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HEARING
ON
NATIONAL DEFENSE AUTHORIZATION ACT
FOR FISCAL YEAR 2019
AND
OVERSIGHT OF PREVIOUSLY AUTHORIZED
PROGRAMS
BEFORE THE
COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES
ONE HUNDRED FIFTEENTH CONGRESS
SECOND SESSION
SUBCOMMITTEE ON EMERGING THREATS AND
CAPABILITIES HEARING
ON
**REVIEWING DEPARTMENT OF DEFENSE
STRATEGY, POLICY, AND PROGRAMS
FOR COUNTERING WEAPONS OF MASS
DESTRUCTION FOR FISCAL YEAR 2019**

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**REVIEWING DEPARTMENT OF DEFENSE STRATEGY,
POLICY, AND PROGRAMS FOR COUNTERING WEAPONS
OF MASS DESTRUCTION FOR FISCAL YEAR 2019**

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON EMERGING THREATS AND CAPABILITIES,
Washington, DC, Thursday, March 22, 2018.

The subcommittee met, pursuant to call, at 11:18 a.m., in room 2212, Rayburn House Office Building, Hon. Elise M. Stefanik (chairwoman of the subcommittee) presiding.

OPENING STATEMENT OF HON. ELISE M. STEFANIK, A REPRESENTATIVE FROM NEW YORK, CHAIRWOMAN, SUBCOMMITTEE ON EMERGING THREATS AND CAPABILITIES

Ms. STEFANIK. The subcommittee will come to order. Thank you for your patience.

Welcome, everyone, to today's hearing on the Department of Defense's [DOD's] policy and programs for countering weapons of mass destruction [CWMD] for fiscal year [FY] 2019.

Almost 1 year ago, we met to discuss this same topic amidst news of Syria's repeated use of chemical agents and North Korea's advancements in nuclear weapons as well as their asymmetric use of nerve agent for political assassination.

In the year between, reports have surfaced of North Korea's biological weapons program and their regular transfer of chemical weapons technology to Syria. We have also seen Russia's attempted use of a military-grade nerve agent in support of their ongoing political assassination campaigns. Needless to say, a lot has happened in just a year.

The pursuit and potential use of weapons of mass destruction remains a high-consequence threat to our national security. Thankfully, we have not seen any use domestically, but we must not take this for granted.

As the past few years have shown, the use of WMD [weapons of mass destruction] is unfortunately becoming more and more commonplace. Low barriers and, in some cases, no barriers to entry should force us to continually review and evaluate our programs, policies, and activities designed to counter and mitigate these threats across the WMD spectrum, from state and nonstate actors alike.

From an adversarial standpoint, I am particularly concerned about advancements being made in the areas of synthetic biology [syn bio] and biotechnology. China and Russia continue to pursue gene editing and unique approaches to biotechnology that should give us all tremendous pause.

With respect to nonstate threats, some analysts say that the potential for a single undetected terrorist group to develop and deploy first-seen engineered pathogens has never been higher. And as the subcommittee has discussed before, synthetic biology and gene editing, when combined with high-performance computing and access to large-scale genetic data sets, has the potential to redefine biological threats as we know them today.

With all of this in mind, we can understand the importance of today's hearing.

We have before us four distinguished witnesses: from my left, Mr. Ken Rapuano, Assistant Secretary of Defense for Homeland Defense and Global Security; Mr. Guy Roberts, Assistant Secretary of Defense [ASD] for Nuclear, Chemical, and Biological Defense Programs; Mr. Vayl Oxford, Director of the Defense Threat Reduction Agency [DTRA]; and Lieutenant General Joseph Osterman, Deputy Commander of U.S. Special Operations Command [SOCOM].

I would now like to take a moment to recognize Ranking Member Jim Langevin for his opening remarks.

[The prepared statement of Ms. Stefanik can be found in the Appendix on page 25.]

STATEMENT OF HON. JAMES R. LANGEVIN, A REPRESENTATIVE FROM RHODE ISLAND, RANKING MEMBER, SUBCOMMITTEE ON EMERGING THREATS AND CAPABILITIES

Mr. LANGEVIN. Thank you, Chairwoman Stefanik.

And thanks to our witnesses for being here today to provide testimony on the Department of Defense's strategy, policy, programs, and preparedness for countering weapons of mass destruction and the fiscal year 2019 CWMD budget request.

In 2014, the Department released its strategy for CWMD, which outlined three end states: that no new actors possess WMD; that there be no WMD use; and that, should WMD be used, that there be a minimization of their effects, with associated objectives and lines of effort.

The strategy notes that fiscal constraints require that DOD makes strategic choices and accept some risk. However, increasingly bold rogue actors and technological advances are challenging the strategy's goal of ensuring that the U.S. and its allies and partners are not attacked or coerced by adversaries possessing WMD.

For example, earlier this month, we witnessed a peacetime chemical weapons attack in the United Kingdom [U.K.] in an assassination attempt on one of Russia's former military intelligence officers. This attack on one of our closest allies, perpetrated by Vladimir Putin, demands a strong and unequivocal response, which is why I introduced bipartisan House Resolution 786 last week in condemnation of this attack in support of our allies.

In Syria, pro-regime forces and ISIL [Islamic State of Iraq and the Levant] consider the use of chemical weapons on civilian populations as advantageous to achieving tactical and strategic objectives.

Technological advancements, especially in biotech, as Chairwoman Stefanik has referred to, may allow individuals with nefar-

ious intent, or simply by chance, to produce biological agents in a scope and scale not yet encountered.

Since the strategy was released, the Department has taken some initial steps to strengthen CWMD efforts. In 2017, Special Operations Command was designated as the coordinating authority for CWMD. Today, we will hear from Lieutenant General Osterman, the Deputy Commander of SOCOM, about how the command is leveraging best practices from its traditional missions and from lessons learned in its role as CA [coordinating authority] for countering violent extremism, to reinvigorating CWMD awareness, planning capacity and capability across the DOD and the interagency.

The witnesses also include Assistant Secretary of Defense Ken Rapuano and ASD Guy Roberts as well as Director Vayl Oxford from the Defense Threat Reduction Agency. Together, these individuals hold positions that comprise the bulk of assigned roles and responsibilities associated with aligning CWMD policy, strategy, and programs, executing CWMD programs, and delivering current and future personal protective equipment and other CWMD capabilities to our warfighters.

Since the last hearing on this topic, the Department has reorganized. The split of the Under Secretary for Acquisition, Technology and Logistics [AT&L] into two entities serves as both an opportunity and also a potential area of risk to the CWMD effort. There must continue to be coordination within all elements of the Office of Secretary of Defense on this front, including with the Under Secretary of Defense for Research and Engineering. There must also be continued focus on and prioritization of CWMD by all those with assigned roles and responsibilities.

In closing, there is much work to be done to strengthen the CWMD policy, programs, and preparedness. This includes understanding the 2014 strategy in the context of today's threat landscape, the budget request alignment to the current strategy, and understanding how DOD strategy and end states are consistent with the national-level strategy and whole-of-government effort.

With that, I want to thank our witnesses again for appearing before us today. I look forward to your testimony.

And, with that, I yield back.

Ms. STEFANIK. Thank you, Jim.

And just a reminder to our members today and witnesses: Immediately following this open hearing, we will move next door to a closed, classified roundtable.

Thank you again to our witnesses for being here.

And, Assistant Secretary Rapuano, we will start with you for your opening remarks.

STATEMENT OF KENNETH P. RAPUANO, ASSISTANT SECRETARY OF DEFENSE FOR HOMELAND DEFENSE AND GLOBAL SECURITY, OFFICE OF THE UNDER SECRETARY OF DEFENSE FOR POLICY

Secretary RAPUANO. Thank you, Chairwoman Stefanik, Ranking Member Langevin, and members of the subcommittee.

I am pleased to be here today to testify with three of my esteemed colleagues about the Department of Defense's effort to counter weapons of mass destruction: the Honorable Guy Roberts,

Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs; Lieutenant General Jody Osterman, Deputy Commander of U.S. Special Operations Command; and Mr. Vayl Oxford, the Director of the Defense Threat Reduction Agency.

The four of us, the Joint Staff, the combatant commands [COCOMs], and other DOD components work closely together to ensure the Department prioritizes its efforts and fully leverages DOD's unique authorities, resources, and capabilities to protect the Nation.

As Assistant Secretary of Defense for Homeland Defense and Global Security, I am the Secretary's primary adviser on CWMD strategy and policies.

The United States faces a range of complex and multidimensional WMD challenges. Chief among these are: North Korea's dangerous and provocative testing of nuclear weapons and ballistic missiles; the continued use of chemical weapons by the Syrian regime and ISIS [Islamic State of Iraq and Syria]; China's expansion of its strategic nuclear force; Russia's recent provocative statements regarding nuclear strike capabilities and their likely responsibility for the attempted assassination of a former Russian spy in Britain using a highly lethal nerve agent; and technological advances lowering barriers to entry for a range of adversaries around the world.

We maintain unique capabilities to address these and other WMD threats and achieve the National Defense Strategy objective to dissuade, prevent, and deter our adversaries from acquiring, proliferating, or using weapons of mass destruction. We enable a more lethal and resilient force by degrading WMD threats, modernizing key CWMD capabilities, and ensuring the Department's policies and plans comprehensively account for WMD threats.

DOD's strategic approach to the countering WMD mission focuses on three lines of effort: preventing acquisition; containing and reducing threats; and, when necessary, responding to crises.

DOD seeks to prevent acquisition of WMD through the Department's Cooperative Threat Reduction program, or CTR, by working in over 30 countries to build capacity to detect, secure, or eliminate WMD and pathogens of security concern.

In addition, to prevent the transfer of WMD or dual-use materials, the Department works closely with interagency partners to build partner capacity and to spread an understanding of international norms and obligations through the Proliferation Security Initiative.

To contain and reduce threats already developed, the Department maintains specialized plans and capabilities to isolate, identify, neutralize, and dispose of WMD threats before they can reach our borders.

DOD also continues to support State Department-led efforts to work with international allies and partners to hold the Assad regime accountable for using chemical weapons, and will continue to ensure the President has all the options available to respond as necessary. The U.S. and our coalition partners continue to exploit opportunities on the ground to better understand and disrupt ISIS CW [chemical warfare] networks.

Ultimately, should deterrence or efforts to contain and reduce threats fail and an adversary attacks us, the Department of De-

fense's top military priority is to respond and prevent future attacks. DOD safeguards the force and ensures personnel can sustain effective operations in contaminated environments to guarantee DOD's warfighting capabilities.

Using the unique section 333 authority granted last year, DOD improves partnerships and alliances by training and equipping partner nations to conduct CWMD operations.

DOD also has a wide range of domestic CBRN [chemical, biological, radiological, and nuclear] response elements and continuously trains and exercises to employ these capabilities, which can be used to support civil authorities to help save and sustain lives in the aftermath of a domestic CBRN incident.

The complexity of this mission area requires a whole-of-government approach and strong unity of effort. In alignment with the Secretary's prioritization of defense reform, we cooperate closely with other U.S. departments and agencies and our allies and partners. We rigorously prioritize the application of our roles, responsibilities, and capabilities to focus on countering the most operationally significant WMD risks to achieve the most security impact for the Nation. And we are bringing together DOD CWMD stakeholders to ensure a common prioritization of threats and objectives.

As WMD-related challenges continue to emerge, your continued support for the Department and the efforts described today are critical to our ability to understand, anticipate, and mitigate these threats.

Ms. STEFANIK. Thank you. We will have to take the rest for the record. The time has expired.

Secretary RAPUANO. Thank you.

[The prepared statement of Secretary Rapuano can be found in the Appendix on page 27.]

Ms. STEFANIK. Assistant Secretary Roberts, you are recognized for 5 minutes.

STATEMENT OF HON. GUY B. ROBERTS, ASSISTANT SECRETARY OF DEFENSE FOR NUCLEAR, CHEMICAL, AND BIOLOGICAL DEFENSE PROGRAMS, OFFICE OF THE UNDER SECRETARY OF DEFENSE FOR ACQUISITION AND SUSTAINMENT

Secretary ROBERTS. Thank you, Chairwoman Stefanik, Ranking Member Langevin, and distinguished members of the subcommittee. I certainly appreciate this opportunity to testify on the Department's efforts to counter threats posed by weapons of mass destruction.

In the interest of time, I have provided a written statement for the record. I simply aim to highlight for you here a few key aspects about the organization I am charged to lead, the enduring and emerging weapons of mass destruction challenges our forces face, and what the Department is doing to address them.

As the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, I am responsible for advising the Secretary of Defense on nuclear weapons, nuclear energy, and chemical and biological defense matters. Further, on behalf of the Under Secretary of Defense for Acquisition and Sustainment, our office also oversees the modernization of our nuclear forces and the devel-

opment of the Department's capabilities to counter weapons of mass destruction threats.

NCB [Nuclear, Chemical, and Biological] is comprised of a workforce that includes the Offices of Nuclear Matters, Chemical and Biological Defense Programs, and Threat Reduction and Arms Control, as well as the Defense Threat Reduction Agency. Together, we ensure that our nuclear deterrent is safe, secure, and effective; we take proactive steps to reduce and eliminate known WMD threats; and we develop capabilities to protect the lethality of our forces against a myriad of WMD threats they may face should deterrence fail.

State efforts to modernize, develop, or acquire WMD and their delivery systems constitute a major threat to the security of the United States, our deployed troops, and allies.

In recent years, both state and nonstate actors have used chemical weapons against civilians, such as in Iraq and Syria by ISIS and the Assad regime. Further, Russia's recently reported use of a military-grade nerve agent in the U.K. constitutes the first offensive use of a nerve agent in Europe since World War II.

Biological and chemical materials and technologies, almost always dual-use, move easily in the globalized economy, as do personnel with the scientific expertise to design and use them both for legitimate and illegitimate purposes. We are just beginning to grasp the implications of the accelerating diffusion of these technologies and materials.

Perhaps most significantly, however, China and Russia are accelerating the modernization and expansion of their nuclear forces, among other things, in an effort to reduce the influence of the United States; gain veto authority over other nations' economic, diplomatic, and security decisions; and, ultimately, shape a world consistent with their authoritarian model to gain advantage.

NCB's top objective, in alignment with the National Defense Strategy, is to dissuade, prevent, or deter state adversaries and violent extremist organizations [VEOs] from acquiring, proliferating, or using WMD.

Our nuclear forces make essential contributions to the deterrence of nuclear and non-nuclear aggression as well as nonproliferation. Our nuclear forces not only deter a nuclear attack of any scale, but, by extending nuclear guarantees to our allies, we lessen their incentive to develop nuclear weapons on their own, thereby supporting U.S. nonproliferation goals.

WMD threat reduction programs, executed by DTRA, continue to reduce the threat of WMD around the world by detecting and preventing WMD proliferation and consolidating, securing, and eliminating dangerous pathogens and materials of concern.

To counter current and emerging threats like those enabled by synthetic biology and nontraditional agents, the Chemical and Biological Defense Program is developing protective equipment and detection systems for our warfighters as well as developing new strategies to anticipate, prepare, and more rapidly respond to chemical, biological, radiological, and nuclear threats, especially in the area of medical countermeasures.

Consistent with U.S. commitments under the CWC [Chemical Weapons Convention], we are diligently continuing our work to

safely eliminate the remaining U.S. chemical weapons stockpile, located in Colorado and Kentucky. This investment highlights the U.S. commitment to and importance of strengthening international norms against proliferation and use of chemical weapons.

WMD threats continue to pose a clear and present danger to our way of life. Our adversaries pursue them because they believe doing so will give them significant leverage. Our job is to reduce and eliminate any advantage they may seek to gain by either making their threats impotent or convincing them of our ability and will to impose costs that will outweigh any benefit they may gain by using WMD.

Given that our prosperity and global stability are at stake, the importance of modernizing our nuclear deterrent cannot be overstated, nor the value of our investments in developing protective equipment and medical countermeasures for our forces, who are the lethal backstop in our diplomacy.

Your leadership and oversight on these issues, as well as the authorities and resources you provide us to perform these responsibilities on behalf of our Nation, are vital to our collective success.

So thank you again for this opportunity to testify, and I certainly look forward to your questions.

[The prepared statement of Secretary Roberts can be found in the Appendix on page 42.]

Ms. STEFANIK. Thank you.

Mr. Oxford.

STATEMENT OF VAYL OXFORD, DIRECTOR, DEFENSE THREAT REDUCTION AGENCY

Mr. OXFORD. Good morning, Chairwoman Stefanik, Ranking Member Langevin, members of the committee. It is an honor to appear before you today to address DTRA's progress and direction. It is also a privilege to appear with my colleagues here at the table.

