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HEARING

ON

NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2020

AND

OVERSIGHT OF PREVIOUSLY AUTHORIZED PROGRAMS

BEFORE THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES
ONE HUNDRED SIXTEENTH CONGRESS

FIRST SESSION

SUBCOMMITTEE ON INTELLIGENCE AND EMERGING THREATS AND CAPABILITIES HEARING

ON

REVIEWING DEPARTMENT OF DEFENSE STRATEGY, POLICY, AND PROGRAMS FOR COUNTERING WEAPONS OF MASS DESTRUCTION FOR FISCAL YEAR 2020

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REVIEWING DEPARTMENT OF DEFENSE STRATEGY, POLICY, AND PROGRAMS FOR COUNTERING WEAPONS OF MASS DESTRUCTION FOR FISCAL YEAR 2020

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON INTELLIGENCE AND EMERGING THREATS AND CAPABILITIES,
Washington, DC, Wednesday, April 3, 2019.

The subcommittee met, pursuant to call, at 2:34 p.m., in room 2212, Rayburn House Office Building, Hon. James R. Langevin (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. JAMES R. LANGEVIN, A REPRESENTATIVE FROM RHODE ISLAND, CHAIRMAN, SUBCOMMITTEE ON INTELLIGENCE AND EMERGING THREATS AND CAPABILITIES

Mr. LANGEVIN. The subcommittee will come to order.

I want to first welcome our witnesses in today's hearing, Reviewing the Department of Defense Strategy, Policy, and Programs for Countering Weapons of Mass Destruction for Fiscal Year 2020.

This past year, both Russia and North Korea famously employed chemical weapons, nerve agents in England and Malaysia, respectively. In Syria, pro-regime and ISIS [Islamic State of Iraq and Syria] forces have continued to use chemical weapons on civilian populations since 2013 to achieve their tactical and strategic objectives.

The President's recent decision to withdraw from the Intermediate-Range Nuclear Forces (INF) Treaty, could open up the possibility of proliferation of intermediate-range and shorter-range missiles. Emerging capabilities in biotechnology may allow individuals acting with nefarious intent or even just by chance to produce biological agents in a scope and scale not yet encountered. And more emerging capabilities like cyber and hypersonics, among others, threaten to exacerbate the complexity of the world's WMD [weapons of mass destruction] threats.

In 2014, the Department approved its strategy for CWMD [countering weapons of mass destruction], which outlined three end states—no new actors possess WMD, no WMD use, and minimization of WMD effects—with associated objectives and lines of effort. The strategy notes fiscal year constraints will require the Department make strategic choices and accept some risks, but rogue actors and technological advances still challenge the strategy's goals of ensuring that the U.S. and its allies and partners are not attacked or coerced by adversaries possessing WMD.

Today, we will hear from five of the major players in the Department who develop CWMD policies, oversee and execute CWMD programs, and coordinate the Department's CWMD efforts. We welcome today Dr. Christian Hassell, the Deputy Assistant Secretary of Defense for Chemical and Biological Defense, who is here today for the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs and the Office of the Under Secretary of Defense for Acquisition and Sustainment, and we thank him for stepping in.

The office is responsible for developing capabilities to detect, protect against, and respond to WMD threats; ensuring DOD [Department of Defense] compliance with nuclear, chemical, and biological treaties and agreements; continuing to work with allies and partners to strengthen our collective CWMD capabilities; and advancing the United States nonproliferation goals.

Next, we welcome Ms. Theresa Whelan, who is the Principal Deputy Assistant Secretary of Defense for the Homeland Defense and Global Security [ASD(HDGS)] for the Office of the Under Secretary of Defense for Policy.

The ASD(HDGS) is responsible for developing policy guidance, providing policy advice, and overseeing planning, capability development, and operational implementation to ensure warfighting and national security advantages in the mission areas of CWMD, cyberspace, and defense support of civil authorities, among others. The ASD(HDGS) also supervises as the Department's homeland defense activities.

