ARMED SERVICES

INTRODUCTION

Mr. Chairman, Congressman Langevin, and distinguished members of the subcommittee, thank you for the opportunity to testify on behalf of the Department of Defense (DoD) Chemical and Biological Defense Program, the U.S. Army as the Program's Executive Agent, and as the Joint Program Executive Officer for Chemical and Biological Defense. I am pleased to be joined by my leaders and partners who set the strategic priorities for the mission of countering weapons of mass destruction. I am going to provide an update regarding the Chemical and Biological Defense Program contribution to this mission, specifically focusing on the Program's four areas of emphasis which are medical countermeasures, diagnostics, biosurveillance, and non-traditional agent defense. I will also note the role of the countering weapons of mass destruction research and development community in the mission to destroy Syrian chemical weapons.

MISSION AND STRUCTURE

The DoD Chemical and Biological Defense Program was created by Public Law 103-160, enacted by Congress in 1993. The law required the Secretary of Defense to assign responsibility for overall coordination and integration of chemical and biological defense programs to a single office within the Office of the Secretary of Defense. The Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs has that task and is responsible for oversight. Public Law 103-160 also established the U.S. Army as the Executive Agent for the Chemical and Biological Defense Program with the mission of coordination and integration of research, development, test and evaluation, and acquisition for the Military Services.

Primary components of the Chemical and Biological Defense Program are the Joint Staff's Joint Requirements Office for Chemical, Biological, Radiological, and Nuclear Defense to establish priorities and requirements, the Defense Threat Reduction

Agency's Joint Science and Technology Office for Chemical and Biological Defense to execute science and technology programs that provide the technical foundation for future capabilities, and the Joint Program Executive Office for Chemical and Biological Defense to manage the advanced development, procurement, fielding, and life-cycle management of systems. The Chemical and Biological Defense Program Test and Evaluation Executive establishes test policy and standards while the Program Analysis and Integration Office oversees budget execution. External to the DoD, the Chemical and Biological Defense Program works closely with our federal agency partners such as the Department of Health and Human Services and the Department of Homeland Security. We also maintain an active international engagement and collaboration program that includes several of our Nation's closest allies.

FISCAL YEAR 2015 DEPARTMENT OF DEFENSE BUDGET REQUEST

The Fiscal Year 2015 Budget Request for the Chemical and Biological Defense Program includes \$320.5 million for procurement, \$553.6 million for advanced development, and \$407.2 million for science and technology efforts within a total of \$1.387 billion. The budget request supports the Program's four enduring strategic goals:

1. Equip the force to successfully conduct military operations to prevent, protect against, and respond to chemical, biological, radiological, and nuclear threats and effects.
2. Prevent surprise by anticipating chemical, biological, radiological, and nuclear threats and developing new capabilities for the Warfighter to counter emerging threats.
3. Maintain infrastructure to meet and adapt current and future needs for personnel, equipment, and facilities within funding constraints.
4. Lead the enterprise to integrate and align activities to fulfill the Chemical and Biological Defense Program mission.

Continued realization of these strategic goals is significantly impacted by progress in the Program's emphasis areas of medical countermeasures, diagnostics, biosurveillance, and non-traditional agent defense.

MEDICAL COUNTERMEASURES

Medical countermeasures include capabilities to protect the Warfighter against chemical, biological, and radiological threats. The Chemical and Biological Defense Program develops both prophylaxes, such as vaccines to immunize personnel, and therapeutics to treat personnel in the event of exposure. *Homeland Security Presidential Directive – 18: Medical Countermeasures Against Weapons of Mass Destruction (2007)* directed U.S. government agencies to collaborate on the development of medical countermeasures. A primary mechanism for that collaboration is the Public Health Emergency Medical Countermeasures Enterprise. This body coordinates Federal efforts to increase national preparedness with respect to medical countermeasures. It is led by the Department of Health and Human Services Office of the Assistant Secretary for Preparedness and Response and includes the Centers for Disease Control and Prevention, the Food and Drug Administration, the National Institutes of Health, the DoD, the Department of Veterans Affairs, the Department of Homeland Security, and the Department of Agriculture. Mr. Andrew Weber, the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, represents the DoD at the most senior level of this interagency body. Typifying coordination within the Enterprise is the Portfolio Advisory Committee which works to align DoD and Department of Health and Human Services resources for medical countermeasures development and infrastructure. Other Enterprise mechanisms for collaboration include the integrated product teams established to synchronize the continued efforts of several agencies against specific threats such as Anthrax and Botulism.