Moreover, I am proud to represent the 2,200 Federal civilian and military members of the agency who we count on every day to counter the threats we will be talking about today.

Our Nation is faced with the most complex global threat environment we have ever faced in our history. And our mission within DTRA, to combat weapons of mass destruction, improvised threats, and to ensure a safe and effective nuclear deterrent, is at the nexus of our country's response to this threat as outlined in the National Security Strategy, the National Defense Strategy, and the Nuclear Posture Review.

As an agency, we must adapt to be more agile to meet our mission obligations within the context of this threat environment.

On this day 10 months ago, I was sworn in as the director of the agency and immediately set four priorities: restore our focus on combat support; strengthen and expand our interagency and international partnerships; and develop capabilities to address gaps in our Nation's ability to prevent proliferation, deter its use, and defeat WMD threats, if necessary. Finally, it was most important that I empower our agency leadership and staff to meet their obligations within these mission responsibilities.

After taking office, I met with Secretary Mattis, and he reemphasized the need for us to restore our focus on combat support. My

first priority in this regard was to establish a strong relationship with U.S. Special Operations Command in both their coordinating authority role and as a combat support agency responsible for confronting these threats directly.

I think this offers us two immediate opportunities. First, we collectively can accelerate the progress against this threat across DOD with our interagency partners and the international communities. And we are not bound by geographical distinctions, so we can actually look across the seams and gaps with the other combatant commanders to actually address those gaps accordingly.

DTRA has made great strides in shifting its focus to ensure alignment with strategic direction. And, to this time, we have solicited and received operational needs from many of our combatant commanders; we have established operationally specific theater support teams to accelerate progress to counter Russia, Iran, and North Korean threats; and we have extended our outreach to interagency and international communities to go after these adversarial networks.

In summary, we have accomplished a lot, but much remains to be done. I look forward to keeping Congress informed of our progress, and I am happy to answer any questions you may have. Thank you.

[The prepared statement of Mr. Oxford can be found in the Appendix on page 51.]

Ms. STEFANIK. Thank you.

Lieutenant General Osterman.

STATEMENT OF LTGEN JOSEPH L. OSTERMAN, USMC, DEPUTY COMMANDER, U.S. SPECIAL OPERATIONS COMMAND

General OSTERMAN. Good morning. Chairwoman Stefanik, Ranking Member Langevin, and members of the subcommittee, thanks for the opportunity to address you today.

It is an honor to be here today with ASD Rapuano, whose office is critical in providing the policy and strategic direction that guides the Department's countering weapons of mass destruction efforts; as well as ASD Roberts, whose office is critical to development within our counter-WMD efforts; and, obviously, to Mr. Oxford as well, our close partner from the Defense Threat Reduction Agency, with whom our efforts are embedded and with whom we work on a daily basis.

Two months ago, General Thomas testified to the House Armed Services Committee's Emerging Threats and Capabilities Subcommittee. During that address, he discussed the U.S. Special Operations Command's responsibilities in our new role as DOD's coordinating authority for countering weapons of mass destruction.

I am proud to say that we have made tremendous strides in enhancing the counter-WMD community of action. We have heightened the operational coordination within and between entities and developed a center dedicated to coordinating information flow and executing planning efforts, thus furthering our initial goals.

The role of coordinating authority broadens SOCOM's scope of responsibility from traditional soft specific roles to a more strategic view of overall planning of DOD counter-WMD efforts in support of other combatant commands, Department priorities, and, as di-

rected, other U.S. Government agencies. We are proud to be part of that mission set.

In the time since transfer of the counter-WMD coordinating authority responsibility from U.S. Strategic Command, we have focused on developing a campaign plan, in coordination with the geographic combatant commands, that emphasizes active prevention of new WMD development and preclusion of aspiring actors from obtaining WMD. We have also conducted a baseline assessment to determine geographic combatant command capacity and capability shortfalls in order to establish mitigation plans. Lastly, we have built a fusion center which provides a nexus for active planning, intelligence integration, and assessment of progress.

Continued work still remains as we finalize and continue to revise an active campaign plan. This will be accomplished by expanding and refreshing efforts to assess and understand the evolving operating environment and regularly measure how our capabilities map to these assessments.

The reality is that the counter-WMD mission is highly dynamic and constantly evolving, requiring unity of effort and constant vigilance. SOCOM looks forward to continued close work with OSD [Office of the Secretary of Defense] as well as the Joint Staff, DTRA, and the rest of the counter-WMD community. The foundation of expertise they provide and the value they place on collaboration is integral to national success in countering WMD.

Thank you again for the opportunity to address the committee this morning, and I look forward to your questions.

[The prepared statement of General Osterman can be found in the Appendix on page 66.]

Ms. STEFANIK. Thank you to our witnesses for your opening statements.

My first question will focus on innovation. As I referenced in my opening statement, we have seen rapid advancements in synthetic biology, gene editing, and biotechnology. How is the CWMD mission leveraging these advances in technology?

I would like to start with Mr. Rapuano for the policy piece and then recognize Mr. Oxford at DTRA for your piece of how we are tackling this.

Secretary RAPUANO. Congresswoman, thank you very much for that question.

As you are well aware, advanced development of biotechnology, genetic engineering, other capabilities such as artificial intelligence [AI] very much present double-edged swords when it comes to how we look at how threat actors and wannabe threat actors can leverage the knowledge and the ability of these capabilities to develop certain types of threats, particularly in the bio [biology] realm, in terms of when you look at the degree of dual-useality of the skills and technologies, but as well as the advanced information or artificial intelligence sequencing.

So we do have some very important programs developed in those areas. And I know that my colleagues, in particular Mr. Oxford and Mr. Roberts, can speak to some of the details.

Thank you.

Ms. STEFANIK. Mr. Oxford.

Mr. OXFORD. Thank you.

I think it is really important to understand what Mr. Rapuano said; there are good and bad for all these technologies that we talk about: synthetic bio, additive manufacturing, drone technology, as well as AI that I believe we are being outpaced in. We have strong indications from the Secretary on down to really up our game in machine learning, as well as AI.

We are working closely, especially with the guidance we get from Mr. Roberts' office, on syn bio. We have been part of a community looking at, again, the pros and cons of that technology. There are very positive things that can come out of that. At the same time, there are nefarious ways that we need to address that.

The way I assess this right now is there is a lot of generalized fear and uncertainty in terms of where the good and the bad are. And we need to get, in my mind, to the top 10 things we really think are the nefarious use of syn bio and start to tackle that.

Ms. STEFANIK. Let me ask you, given the importance of S&T [science and technology] efforts, do you think our budget is adequate for S&T?

Mr. Rapuano.

Secretary RAPUANO. The most important element of the budget is predictability for us. And the one thing that I would ask is just ensuring that we get our 2019 budget, and, therefore, we can plan and operate based on a known set of resources, which we will then prioritize.

So, obviously, in the recent budget, the Department has more resources than we have had in quite some time, and I am confident that we will be able to focus them on the priorities as we have just laid out.

Ms. STEFANIK. Shifting gears, Mr. Rapuano, this question is for you as well. The work of the Cooperative Threat Reduction program has evolved significantly since it began. Can you talk specifically about how this program can be used to address current and future threats?

Secretary RAPUANO. Absolutely. It has evolved considerably since its initial focus on former Soviet Union states and WMD capabilities that were legacy from the Soviet Union.

As we look towards the future—and this is something that Mr. Oxford can go into in great detail—we are really looking at this, what we call, left of boom, in terms of prevention of CWMD. The focus of our CTR efforts is working with and developing new partnerships with nations to help inform and equip their efforts to counter WMD, as well as the proliferation of technologies and know-how that could lead to WMD capabilities.

Ms. STEFANIK. Thank you.

And I wanted to give Mr. Roberts an opportunity to answer my previous question on the policy side.

Secretary ROBERTS. Yes. Well, I concur with Mr. Rapuano. I think our budget, as we have submitted—I support the President's budget, and I think it is adequate.

Ms. STEFANIK. Okay.

Mr. Oxford, did you want to comment on the Cooperative Threat Reduction in terms of the left of the boom, moving towards that direction as we modernize the program?

Mr. OXFORD. Absolutely. Thank you for that.

On the S&T side, I think we are adequately resourced. You know, obviously, the CRs [continuing resolutions] hurt in that we disrupt momentum on programs, which have unintended consequences.

On the CTR program, one of the first things I strove to do was to get with the combatant commanders and find out what they thought the best programs were that we could operate within their AORs [areas of responsibility] to buy down risk and then, in consultation with Mr. Rapuano's office, who issues the planning guidance for CTRs, to work that collaboratively to make sure we are actually getting the best bang for the buck.

Ms. STEFANIK. Thank you.

I now recognize Mr. Langevin.

Mr. LANGEVIN. Thank you, Madam Chair.

Again, thanks to our witnesses for your testimony today.

So the chemical weapons attack on Sergei Skripal provides a tragic test case of sorts for the 2014 strategy.

How are policies developed with respect to the "Respond to Crises" strategic line of effort and the "Cooperate With and Support Partners" foundational activity dictated in the Department's response? And what specific activities is the Department engaging in to assist our allies? And how is the Department working with the interagency to reduce incentives to employ WMD by responding to Russian aggression?

Secretary RAPUANO. I will take the first shot at that, Congressman, and thank you for the question.

We are, as a whole of government, working very closely with the U.K., as well as other partners and allies, developing the response to this event.

As you may be tracking, the advanced forensics is currently being conducted by the U.K. That said, it appears highly likely, with the information at hand, that the Russians are responsible for the use of an advanced chemical agent against this individual. And, as you note, we need to develop an approach that imposes high cost on this type of behavior in order to deter future types of behavior either from the Russians or others.

Secretary ROBERTS. If I could add to that, I was privileged to be at the Organization for the Prohibition of Chemical Weapons last week, in which several other nations—and this issue had come up, and it was uniformly condemnation of Russia for what happened. And both the EU [European Union] and NATO [North Atlantic Treaty Organization], as organizations, made statements to that effect.

As far as the support that the U.S. provided, we made it very clear that we were willing to help them in any way that we could, as far as trying to track down and chemically analyze what was happening there.

But there was a lot of support overseas for the efforts that the Brits were undertaking.

Mr. LANGEVIN. Thank you. Well, I wish the President were more vocal on this front, as well.

But as I mentioned in my opening statement, the Department of Defense reorganization provides both opportunity and potential risk in coordinating policies, plans, and programs across the De-

partment. Historically, CWMD has been treated as a specialized issue with somewhat segregated policies.

Secretary Rapuano and Secretary Roberts, could you please describe how the Office of the Under Secretary for Acquisition and Sustainment, and the Under Secretary for Policy will continue coordination to establish policies and procedures for effectively developing programs that support current CWMD goals and force preparedness?

Secretary RAPUANO. Thank you, Congressman. I will take a first shot at the policy piece of the equation.

As I note in my opening remarks, I am the lead for the development of strategy and policy on CWMD for the Secretary. And, as you note, there are many other critical functions within the Department, including AT&L, that are necessary and critical to supporting our CWMD efforts.

The Secretary has made very clear that we have got to achieve a higher unity of effort in terms of how the threat has evolved and increased and the myriad capabilities and functions within the Department.

So we have engaged from the get-go, really since I came into my position, working with Mr. Roberts, as well as Mr. Oxford, as well as with SOCOM as the coordinating authority, on how we are prioritizing and how we are focusing and how we are synthesizing our efforts to ensure that we are getting at the most significant threats in the most effective manner possible.

Secretary ROBERTS. And I can certainly echo what Mr. Rapuano said. Combating-WMD policy and capability development, in my view, requires that our offices coordinate very closely, and I am happy to report to you today that I think our cooperation and coordination is outstanding.

My office serves as the principal point of contact in the Office of the Under Secretary for Acquisition and Sustainment for the counter-WMD issues. And we develop, again, in coordination with Mr. Rapuano's office, policies, we provide advice, and we make recommendations on, among other things, the U.S. nuclear weapons; our CBRN medical and nonmedical defense; our safety and security for chemical and biological agents; safety, surety, security, and safe destruction of the current chemical weapons stockpile; and nuclear, chemical, and biological arms control activities.

And so I think that relationship will grow stronger over time as we continue to look to other agencies within DOD that also have a role to play in this area.

Thank you.

Mr. LANGEVIN. Thank you.

I will have additional questions. I do not know if we are going to go to a second round. But thank you all for your testimony.

And I will yield back.

Ms. STEFANIK. Ms. Cheney.

Ms. CHENEY. Thank you, Chairwoman Stefanik.

And thank you to all of our witnesses for being here today.

Lieutenant General Osterman, my question is for you—my first question. In your testimony, you talked about the need for exquisite access. And you began to sort of discuss, I think, the extent to which we are trying to get information in what are very difficult

and challenging areas, some of the most difficult, I think, in which we operate, and the most opaque.

But could you, to the extent that you can in open setting, talk about why you think what we are doing now is going to be more effective in that regard—in particular, in areas connected to non-proliferation?

And I understand there are other responsibilities and other offices for that, but as you look at things like the North Korea threat—and I am not talking about whether or not we have to take military action there, but looking at nonproliferation issues there, how you feel we are in a better position today to be able to ensure that we actually know what is happening with those nuclear materials and others in other rogue states.

General OSTERMAN. Congresswoman, thank you for the question.

I think probably fundamental to that is, in our efforts with counter-WMD, we are tied very closely to the National Defense Strategy. So the clear articulation in terms of the prioritization and how our National Defense Strategy is constructed has been of great utility for us in that regard, in terms of apportionment of assets, of—mostly, as you are referring to, the exquisite capabilities associated with the intelligence apparatus in order to have information that we need in order to conduct the missions, not only in a planning context, but also a tactical context.

So I would say that I do believe that there has been a significant change with the emphasis in those hard problem sets and in the peer competitor range that allow us, then, to open up that planning beyond just the counter-VEO mission that we had typically focused on, you know, with our previous mission sets, and then open that aperture to allow us to look at some of these harder ones that really require a whole-of-government approach, and then allow us to continue with our interagency coordination to achieve that.

Ms. CHENEY. And you also talked about, in a pre-crisis scenario, the extent to which other agencies have responsibilities. Could you define, sort of, what would constitute “crisis,” how we would determine that you all are now carrying the responsibility in terms of these issues, how that responsibility has shifted from other agencies?

General OSTERMAN. Congresswoman, I guess I would define that as pre-crisis being short of conflict, active and open conflict, which is where, then, as Department of Defense—and I would really refer this more towards the policy folks. But it is where we would—DOD would then look to take on primacy, rather than a supporting effort.

So, right now, our counter-WMD effort as a coordinating authority is really how best to orchestrate the Department of Defense activities in that pre-crisis phase to support the other interagency and intelligence community organizations that are associated with looking at the problem set and working with it, you know, from a deterrence perspective and counterproliferation perspective. The shift being, then, once it crosses a line, I think, into active and open conflict.

Ms. CHENEY. Thank you.

And I will have additional questions in the closed setting, but I will yield back now.

Ms. STEFANIK. Mr. Larsen.

Mr. LARSEN. Thank you, Madam Chair.

Mr. Oxford, hello again. I have a question about the turnaround time that DTRA has when you get a COCOM request and then you prototype and develop and produce.

Are you using a separate process outside of acquisition or not? And, then, is there anything that you need to change or we need to consider changing within that process that you use to increase that turnaround—or, shorten that turnaround time?

Mr. OXFORD. So thank you for the question, Congressman. And, clearly, it depends on the complexity of the problem that we have been asked to resolve.

In some cases—and we can talk about this a little bit more in the closed session—if we get a quick operational requirement, we have been known to turn back in 12 days. That is to provide limited numbers of capabilities. But, in many cases, we are looking at that 2- to 3-year time period.

We have a lot of requirements from Under Secretary Lord right now to make sure we are looking at every contracting vehicle possible, as opposed to what had become kind of the traditional contracting vehicles people have used.

So we are standing up, actually, an innovation office within the agency to look at these various levels of complexity of the problem and what the right, appropriate contracting vehicle is to get after that problem.

So the turn cycle will be predicated on the complexity and the vehicle that we can use to do that. But I will tell you, as an agency, we became too traditional in some of our contracting, and we are opening the lens to this innovation board, bringing in new contracting officers to get at the problems in a more holistic way and with a lot more innovation.

Mr. LARSEN. Yeah. You are bringing in new contracting officers from other agencies within DOD, or do you mean you are hiring additional ones?

Mr. OXFORD. We are going to go out and hire new people. The Under Secretary has told us to make sure all of our contracting officers are trained in other transactional authorities [OTAs]. It is something that she is very akin to.

We have people that are using OTAs at this point in time, but it is going to be a bigger part of our future as we look across the consortiums that have been established elsewhere by DIUx [Defense Innovation Unit Experimental] and others to make use of the OTAs they already have in place, because we can rapidly get things on to contract that way.