Ms. Whelan, I want to thank you for acting on behalf of Assistant Secretary Rapuano today, who is currently down the hall right now, I know, testifying on our Strategic Forces Subcommittee's space hearing. He was recently before the subcommittee testifying about cyber. And clearly, he has a very big portfolio. And so we are looking forward to hearing about the Department's current CWMD policies from you, including how the Department is ensuring that its cooperative threat reduction programs, which would achieve notable accomplishments in the past, are oriented to address today's threats and how the Department's thinking about cyber, opioids, and other nontraditional materials and capabilities that could be used to cause mass destruction.

Over the last few years since the strategy was released, the Department has taken some initial steps to strengthen CWMD efforts, since the strategy was released. In 2017, the Special Operations Command [SOCOM] was designated as the coordinating authority for CWMD. Today, we will hear from Vice Admiral Timothy Szymanski, the Deputy Commander of SOCOM, about how the command is leveraging the best practices from its traditional missions and lessons learned in its coordinating authority role for countering violent extremism to reinvigorate and integrate CWMD awareness, planning, capacity, and capability across the Department and with the interagency.

Welcome, Admiral.

Finally, we welcome Director Vayl Oxford from the Defense Threat Reduction Agency [DTRA], the execution arm that falls within Secretary Roberts' ASD(NCB) [Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense] office.

Before departing, Secretary Mattis approved a new mission statement for DTRA, redirecting the mission from countering and deterring WMD and improvised explosive device threats to countering WMD and improvised threat networks. This and DTRA's participation in the counter unmanned aerial systems mission are substantial evolutions. I am interested in understanding where this agency fits in the Department—in the Department's CWMD organization today and what effects this change is having on your core mission and responsibilities.

Director Oxford, we welcome you, and look forward to hearing about the changes.

Together, these individuals hold positions that comprise the bulk of assigned roles and responsibilities associated with aligning CWMD policy to strategy and programs, executing CWMD programs, and delivering current and future personal protective equipment to other CWMD capabilities to our warfighters.

In the past few years, the CWMD bureaucracy has evolved as the Department has recognized and reorganized. In addition to the movement of the CWMD mission from U.S. Strategic Command to USSOCOM, in addition in section 901 of the fiscal year 2017 NDAA [National Defense Authorization Act], Congress split the former Under Secretary for Acquisition, Technology, and Logistics [USD(AT&L)] into two positions, the Under Secretary of Defense for Research and Engineering [USD(R&E)] and the Under Secretary for Acquisition and Sustainment, in the hopes of simplifying and focusing the responsibilities of each.

The split of USD(AT&L) into two under secretariats serves as both an opportunity and a potential area of risk to the CWMD effort. Though both ASD(NCB) and DTRA fall under ASD(A&S) [Assistant Secretary of Defense for Acquisition and Sustainment], there must continue to be coordination within all elements of the Office of Secretary of Defense on CWMD, including with the USD(R&E). This is especially true for the science and technology investment and research and development portfolio so characteristic of DTRA's past focus.

There must also be continued focus on and prioritization of CWMD by all those with assigned roles and responsibilities, especially considering connected roles and responsibilities of each in your offices. So we are looking forward to hearing how the CWMD Unity of Effort Council is now operating.

To that end, the fiscal year 2019 NDAA included a section mandating that the Secretary of Defense designate a principal advisor on CWMD to coordinate the CWMD activities of the Department. Additionally, it directed the development of a plan to streamline the oversight framework of OSD [Office of the Secretary of Defense]. That plan was to focus on any efficiencies that could be realized and the potential to reduce, realign, or otherwise restructure current ASD [Assistant Secretary of Defense] and Deputy ASD positions with responsibilities for overseeing CWMD policy, programs, and activities. It also directed a report on these and related efforts to be submitted with the fiscal year 2020 budget. We look forward to hearing about where all of this stands today.

Finally, I am concerned that, due to almost two decades of war in Afghanistan, Iraq, and Syria, our preparedness for significant

state-level of WMD event has atrophied. A year ago, General Scaparrotti said that he believed we were underprepared, and the Congress has expressed its continued dissatisfaction with our preparedness for such an event, and whether our troops are trained and equipped to operate in a contaminated environment. Thus, the fiscal year 2019 NDAA directed the Department to submit an assessment on material shortfalls in the United States Forces Korea for chemical, biological, radiological, and nuclear defenses. GAO [Government Accountability Office] has just begun work on this project.