While there is a great deal of collaboration and coordination, it is important to understand that different agencies have different requirements based on their distinct missions. For instance, critical to the DoD is protecting deployed military forces prior to

exposure or attack while the Department of Health and Human Services emphasizes responding to attacks and threats to the U.S. population after exposure. *Homeland Security Presidential Directive - 18* affirmed the unique nature of DoD requirements, stating, “The Secretary of Defense shall retain exclusive responsibility for research, development, acquisition, and deployment of medical countermeasures to prevent or mitigate the health effects of WMD threats and naturally occurring threats to the Armed Forces and shall continue to direct strategic planning for and oversight of programs to support medical countermeasures development and acquisition for our Armed Forces personnel.” The composition of the DoD Chemical and Biological Defense Program medical countermeasures portfolio is determined by the Warfighter’s funded requirements and based on Warfighter threats and priorities. The Joint Staff’s Joint Requirements Office for Chemical, Biological, Radiological, and Nuclear Defense identifies future operational capability needs including medical countermeasures with input from the Military Services, the Joint Staff-led Capabilities Based Assessments, and the Combatant Commands. The output of this process is the Joint Priority List, which identifies and prioritizes required capabilities.

To accelerate the fulfillment of our unique requirements, the Chemical and Biological Defense Program is establishing the DoD Medical Countermeasures Advanced Development and Manufacturing Capability, a dedicated state-of-the-art center of excellence focused on flexible, modular, and disposable single-use manufacturing techniques. The intent is flexible and modular manufacturing to support DoD quantities, which have historically been significantly less than the quantities required by the Department of Health and Human Services, while working with our unique industrial base which in this specialized area is normally small businesses. The facility will cover a full array of development and production services and be capable of Biosafety Level 3 manufacturing. As we establish a product pipeline feeding Chemical and Biological Defense Program medical countermeasure programs of record to the center of excellence, we intend to implement lessons learned on each additional DoD product with advances in new regulatory sciences and manufacturing processes to shorten development cycles and eliminate redundancies. The goal of the effort is to

enable faster delivery of medical countermeasures designed to protect and treat military personnel. This past October, the prime contractor for the DoD Medical Countermeasures Advanced Development and Manufacturing Capability began construction of a thirty-acre complex in Alachua, Florida, using privately secured financing to fulfill the contract awarded by the DoD. We anticipate that the facility will be completed by the end of fiscal year 2015.

DIAGNOSTICS

Diagnostic capabilities provide health care providers with timely and accurate information to inform individual patient treatment. Additionally, the threat identification information obtained during diagnostic testing will provide commanders with situational awareness of biological hazards to support Force Protection and Force Health Protection decision making. Our diagnostic end state is to provide seamless biological warfare diagnostic capabilities throughout all echelons of the DoD Combat Health Support System and to facilitate the use of next generation diagnostic capabilities by the DoD in the areas of field analytics, infectious disease biosurveillance, cooperative engagement, and pathogen discovery.

The Chemical and Biological Defense Program has sharpened the DoD diagnostics portfolio by increasing the capability of our fielded system, some 340 of which have been provided to the Military Services. The Joint Biological Agent Identification and Diagnostic System is a portable system capable of rapid, reliable, and simultaneous identification of specific biological agents and pathogens. By partnering with the U.S. Army Medical Research and Materiel Command and the Food and Drug Administration, we have made accessible additional diagnostic assays for high consequence, low probability biological threat agents for use during declared public health emergencies. This collaboration has facilitated the availability of viral hemorrhagic fever diagnostic assays for use during a declared emergency and adds previously unavailable preparedness capabilities to this fielded system.