Mr. LARSEN. Yeah. And I note you said you could cover some other things in the closed session as well?

Mr. OXFORD. Yes.

Mr. LARSEN. Okay. Great.

Mr. Roberts, I think this is for you, but it is about the Proliferation Security Initiative [PSI]. Would that be a question for you or Mr. Rapuano?

Secretary ROBERTS. Mr. Rapuano, probably.

Mr. LARSEN. Okay. Great. Well, then you are off the hook.

Is the PSI still helping to prevent WMD proliferation? And are there any changes that the administration is pursuing to it to improve upon any changes that you think are necessary?

Secretary RAPUANO. Absolutely, it is.

And really the driving purpose of PSI is to shape the environment in terms of partners, allies, the international community with regard to the importance as well as the how-to's associated with enforcing U.N. [United Nations] Security Council sanctions with regard to proliferation.

Obviously, very active in terms of that education process and that consensus-building process in supporting the maximum-pressure campaign against North Korea.

Mr. LARSEN. Yeah. And are our partners in PSI still unwilling to utilize their own—are you hearing any reluctance from partners to utilize their own laws, their own rules in order to implement PSI?

Secretary RAPUANO. So the actual coordination of activities really falls into other categories beyond PSI. PSI is more about the engagement, the education, the consensus building. But in terms of specific actions, those are handled in a variety of different ways that we can speak to in more detail in the closed hearing.

Mr. LARSEN. Great. Thanks.

And then I think this might be for Mr. Oxford as well, but whoever can answer it, I would appreciate it.

So there appears to be some overlap in our capabilities of medical countermeasures between the DOD and HHS [Department of Health and Human Services], our manufacturing capabilities. Is it necessary that DOD have independent manufacturing capabilities for medical countermeasures, or is there some efficiencies that we can explore?

Mr. OXFORD. So, if I could, there is always interagency strife, as you may know, but we actually follow suit as a performer through Mr. Roberts' office. So they handle the prioritization of what we are tasked to do.

Mr. LARSEN. Uh-huh.

Secretary ROBERTS. If I could comment on that, we have, in fact, established—you may be familiar with it—a medical countermeasures platform within what we have established as the Advanced Development and Manufacturing Center in Florida.

And this is a facility that is contract-operated, contract-owned, but we provided the equipment, that helps us in different circumstances rapidly develop vaccines for the warfighter, and also over agents that would not be normally profitable for Big Pharma, big pharmaceuticals, to run.

So this is a new and innovative thing. It is up and running. And it provides us a capability that is not in the civilian community.

Mr. LARSEN. Okay. Thank you.

Ms. STEFANIK. Time has expired.

We will now move to round two of questions and then break for the closed session.

So my second question I want to direct first at SOCOM and then at DTRA.

Given the increased threat of chemical and biological agents, what is our ability to operate in and through a contaminated environment? Do we have equipment or readiness concerns?

I want to ask that question broadly, and then I want to ask that question specifically with the North Korea threat.

General OSTERMAN. Chairwoman, we do have the ability to operate in those environments. And we have continued and, as a matter of fact, are enhancing training throughout DOD in the sense of being able to operate in those environments given the emerging and more prevalent threats, I think, than what we have had, perhaps, in the past.

We have always had that capability. And, for example, even in the Iraq-Syria mission sets, where we have had chemicals used and everything, we have been able to respond to those very adequately with the proper protection, proper forces in order to be able to work with it from a DOD perspective.

Some of the specifics associated with North Korea, I prefer to wait until the closed session, if we could, and I will be prepared to answer then.

Ms. STEFANIK. Thank you.

Mr. Oxford.

Mr. OXFORD. Thank you. And, again, more details in the closed session, if we could.

But I will say that, after 17 years of the counterterrorism fight, we are finding a lot of things that we used to do with the big general purpose forces is under stress. And so, as we look at a North Korean or other engagements against those threats that are identified in the National Defense Strategy, we need to rebalance the force.

And I think Secretary Mattis would say getting back to preparedness and then modernization would be his top two priorities.

Ms. STEFANIK. Thank you.

Shifting gears, Mr. Roberts, your office oversees the Chemical Demilitarization Program. Can you update us on how this work is progressing? We understand there have been some contract issues.

Secretary ROBERTS. Yes. Well, our biggest—first of all, we have, as you know, two facilities, one in Pueblo, Colorado, and the other at Bluegrass in Kentucky. And our biggest challenge is right now the—well, the Bluegrass facility is not up and running yet. It will not be until next year.

And the Pueblo facility, there, we have had some problems with the throughput, if you will, of the neutralization and hydrolysate treatment process. As a result, we haven't actually been dismantling and destroying the munitions since last August. We are hoping that facility would be up and running by July.

And, as it stands right now, given all the other things that we are doing, working very closely with the contractor, we still believe we will be able to meet the December 31, 2023, deadline.

Ms. STEFANIK. Thank you.

And my last question is for Mr. Oxford, which has to do with rapid development and fielding. What has DTRA learned from JIDO's [Joint Improvised-Threat Defeat Organization's] rapid delivery—capability delivery?

Mr. OXFORD. So I think the biggest issue is to really understand the operational requirements. And we created one of the strategic imperatives within the agency when I took over; we call it "attack the network." And it gets to one of the questions that Congresswoman Cheney asked, as well. Really illuminating the entire network and identifying through ops intel [operations intelligence] analysis, how do you get to the solution space, allows us to more rapidly turn within some of the questions that Mr. Larsen was also asking, to take the ability to tailor the response, identify in many cases commercial capabilities as opposed to developing them within the Department, which has been kind of the traditional approach. But then having the adequate test and evaluation process that is tailored, again, to the complexity of the problem as opposed to what the DOD 5000 series would suggest is a T&E [testing and evaluation] problem, is to actually tailor it to the rapid response, again, based on the complexity and what ops intel tells us the capability needs to be.

Ms. STEFANIK. Thank you.

Mr. Langevin, you are recognized for a second round of questions.

Mr. LANGEVIN. Thank you, Madam Chair.

Again, thanks to all of our witnesses.

To follow up and continue in this line of questioning, Director Oxford, how is DTRA coordinating S&T and R&D [research and development] with the Under Secretary for Research and Engineering community, which includes DARPA [Defense Advanced Research Projects Agency] and the labs.

Mr. OXFORD. A couple things there, especially on the latter part of that, Mr. Langevin.

I have a working agreement now with Steve Walker, the Director of DARPA. He sent his entire senior staff along with himself to the agency, and we spent half a day with his entire organization. We are now a transition partner for many of the capabilities that he gets to a certain phase and we take them on and get them matured and into the field. And we actually showed the Under Secretary some of those yesterday.

Regarding the national labs, I hosted 10 national labs at the agency recently and talked about a path forward, where we will now quarterly meet with the labs, identify capabilities that match against our priorities, and then figure out, working with the DOE [Department of Energy] leadership and the NNSA [National Nuclear Security Administration] leadership, how to gain access to those laboratories in a way that meets the solution space.

My head of research and development is actually a member of the executive committee under Mr. Griffin over in R&E [Research and Engineering], so he meets with his seniors on a quarterly basis as well. So, even though Mr. Griffin has only been in office for a short while, we have a direct connectivity into his chain.

Mr. LANGEVIN. Thank you.

So I believe that a whole-of-government effort is required to support CWMD strategy and policy. Can you please describe, all of you, your work with other agencies to achieve your strategic CWMD objectives? And how has underresourcing and marginaliz-

ing of other Federal agencies, such as the Department of State, affected the CWMD effort?

Secretary RAPUANO. To your point, Congressman, it truly is a whole-of-government effort. When you look at, particularly in the acquisition, the capability development on the part of adversaries or potential adversaries, many of those interdictions, many of those interventions and efforts to get at the pathways, we call it, in terms of the routes for individuals who are nonstate actors or state actors to develop capability, are getting at the diplomatic piece of it, the arms control compliance piece of it, the economic sanctions.

We have the Treasury, Department of Commerce, DHS [Department of Homeland Security], in terms of all of the export control issues, involved. We meet on a constant basis with them routinely, weekly, in terms of at the White House and the PCC [Policy Coordination Committees], at other interagency constructs that we can speak about in more detail in closed session. But it truly is a very well-integrated effort in terms of all the different players—

Mr. LANGEVIN. Yeah, but I do not want to hear just the good-news story. I also want to see how has the underresourcing and the marginalizing of other Federal agencies, such as Department of State, affected the CWMD effort.

Secretary RAPUANO. Congressman, I cannot speak to the budget circumstances of other agencies. I would simply note that the cooperation is ongoing and very strong.

Mr. OXFORD. Mr. Langevin, if I could address that, General Osterman and I had a chance to meet in two consecutive weeks, first with CENTCOM [U.S. Central Command] in an interagency meeting to talk about specific threats. And, again, we can talk about that in the closed session.

The challenge for the Department, as General Osterman said, is illuminating the networks so we can get the interagency involved in getting after the threats within their authorities, as opposed to it becoming a DOD-only problem.

We met a week later, under General Thomas' leadership, at a global synchronization conference, where, once again, we reemphasized the need for the interagency to be involved left of the problem.

And what the burden is on many of those other interagency partners is lack of analytical capabilities and lack of information that DOD often has, but we have not always shared. So getting to a better information-sharing further enables the small analytical capabilities they have in some of the agencies that Mr. Rapuano mentioned.

Mr. LANGEVIN. Very good. Thank you.

So, as Lieutenant General Osterman noted in his testimony, there is a lack of clear tasks for CWMD. How are each of you working to bring clarity to CWMD roles and responsibilities, tasks, as well as policies and programs, so that CWMD efforts are well understood across the DOD and combatant commands?

Secretary RAPUANO. I will take a first knock at that, Congressman.

The first thing we are focused on doing is prioritization. All WMD is not equal, and all WMD is not equally interdictable, in the sense of, when we look at the different pathways and means of ac-

quisition of different actors, we need to be, and are, prioritizing who the actors are that represent the biggest risk and threat, and, therefore, what pathways and activities we are going to focus on, and then identifying those agencies with the information, authorities, and capabilities necessary to work either independently or in tandem with others to most effectively get at that acquisition and deny it.

Secretary ROBERTS. And if I could add, we continue to work with the services and the Joint Requirements Office to align—assess, align resources to address any of the capability gaps. Joint Staff then identifies future operational capability needs, with input from the services. And we arrive at what would be called a Joint Priority List, which identifies and prioritizes these capabilities.

And then we continue to be in close collaboration with the end users. And I think that process overarching allows us to, you know, effectively identify the priorities that need to be addressed and in order of priority.

Mr. LANGEVIN. Thank you.

General OSTERMAN. Sir, I can jump on that as well. Just two very quick things.

One is developing a functional campaign plan, which SOCOM has done, which harmonizes and coordinates all those activities, also identifies gaps through the assessment process.

And then the other one is the creation of our fusion center, which allows for the integration of planning as well as resources, threat analysis, and even operational activity.

Mr. LANGEVIN. Thank you all. I know my time has expired, so I will yield back, but thank you all.

Ms. STEFANIK. Thank you.

This concludes our open session. We will now transition for the closed portion of this hearing.

[Whereupon, at 12:12 p.m., the subcommittee proceeded in closed session.]

A P P E N D I X

MARCH 22, 2018

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

MARCH 22, 2018

Opening Statement
Chairwoman Elise M. Stefanik
Emerging Threats and Capabilities Subcommittee
Department of Defense (DOD) Countering Weapons of Mass Destruction
(CWMD) Policy and Programs for Fiscal Year 2019

March 22, 2018, 10:30 am, 2212

The subcommittee will come to order.

Welcome everyone to today's hearing on the Department of Defense's policy and programs for Countering Weapons of Mass Destruction for Fiscal Year 2019.

Almost one year ago, we met to discuss this same topic amidst news of Syria's repeated use of chemical agents, and North Korea's advancements in nuclear weapons, as well as their asymmetric use of a nerve agent for political assassination.

In the year between, reports have surfaced of North Korea's biological weapons program, and their regular transfer of chemical weapons technology to Syria. We have also seen Russia's attempted use of a military-grade nerve agent in support of their ongoing political assassination campaigns.

Needless to say, a lot has happened in a year.

The pursuit and potential use of weapons of mass destruction remains a high consequence threat to our national security. Thankfully, we have not seen any use domestically. But, we **must not** take this for granted.

As the past few years have shown, the use of WMD is unfortunately becoming more and more common-place. Low barriers, and in some cases, no barriers to entry, should force us to continually review and evaluate our programs, policies, and activities designed to counter and mitigate these threats across the WMD spectrum, from State and non-state actors alike.

From an adversarial standpoint, I am particularly concerned about advancements being made in the areas of synthetic biology and biotechnology. China and Russia continue to pursue gene editing and unique approaches to biotechnology that should give us all tremendous pause. With respect to non-state threats, some analysts say that the potential for a single, undetected terrorist group to develop and deploy first-seen engineered pathogens has never been higher.

And as this subcommittee has discussed before, synthetic biology and gene editing, when combined with high-performance computing and access to large-scale genetic data-sets, has the potential to redefine biological threats as we know them today.

With all of this in mind, we can understand the importance of today's event. We have before us four distinguished witnesses:

- **Mr. Ken Rapuano**, Assistant Secretary of Defense for Homeland Defense & Global Security
- **Mr. Guy Roberts**, Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs
- **Mr. Vayl Oxford**, Director of the Defense Threat Reduction Agency
And
- **Lieutenant General Joseph Osterman**, Deputy Commander of U.S. Special Operations Command

I remind members that immediately following this open hearing we will reconvene next door for a closed, classified Roundtable discussion with our witnesses.

Thank you again to our witnesses for being here. Assistant Secretary Rapuano, we will begin with you.

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HOUSE ARMED SERVICES COMMITTEE

STATEMENT OF

MR. KENNETH P. RAPUANO
ASSISTANT SECRETARY OF DEFENSE FOR
HOMELAND DEFENSE AND GLOBAL SECURITY
BEFORE THE HOUSE ARMED SERVICES COMMITTEE
EMERGING THREATS AND CAPABILITIES SUBCOMMITTEE
MARCH 22, 2018

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HOUSE ARMED SERVICES COMMITTEE

INTRODUCTION

Chairwoman Stefanik, Ranking Member Langevin, and members of the subcommittee, I am pleased to testify today about Department of Defense (DoD) efforts to counter chemical, biological, radiological, and nuclear (CBRN) threats both at home and abroad. The National Security Strategy (NSS) makes clear that this Administration prioritizes efforts to defend against weapons of mass destruction (WMD) as essential components of the U.S. Government's efforts to protect the American people, the homeland, and the American way of life. Countering WMD threats requires a whole-of-government approach, and DoD prioritizes areas where DoD roles, authorities, and capabilities will have the most security impact for the nation. DoD underpins the nation's political will and position of strength by ensuring that the United States and its allies and partners are not attacked or coerced by adversaries possessing WMD. I am going to focus on those capabilities, DoD's roles and responsibilities within the countering-WMD (CWMD) mission, and where DoD plays a supporting role with other departments and agencies.

THREAT ENVIRONMENT

The use, threatened use, and proliferation of WMD pose a significant threat to U.S. national security, peace, and stability around the world. In the past year, North Korea has accelerated its development of nuclear and advanced missile delivery capabilities and has threatened to use nuclear weapons against the United States and our allies in the region. Further, North Korea's chemical and biological capabilities continue to threaten the United States and our allies and partners. According to recent open-source reporting, North Korea continues to seek both dual-use equipment (*i.e.*, items that can be used for both peaceful and military purposes) necessary for bioweapon production and advanced training in microbiology for its experts, which raises significant concerns about its capability and intent to use biological weapons.

Russia has expanded and improved its strategic and non-strategic nuclear forces, has condoned Syria's use of chemical weapons and – most recently – is very likely responsible for an attempted assassination in the United Kingdom using a military-grade nerve agent. Russia's actions have consistently disregarded its international obligations and commitments. China's military modernization has resulted in a significant expansion of its nuclear force.

The Organization for the Prohibition of Chemical Weapons-United Nations Joint Investigative Mechanism confirmed that the Syrian regime and the Islamic State of Iraq and

Syria (ISIS) used chemical weapons in Syria. Additionally, we know ISIS has used chemical weapons in Iraq. And, although Iran has agreed to constraints on its nuclear program under the Joint Comprehensive Plan of Action (JCPOA), it retains the technological capability and much of the capacity necessary to develop enough fissile material for a nuclear weapon within one year of a decision to do so.