In closing, there is much work to be done to strengthen CWMD policy, programs, and preparedness. I said as much when I testified before the Blue Ribbon Study Panel on Biodefense in February, and I commend the panel and others who have continued to highlight the unique challenges posed by technologies that can cause indiscriminate destruction on a wide scale.

Congress has an important role to play as well, and our focus today on understanding the 2014 strategy in the context of today's threat landscape, the budget request's alignment to current strategy, and how the Department's strategy and end states are consistent with a national level strategy and whole-of-government effort, will help ensure effective oversight going forward.

So, with that, I look forward to hearing from our witnesses on the fiscal year 2020 CWMD request, and note that following the discussion, that we will go into a closed classified follow-on hearing. With that, before we get to our witnesses, I want to now turn to the ranking member, Member Stefanik, for her remarks.

[The prepared statement of Mr. Langevin can be found in the Appendix on page 31.]

STATEMENT OF HON. ELISE M. STEFANIK, A REPRESENTATIVE FROM NEW YORK, RANKING MEMBER, SUBCOMMITTEE ON INTELLIGENCE AND EMERGING THREATS AND CAPABILITIES

Ms. STEFANIK. Thank you, Chairman Langevin. And thank you to the witnesses for being here today.

Inside the Department of Defense, and especially within Special Operations Command, we often hear of no-fail missions, and I cannot think of a mission more appropriate for this type of resolve and determination than the countering weapons of mass destruction problem set. While the Department of Defense faces urgent challenges on a daily basis, we can never afford to lose sight of or be distracted from the critically important mission of countering weapons of mass destruction.

In February, this committee received testimony from the GAO and the intelligence community on long-range emerging threats facing the United States. One of the most alarming findings was the continuing trend of technological advances allowing a wider range of actors to acquire sophisticated capabilities that were once only within reach of well-resourced nation-states. This democratization of technology has significantly increased the threat posed by advancements in gene editing and synthetic biology. We need only to look to China to witness the risks posed by rogue gene editing scientists who lack the oversight and moral compass but who pos-

sess the expertise and technology to circumvent international guidelines and standards.

I appreciate the daily focus that the Defense Threat Reduction Agency, U.S. Special Operations Command, OSD Policy, Acquisition and Sustainment, and countless other organizations across the Department are providing to prevent, prepare, and respond to CWMD events across the globe. This is especially relevant in recent years as Syria, North Korea, and Russia have all used chemical weapons to intimidate and devastate civilian populations or for calculated political assassinations. The pursuit, proliferation, and potential use of weapons of mass destruction remains a high-consequence threat that we must plan for.

The Department has tools and resources at its disposal to help prevent the development, proliferation, use, and effects of weapons of mass destruction. I am pleased to see a 5 percent increase in the fiscal year 2020 budget for these activities, which include chemical and biological defense, detection, and protection capabilities; chemical demilitarization programs to reduce our own stockpiles and set a positive example on the world stage; and cooperative threat reduction program which proactively partners with foreign countries to prevent proliferation of materials, technologies, and expertise that could pose a WMD threat.

Finally, I am interested to hear from our witnesses today how recent efforts to streamline and provide additional leadership and accountability to this problem set have taken shape, specifically the establishment of the Unity of Effort Council, the maturation of U.S. Special Operations Command in the new role of coordinating authority, and DTRA's integration of Joint Improvised Threat Defeat Organization.

Thank you again to our witnesses, and I yield back to the Chair.

Mr. LANGEVIN. I want to thank the ranking member.

The witnesses' full statement will—without objection, will be entered into the record, and you will each be recognized now for 5 minutes to summarize your remarks, if you would. And we now recognize Principal Deputy Assistant Secretary Whelan for opening remarks.

STATEMENT OF THERESA M. WHELAN, PRINCIPAL DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR HOMELAND DEFENSE AND GLOBAL SECURITY, UNDER SECRETARY OF DEFENSE FOR POLICY

Ms. WHELAN. Thank you, Chairman Langevin, Ranking Member Stefanik, and members of this subcommittee, for the invitation to join my distinguished DOD colleagues here today to address current countering WMD policy, strategy, priorities, and programs. As the Principal Deputy Assistant Secretary of Defense for Homeland Defense and Global Security at OSD Policy, I support the Assistant Secretary of Defense in the execution of responsibilities for the Department's CWMD policy and strategy.