Looking to the future, our Next Generation Diagnostics System is under development. It will be part of a family of systems supporting medical diagnostics and surveillance across echelons of care, with the additional objective to provide common biological identification materiel solutions across our portfolio of equipment. The Next Generation Diagnostics System Increment 1 – Deployable Component recently completed competitive prototyping and the winning contractor is in the process of developing Food and Drug Administration cleared medical diagnostics devices as well as diagnostic assays. Increment 1 of the system offers increased ease of use over the currently fielded system as well as immediate military utility through available commercial-off-the-shelf assays cleared by the Food and Drug Administration. The plan is for the Next Generation Diagnostics System Increment 1 to replace the Joint Biological Agent Identification and Diagnostic System beginning in 2017.

BIOSURVEILLANCE

Consistent with *Homeland Security Presidential Directive – 21: Public Health and Medical Preparedness* (2007), the *National Strategy for Countering Biological Threats* (2009), the *National Strategy for Biosurveillance* (2012), and the Global Health Security Agenda (2014), the Chemical and Biological Defense Program is moving forward assertively to apply its expertise and equipment to improve situational awareness for the Warfighter and the Nation. The *National Strategy for Biosurveillance* defines biosurveillance as “the process of gathering, integrating, interpreting, and communicating essential information related to all-hazards threats or disease activity affecting human, animal, or plant health to achieve early detection and warning, contribute to overall situational awareness of the health aspects of an incident, and to enable better decision-making at all levels.” The Chemical and Biological Defense Program’s competencies lend themselves well to this complex challenge. We are determined to advance biosurveillance technology by integrating chemical and biological defense systems so that field detectors, diagnostic devices, and information systems can better inform battlefield commanders.

A prime example is the ongoing Joint United States Forces Korea Portal and Integrated Threat Recognition advanced technology demonstration, also known by the acronym, JUPITR. Led by the Joint Program Executive Office for Chemical and Biological Defense and supported by U.S. Army Edgewood Chemical Biological Center, this advanced technology demonstration is providing specific detection and analysis resources to address the need for biosurveillance on the Korean Peninsula. The objective is to significantly increase defense capabilities to mitigate impending biological threats to U.S. Forces Korea and the Republic of Korea. Currently underway, JUPITR is providing, 1. a web-based portal that facilitates unclassified collaboration by automatically collecting and sharing biological threat information as well as generating hazard analysis and situation reports to better inform command decision-making; 2. new, cutting edge laboratory equipment to identify biological toxins and pathogens of concern much more rapidly than current systems in use at U.S. Forces Korea facilities; 3. an assessment of a variety of environmental field sensors to determine the best product for biological detection and identification by U.S. Forces Korea; and, 4. integration of a suite of non-chemical and non-biological force protection sensors, such as cameras and radar, with chemical and biological standoff and point sensors to demonstrate a chemical and biological early warning capability. The JUPITR advanced technology demonstration is expected to be completed during fiscal year 2015.

NON-TRADITIONAL AGENT DEFENSE

Non-traditional agents are chemicals and biochemicals reportedly researched or developed with potential application or intent as chemical warfare agents, but which do not fall in the category of traditional chemical warfare agents, toxic industrial chemicals, or toxic industrial materials. The 2010 Quadrennial Defense Review directed the DoD to increase resources for research and development of countermeasures and defenses to non-traditional agents. The Fiscal Year 2015 Budget Request continues to evaluate non-traditional agent threats and test developmental technologies to enhance the capability of Chemical and Biological Defense Program systems to counter these threats. To address the need for a near term capability to combat emerging threat

materials, we have already provided Domestic Response Capability kits to the National Guard weapons of mass destruction civil support teams resident in all 50 states. These kits provide emerging threat mitigation capability that includes detection, personnel protection, and decontamination.

ELIMINATION OF SYRIA'S CHEMICAL WEAPONS

In anticipation of the need to address Syria's chemical weapons stockpile in the context of the Syrian Civil War, the DoD created the Field Deployable Hydrolysis System, a transportable, high throughput neutralization system designed to convert chemical warfare materiel into compounds unusable as weapons. The DoD response in this case is an excellent example of collaboration and agility in capability development. An acquisition effort was launched in February of 2013 and the first system was delivered less than six months later. A government team comprised of the Joint Program Executive Office for Chemical and Biological Defense, the Defense Threat Reduction Agency, U.S. Army Edgewood Chemical Biological Center, U.S. Army Chemical Materials Activity, and U.S. Army Contracting Command produced this capability which is now deployed aboard the motor vessel *Cape Ray*. When this roll-on/roll-off type ship receives Syrian chemical warfare materials, it will head out to international waters to carry out the neutralization process using the Field Deployable Hydrolysis System, a capability that the U.S. would not have but for this innovative joint effort within the DoD.