More broadly, rapid technological advancements and increased access to dual-use goods, expertise, and materials heighten the risk that adversaries will seek or acquire WMD. The same emerging technologies that may help ensure we win the wars of the future are increasingly lowering the barriers for a range of adversaries to develop WMD. For example, advances in synthetic biology, including rapid and cheap genetic sequencing, may enable DoD to understand how to produce new medical therapeutics, fuels, or other advanced materials, but may also enable an adversary to understand how to optimize a biothreat.

These diverse pathways for adversaries' acquisition of WMD and means to deliver them require multifaceted approaches that keep up with and adapt to current threats while remaining postured to mitigate future risks. Multiple departments and agencies play critical roles in detecting threats, preventing attacks on the homeland, and working with foreign partners to prevent and respond to incidents. DoD supports these efforts through both domestic and overseas activities and works closely with allies and partners to counter the wide range of WMD threats that exist today.

DOD ROLES AND RESPONSIBILITIES

As the Assistant Secretary of Defense (ASD) for Homeland Defense and Global Security (HD&GS), I am responsible for the Department's CWMD strategy and policies. My office develops and oversees DoD's policies and guidance to protect the U.S. Armed Forces, the homeland, and other U.S. interests from a CBRN attack and from any type of destabilizing CBRN-related event, including the natural, accidental, or intentional spread of dangerous pathogens and toxins, and represents DoD's interests on traditional counter-proliferation and non-proliferation policy issues. I am also responsible for the coordination of DoD assistance to Federal, State, and local officials, including the response to threats involving nuclear, radiological, biological, and chemical weapons, or high-yield explosives or related materials or

technologies, and assistance in identifying, neutralizing, dismantling, and disposing of these weapons and materials.

We work closely with our partners in the Office of the Under Secretary of Defense (USD) for Acquisition and Sustainment (A&S), specifically the ASD for Nuclear, Chemical, and Biological Defense Programs (NCB) to ensure that DoD has the capabilities and capacity necessary to protect our forces and to leverage partners' capabilities in countering global threats.

My office also develops priorities for, and advises the Secretary on, the Department's CWMD building partner capacity programs to counter WMD proliferation and use. We develop strategic guidance for the Department's primary tool for working with partners to prevent WMD proliferation, the DoD Cooperative Threat Reduction (CTR) Program, which is implemented by the Defense Threat Reduction Agency (DTRA). As a Title 50 program, one of the unique aspects of the DoD CTR Program that has contributed greatly to its effectiveness is the ability to work with a multitude of partners, military and civilian, to achieve DoD's threat reduction goals and to build partner capacity to do so – a key DoD objective. Additionally, we help prioritize the Department's CWMD security cooperation activities under the authority of Section 333, of title 10, U.S. Code, which focuses on building the capacity of partner nation security forces to respond to a WMD incident; and develop guidance for the Department's Proliferation Security Initiative (PSI) engagements to help build the political will of our partners to develop appropriate policies and sufficient capabilities to counter WMD proliferation. All of these engagements, of course, take into account the priorities of our geographic Combatant Commanders, and seek to complement the activities of other U.S. Government and international partners. We expect DTRA will remain DoD's "go-to agency" in our efforts to build partner nation CWMD capabilities.

We also work closely with the Joint Staff and the Combatant Commands, including U.S. Special Operations Command (USSOCOM) in its new role following the December 2016 Unified Command Plan (UCP) change, which we continue to support by providing policy guidance. USSOCOM has brought a renewed sense of enthusiasm and energy to the CWMD mission and plays a critical role in ensuring that the Combatant Commands are fully integrated into the broader CWMD mission and are taking a transregional approach to countering these challenges.

DoD's efforts to prevent, counter, and respond to WMD threats and incidents are carried out by a number of dedicated and hardworking Airmen, Sailors, Marines, Soldiers, and civilians. DoD's cadre of CWMD experts supports a diverse range of activities, including CWMD-related planning, research and development, programming, exercising, analysis, technical reach-back support, and mission execution. This mission is a team effort, and it is an honor to work with such dedicated professionals.

STRATEGIC APPROACH FOR COUNTERING TODAY'S WMD CHALLENGES

The National Security Strategy prioritizes the following actions to defend against WMD: enhancing missile defense; detecting and disrupting WMD; enhancing counterproliferation measures; and targeting WMD terrorists. The NSS places additional priority on the need to detect and contain biothreats at their source, support biomedical innovation, and improve emergency response to combat biothreats and pandemics – whether as the result of deliberate attack, accident, or a natural outbreak. The National Defense Strategy identifies a key DoD objective to dissuade, prevent, or deter State adversaries and non-State actors from acquiring, proliferating, or using WMD. To meet this objective, and as key enablers for protecting the security of our nation, we pursue three general lines of effort to counter WMD threats: prevent acquisition; contain and reduce threats; and respond to crises. We enable a more lethal and resilient force by degrading WMD threats and modernizing key CWMD capabilities. Close cooperation with the other U.S. departments and agencies, and our allies and partners, enables DoD to prioritize capabilities and efforts that counter operationally significant WMD risks and activities that are best executed by the Department. We accept risk in areas where WMD use is implausible, infeasible, or would have limited effects. Ultimately, DoD seeks to ensure that the United States and its allies and partners are neither attacked nor coerced by actors with WMD. We do this by ensuring that we have a layered approach to detecting and mitigating WMD threats at the source, thereby preventing WMD threats from reaching the homeland. If we are attacked, we seek to sustain our operations and force protection with minimal limitations; to respond militarily to disrupt ongoing attacks and preclude additional attacks; and to provide authorized support to domestic and international consequence response efforts, as requested.

We are bringing together and working with DoD CWMD stakeholders to ensure that we share a common prioritization of WMD threats and an understanding of how to leverage most

effectively our unique DoD authorities and capabilities to counter them. The stakeholders include our colleagues in the Joint Staff, the Office of the USD(A&S), the Services, and USSOCOM. Priorities are being set by DoD leadership through the National Security Strategy and National Defense Strategy, and accompanied by a robust process at all levels of stakeholders to achieve prioritized outcomes and to address resources and authorities.

Prevent Acquisition

A critical element of our efforts to counter WMD threats is preventing actors that do not possess WMD from obtaining them. DoD works closely with our interagency partners to leverage DoD authorities, resources, and capabilities where they can make the most difference to prevent adversaries from acquiring the technologies, materials, and expertise needed to develop WMD. For example, DoD works closely with the intelligence community and other departments and agencies to ensure that DoD understands the threat environment and maintains situational awareness of the location, quantity, and vulnerability of global materials and stockpiles, and of the intentions and capabilities of actors of concern. This is foundational to all DoD CWMD efforts.

DoD has the authority to work with foreign partners to secure or eliminate threats at the source and to build partner capacity to prevent proliferation. The DoD CTR Program, executed by DTRA, is an example of DoD's collaborative efforts with its partners. Secretary Mattis described the DoD CTR Program as DoD's "most comprehensive and effective tool for working cooperatively with international and interagency partners to mitigate WMD-related threats." For more than 25 years, the DoD CTR team has worked with foreign partners to destroy existing WMD stockpiles successfully; to make nuclear, chemical, and biological weapons more difficult to acquire; and to detect and interdict dangerous WMD components and materials.

In response to the changing threat environment, the DoD CTR Program has evolved in recent years. The DoD CTR Program initially focused on securing sources of WMD material in the former Soviet Union. In more recent years, as some WMD materials have become easier to acquire and proliferate; as State and non-State groups have continued to use these materials in conflict; and as various conflicts have destabilized borders and facilitated new trafficking routes, Congress expanded the DoD CTR Program's authority to address threats outside of the Former Soviet Union States in the National Defense Authorization Act (NDAA) for Fiscal Year (FY)

2008. With this additional flexibility to adapt the program to address the evolving threat environment, the Secretary of Defense has made determinations, with the concurrence from the Secretary of State, to expand the program geographically to address critical and emerging threats. The Program works in more than 30 countries to build our partners' capacity to secure materials within their borders, to detect WMD use and destabilizing disease outbreaks, and to prevent proliferation across borders and through maritime routes. Within the CTR Program, there are five primary lines of effort.

The DoD CTR Global Nuclear Security (GNS) Program helps prevent nuclear proliferation by facilitating the cooperative elimination of foreign nuclear weapons and nuclear weapons components, supporting the safe and secure transportation and storage of nuclear weapons-usable and high-threat radiological materials, and improving safety and security practices at foreign partner nuclear facilities. For example, we are working with Kazakhstan's nuclear security guard force to ensure that all nuclear material storage facilities in that country are secure.

The DoD CTR Proliferation Prevention Program (PPP) prevents the proliferation of WMD materials, components, technology, and expertise by cooperatively strengthening the capability of foreign government partners to conduct surveillance of land and maritime borders, detect trafficking of WMD, and interdict illicit WMD materials. Through the PPP, we are working with the Jordanian and Lebanese Armed Forces to enhance their WMD detection and interdiction capability on the Jordanian and Lebanese borders with Syria. This helps both Jordan and Lebanon to prevent chemical weapons (CW) attacks on their soil and the trafficking of CW materials through Jordan and Lebanon. These efforts are often complementary to other DoD border or maritime security initiatives, as well as interagency efforts such as the Department of Energy's non-proliferation activities with partners at ports of entry.

Recognizing that biological threats are ubiquitous and often endemic, and that potential adversaries can use legitimate, widely available biotechnologies to manipulate dangerous pathogens, the DoD CTR Cooperative Biological Engagement Program (CBEP) prevents the proliferation of biological weapons (BW), BW components, and BW-related technologies and expertise. The CBEP achieves this by securing and enhancing biosecurity and biosafety at facilities that store and handle extremely dangerous pathogens for legitimate beneficial purposes, and enhancing detection and reporting of outbreaks of dangerous diseases before they spread,

and remains postured to secure and cooperatively eliminate foreign BW stockpiles and associated infrastructure. For example, the CBEP team is partnering with Iraq to upgrade the safety and security of laboratories containing highly dangerous pathogens to prevent potential theft and use by non-State actors. The CBEP efforts also seek to stop threats “at the source” by preparing partners to detect and report disease outbreaks of security concern. The CBEP team recently collaborated with the Tanzania Wildlife Research Institute to mitigate the imminent threat of an anthrax outbreak, a disease of security concern given the historical use of *Bacillus Anthracis* as a biological weapon, by establishing mechanisms for safe and secure diagnostic work during this and future outbreaks.

CBEP efforts reduce biological threats at the source, before they affect the United States, and directly support the U.S. Government goals for the Global Health Security Agenda (GHSA). GHSA is a global initiative with more than 60 member nations and a 10-member Steering Group, currently chaired by Italy, and focuses on employing a whole-of-society approach to the prevention, detection, and response to infectious disease threats, including biological attacks. In an increasingly interconnected world, it is imperative to promote cooperation among health, agriculture, security, development, and other sectors to address biological threats and ensure that dangerous pathogens are not accessible to terrorists. DoD, in collaboration with partners abroad remains focused on reducing biological threats to U.S. forces and the U.S. homeland. The Department works closely with the Department of State, Department of Health and Human Services (HHS), and the U.S. Department of Agriculture (USDA), along with other domestic and international partners through frameworks like the GHSA, to ensure that assistance is provided in the most holistic, effective, and efficient manner. DoD is collaborating closely with its interagency partners to develop the National Biodefense Strategy and associated implementation plan as directed by Section 1086 of the NDAA for FY 2017. The draft strategy is forthcoming.

The DoD CTR Chemical Weapons Destruction (CWD) Program prevents the proliferation of CW, CW components, and CW-related materials and expertise. The DoD CTR CWD team is working with Morocco, Tunisia, Algeria, Lebanon, Jordan, and Interpol on improving the security of source chemicals that could be used in improvised CW attacks to prevent non-State actors from replicating such attacks as have occurred in Syria and Iraq.

The CTR Strategic Offensive Arms Elimination (SOAE) program supports the destruction of strategic weapons delivery systems and associated infrastructure, providing

equipment and services cooperatively to destroy or dismantle foreign intercontinental ballistic missiles (ICBMs), ICBM silos, road-mobile launchers, submarine-launched ballistic missiles (SLBM), nuclear-powered ballistic missile submarines, SLBM launchers, and related WMD infrastructure. The SOAE program will complete all planned programmatic activities by the end of calendar year 2018. The SOAE team had tremendous success eliminating strategic delivery systems previously aimed at the United States, our friends, and our allies. We plan to maintain a small technical staff to plan for potential contingencies, such as the elimination of North Korea's WMD-capable delivery systems.

Beyond the CTR Program, DoD continues to raise barriers to acquiring WMD material in cooperation with the Department of State through PSI. Through PSI, 105 nations have committed to help stop the trafficking of WMD, delivery systems, and related materials. In general, DoD works alongside the Department of State and experts from other U.S. departments and agencies to engage partners to build capacity, a willingness to act, and a whole-of-government approach to preventing the proliferation of shipments of concern. Most recently, a number of PSI States endorsed a Joint Statement supporting strong United Nations Security Council Resolution (UNSCR) 2375 and 2397 enforcement, particularly the maritime interdiction provisions, because these provisions are consistent with their support for PSI. UNSCRs 2375 and 2397 are focused on denying North Korea the revenue and imports it needs to advance its nuclear and missile programs. Looking forward, endorsees will mark the 15th anniversary of PSI at the High-Level Political Meeting in France in May, where we expect many of the PSI endorsees to commit to continuing to engage in efforts to mitigate the threat posed by the proliferation of WMD, particularly in the context of today's most pressing threats.

In addition, DoD supports the Department of State and other U.S. departments and agencies that lead efforts to implement and monitor international treaties and agreements, including the Nuclear Nonproliferation Treaty (NPT), the Biological Weapons Convention (BWC), and the Chemical Weapons Convention (CWC). DoD also supports efforts to prevent the misuse of sensitive dual-use equipment through its support to the Nuclear Suppliers Group, the Australia Group, and other key regimes. As part of these efforts, DoD works with partners to monitor future threats and to consider the implications of emerging and disruptive technologies for multilateral treaties and regimes, as well as for ways to ensure that our forces remain protected in the face of what may be emerging threats.

Containing and Reducing Threats

For States that already possess WMD programs, DoD seeks to deter use and contain and reduce threats. DoD is uniquely postured to counter imminent WMD threats and maintains specialized plans and capabilities to isolate, intercept, seize, and secure lost or stolen WMD or material of concern and manage WMD threats from hostile or fragile States. Defenses in depth, including passive countermeasures, enhanced border security, and missile defenses, also help to prevent the transfer and deter the use of WMD. ISIS' use of chemical weapons in Iraq and Syria and the Assad regime's use of these weapons in Syria over recent years has reinforced the importance of containing and reducing WMD threats.

One of Secretary Mattis's top three priorities for the Department is to strengthen alliances and develop new partners. DoD engages multilaterally through the North Atlantic Treaty Organization (NATO), and bilaterally with many other countries such as the United Kingdom on a number of CWMD issues. We are the permanent co-chair for the NATO Committee on Proliferation in the Defense Format (CP(D)), NATO's senior advisory body to the North Atlantic Council on countering the proliferation of WMD and CBRN defense. Through this committee, we increase allies' awareness of WMD threats, enhance our collective CBRN preparedness, and ensure that NATO is strategically and operationally prepared to counter WMD. This year the committee is focusing on training and exercises to raise awareness of NATO's role in crisis response during a potential CBRN event. We also work with partners to strengthen their ability to detect, interdict, and mitigate threats at and within their borders. For example, the DoD CTR Program works with partners in the Middle East and North Africa, as well as along vulnerable borders in Eastern Europe, to prevent the proliferation of WMD.

Other U.S. Government departments and agencies have key roles preventing illicit trade and technology transfers relevant to WMD, including the Department of State's role in negotiating and implementing export control regimes, the Department of Treasury's authorities to sanction proliferators, the Department of Homeland Security's (DHS) responsibilities to prevent and screen for dangerous exports, and the Department of Commerce's efforts to ensure that U.S. goods are not available to dangerous actors. We also engage with domestic interagency partners including the Federal Bureau of Investigation (FBI), DHS, and the Department of Health and Human Services (HHS) to leverage unique DoD capabilities in support of U.S. Government efforts to prevent and, if necessary, interdict CBRN weapons and materials from

crossing our nation's borders into the homeland. These capabilities include intelligence, surveillance, and reconnaissance as well as the capacity to interdict at sea.

Despite adoption of multiple UNSCRs prohibiting North Korea from exporting a majority of its key exports, including sectoral goods such as coal and ore, and from importing refined petroleum through ship-to-ship transfers, North Korea has continued to try to evade these sanctions through deceptive practices. DoD provides support by taking imagery of possible violations in order to help the Department of State engage flag States and insurance companies to take actions against their offending vessels and engage port States to seize assets involved in UNSCR violations when ships pull into port. DoD's efforts also enable the Department of Treasury to pursue sanctions and law enforcement agencies to open cases on violators.