The Department's CWMD mission is broad, deep, and multifaceted, requiring a unity of effort among the Secretary of Defense's principal staff assistants, along with the Joint Staff, the combatant commands, the military services, the defense agencies, and the intelligence community.

Within DOD, OSD Policy focuses on developing, coordinating, and overseeing implementation and integration of CWMD policy and strategy. We work closely with other OSD components to synchronize, to deconflict, and to assess the effectiveness of activities across and among our respective CWMD missions.

We partner closely with the Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs to align DOD CWMD policies with their activities that affect or require engagement with U.S. and international partners.

OSD Policy also partners closely with the Defense Threat Reduction Agency and U.S. Special Operations Command to help incorporate strategic level policy and guidance into their respective program execution and planning activities.

The complexity of the CWMD mission area requires a unity of effort, which was codified by the then Deputy now Acting Secretary of Defense establishing the DOD's CWMD Unity of Effort Council. The Unity of Effort Council has raised awareness and accelerated collaboration, coordination, and deconfliction across DOD's CWMD enterprise. The council is structured to drive results across the three primary lines of effort in the 2014 DOD strategy for CWMD: First, to prevent acquisition of new WMD; second, to contain and reduce threats; and third, to respond to crises.

With the release of the National Security Strategy in 2017 and the National Defense Strategy [NDS] in 2018, we recognized the need to determine whether the 2014 CWMD strategy required a refresh or rewrite. We asked the National Defense University [NDU] to analyze the CWMD strategy and provide a recommendation on whether a new strategy would be necessary to execute the 2018 NDS. NDU assessed, and Policy concurred, that since the CWMD strategy is threat-agnostic and provides a flexible framework, the strategy remains relevant to the WMD threat environment and effectively nests under the NDS.

We did, however, identify a need to develop priorities for the CWMD enterprise that take into account the CWMD strategy's framework, the NDS approach, and the threat actors identified in the functional campaign plan for CWMD. Policy is leading this effort via the Unity of Effort Council.

With regard to threats, a key priority remains the threats posed by North Korea's WMD programs. DOD is supporting the State Department's efforts to achieve the final, fully verified denuclearization of North Korea, and remains postured for any military contingency. We also remain concerned by the erosion of international norms against the use of chemical weapons. The pattern of use by state and nonstate actors is alarming. Russia in the U.K. [United Kingdom], the Assad regime against Syrian citizens, North Korean agents in Malaysia, and nonstate actors in Syria and Iraq.

Additionally, Iran's WMD threat remains with or without JPOA [Joint Plan of Action]. We continue to support the larger U.S. Government effort to deny Iran all paths to a nuclear weapon and counter Iran's proliferation of missiles around the region. The WMD threat environment is complicated further by the rapid technological advancement coupled with increased access to dual-use materials and expertise, particularly in the biological science fields. The threats are complex with no simple formula or direct path to

eliminate them all. Key efforts OSD Policy supports to address WMD and related materials proliferation and use include serving a leadership role in a proliferation security initiative; updating policy guidance for a cooperative threat reduction program; engaging our international partners to enforce North Korea-related U.N. [United Nations] Security Council resolutions; reviewing and updating DOD policy and guidance documents related to force preparation and protection against WMD incidents and contaminated environments; and last but not least, developing and reinforcing allies' and partners' capacity and capabilities to detect, interdict, and respond to WMD use and proliferation.

We appreciate your continued interest in and support for the CWMD mission space to ensure we remain agile and positioned to confront WMD challenges.

Thank you for the opportunity to address the subcommittee, and I look forward to answering questions.

[The prepared statement of Ms. Whelan can be found in the Appendix on page 34.]

Mr. LANGEVIN. Thank you, Secretary Whelan.

Deputy Assistant Secretary Hassell is now recognized for 5 minutes.