CONCLUSION

As this subcommittee is well aware, a confluence of technological, political, and economic factors are making the current security environment as challenging as any Congress and the President have faced in the Nation's history. Continued collaboration is critical to advancing chemical, biological, and radiological defense science and engineering to maintain the technological advantage currently held by our forces. I look forward to continued cooperation with the subcommittee to meet the DoD's unique

requirements for specific systems for the Warfighter. Mr. Chairman, Congressman Langevin and members of the subcommittee, on behalf of the men and women of the Chemical and Biological Defense Program, thank you again for the opportunity to appear before you today and thank you for your continued support.

Not for Public Release until Approved by the
House Armed Services Committee

Statement of Mr. Andrew Weber
Assistant Secretary of Defense for
Nuclear, Chemical, and Biological
Defense Programs

On
Countering Weapons of Mass Destruction Programs

Before the
Intelligence, Emerging Threats and Capabilities Subcommittee
Committee on Armed Services
U.S. House of Representatives

April 8, 2014

Introduction

Chairman Thornberry, Ranking Member Langevin, and members of the Subcommittee, thank you for giving me the opportunity to testify about U.S. countering weapons of mass destruction (CWMD) programs.

I have the privilege of serving as the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs (NCB). In this capacity I am a principal advisor to the Secretary of Defense, Deputy Secretary of Defense, and the Under Secretary of Defense for Acquisition, Technology and Logistics (AT&L) on nuclear energy, nuclear weapons, and chemical biological defense. I also serve as the Staff Director of the Nuclear Weapons Council (NWC).

As the Assistant Secretary for NCB, I oversee the implementation of the Department of Defense (DoD) Cooperative Threat Reduction (CTR) program and manage the Department's treaty implementation activities to ensure compliance with nuclear nonproliferation agreements, the Chemical Weapons Convention (CWC), and the Biological and Toxin Weapons Convention (BWC). I am responsible for oversight, integration, and coordination of the Department's Chemical and Biological Defense (CBD) Program. This program develops capabilities to enable the warfighter to deter, prevent, protect, mitigate, respond, and recover from chemical, biological, radiological, and nuclear (CBRN) threats and effects as part of a layered, integrated defense. I oversee the Nuclear Matters (NM) Office, which is the focal point for DoD activities and initiatives related to the dual missions of sustaining a safe, secure, and effective nuclear deterrent and countering the threats of nuclear terrorism and nuclear proliferation. I also manage the Department's governance process for the U.S. Chemical Demilitarization Program.

Additionally, I oversee the Defense Threat Reduction Agency (DTRA), led by Mr. Ken Myers, who is here with us today. DTRA's mission is to safeguard the United States and its allies by providing capabilities to counter, reduce, and eliminate WMD threats and mitigate their effects. They are the Department's Combat Support Agency for the CWMD mission, executing critical programs for nonproliferation, counter proliferation, consequence management, and the development of improved CWMD capabilities.

I would like to recognize the outstanding contribution of the Joint Program Executive Office for Chemical and Biological Defense, which under Mr. Carmen Spencer's able leadership implements much of the Chemical and Biological Defense Program. His team designed and fabricated the Field Deployable Hydrolysis Systems tailored to the destruction of Syria's chemical weapons stockpile.

All of these programs are aligned to provide affordable and strong CWMD capabilities for the United States and our international partners and allies. The personnel running these programs closely coordinate and leverage one another's efforts and accomplishments to ensure DoD is unified and successful in countering WMD threats.

My testimony focuses on specific initiatives that prepare for emerging threats across the CBRN spectrum and strengthen our ability to respond effectively to the WMD threats that exist today. The President's FY15 budget requests a total of \$3.12 billion for these efforts: \$1.38 billion for

Chemical and Biological Defense; \$1.27 billion for DTRA programs; \$365.1M for the Cooperative Threat Reduction Program; \$55.6 million for the Nuclear Matters programs; and \$51.7 million for the CWMD Systems Program.