Where hostile actors persist in making significant progress towards acquiring WMD, DoD remains prepared to undertake or support kinetic and non-kinetic actions to prevent such capabilities from being fully realized. DoD maintains the ability to conduct specialized pathway and WMD defeat missions. This involves developing and fielding tailored kinetic and non-kinetic capabilities to neutralize or destroy weapons and agents; delivery systems; and materials, facilities, and processes, including the functional or structural defeat of hardened targets. DoD also has the authority to work cooperatively with foreign partners to dismantle and dispose of WMD weapons and materials. This includes deliberate technical processes that reduce or dismantle production methods, materials, stockpiles, and technical infrastructure; the redirection of an actor's capabilities and expertise towards peaceful productive activities; and the establishment of monitoring regimes to ensure that a WMD program is not reconstituted.

Finally, a cornerstone of U.S. efforts to contain and reduce threats is our ability to deter coercion or use. The United States maintains a range of capabilities, both conventional and strategic, to deter adversaries and ensure that those actors that already possess WMD do not use them against the United States or its allies, partners, and interests. Although strategic deterrence and missile defense are not a function of the ASD (HD&GS), building resilient capabilities both overseas and in the homeland supports deterrence, and my office helps ensure that we are prepared to respond to an attack.

To decrease incentives for retention and employment of WMD arsenals, DoD supports the creation and implementation of effective arms-control initiatives, including measures to enhance security and safety practices. As noted in the recently released Nuclear Posture Review

(NPR), the United States intends to work to create the conditions for disarmament by pursuing transparency measures, engaging in confidence and security-building measures with adversaries, and pursuing new arms-control measures, when conditions permit, that would improve the security of the United States and its allies and partners.

Responding to Crises

DoD remains prepared with unique and flexible capabilities to manage and resolve WMD crises rapidly and decisively, whether at home in support of civil authorities or abroad. The National Defense Strategy makes clear that, should deterrence or efforts to contain and reduce threats fail, the Joint Force must be prepared to prevail. One of our top military CWMD priorities is to target the source of a WMD attack to prevent ongoing or further threats. To guarantee DoD's warfighting capabilities, DoD must safeguard the force and mitigate the hazards and effects of WMD use. DoD must also enable force projection into contested CBRN environments. This includes recovering casualties rapidly, decontaminating personnel, equipment, and points of embarkation, and establishing a protective posture while continually monitoring the force.

DoD works closely with allies and partners to ensure that we are prepared to respond to international WMD incidents. For example, supported by other U.S. departments and agencies, DoD works closely with our Republic of Korea and Japanese counterparts to ensure that U.S. regional alliances are prepared to respond to WMD contingencies on, or emanating from, the Korean Peninsula. This includes the conduct of semi-annual CWMD-focused bilateral engagements, support to regional exercises, and providing policy guidance to enable effective CWMD operations. The U.S. Army's 20th Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) Command also continues to develop and refine the extensive capabilities and technical expertise necessary to deploy rapidly in support of U.S. forces around the world and conducts regular training exercises to operate in highly challenging realistic operational environments.

Although our CWMD efforts prioritize early action, and rightly so, prudence dictates that we and our partner nations have the capability to respond to and mitigate the effects of WMD incidents. Building partner nation capabilities promotes regional security cooperation and interoperability, reduces the potential for a large U.S. Government requirement to support

international CBRN incident-response operations, and maximizes the effectiveness of a combined response.

Section 333 of title 10, U.S. Code, provides DoD a consolidated authority to build partner nation capability. Building on the work the Department has done over the past four years under other authorities, Section 333 enables DoD to train and equip foreign national security forces to conduct CWMD operations. In Fiscal Year 2018, DoD plans to develop CBRN incident-response capacity in 21 foreign countries, including Ukraine, the Philippines, Jordan, Panama, and Kenya. The Department is taking full advantage of this authority to mitigate the consequences of a CBRN crisis and to ensure that our partners are able to contain the threat. I thank you for providing us the authority to execute this important mission.

From the homeland perspective, in accordance with Section 2313 of Title 50, U.S. Code, I am the DoD official responsible for coordinating DoD assistance to Federal, State, and local officials in responding to threats involving CBRN weapons or high-yield explosives, including assistance in identifying, neutralizing, dismantling, and disposing of such weapons and explosives.

I work closely with the Commanders of U.S. Northern Command (USNORTHCOM) and U.S. Pacific Command (USPACOM) to ensure that DoD forces remain ready to deter, defend against, and, when required, defeat nation-State or terrorist WMD attacks on the homeland in the air, maritime, and land domains. As noted, DoD's primary responsibility is to employ our warfighting capabilities to prevent, interdict, and respond militarily to preclude further WMD attacks; however, DoD also plays an important supporting role in the national response system.

DoD supports its Federal- and State-partner preparedness efforts to respond to CBRN incidents in the homeland, such as integrated regional planning, training, and exercises in coordination with DHS, the Federal Emergency Management Agency, HHS, FBI, and other Federal partners. DoD is postured to assist civil authority efforts to detect, identify, neutralize, dismantle, and dispose of CBRN threats before they can reach our nation's borders and, if they succeed in penetrating our borders, before they can be employed against our nation. DoD has developed a wide range of CBRN-response capabilities and continuously plans, trains and exercises so that DoD is prepared to employ these capabilities rapidly in support to civil authorities to help save and sustain lives in the aftermath of a CBRN incident.

The DoD CBRN Response Enterprise – approximately 18,735 Active, Guard, and Reserve military personnel – is postured to respond within hours of a CBRN incident with critical capabilities such as detection and assessment of CBRN hazards; casualty search and extraction; casualty decontamination; emergency medical, patient triage, trauma care, and surgical and intensive medical care; fatality recovery; ground and rotary-wing air patient movement; security; command and control; engineering; logistics; transportation; and aviation lift.

CONCLUSION

We must anticipate that our adversaries will continue to evolve and develop increasingly sophisticated methods to pursue, develop, or deploy WMD. The diversity of these threats makes it imperative that DoD be rigorous in prioritizing its efforts and work closely with other U.S. departments and agencies and international partners to confront the threats posed by WMD at home and abroad. As WMD-related crises continue to emerge, your continued support in the areas described today will be critical to DoD's ability to understand, anticipate, and mitigate these threats.

Chairwoman Stefanik, Ranking Member Langevin, members of the subcommittee: We appreciate your leadership and your continued support for the Department of Defense. Thank you for the opportunity to appear before you today. I look forward to your questions.

Kenneth P. Rapuano
Assistant Secretary of Defense for Homeland Defense and Global Security

Mr. Kenneth P. Rapuano is the Assistant Secretary of Defense for Homeland Defense and Global Security. Previously Mr. Rapuano was a Senior Vice President at the ANSER Corporation, and the Director of the Studies and Analysis Group which provided multi-disciplinary studies and operational analysis for a broad array of government clients in the national security, homeland security areas. Up until November of 2016, Mr. Rapuano Directed the Homeland Security Studies and Analysis Institute (HSSAI), a Federally Funded Research and Development Corporation (FFRDC) operated by ANSER, a mission oriented not-for-profit organization.

Prior to joining ANSER Mr. Rapuano was the Director of Advanced Systems at the MITRE Corporation. He was responsible for guiding crosscutting strategic national and homeland security mission initiatives, with particular focus on counterterrorism, intelligence, aviation security, crisis management/decision support, national preparedness, and CWMD.

Previously, Mr. Rapuano served at the White House as Deputy Homeland Security Advisor to President George W. Bush from 2004-2006. He was responsible for managing the development and implementation of homeland security policies among departments and agencies, chaired the Homeland Security Council Deputies Committee, and co-chaired the White House Counterterrorism Security Group. He left the White House in 2006 to volunteer for deployment as a Marine Corps officer to Afghanistan with a Joint Special Operations Task Force, establishing and directing a targeting fusion center tracking high-value terrorists and insurgents. He also served in Iraq in 2003, commanding the Joint Interrogations and Debriefing Center of the Iraq Survey Group established to conduct the mission of surveying and exploiting possible weapons of mass destruction activities across Iraq.

In 2003, Mr. Rapuano was appointed Deputy Under Secretary for Counter Terrorism at the Department of Energy, responsible for nuclear counter terrorism, homeland security, emergency response, and all related special access programs for DOE and the National Nuclear Security Administration. Previous to that, he was the National Security Advisor to the Secretary of Energy. Mr. Rapuano has also served as Special Assistant to the Assistant Secretary of Defense, International Security Policy. He served 21 years on active duty and in the reserves as a Marine Corps infantry officer and intelligence officer.

Mr. Rapuano has also served as a Distinguished Research Fellow at the National Defense University's Center for the Study of WMD, as a member of the Defense Science Board Task Force on the Role of DoD in Homeland Defense, the Pacific Northwest National Lab's National Security Advisory Committee, the FBI's Weapons of Mass Destruction Directorate Advisory Group, the DHS Quadrennial Homeland Security Review Advisory Committee, and the DHS Science and Technology Advisory Committee.

Mr. Rapuano received a bachelor's degree in Political Science from Middlebury College, a master's degree in National Security Studies from Georgetown University, and has attended the Marine Corps Air-Ground Task Force Intelligence Officer Course at the Navy and Marine Corps Intelligence School.

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House Armed Services Committee

Statement of
Honorable Guy B. Roberts
Assistant Secretary of Defense
for Nuclear, Chemical, and Biological
Defense Programs

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

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INTRODUCTION

Chairwoman Stefanik, Ranking Member Langevin, and distinguished members of the Subcommittee, I appreciate the opportunity to testify on the United States Department of Defense's (DoD) efforts to counter threats posed by weapons of mass destruction (WMD).

As the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs (NCB), in accordance with Section 138 of Title 10, United States Code (U.S.C.), I am responsible for advising the Secretary of Defense on nuclear weapons, nuclear energy, and chemical and biological defense matters, as well as serving as the Staff Director of the Nuclear Weapons Council. Further, per Section 133b of Title 10, U.S.C., on behalf of the Under Secretary of Defense for Acquisition and Sustainment, our office also oversees the modernization of our nuclear forces and the development of the Department's capabilities to counter weapons of mass destruction (CWMD) threats.

NCB is comprised of a workforce spanning three components, including the Office of Nuclear Matters (NM); the Office of Chemical and Biological Defense Programs (CBDP); and the Office of Threat Reduction and Arms Control (TRAC). Additionally, on behalf of the USD(A&S), NCB exercises authority, direction, and control of the Director of the Defense Threat Reduction Agency (DTRA). Together, we ensure the safety, security, and reliability of our nuclear deterrent; develop CWMD capabilities to prevent the proliferation of, protect against, and respond to WMD threats; and ensure DoD compliance with nuclear, chemical, and biological treaties and agreements.

Ultimately, NCB's role is to ensure that our nuclear deterrent is safe, secure, and effective; reduce and eliminate known WMD threats; and develop a spectrum of capabilities to protect the lethality of our forces against the myriad of WMD threats should they encounter them in battle.

WMD THREAT LANDSCAPE

As noted in our National Defense Strategy, the central challenge to U.S. prosperity and security is the reemergence of long-term, strategic competition by revisionist powers. It is increasingly clear that China and Russia want to reduce U. S. influence and shape a world consistent with their authoritarian model to gain veto authority over other nations' economic, diplomatic, and security decisions.

Russia's use of nuclear posturing, rhetoric, and doctrine; occupation and purported its annexation of Crimea, aggressive actions in Ukraine, and its use of a chemical weapons agent in an assassination attempt in the UK, as well as its violation of the Intermediate-Range Nuclear Forces (INF) treaty, reflect, among other things, its strategic intentions to undermine the North Atlantic Treaty Organization (NATO), and change European and Middle East security and economic structures to their favor. Similarly, China is leveraging military modernization, influence operations, and predatory economics to coerce neighboring countries in order to reorder the Indo-Pacific region to their advantage. These actions pose immeasurable security implications for our security interests and those of our allies and partners.

Further, rogue regimes, such as North Korea and Iran, continue to seek out or develop WMD as well as long-range missile capabilities. Pyongyang is committed to developing a long-range, nuclear-armed missile that is capable of posing a direct threat to the United States. Further,

North Korea has a longstanding biological weapons (BW) capability and biotechnology infrastructure that could support a BW program. The intelligence community also assesses that North Korea has a chemical weapons program and the capability to employ these agents by modifying conventional munitions or with unconventional, targeted methods. Iran's ballistic missile programs give it the potential ability to hold targets at risk across the region.

Terrorists likewise continue to pursue WMD, while the spread of nuclear weapon technology and advancements in manufacturing and bioengineering technology continue to lower the barriers for entry.

Today, America faces the most complex, demanding international security situation since the end of the Cold War. To address these challenges, the Secretary has prioritized rebuilding military readiness to build a more lethal Joint Force; strengthening alliances to attract new partners; and reforming the Department's business practices for greater performance and affordability. The willingness of rivals to abandon aggression will largely depend on their perception of U.S. strength and the vitality of our alliances and partnerships.

NCB PRIORITIES

NCB's top objective, in alignment with the National Defense Strategy, is to dissuade, prevent, or deter state adversaries and Violent Extremist Organizations from acquiring, proliferating, or using WMD.

Our nuclear forces make essential contributions to the deterrence of nuclear and non-nuclear aggression, as well as nonproliferation and counterproliferation. While the highest U.S. nuclear policy and strategy priority is to deter potential adversaries from nuclear attack of any scale, our extended deterrence posture enables our allies to avoid the need to develop their own nuclear arsenals. As such, it is vital that our nuclear deterrent remains safe, secure, effective, ready, and flexible. In addition to supporting our nuclear forces, preventing WMD proliferation and denying terrorists access to finished weapons, material, or expertise, and ultimately reducing their effectiveness in the event of use, are also key priorities driving our investments.

Our efforts align with the Department's CWMD Strategy, which outlines three end states: no new WMD possession, no WMD use, and minimization of WMD effects. We achieve these end states through four priority objectives: reducing incentives to pursue, possess, and employ WMD; increasing barriers to the acquisition, proliferation, and use of WMD; managing WMD risks emanating from hostile, fragile, or failed states and safe havens; and denying the effects of current and emerging WMD threats through layered, integrated defenses.

These objectives shape a comprehensive response to the WMD challenge and focus on shaping the environment, cooperating with partners, and prioritizing early action.

NCB EFFORTS TO REDUCE INCENTIVES, INCREASE BARRIERS, AND DENY EFFECTS OF WMD

In close collaboration and coordination with Assistant Secretary of Defense for Homeland Defense and Global Security, Mr. Ken Rapuano, NCB supports the Department's CWMD strategy through the following efforts:

Reducing incentives to pursue, possess, and employ WMD

These activities include sustaining formal security guarantees underwritten by U.S. nuclear capabilities and providing direct security assistance in building partner capacity to counter WMD.

Foundational Security Guarantee: Safe, Secure, and Effective Nuclear Deterrent

Our nuclear deterrent contributes to U.S. efforts to reduce incentives for other countries to pursue, possess, or employ WMD. The United States extends deterrence to over 30 countries with different views about the threat environment and the credibility of U.S. security commitments. An effective deterrent is the foundation for effective assurance. Accordingly, it is essential that the United States maintain the capabilities necessary to deter effectively and, if necessary, respond effectively and decisively across the spectrum of potential nuclear and non-nuclear scenarios. NCB is responsible for planning and implementing the modernization of the nuclear stockpile, and creating adaptive policy and governance for physical security of nuclear weapons, critical nuclear command and control facilities, and the personnel reliability program.

CWMD Building Partner Capacity

Trafficking networks that span the globe and an expanding set of state and non-state actors interested in acquiring, developing, or using WMD, leave potentially vulnerable stockpiles of chemical, biological, nuclear and other radioactive materials at risk. Through efforts such as the DoD Cooperative Threat Reduction Program, Proliferation Security Initiative, and training and equipping our partners' national security forces, the Department builds the capacity of partners to secure WMD materials, detect and interdict proliferation, and respond to CBRN events, stopping WMD threats closer to the source. Activities range from detecting and preventing WMD proliferation in the Middle East, Southeast Asia, and North Africa, to enhancing nuclear security and counter nuclear smuggling capabilities in Europe and Eurasia, to consolidating and securing collections of dangerous pathogens in Sub-Saharan Africa, to strengthening partners' capabilities to detect and mitigate biological threats and disease outbreaks.

Our office provides acquisition policy, governance, and portfolio management of CWMD security cooperation and building partner capability and capacity programs. We manage risk, demonstrate the impact of CWMD threat reduction to broader U.S. security objectives, conduct data-driven analysis to enable innovation, and lead business reform of the CWMD community.