STATEMENT OF D. CHRISTIAN HASSELL, DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR CHEMICAL AND BIOLOGICAL DEFENSE, UNDER SECRETARY OF DEFENSE FOR ACQUISITION AND SUSTAINMENT

Dr. HASSELL. Thank you, Chairman Langevin, Ranking Member Stefanik, and distinguished members of the subcommittee. I appreciate the opportunity to join my colleagues in testifying on the Department's efforts to counter threats posed by weapons of mass destruction and to provide context for the President's fiscal year 2020 budget request. As noted today, I am representing the Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs.

Our budget request includes resources to reduce threats and protect warfighters in several areas. First, the chemical and biological defense program budget request of $1.4 billion will continue the development of capabilities to protect against chemical, biological, and radiological threats. Our chemical demilitarization program of $986 million will continue to ensure the safe, complete, and treaty-compliant destruction of the U.S. chemical weapons stockpile. Our nuclear matters resources of $65 million will support the development of policies that guide the safety and security of the Nation's nuclear deterrent and help to counter threats of nuclear terrorism and proliferation.

The Defense Threat Reduction Agency budget request of $1.9 billion includes the areas that will be described by Mr. Oxford in a moment.

Our National Defense Strategy directs the Department to compete, deter, and win, alongside our allies and partners, to prevail in conflict and preserve peace through strength. Among its key components, the strategy prioritizes nuclear modernization, readiness, and lethal combat power in contested environments.

Our office is first responsible for ensuring that our nuclear deterrent is safe, secure, and effective. This is in order to prevent—to deter the use of WMD against the U.S. and our allies. Furthermore, from a readiness standpoint, the office is the Department's focal point for developing material capabilities to ensure that our forces are resilient against WMD threats. So in other words, we must protect those warfighters so that they can accomplish their mission, even if it is in a contaminated environment. We often use the phrase protect to fight, not just protect to survive.

We accomplish these objectives through multiple programatic efforts. With respect to nuclear threats, the Department of Defense works with other departments and agencies to strengthen the Nation's capability to detect and respond to nuclear proliferation. The chemical and biological defense program ensures the protection and resiliency of our forces by providing research, development, testing, and fielding of protective equipment, detectors, decontamination systems, vaccines, and therapeutic drugs.

In domestic chemical demilitarization, the Department continues to make significant progress in meeting the Nation's commitments under the Chemical Weapons Convention by eliminating our remaining chemical weapons stockpiles in Colorado and Kentucky.

The Department's counter-WMD activities support a broad spectrum of efforts that protect our forces and reduce threats. We strengthen program effectiveness and ensure efficiencies by acting in collaboration and coordination with numerous interagency and international partners and, of course, with our DOD partners as represented here today.

So thank you again for the opportunity to testify before you today.

[The prepared statement of Dr. Hassell can be found in the Appendix on page 47.]

Mr. LANGEVIN. Thank you, Secretary Hassell.

Vice Admiral Szymanski is now recognized for 5 minutes.

STATEMENT OF VADM TIMOTHY G. SZYMANSKI, USN, DEPUTY COMMANDER, U.S. SPECIAL OPERATIONS COMMAND

Admiral SZYMANSKI. Thank you, Chairman.

Good afternoon, Chairman Langevin, Ranking Member Stefanik, and members of the subcommittee. Thank you for the invitation to update you on the work of U.S. Special Operations Command as the Department's coordinating authority for countering weapons of mass destruction.

U.S. Special Operations Command's responsibilities as DOD coordinating authority revolve around counter WMD campaign planning, assessing progress against campaign objectives, and recommending changes to plans for countering WMD, all in support of the geographical combatant commanders' and Department priorities. These functions are distinct from the command's longstanding and continuing operational role in WMD counterproliferation.

In the past 18 months since USSOCOM assumed the role as the Department's CWMD coordinating authority, we have completed and published the Functional Campaign Plan for Countering Weapons of Mass Destruction. This plan focuses joint force activities below the level of armed conflict to defeat priority actors of concern

along pathways from aspiration or intent to acquire WMD to development or use of WMD. This approach orients the Department's military capability and capacity to prevent, protect, and respond to global WMD threats aligned with national strategy.