Support of the FY15 budget request will enable us to continue providing our nation with capabilities that are critical to our ability to counter chemical, biological, and nuclear threats.

Chemical Threats

Long before the August 21, 2013 massive use of chemical weapons by the Syrian Arab Republic against its population, the DoD was acutely aware of the dangers posed by these weapons. There remain countries outside of the CWC that have developed, produced, and stockpiled these lethal weapons; as well as non-state actors who maintain an interest in having a chemical weapons capability. The DoD is targeting the programs I described to prevent chemical weapons and the capabilities to produce them from falling into the hands of terrorists, and to help international partners uphold their nonproliferation and disarmament obligations.

After the fall of Muammar Qaddafi, the DoD supported Libya in fulfilling its obligations under the CWC. The new Libyan government discovered nearly two tons of previously undeclared chemical weapons. They consolidated the newly declared munitions at the facility that the Qaddafi government had been using to destroy bulk chemical agent. The DoD worked with interagency and international partners to provide safety and security upgrades at the Libyan chemical weapons destruction site, which allowed Organisation for the Prohibition of Chemical Weapons (OPCW) inspectors to return and for destruction to resume. The DoD consulted with the Libyan Government to identify and procure the appropriate technology to destroy the newly discovered munitions, and provided training for Libyan chemical weapons destruction operators. Germany and Canada provided financial resources. These efforts led to the final destruction this winter of mustard-filled Category 1 chemical weapons munitions, consisting of 517 artillery shells, 45 bomb components, consisting of plastic tubes filled with mustard agent, and eight 500-pound bombs. Libya is now free Category 1 chemical munitions.

The DoD, with our interagency and international partners, is looking forward to building off of this success as we stand ready to destroy Syria's chemical weapons stockpile. The cooperative nature of our DoD programs makes international relationship-building a key component of our CWMD efforts.

The international destruction operation is crucial to preventing the Syrian regime from using chemical weapons against its population ever again, or leaving the material at risk of proliferation to terrorists. The DoD is contributing significant resources through contributions of equipment, destruction technology, and expertise. The DoD CTR Program provided transport and material handling equipment, medical countermeasures, and packaging materials to the OPCW-United Nations (UN) Joint Mission to enable removal of the declared chemical stockpile from Syria. The DoD has also outfitted the Motor Vessel (M/V) Cape Ray, a U.S. National Defense Reserve Fleet Vessel, with two specially-designed neutralization systems along with all of the equipment, personnel, and expertise necessary to neutralize the most dangerous Syrian chemicals in a safe and environmentally sound manner.

This will be the first ever chemical weapons destruction operation aboard a vessel. In order to ensure CWC compliance, the DoD and the OPCW worked very closely together to develop the treaty documents required for this one-of-a-kind mission. DoD treaty experts also planned, coordinated, and executed visits and engineering reviews aboard the ship with OPCW Technical Secretariat inspectors and verification experts.

In the broader Middle East, the DoD is reducing the risk of cross-border proliferation of chemical weapon assets. We are working with several of Syria's neighbors to enhance their ability to mitigate the risks of proliferation and possible chemical weapons use near their borders. For example, the DoD CTR Program is providing Jordan with training and equipment assistance to enhance security along its borders with Syria and Iraq, and to detect, interdict and respond to potential chemical weapons incidents.

The DoD has active programs that provide the capabilities required to respond to chemical threats in a layered approach. We invest in detection equipment to identify chemical agents and provide situational awareness for response. We also provide protective equipment to shield against exposure, and we develop responsive medical countermeasures.

DoD's development of chemical defense capabilities is a key part of an integrated national effort to address traditional and non-traditional threats. In this budget request, we continue to conduct research and develop technology for a range of chemical defense capabilities, including for detection, medical countermeasures, decontamination and protection. For example, this year we will complete the rapid fielding of enhanced equipment packages for the National Guard's Weapons of Mass Destruction Civil Support Teams to protect against and respond to non-traditional agents.