Strengthening Nonproliferation Regimes: Treaty Management

As the lead for the DoD, we govern the implementation of and compliance with existing and prospective nuclear, biological, and chemical arms control agreements. We manage the DoD's compliance with U.S. policies and agreements, as well as chemical and biological defense and destruction activities compliance with the Chemical Weapons Convention (CWC) and the Biological Weapons Convention (BWC). Through reporting of implementation activities in annual reports, initial and systematic inspections, onsite monitoring, and verification activities at U.S. sites, we ensure compliance.

Just last week, I presented the U.S. Chemical Demilitarization briefing to the Organization for the Prohibition of Chemical Weapons (OPCW) Executive Council, which occurs three times a year, and this November, I will brief the Conference of the States Parties, which occurs annually. Immediately following that conference, our office will support the 4th CWC Review Conference in The Hague.

This past year, we successfully facilitated six inspections of DoD sites by the OPCW's Technical Secretariat and completed our review of the DoD Chemical and Biological Defense programs and activities for treaty compliance, and have ensured all treaty-related requirements were met, including reporting DoD's portion of the Confidence Building Measures under the BWC and various reports under the CWC.

The Department's Nuclear Arms Control Technology Program, executed by DTRA, is considered to be one of six "safeguard" assurances which would be required should the United States choose to ratify its signing of the Comprehensive Nuclear Test Ban Treaty. Regardless of its being ratified or entered in to force, the United States has made a policy commitment to field the International Monitoring System, which my office supervises and manages.

Increasing barriers to the acquisition, proliferation, and use of WMD

We increase barriers by, among other things, assisting our allies and partners in securing and reducing WMD programs, stockpiles and materials, enhancing our abilities to collaborate with our partners in countering WMD, and strengthening international norms against proliferation and use.

Securing and Reducing WMD Programs, Stockpiles, and Materials

Nuclear Physical Security: To gain insight into the effectiveness of our policies and capabilities for protecting our nuclear weapons, NCB provides oversight of the MIGHTY GUARDIAN program, which is a realistic, force-on-force exercise executed by DTRA against threats outlined in the Nuclear Security Threat Capabilities Assessment. This exercise accounts for foreign and domestic threats, including those posed by evolving technologies, such as unmanned systems.

Further, through the Physical Security Enterprise Analysis Group (PSEAG), our office works with the Military Departments and the interagency, to solve gaps in our ability to detect, delay, deny, defeat and ultimately deter threats to our nuclear assets, both at home and within NATO. Examples of the projects we manage include determining the best way to systematically develop and deploy countermeasures to defeat selected Unmanned Aircraft System threats and by conducting a cybersecurity assessment for nuclear electronic security systems to identify whether vulnerabilities exists and determine potential solutions.

Countering Nuclear, Chemical and Biological Threats: Nuclear terrorism remains among the most significant threats to the security of the United States and its allies and partners. The United States maintains National Technical Nuclear Forensics capabilities, and works with our interagency partners, to attribute the source of any nuclear or other radioactive material intended for or used in a terror attack. Leveraging our capabilities, we actively engage with our international partners on countering nuclear terrorism and nuclear proliferation threats.

Drawing from our experiences in the international effort to eliminate Syrian and Libyan chemical weapons, it is important that DoD maintain materiel readiness to eliminate other nations' chemical and biological weapons (CBW), should the Department be called upon to do so. We have implemented a continuous process to evaluate threats, assess materiel readiness, identify gaps in capability, identify and evaluate potential solutions, and recommend investments to improve overall DoD readiness to assist in reducing the serious threat posed by existing, and

future variations of CBW. Retaining flexible authorities and resources to ensure we are best postured to address these needs is vital.

Enhancing our Collaboration in Countering WMD: In accordance with our responsibilities to oversee development of CWMD capabilities for the Department, we are working with multiple DoD Components to develop requirements and solutions that ensure our military forces are ready for a variety of WMD contingencies. Through our investments, we are focused on how we can accelerate development of technologies that can transition to fielded capabilities in response to warfighter needs.

For example, in response to a 2017 Combatant Command request for development of a DoD CWMD “User Defined Operational Picture” that can access and share relevant WMD information with DoD mission partners, we sponsored the development and deployment of a CWMD dashboard that is now being leveraged to more effectively share information with mission partners. We also sponsor other projects to close CWMD situational awareness gaps by leveraging mature technologies, modifying existing systems, and utilizing small analytical cells. For example, we support several Combatant Commands and interagency partners to develop tools that will enhance counterproliferation analysis. This approach enables us to provide innovative capabilities cost-effectively and quickly.

Strengthening International Norms: Destruction of U.S. Chemical Weapons Stockpile

Consistent with U.S. commitments under the CWC, we diligently continue our work of safely eliminating the remaining U.S. chemical weapons stockpile located in Colorado and Kentucky. This investment highlights the importance the United States places on honoring its treaty obligations as well as the U.S. commitment to, and the importance of, strengthening international norms against the proliferation and use of chemical weapons.

In Colorado, the team at the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) has started destruction operations to destroy nearly 780,000 mustard agent-filled projectiles and mortars at completion. To date, PCAPP has destroyed more than 42,000 munitions containing approximately 251 tons of mustard agent. Being a pilot plant, PCAPP has experienced technological challenges, which have caused delays and affected the throughput rate of destruction operations. We continue to make progress to resolve these challenges by improving the reliability, availability, and maintainability of the first-of-its-kind systems and equipment, while ensuring operations are conducted in an environmentally safe manner. I appreciate your continued patience in these efforts as we assure you that we are doing everything possible to meet established deadlines.

I am pleased to relay that the construction of our Blue Grass, Kentucky, Chemical Agent-Destruction Pilot Plant (BGCAPP) is substantially complete. Systemization of BGCAPP, through the preparation and testing of the personnel, procedures, equipment, and systems, is about 59 percent done. BGCAPP should begin destruction operations on or about April 2020, destroy nearly 87,000 nerve agent-filled projectiles and rockets. We have also identified a supplemental technology, called a Static Detonation Chamber, which will be used to destroy all 15,492 mustard-filled munitions stored at the Blue Grass Army Depot.

Denying the effects of current and emerging WMD threats through layered, integrated defenses

The lethality of the Joint Force depends on our warfighters' ability to deter, prevent, protect against, mitigate, respond to, and recover from CBRN weapons use and effects. Further, an effective defense helps deny adversaries the expected gains of WMD use, pursuit, and possession.

Through CBDP, we supply materiel solutions to enable our service members to operate in a CBRN environment, whether they are conducting combat operations abroad, or supporting first responders in domestic incident prevention and response. The Department's development of CBRN defense capabilities is a key component of an integrated national effort to address traditional and emerging CBRN threats and maintain DoD's CBRN defense readiness.

As part of a layered defense, we deny the effects of WMD threats by developing and fielding a wide range of defensive equipment (e.g., suits and masks). We engage early and often with the Services to ensure our products are responsive to operational priorities and requirements. Currently, we are focused on improving personal and collective protection, advanced medical countermeasures, next generation detection and identification, diagnostics for clinical samples, and the capability to disable tactical-level WMD threats. Delivering capabilities such as improved protective masks, next generation protective clothing, advance detection and diagnostics, and medical countermeasures protect service members and improve decision making which sustains the lethality of the Joint Force against CBRN threats.

Our success depends on strategic engagements with our interagency and international partners. We leverage the expertise and complementary missions of the Department of Health and Human Services (HHS), the Department of Homeland Security, and our global counterparts. Internally, all of our medical countermeasure work is coordinated with Office of the Secretary of Defense for Health Affairs. On-going cooperation includes coordination to manage stockpiles of medical countermeasures, and especially in the case of the HHS, coordinating medical countermeasure development and implementing incentives or transactional authorities that maximize value while mitigating risk. These investments and interagency engagements have, and continue to, incentivize industry engagement.

To support the development and manufacturing of medical countermeasures, the Department has invested in a new, agile manufacturing capability through the Advanced Development and Manufacturing (ADM) facility in Alachua, Florida. This facility provides the capability to rapidly develop and produce medical countermeasures for a subset of people, on a smaller scale than those needed for the public health sector. We are pursuing innovative manufacturing capabilities that allow for a more modular and flexible approach to meet the Department's needs in a rapid and cost-effective manner. From a product development perspective, the CBDP is establishing a platform capability at the ADM to produce medical countermeasures more efficiently, rapidly, and at a lower cost. My office will continue to augment this capability, which stabilizes the industrial base for medical countermeasures by allowing the Department to mitigate risk early in the development for industry and have more control over the development process.

CONCLUSION

The pursuit of WMD and the risk of employment by actors of concern pose a persistent threat to

peace and stability worldwide and to the national security objectives of the United States. Ensuring our warfighters are postured to counter nuclear, radiological, chemical, and biological threats and that the Department safeguards our nuclear deterrent are my highest priorities. To address the full WMD threat spectrum, our nuclear, radiological, chemical, and biological defense programs and CWMD threat reduction programs must retain flexible authorities and resources to promote our warfighters' ability to carry out their mission to deter our enemies. We continue to act in collaboration and coordination within the Department and the interagency and with our international partners to maximize our effectiveness and efficiencies in confronting, deterring, and if required, defeating those who would threaten the use of WMD. Failure to do so risks the safety and security of our forces, our populations, and our nation. We must not, and will not, fail.

Thank you for this opportunity to testify.

Guy B. Roberts**Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs**

The Honorable Guy B. Roberts joined the Department of Defense as the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs (ASD(NCB)) on November 30, 2017.

As the ASD(NCB), Mr. Roberts is the principal advisor to the Secretary of Defense, the Deputy Secretary of Defense, and the Under Secretary of Defense for Acquisition, Technology and Logistics for matters concerning nuclear, chemical, and biological defense programs.

Mr. Roberts also leads the enterprise responsible for ensuring the U.S. Nuclear Deterrent is safe, secure and effective; developing and sustaining capabilities to counter improvised and weapons of mass destruction threats, effects, and proliferation; and ensuring DoD compliance with nuclear, chemical, and biological treaties and agreements.

Prior to joining the Trump Administration, Mr. Roberts led a distinguished career in the United States Marine Corps as an infantry officer, judge advocate, and staff officer. He went on to serve as the Acting Deputy Assistant Secretary of Defense for Arms Control and Nonproliferation Policy for the Department of Defense, and then as the North Atlantic Treaty Organization's Deputy Assistant Secretary General for Weapons of Mass Destruction Policy and Director for Nuclear Deterrence Policy before becoming an independent consultant and adjunct professor.

Mr. Roberts earned a Bachelor's of Arts in Political Science from Arizona State University, a law degree from the University of Denver, and he holds masters' degrees in international and comparative law from Georgetown University, in international relations from the University of Southern California, and in strategic studies from the Naval War College where he graduated with highest distinction and won the Stephen B. Luce Award for academic achievement.

He is admitted to practice in Colorado, California, Arizona, and before the Military Court of Criminal Appeals and the US Supreme Court, and he is a member of the International Law of War Society.

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House Armed Services Committee

Statement of Mr. Vayl Oxford
Director, Defense Threat Reduction Agency

Reviewing Department of Defense Strategy, Policy, and Programs for Countering Weapons of
Mass Destruction (CWMD) for Fiscal Year 2019

Before the

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

March 22, 2018

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

Chairwoman Stefanik, Ranking Member Langevin, and Members of the Subcommittee, it is an honor to be here today to share with you the work we do every day to combat the threats posed by chemical, biological, radiological and nuclear (CBRN) weapons, and improvised threats to ensure a safe and effective deterrent.

My goals for this hearing are to provide you with an understanding of the threat environment that we face, the capabilities the Defense Threat Reduction Agency (DTRA) provides to the Combatant Commands and Services, the critical international and interagency partnerships and relationships we leverage to build partner capacity, our focus on innovation, and our work in the nuclear enterprise. DTRA is grateful to the Committee for the strong funding and authorities they have provided. I am hopeful that the Committee will continue to provide these critically needed resources and serve as an advocate for the Countering Weapons of Mass Destruction (CWMD) and improvised threat mission space.

What We Do

DTRA is a unique organization with diverse capabilities. Our expertise spans improvised explosive devices, high yield explosives, as well as the full weapons of mass destruction (WMD) threat spectrum – chemical, biological, radiological, and nuclear weapons. While we are not the only players in this field, we have a unique concentration in these critical mission areas. Along with the partners at this table and others, we are responsible for one of the critical objectives outlined by the 2018 National Defense Strategy, “Dissuading, preventing, or deterring state adversaries and non-state actors from acquiring, proliferating, or using weapons of mass destruction.”

With a planned effective date of June 1, 2018, DTRA is scheduled to align directly under the authority, direction, and control of the Under Secretary of Defense for Acquisition and Sustainment (USD A&S). In this role, we support and enhance the nuclear enterprise; we support United States Government efforts to prevent the proliferation and use of WMD; and we perform and manage a research and development portfolio to develop tools and capabilities to respond to WMD and improvised threat environments. In fact, DTRA provides the United States

Special Operations Command (SOCOM) with the majority of their counterproliferation applications. As a combat support agency, DTRA also communicates directly with the Offices of the Chairman of the Joint Chiefs, and provides direct support to combatant commanders and the Services.

Our programs come in many shapes and sizes and we work all over the world. On any given day, hundreds of DTRA experts are deployed overseas, and in certain cases to some of the most dangerous and sensitive of areas, in order to provide analysis, research, testing, training, and operational expertise.

Expanded Relationship with SOCOM

As of January 2017, SOCOM assumed the Unified Command Plan CWMD mission responsibilities previously performed by the United States Strategic Command. As the Coordinating Authority for CWMD, SOCOM integrates DoD plans and intelligence priorities to support operations against state and non-state networks that possess or seek WMD, and executes global operations against the same - in coordination with other Combatant Commands. Last year, SOCOM established the CWMD Fusion Center, with a large contingent resident at the DTRA headquarters at Ft. Belvoir, to serve as a nexus of CWMD awareness, active planning, and operational advocacy across functional and geographic missions. This expanded relationship is already paying dividends. For example, DTRA is providing planning support to the SOCOM Fusion Cell to advance progress on the Global Campaign Plan annexes.

Additionally, SOCOM has asked DTRA to develop, maintain, and manage the digital CWMD situational awareness tool to enable the Department's decisions for the CWMD campaign, campaign activities, contingency operations, and crisis action plans.

Evolving Threat

We live in the most complex and dynamic geopolitical and threat environment ever confronted by our Nation.

We spent decades during the Cold War confronting the threat from the Soviet Union. Much of our national security and intelligence apparatus was uniquely focused on that threat. By comparison, very little attention was devoted to other nation state threats. Over time, a calculus evolved that was based on some common sense understanding of U.S. and Soviet policies and on the precept of mutually assured destruction.

With the end of the Cold War, we began to face the evolving threats from nation states such as Iran, North Korea, and Iraq who had been in the background for many years. The shift in focus to those threats was complicated. Our intelligence experts were Soviet specialists and the experience to focus on new threats had to evolve over many years. Our military/industrial complex was focused on big force deployments and nuclear capabilities to counter the Soviet threat. Over time, we began to overcome these difficulties but the intelligence community struggled through a period of developing new expertise in the various countries as well as in understanding the threat networks and capabilities across the threat spectrum. The Soviet threat was well characterized, but the new nation state threats were not and we faced a very difficult “dual-use” dilemma when it came to chemical and biological threats.

Then 9/11 happened, and while we did not lose all of our focus on these nation-state threats, we did shift much of our focus to the counterterrorism fight. This required a totally different approach and force structure. We had to confront this threat globally rather than in well-defined countries or regions. We needed new tools and capabilities to identify, locate, and defeat the terrorist threat. After 17 years, we have much better tools, capabilities and expertise to “manage” the terrorist threat. We never expect to defeat it, but will continue to limit its overall impact.

Now, as we assess today's threat spectrum, we are faced with all three of the threat environments we have confronted since WWII. The United States faces a return to great Power competition with Russia and China. We have the continuing nation state threats in Iran and North Korea among others. And we have the on-going ISIS, Al Qaeda, Taliban and other terrorist group threats. Rapidly evolving technologies—ranging from synthetic biology to 3D printing and unmanned delivery vehicles—are both exacerbating existing threats and making WMD and IED technologies more diffuse and accessible, and not just to nation states. Today, we have to watch not just a handful of nations; we have to watch a world full of bad actors. The threat is comprised of complex global networks that require a shift in our approach to prevent proliferation and use.

To quote again from the 2018 National Defense Strategy, “the security environment is also affected by rapid technological advancements and the changing character of war. The drive to develop new technologies is relentless, expanding to more actors with lower barriers of entry and moving at accelerating speed.” Our Nation and International partners must confront this ever-evolving threat with agile, innovative, and timely responses.

DTRA's Priorities

With these challenges in mind, I have developed four key priorities for DTRA that align with the Department's priorities and lines of effort.

Enhancing Combat Support

In order to build a more lethal force, I have enhanced our focus on our combat support responsibilities. We have initiated an expansive outreach effort with all of the Combatant Commands to assess their WMD challenges and what capabilities DTRA can provide. We are increasing our communications with the Commands from the top down and expanding networks and relationships. We have asked the Combatant Commands to prioritize their requests based on the threat so that we can utilize those inputs in our own budget strategies and planning process.

For example, we are working closely in partnership with the Combatant Commands to develop counterproliferation strategies and capabilities to hold nation state WMD and improvised threat networks at risk. Within DTRA, we have established contingency and deliberate planning cells to develop country specific strategies for top tier threat nations. These cells work in collaboration with operational and interagency partners to conduct WMD and delivery system network analysis, and develop options for execution.

We also work with the Combatant Commands to illuminate threat networks. We are focused on networks who are attempting to develop or proliferate WMD and improvised threats. The counter threat networks analysis we provide enhances joint force commanders' operational planning, force protection, maneuverability, tactical responsiveness, and actions against threat networks. The tools that we develop enable decisions on kinetic and non-kinetic actions on the threat's supporting supply chains.

This effort is important as threat networks are agile learning organizations. They operate seamlessly in multiple domains, to include virtually -- using social media and the Internet to communicate, raise funds and share intelligence. We, too, must be equally adaptable, agile, flexible, and fast. Working closely with the intelligence community, we enable Commands by conducting continuous monitoring and analysis of designated threat areas as well as associated groups, their relationships, capabilities and intentions. We enhance situational understanding of these networks. Through the understanding of the threat's tactics, techniques, and procedures, where the threat networks are operational and what technologies they deploy, DTRA takes action to prepare for and deliver counter-threat solutions.

One example of the capabilities that we provide to Combatant Commands can be seen through our efforts to improve our lethality to threats underground. Our adversaries know that what we can see, we can likely defeat. They are adapting. As a result, they are digging deep into the recesses of mountains and buried caverns to hide whole laboratories and other facilities. They are creating complex tunnels to relocate undetected missiles. They are fortifying their military installations under tons of advanced concrete. These underground military installations increase

risk to our national objectives. As a result, we need agile and adaptive solutions to overcome them. And, we need them quickly.

DTRA supports our Commands and troops with capability to see and better understand what our enemies are hiding underground. DTRA research and development programs are developing unique intelligence, surveillance, and reconnaissance to understand how the enemy moves weapons of mass destruction between storage facilities and launch points. DTRA employs scientists and engineers to prioritize hard target sets to inform pre-mission planning. We are focusing more and more on helping the Combatant Commanders frame the questions to drive the kind of intelligence that will allow us to scope their operational planning.

DTRA supports our troops with capabilities to operate underground. DTRA develops sensor capabilities to send ahead of the soldier into the underground terrain, providing the warfighter digital eyes to see the map to maneuver within a labyrinth. DTRA develops sensors that can provide early warning and alert the warfighter to the presence of poisons and dangerous levels of radiation. DTRA refines the tactics, techniques, procedures, and protective equipment to defend the soldier against improvised explosive devices and unconventional booby traps hidden in the crevices and corners of complex tunnel systems.

DTRA supports our troops with capabilities to defeat what is underground. DTRA develops unique munitions to hold WMD targets at risk. DTRA retains experts on hand that understand the weapon designs of our current stockpiles so that we can accurately model the effects and tradeoffs of employing different weapons against hard and deeply buried enemy targets. These are the same experts that inform the warfighter on how to protect innocent populations and minimize collateral blast effects in ongoing conflicts in the Levant.

The underground domain is not a unique U.S. challenge; it is a future battlespace that some of our closest allies will also experience. DTRA works collaboratively with our allies through technical exchanges and agreements to share the burden to develop solutions and defend our common interests together in this future domain.

We also provide the Combatant Commands and our deployed US and coalition Joint Forces protection from the threat's use of small unmanned aerial systems (sUAS). While I am limited in what I can say on this topic in open session, the threat uses small UAS as a reconnaissance and weapons delivery capability. The threat's capabilities increase exponentially upon each spiral of commercially-available technology. We have seen technology enhancements in as little as 90 days, all available on the open market. This is a major force protection issue and an area of critical focus for DTRA's Joint Improvised Threat Defeat Organization (JIDO).

Expanding Relationships with International Partners and the Interagency

A priority for both the Department and for our Agency is strengthening our alliances to build a more lethal force. Because of the challenges associated with WMD and improvised threats, no one Federal Department, no single geographic region, no single country can marshal the necessary capabilities alone to successfully fight the threats we face. It requires expanded relationships, communication and information sharing, and leveraging expertise and capabilities.

DTRA advances strategic alliances through efforts such as the Nunn-Lugar Cooperative Threat Reduction (CTR) program, which is the Department's most comprehensive and effective tool for working cooperatively with international and interagency partners to mitigate WMD-related threats.

The biological threat reduction component of CTR establishes productive relationships with countries at highest risk for destabilizing disease outbreaks, whether naturally occurring or intentionally spread, to achieve multiple goals including protecting the U.S., our Forces, and our allies from high-consequence biological threats; advancing broader U.S. strategic goals through improved relations; and reducing reliance on DoD's resources during a biological crisis. We work with over 30 nations in this area -- developing a global network that is better prepared to quickly detect and mitigate spread of dangerous pathogens, including when faced with a suspected biological attack.

Moreover, the Office of the Secretary of Defense for Policy, in close coordination with DTRA and through USD A&S, is responsible for providing strategic guidance for the CTR program, which includes significant input from the Combatant Commanders on partner nation priorities and end-states to best reduce risk on WMD and improvised risk.

For example, DTRA continues to work with United States Central Command (CENTCOM) to enhance the capabilities of countries like Jordan and Lebanon to detect, identify, track, and interdict potential traffickers of CBRN materials on their borders with Syria and Iraq. Along with a network of fixed and mobile sensors along these borders, DTRA, in close cooperation with the Department of Energy/National Nuclear Security Administration and other interagency partners, delivers critical WMD border security and detection training and equipment enabling these partner nations to better protect their people from the threat of WMD terrorism and prevent illicit trafficking of WMD. This work is crucial given the well-known intention of terrorist groups to use any WMDs or CBRN materials against the United States and Allied forces. In conjunction with the Office of the Secretary of Defense and the Geographic Combatant Commands, we are exploring expansion of these capabilities to other partners similarly threatened by non-state actors such as ISIS.

In the United States Africa Command area of responsibility, Tunisia provides one such example. In response to the emergence of an ISIS affiliate in Libya and associated WMD proliferation threats, the CTR program has partnered with the Tunisian government to provide an integrated WMD surveillance, detection, and interdiction system along 195 km of Tunisia's rugged desert border with Libya. The system will consist of stationary electro-optical/infrared cameras and radars on 16 towers along the border, a Common Operating Picture, communications links to a Border Security Operations Center, and four regional border security headquarters. Our Tunisian partners are acutely aware of the threat posed by Tunisian militants based just across the border in Libya, with memories of attacks on border stations and tourist spots in the last couple of years still very fresh and WMD proliferation being one of many concerns about the border.

The implementing partner on the project is the Tunisian Ministry of Defense. They have already completed a trench and dirt berm down the northern length of Tunisia's inhospitable border with

Libya, as well as a number of “strong points” that will fill in between and reinforce existing National Guard border posts. The project is also leveraging the authorities Congress has provided for accepting outside funds to apply approximately \$19 million in German funding to complete the border surveillance system along the most vulnerable southern sections of the Tunisia-Libya border.

A final example relates to our efforts with United States Pacific Command (PACOM) to prevent the trafficking of WMD-related materials and components in Southeast Asia – with particular focus on North Korea. In Southeast Asia, CTR has initiated cooperative projects with countries in this region to reduce the maritime WMD proliferation threat and enhance the force protection of U.S. sailors at sea.

CTR programs collaborated with the Governments of Vietnam and the Philippines to develop, install, and sustain the systems to surveil territorial waters and interdict suspicious cargo along some of the most likely WMD proliferation routes. CTR also provided equipment, training, and infrastructure improvements to address any potential deficiencies in WMD detection. To provide context to the suite of these capabilities, DTRA’s CBRN Preparedness Program is also working with PACOM to enhance WMD emergency and mitigation capabilities within Da Nang city civil response units through the delivery of relevant training and equipment. CTR provided the same types of enhancements to the Philippines Coast Guard that contributed to the successful interdiction of the North Korean cargo vessel, Jin Teng. In addition, CTR supported the Philippines framework for maritime domain awareness through the construction of the Philippine National Coast Watch Center and substations; providing communications, surveillance, and WMD detection/identification equipment; and installing a common operational picture that has enhanced the Philippines ability to deter, detect, and interdict attempts to traffic WMD and related materials through or near its territorial waters.

In close cooperation with the U.S. Department of State and other interagency partners, the CTR Program is also seeking a determination to authorize CTR Program activities to build the Republic of Korea capability to mitigate WMD threats emanating from North Korea. DTRA will continue to explore opportunities for working with PACOM, U.S. Forces Korea, and other

relevant interagency and DoD entities on potential gaps and requirements for CTR on the Korean Peninsula.

Developing Capabilities through Innovation and Rapid Fielding Approaches

Another shared priority with the Department is our focus on innovation and getting capabilities to the battlefield quickly. This is an area of particular focus for the Under Secretary of Defense for Acquisition and Sustainment, Ellen Lord.

Our ability to rapidly counter new and emerging threats and to consistently maintain the technological upper hand over our adversaries is essential to our national security. But that superiority isn't guaranteed. In fact, it is at risk. The United States now ranks fourth on the World Intellectual Property Organization's list of most innovative countries. More than one-half the PhD's awarded by U.S. engineering schools go to non-U.S. citizens and research indicates that roughly a third of them leave the United States in just five years.

At the end of the day, technological superiority is earned—it is earned in the laboratory and library. It is earned by encouraging innovative businesses to work with the Department. Those are the exact resources that we want to tap. DTRA does not own or operate any functional laboratory, but we are able to select from the full range of national expertise, wherever that may be. Our performers include the Department's laboratories and Department of Energy national labs, contractors, Federally-Funded Research and Development Centers, University-Associated Research Centers, academia, and of course both large and small innovative companies. We provide and operate unique and essential test and evaluation capabilities at government facilities in New Mexico and Nevada to meet our own mission requirements, and those of our various customers and stakeholders.

Our programs respond to the most pressing threat challenges including stand-off detection that seeks to identify WMD or improvised threat materials from safe distances, tracking, and interdiction of threats; modeling and simulation to support weapons effects and hazard predictions; classified support to Special Operations Forces; defeat of WMD and improvised

threat agents and materials; developing technologies to defend against small unmanned aerial systems, and protection of people, systems, and infrastructure against WMD and IED effects.

DTRA's test beds provide unmatched threat-representative target structures and threat-characteristic geologies. We support a number of Service, Joint Staff, and Combatant Command priorities, including development of the Large Caliber Penetrator; expanded tactics, techniques, and procedures for use of the Joint Programmable Fuse; and enhanced U.S. missile defeat capabilities.

DTRA is also focused on the Department's effort to reform business practices to achieve greater performance. One of the great tools that Congress has provided is the rapid capability delivery authorities provided to JIDO. JIDO develops and delivers counter-improvised explosive device capabilities on an abbreviated timeline that gets capabilities to the field much faster than a normal acquisition process. This highly streamlined approach explicitly accepts risk in exchange for acquisition speed. In doing so, some of JIDO's rapid acquisition initiatives are being integrated into some of DOD's standard practices. USD (A&S) Lord has specifically highlighted the JIDO capabilities as a model example of how to deliver performance at the speed of relevancy. Moreover, she has asked DTRA to scale-up a Quick Reaction Capability to address the requirements needed across the spectrum of DTRA mission areas.

Empowering Agency Leadership and Staff

DTRA's fourth priority supports the most valuable asset in the Agency -- its people. I have worked diligently to push decision-making down to the most appropriate level and to empower the Agency leadership and staff while still providing clear accountability. These actions complement the Department's efforts to reduce the number of self-imposed bottlenecks. I also have asked my staff to critically think about how to address problems and be more risk tolerant while remaining in appropriate compliance.

Nuclear Deterrence

One additional area that I want to raise to the Committee is DTRA's focus on the nuclear deterrent. I know that the Committee has been focused on the Nuclear Posture Review and DTRA plays a key role in these areas. While I am limited in what I can say in open session on this topic, I can share with the Committee a few of the capabilities and functions we provide.

For example, DTRA is involved with efforts to secure weapons-usable nuclear materials worldwide, understanding and predicting nuclear weapons effects, and the survivability of United States Nuclear Command, Control, and Communications and other warfighter mission critical systems that must operate through nuclear environments.

DTRA provides nuclear enterprise support to the Department of Defense and Interagency stakeholders that ensures the safety, security, reliability, and effectiveness of the U.S. nuclear deterrent force. Our nuclear experts are supporting sustainment of current and future nuclear deterrent capabilities; implementation of nuclear enterprise review recommendations; and nuclear enterprise recapitalization efforts. We have systems in place to guarantee that we have complete control and accounting of our nuclear weapons at all times.

We also perform oversight inspections of all Air Force and Navy Nuclear Surety Inspection Teams. We make sure the Navy and the Air Force's inspections provide tangible proof that every safety system is in place, maintained and in working order, and put the operations, maintenance and security forces through drills and exercises to ensure that everyone knows their job; they know the proper procedures and they know how to react when the situation changes. Our collective goal is to protect, control and serve the nation with 100% assured predictability, reliability and confidence in our nuclear weapons stewardship.

DTRA leads, supports and participates in numerous joint exercise and training events throughout each calendar year, based on Joint Doctrine, Commanders Objectives and mission requirements. One of the largest of these exercises is the Nuclear Weapon Accident Incident Exercise (NUWAIX). This exercise is a Secretary of Defense directed, combatant command executed, and DTRA planned field training exercise. This annual event exercises a whole of government response involving custodial nuclear weapons or materials. These efforts allow for the

identification of gaps in nuclear weapons accident/incident response capabilities and means and methods to repair those vulnerabilities. NUWAIX involves as many as 1,000 people across the country and includes participants throughout the interagency and state and local participation, when possible. This year we are working with the United States European Command to execute this exercise with our NATO allies to ensure we are prepared to respond globally in support of our forward deployed nuclear deterrent.

Finally, with the release of the Nuclear Posture Review and its associated renewal of focus on the nuclear enterprise, DTRA is initiating a nuclear related human capital initiative to develop the next generation of nuclear expertise.

Conclusion

In closing, I would like to thank the Committee for this opportunity to share some of our recent efforts and accomplishments. There are a number of challenges on the horizon, but I am confident that we will innovate to address these threats. I hope that we will continue to earn the Committee's trust and support. Thank you, again, for the opportunity to be here today. I would be pleased to respond to your questions.

Vayl S. Oxford
Director, Defense Threat Reduction Agency

Vayl S. Oxford, a member of the senior executive service (SES), is the Director of the Defense Threat Reduction Agency (DTRA) located on Fort Belvoir, Virginia. The DTRA mission is to safeguard the U.S. and its allies from weapons of mass destruction (WMD), specifically chemical, biological, radiological, nuclear, and high-yield explosive threats, and improvised threats by providing the means to prevent and counter the proliferation of WMD and improvised threats and to reduce, eliminate, and mitigate their effects. This includes helping ensure the U.S. maintains a safe, secure, effective and credible nuclear weapons deterrent. As the DoD Combat Support Agency for the Counter WMD and improvised threats mission, DTRA develops and provides operational support for associated capabilities to warfighters worldwide.

Mr. Oxford is no stranger to DTRA, having served in several different positions with DTRA and its legacy organizations, first as a U.S. Air Force officer and then as a DoD civilian. Before being named DTRA Director, he was the National Security Executive Policy Advisor at the Department of Energy's Pacific Northwest National Laboratory (PNNL) where he was responsible for guiding the strategic direction and vision for national security issues. Before joining PNNL, Mr. Oxford spent a short time in private industry after 35 years of public service that combined time in the military and as a government civilian employee, almost all of it focused on countering weapons of mass destruction.

He served in multiple positions in the Department of Homeland Security (DHS) from 2003 to 2009, as the Policy Advisor to the Under Secretary of Science & Technology, as Acting Director of the Homeland Security Advanced Research Projects Agency, and as the first Director of the Domestic Nuclear Detection Office (DNDO), which was created to be the single entity in the U.S. government to protect the nation against nuclear terrorism. Appointed by President George W. Bush and reporting to the DHS Secretary, he led the development of the National Strategy to Combat Nuclear Terrorism.