Biological Threats

The DoD also continues to anticipate and prevent biological threats. We are working proactively to prepare for both existing and emerging biological threats and respond rapidly when necessary. Biological threats from an attack, accidental release, or natural occurrence have the potential to cause enormous damage in terms of lives lost, economic impact, and ability to recover. As stated in the National Strategy for Countering Biological Threats, "...fanatics have expressed interest in developing and using biological weapons against us and our allies." Rapid advancements in biotechnology are making it easier for an adversary, whether state or non-state, to develop biological weapons.

Unlike other threats, biological agents have the capacity to spread without regard to borders, conflicts, or intentions. As such, countering biological threats lies at the complex nexus of security and health, and needs to be addressed by all stakeholders involved, to include health, defense, law enforcement, private, international, and non-governmental counterparts.

One of the primary international initiatives to which DoD is contributing to address this challenge is the newly-announced Global Health Security Agenda -- an international effort to enhance our ability to prevent, detect, and respond to infectious disease threats. DoD drives the security components of this Agenda.

The DoD has unique contributions to protecting the health and security of U.S. citizens, both at home and abroad. Our programs prevent biological threats to our security through threat reduction activities such as biosecurity and pathogen consolidation. Dangerous pathogens, naturally prevalent in many regions of the world, are stored in laboratories to conduct vital research and medical diagnosis to protect and treat a nation's citizens. These same pathogens may be attractive to those who have ill intent, be they lone actors or terrorist organizations.

Recognizing this, DoD is expanding threat reduction activities to other parts of the world to limit access to dangerous pathogens and decrease the threat of their deliberate or accidental release; and build systems to rapidly detect, diagnose, and report biological threats around the world before they affect the American people or U.S. interests. We have expanded our bioengagement programs to the Middle East, Southeast Asia and Africa. Many countries in these regions have a confluence of dangerous pathogens that are naturally prevalent and nefarious actors who could exploit these biological agents.

Because integrated biological preparedness and response capabilities are critical to our security, the DoD is collaborating on this with key partners and allies. We are working with the Republic of Korea (ROK) to enhance biosecurity, biosurveillance, and biodefense. The United States and ROK designed the Able Response exercise to improve our governments' ability to prepare for and respond to an intentional biological incident by employing a "whole-of-government" approach. This year, the DoD and ROK will test their collaborative capabilities through a web-based enterprise environment that facilitates collaboration, communication, and information sharing in support of detection, management, and mitigation of biological incidents.

Our Chemical and Biological Defense team also collaborates closely with interagency partners, for example a joint effort with the Department of Health and Human Services (HHS) and Department of Homeland Security (DHS) called the Public Health Emergency Medical Countermeasures Enterprise (PHEMCE). This effort ensures collaboration across the government to develop and deliver medical countermeasures. DoD focuses on protecting our forces deployed around the globe against weaponized agents, emerging threats that may be used against them, and diseases they might encounter. HHS focuses on responding to specific threats to the general population. By working together through the PHEMCE, we leverage each other's work.

We are also making progress on vaccine candidates for plague, botulinum toxin, Ebola and Marburg, equine encephalitis viruses, and nerve agent pretreatments through advanced development to Food and Drug Administration (FDA) licensure. DoD developed and fielded an FDA-cleared capability for diagnosis of biological warfare agents, and we are now moving forward with a next generation diagnostic providing capability for biological warfare agents and infectious diseases outside of established medical centers.

In support of these medical countermeasure requirements, the Department has invested in a dynamic and agile manufacturing capability through the Advanced Development and Manufacturing (ADM) facility being developed in Alachua, Florida.

The DoD ADM and the HHS Centers for Innovation and Advanced Development and Manufacturing (CIADM) capabilities are complementary. DoD and HHS have worked the design of their respective capabilities to ensure DoD is technically matched to the scale required for the Joint Force versus the scale required to support the public health emergency needs of the United States. Furthermore, DoD's medical countermeasures must be flexible and agile to meet a broad range of medical countermeasure needs for agents encountered by the Joint Force globally. In partnership with HHS, we are revolutionizing national capabilities to respond to emergencies and address threats to DoD personnel and U.S. citizens across the globe.

Nuclear Threats

Finally, I want to highlight DoD's efforts to ensure that terrorists and proliferators cannot access nuclear materials and expertise abroad. President Obama has called nuclear weapons in the hands of terrorists "the single biggest threat to U.S. security." As the President has said, just one nuclear weapon detonated in an American city would devastate "our very way of life." With such destructive ability, nuclear threats remain a prominent concern.

Continued reports of nuclear material trafficking and insufficient security standards at nuclear sites demonstrate that these threats are still present. The combination of vulnerable nuclear materials, the global distribution of nuclear weapons, and non-state actors seeking to acquire WMD capabilities presents a grave threat to U.S. security and that of our allies.

The ongoing spread of advanced nuclear knowledge, potential new enrichment techniques, and improved weaponization and delivery capabilities contribute to new challenges. The DoD is working with the Departments of Energy and State to reduce the availability and accessibility of weapons-usable nuclear materials worldwide, promote a culture of security and to sustain robust interdiction efforts and ensure that nefarious nuclear ambitions of state and non-state actors will remain difficult to realize.

Last month, the third Nuclear Security Summit was held in The Hague. Heads of state and international organizations enacted measures to combat the threat of nuclear terrorism, protect nuclear materials, and prevent the illicit trafficking of nuclear materials. DoD has supported this effort by working with global partners to secure weapons-usable nuclear material and establish nuclear security training centers. We are also expanding nuclear counterterrorism and threat reduction cooperation with two of our closest allies, the United Kingdom and France, building on all three countries' technical expertise and history of cooperation.

I would like to echo what President Obama said at this year's Summit: we still have a lot more work to do to fully secure all nuclear and radiological material. DoD continues to contribute to this critical effort.

On the domestic front, the Nuclear Weapons Accident Incident Exercise (NUWAIX) program focuses on developing the capabilities required to mitigate the consequences of a U.S. nuclear weapon accident or incident. This full-scale national-level exercise program is shared among the Air Force, Navy, the Department of Energy's National Nuclear Security Administration and the Federal Bureau of Investigation. The exercises provide realistic training to either safely recover a weapon, or recapture a weapon, in order to stop a terrorist attack. We look forward to ongoing

collaboration in future exercises and continued progress in preparing for potentially catastrophic events.

Although past assessments suggest the likelihood of an electromagnetic pulse (EMP) attack from potential adversaries is low, the Department considers our nuclear survivability, including EMP survivability, an important part of maintaining a credible deterrent posture, particularly with regard to all DoD assets considered critical to ensuring our national security missions. To this end, my office establishes oversight for survivability of DoD mission-critical systems to nuclear effects, to include EMP. We also coordinate with the Department of Homeland Security, which provides the official government policy on threats and vulnerabilities potentially facing the nation that fall outside DoD's roles and responsibilities.

CWMD Awareness

All CWMD efforts, not just within the DoD but across the interagency and internationally, generate immense amounts of information regarding the location of WMD-related materials, available expertise, and international dual-use capabilities. We are working to integrate and fuse this and other existing CWMD information across the U.S. government to foster a shared understanding of the CWMD operating environment and to support decision making.

My office recently developed a Research, Development, Test, and Evaluation Defense Wide program called CWMD Systems. It is focused on developing, testing, and fielding a new CWMD situational awareness prototype that we will call Constellation. Constellation is a next-generation information gathering, sharing, analysis, collaboration, and visualization system. It will provide a platform for sharing information across security domains. Constellation leverages emergent DoD and Intelligence Community technologies to revolutionize CWMD knowledge management. When completed, it will provide a dynamic, holistic view of the global CWMD operating environment. This platform will ensure that information gathered from WMD threat reduction activities, when integrated with other relevant US Government and international partner information, will provide decision-makers and operational personnel a holistic view of the WMD landscape.

We are also supporting the special operations community in its critical CWMD efforts. My office is working with these forces to provide the training and equipment they require for success in their missions.

Conclusion

Nuclear, chemical, or biological threats to our troops, our homeland, our allies, and innocent civilians around the world is very real and always evolving. This means DoD must develop agile programs to respond. The Department is working to strengthen our capabilities to effectively prevent, deter, defeat, and respond to these threats. I ask you to support a responsible FY15 authorization bill and the President's FY15 budget request so that we can achieve these goals.

I appreciate the opportunity you have given me to testify today and would be pleased to answer your questions.