Prior to his appointment to DHS, Mr. Oxford served as the Director for Counterproliferation at the National Security Council, where he supported the development of the President's National Strategy to Combat WMD, the policy and strategy for WMD interdiction, and represented the NSC in the development of the National Biodefense Strategy. He chaired the interagency working group for Operation Iraqi Freedom to develop policies for combating WMD in Iraq, to include developing the initial concept for WMD exploitation and elimination, and the plan for foreign consequence management to protect civilian populations from potential Iraqi use of WMD.

From 1987 to 2002, he held several positions with DTRA and its legacy organizations (Defense Special Weapons Agency and Defense Nuclear Agency). Highlights include directing a 300 member staff and a \$400M RDT&E program to defeat WMD targets. He also initiated a joint program with SOCOM to develop specialized capabilities to exploit and defeat WMD threats. As Director for Counterproliferation, he led DoD's counterforce efforts to identify, characterize and defeat WMD facilities, including oversight of two Advanced Concept Technology Demonstrations.

Mr. Oxford received his Bachelor of Science in General Engineering from the U.S. Military Academy at West Point and his Master of Science in Aeronautical Engineering from the Air Force Institute of Technology at Wright-Patterson Air Force Base, Ohio.

Mr. Oxford has numerous military and civilian awards, including the Presidential Meritorious Rank Award and the Distinguished Public Service Award for his contributions to Homeland Security.

STATEMENT OF
LIEUTENANT GENERAL JOSEPH L. OSTERMAN, U.S. MARINE CORPS
DEPUTY COMMANDER
UNITED STATES SPECIAL OPERATIONS COMMAND
BEFORE THE
HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON EMERGING THREATS AND CAPABILITIES
MARCH 22, 2018

Chairwoman Stefanik, Ranking Member Langevin and Members of the Subcommittee, thank you for the opportunity to address you today. Last month General Thomas testified to the House Armed Services Committee, Emerging Threats and Capabilities Subcommittee. During that address, he discussed U.S. Special Operations Command's (USSOCOM) responsibilities in our role as DoD's Coordinating Authority (CA) for Countering Weapons of Mass Destruction (CWMD), on which this testimony is focused. I am proud to say that we have made tremendous strides in enhancing the dedicated CWMD community of action, including: heightened operational coordination within and among entities; the development of a center dedicated to coordinating information flow and executing planning efforts; and further refinement, and thus improvement, of our initial goals. A tremendous amount of work remains. We must finalize and continue to refine an active campaign plan. To that end, we must expand and refresh efforts to assess and understand the environment in which we operate, and regularly measure how our capabilities map to these assessments. The reality is that the CWMD mission is highly dynamic and constantly evolving, requiring unity of effort and constant vigilance.

The WMD threat has evolved beyond state-sponsored programs, and its transregional nature challenges regionally focused planning efforts and operations. The danger from state and non-state actors attempting to acquire, proliferate, or use WMD is increasing and the technology, materials, and expertise to develop WMD are more readily available than ever before. There is a need for robust monitoring of potential sources of supply and expertise, whether witting or unwitting, while also focusing on emerging threats and capabilities. Advances in, as well as the dual use nature of, science and technology further exacerbate this problem. Differentiating between peaceful scientific research and nefarious intent requires exquisite access into adversary

leadership decision-making. The United States and our partners face a persistent threat against our citizens and interests.

Just over a year ago, USSOCOM assumed responsibilities as DoD's CA for CWMD. This role broadens USSOCOM's scope of responsibility from its traditional Special Operations Forces (SOF)-specific CWMD roles to encompass CWMD planning efforts for the Department. As such, we aim to bridge the gap between policy guidance and tactical capability and capacity by actively supporting Combatant Command (CCMD) planning efforts, Departmental priorities, and, as directed, other U.S. Government agencies. We are doing this, as directed in the Unified Command Plan (UCP) by integrating DoD plans and intelligence priorities to support operations against state and non-state networks that possess or seek WMD and executing global operations against the same, in coordination with other Combatant Commands.

USSOCOM's traditional role in the tactical aspects of CWMD likely contributed to the Department's decision to transfer many of the U.S. Strategic Command's (USSTRATCOM) responsibilities to USSOCOM, though not all missions were included. USSTRATCOM remains the lead for strategic deterrence, nuclear operations, Global Strike, and missile defense. Similarly, U.S. Northern Command (USNORTHCOM) and U.S. Pacific Command (PACOM) maintain responsibility for Defense Support to Civil Authorities (DSCA) and Chemical, Biological, Radiological and Nuclear (CBRN) response. Other ancillary missions associated with WMD are assigned to appropriate staff agencies, such as the capabilities development portfolio, assigned to the Joint Staff. The shift in responsibility exposed gaps that the community continues to resolve, underscoring the need to continue to build and foster a strong and efficient CWMD team. In coordination with the Defense Threat Reduction Agency

(DTRA), we are gaining greater fidelity on shortfalls with respect to CWMD capabilities within the Geographic Combatant Commands (GCC).

Given both the complexity of this mission and our role as the CA, USSOCOM established the CWMD Fusion Center (FC) located at both HQUSSOCOM at MacDill Air Force Base and at Ft. Belvoir, collocated with DTRA. The FC is a nexus of CWMD awareness, active planning, and operational advocacy across functional and geographic missions. The FC accomplishes its mission by coordinating planning, integrating intelligence, assessing campaign progress, advocating for CWMD operations with the Services and CCMDs, and – when directed – supporting execution. Operating within broader national and Department policy guidance, as conveyed by the Office of the Secretary of Defense for Policy (OSD-P) and the Joint Staff, the FC combines the strengths and perspectives of CWMD stakeholders in order to achieve a comprehensive understanding of the threat environment as well as partner capabilities. In turn, the FC identifies opportunities for action against adversary vulnerabilities and advocates for intelligence priorities. In doing so, we facilitate an operational construct that is active and responsive to the dynamic CWMD environment, while maintaining a persistent strategic focus.

The CWMD mission space is broad and varied. In pre-crisis scenarios, other Departments and agencies have traditionally maintained primacy with DoD playing a supporting role. These efforts span from export license reviews to interdiction of specialized WMD components. The CWMD FC is working with OSD and the Joint Staff to enhance DoD's operational relationships across the interagency and Intelligence Community, in order to optimize DoD support. Within DoD, we are engaging with OSD, the Joint Staff, the GCCs, Theater Special Operations Commands (TSOCs), and other DoD elements to ensure we share a collective understanding of the threat and are making best use of existing resources. The

CWMD FC has also improved our ability to assess DoD's CWMD requirements and drive unity of effort.

During our first year, we conducted a baseline assessment of the draft Functional Campaign Plan Strategic Objectives with significant input from the GCCs. The primary finding is that the GCCs lack sufficient capacity and, therefore, assume risk in CWMD. This finding is based on a number of factors which include: resource competition with other priority mission areas; gaps in understanding the threat – a global and evolving threat; unconnected data sources – absence of a complete picture; traditional prevalence of Interagency/Intelligence Community (IA/IC) in preventing proliferation – prevention not viewed as a primary military task; and lack of clear tasks in support of a strategy – perhaps the primary cause for the CWMD-related risks we have assumed. In addition, the baseline assessment identified the difficulties with anticipating the emergence of new WMD programs, and that analysis remains important to understanding the networks supporting WMD pathways. As we conduct future baseline assessments, we will expand our analysis to include the Services, the rest of the Interagency, and Partner Nations. Finally, we will highlight any gaps in policy, authorities, or other strategic issues that may be illuminated through our assessments with our teammates in the Joint Staff and OSD.

In addition to the baseline assessment, we have focused efforts on writing a Joint Staff-directed Functional Campaign Plan for CWMD as an engine for change. The Functional Campaign Plan for Countering WMD (DoD FCP-CWMD), which was developed in coordination with the Combatant Commands, translates policy into strategic guidance that can be further refined into GCC-specific operational planning. Close coordination with GCCs - who conduct the majority of campaign activities - enables us to assess and, when appropriate, adjust guidance

in light of operational effectiveness and changing intelligence. We have established collaborative forums among CCMDs, combat support agencies, Military Services, other U.S. Government agencies with CWMD equities, allies, and partner nations. The plan opens the operational aperture of how DoD sees the WMD problem with a transregional perspective, emphasizing active prevention of new WMD development, and precluding aspiring actors from attaining WMD.

The FCP is crosscutting with the Department's threat-specific Global Campaign Plans (GCPs) and has three Lines of Effort (LOE): Prevent, Protect, Respond. It nests with, supports, and complements the National Defense Strategy, DoD Strategy to Counter WMD and other strategic guidance documents. The FCP focuses heavily on the Prevent LOE, given the strategic imperative to operate as early in the WMD threat spectrum as possible. Actors of concern, in accordance with priorities set by the National Security Strategy and National Defense Strategy, are addressed individually in the campaign plan's supporting annexes, which in turn, provide operational constructs that guide the GCCs operational planning.

The central idea driving the FCP's strategic approach to preventing proliferation is disrupting or defeating WMD pathways. Pathways represent the way actors of concern move from the notion of WMD to development, delivery, or use. Examining pathways through the lens of people, places, and things – coupled with monitoring movement of WMD-related technology, materials and equipment – illuminates emerging WMD actors and identifies opportunities to disrupt. Disrupting pathways at the far left of the continuum includes affecting the decision making of aspirants as well as the means to acquire infrastructure and expertise. Disrupting progress as early as possible ensures that those undeterred lack the means to produce WMD. The FCP prioritizes intelligence collection, analysis, and production to outline

adversaries' objectives concerning research and development and highlights potential vulnerabilities along the continuum. We are applying this model in close coordination with the CWMD community of action and, as a result, are already seeing progress in implementing a more active campaign. In support of this model, the FCP provides a guidepost for GCCs to prepare supporting plans or to integrate campaign activities into existing plans to meet objectives and accomplish tasks outlined in the base plan and annexes.

Through recurring battle rhythm events, we aim to coordinate DoD operational activities across the spectrum of the strategic and operational space. The cornerstone of this battle rhythm is the semi-annual CWMD Global Synchronization Conference (GSC). The GSC serves as a venue for the CWMD community to address and advance activities to prepare, deny, defeat, and respond to the threats posed by WMD. These conferences emphasize the interoperability between USG assets and international partners to succeed in the global environment. While previous GSCs focused on broad sets of topics applicable across the entire spectrum of the mission, we focused our most recent one – this month – on identifying detailed requirements and describing how the FCP is implemented for a specified WMD actor of concern.

In closing, I would like to emphasize our priorities going forward. First, we will finalize the Department's Functional Campaign Plan for Countering WMD in an inclusive manner that builds and strengthens established partnerships. Second, we will improve our assessment process in order to measure more holistically how we can best operate and achieve our objectives in this complex environment. In addition, we will continually update our approach as our understanding of the myriad adversaries, threats, and capabilities evolves. Thank you for your interest in our role as Coordinating Authority and your continued support of USSOCOM and our people.

Lieutenant General Joseph L. Osterman
Deputy Commander
U.S. Special Operations Command

Lieutenant General Osterman is the Deputy Commander of the United States Special Operations Command (USSOCOM), MacDill Air Force Base, Florida. USSOCOM ensures the readiness of joint special operations forces and, as directed, conducts operations worldwide.

A native of Edgewater, Maryland, Lieutenant General Osterman was commissioned in 1982 as a Second Lieutenant through the Naval Reserve Officers Training Corps program at the University of Colorado at Boulder. He served as an infantry officer at all levels to include Commanding General, 1st Marine Division (Forward) in support of Operation ENDURING FREEDOM and Commander, 25th Marine Regiment, in which he deployed in support of Operation IRAQI FREEDOM. As Commander, 1st Battalion, 3rd Marines, he participated in Operation ENDURING FREEDOM after having served as a company grade officer at 1st Battalion, 7th Marines and 1st Battalion, 2d Marines participating in Operations RESTORE HOPE, CONTINUE HOPE, and SEA SIGNAL.

Lieutenant General Osterman also served as Commander, U.S. Marine Corps Forces, Special Operations Command, Commanding General, Marine Corps Recruiting Command, Assistant Division Commander, 2d Marine Division Commander, 1st Marine Division, Director of the Marine Corps Expeditionary Warfare School, Quantico, Virginia, Commanding Officer, Recruiting Station Albany, 1st Marine Corps Recruiting District, Instructor at the Marine Corps Basic School of Infantry Officers Course in Quantico, Virginia, and as Commanding Officer of Marine Detachment aboard the USS Forrestal (CV-59), and as Executive Officer of the Marine Detachment aboard the USS Kennedy (CV-67).

His Joint assignments include the ISAF Joint Command Deputy Chief of Staff of Operations, Afghanistan, and as Instructor and Chief of Staff at the NATO School, Oberammergau, Germany.

Lieutenant General Osterman is a graduate of the Marine Corps Amphibious Warfare School, U.S. Naval War College, and U.S. Army War College. He holds a degree in Biology from the University of Colorado at Boulder. His personal decorations include the Defense Superior Service Medal (2), Legion of Merit (2), Bronze Star, Meritorious Service Medal (3), the Navy and Marine Corps Commendation Medal (2) and the Navy and Marine Corps Achievement Medal (2).

Current as of October 2016

QUESTIONS SUBMITTED BY MEMBERS POST HEARING

MARCH 22, 2018

QUESTIONS SUBMITTED BY MS. STEFANIK

Ms. STEFANIK. Given the current world situation in locations such as North Korea, Ukraine and the Middle East, all members of the Armed Services have an increased potential to be exposed to radiation. The possible scenarios are not limited to current operational theaters but could occur anywhere in the world, including within the United States via a “dirty” bomb, putting our soldiers in particular danger. The armed services must ensure all of their service members are protected from these radiological threats. The Army’s FY2019 budget request includes a proposal to develop and field the next-generation Joint Personal Dosimeter–Individual (JPD–I). An individual dosimeter that includes active and passive technology, such as immediate visual alert, measurement of radiation dose, and inclusion of a comprehensive, legal record and definitive proof of radiation exposure over a soldier’s entire career is highly beneficial. Provided this growing global radiation threat and the Department’s keen interest in this combined alert/dose of record capability, please provide the committee information on the planned way ahead to develop and field the Joint Personal Dosimeter–Individual (JPD–I) in FY2019. Specifically provide details explaining how DOD, the Army in particular, plans to conduct a rigorous, fair and open competition for this new system to ensure the very best dosimeter is developed and selected for deployment to soldiers worldwide in order to increase unit and individual survivability. Include information on the capability requirements for the Joint Personal Dosimeter–Individual; what Services will join the Army in this procurement program; estimated number of industrial competitors expected to compete for contract award; acquisition strategy and timeline; Request for Proposal (RFP) timeline; procurement and fielding schedule; and funding profile over the next 5 years.

Mr. OXFORD. Madam Chairwoman, thank you for your question. DTRA has had no involvement with the JPD–I program and I respectfully request any questions regarding this program be directed to the Army.

Ms. STEFANIK. Given the current world situation in locations such as North Korea, Ukraine and the Middle East, all members of the Armed Services have an increased potential to be exposed to radiation. The possible scenarios are not limited to current operational theaters but could occur anywhere in the world, including within the United States via a “dirty” bomb, putting our soldiers in particular danger. The armed services must ensure all of their service members are protected from these radiological threats. The Army’s FY2019 budget request includes a proposal to develop and field the next-generation Joint Personal Dosimeter–Individual (JPD–I). An individual dosimeter that includes active and passive technology, such as immediate visual alert, measurement of radiation dose, and inclusion of a comprehensive, legal record and definitive proof of radiation exposure over a soldier’s entire career is highly beneficial. Provided this growing global radiation threat and the Department’s keen interest in this combined alert/dose of record capability, please provide the committee information on the planned way ahead to develop and field the Joint Personal Dosimeter–Individual (JPD–I) in FY2019. Specifically provide details explaining how DOD, the Army in particular, plans to conduct a rigorous, fair and open competition for this new system to ensure the very best dosimeter is developed and selected for deployment to soldiers worldwide in order to increase unit and individual survivability. Include information on the capability requirements for the Joint Personal Dosimeter–Individual; what Services will join the Army in this procurement program; estimated number of industrial competitors expected to compete for contract award; acquisition strategy and timeline; Request for Proposal (RFP) timeline; procurement and fielding schedule; and funding profile over the next 5 years.

General OSTERMAN. USSOCOM defers to the Department of the Army, the Joint Staff Force Structure, Resources, and Assessment Directorate J8 and the Joint Program Executive Office for Chemical and Biological Defense to provide the appropriate response to this question.