To directly support combatant commanders with their responsibilities for planning against priority threat actors, USSOCOM's Countering Weapons of Mass Destruction Fusion Cell has developed operational frameworks to compel prudent military planning focused on specific threat actors, inform the joint force of both friendly and adversary capability capacity and intent, and align operations activities and investments across all instruments of national power.

We recently completed the annual assessment of the joint force's capability and capacity to counter WMD. Although this year's assessment was focused on combatant commands, it was mapped to the objectives of the new functional campaign plan, and we will use the feedback from across the Department to include services and combat support agency inputs to identify gaps and recommend mitigation strategies to the Acting Secretary of Defense.

In its capacity as DOD countering WMD coordinating authority, SOCOM works in close partnership with the offices of each of the distinguished panelists before you. We are guided by national Department policy and strategy for countering weapons of mass destruction, as conveyed by the Assistant Secretary of Defense for Homeland Defense and Global Security. The Office of the Assistant Secretary for Nuclear, Chemical, and Biological Defense Programs develops new capabilities to counter WMD and help guide the Unity of Effort Council.

Part of the Countering WMD Fusion Cell that executes SOCOM's coordinated authority is co-located with and collaborates daily with Vayl Oxford's forward-leaning team at the Defense Threat Reduction Agency. We could not do our work without the leadership of all these strong partners.

Although SOCOM is the Department of Defense's coordinating authority, the countering WMD mission is rightfully a whole-of-government mission. We cannot succeed in this role, and the joint force cannot perform its mission adequately, without an active, persistent engagement with the U.S. interagency to ensure a comprehensive understanding of the capabilities and complementary activities of the Department of State, Commerce, Energy, Homeland Security, Justice, Treasury, the intelligence community, and many more.

Our annual Countering WMD Coordination Conference in the fall brought together these departments and agencies with DOD services, commands, combat support agencies, and the Joint Staff to identify cross-cutting challenges and make recommendation to enhance our collective ability to disrupt and defeat WMD adversaries. This past February, General Thomas hosted senior leaders from the same broad community at SOCOM headquarters to assess progress on these challenges and identify focus areas for the coming year.

We are pleased to include defense representatives from Australia, Canada, France, Germany, New Zealand, and the United

Kingdom, recognizing that no country can execute the countering WMD mission alone.

In addition to hosting these outcome-focused fora, we welcome the recent establishment of the countering WMD Unity of Effort Council. As the WMD threats to our country become ever more complex, we will work with the council to further unify the DOD countering WMD community and address Department challenges.

SOCOM looks forward to continued close work with the Office of the Assistant Secretary for Homeland Defense and Global Security, Assistant Secretary for Nuclear, Chemical, and Biological Defense Programs, the Defense Threat Reduction Agency, the Joint Staff, and the rest of the U.S. international countering WMD community to defeat emerging WMD capabilities and protect the U.S. and its interest from actors with existing WMD programs.

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

[The prepared statement of Admiral Szymanski can be found in the Appendix on page 56.]

Mr. LANGEVIN. Thank you, Vice Admiral Szymanski.

The Chair now recognizes Director Oxford for 5 minutes.

STATEMENT OF VAYL OXFORD, DIRECTOR, DEFENSE THREAT REDUCTION AGENCY, UNDER SECRETARY OF DEFENSE FOR ACQUISITION AND SUSTAINMENT

Mr. OXFORD. Thank you, Mr. Chairman. Chairman Langevin, Ranking Member Stefanik, members of the committee, thank you for your continued support to the Defense Threat Reduction Agency where we respond to the most complex and dynamic threat environment we face as a Nation. In doing so, DTRA has adopted a whole-of-government approach working with OSD, the Joint Staff, the combatant commands, our interagency partners, and international partners. Our approach enables the Department to detect, deter, and defeat transregional and multidomain threat networks.

I am pleased to appear before you today with these three colleagues of DTRA's closest partners. We work closely with NCB and Ms. Whelan's office to ensure our priorities are aligned with the National Defense Strategy. Also, we have a strong and enduring relationship with the USSOCOM in both its role as coordinating authority and as a combatant command.

My priorities for DTRA remain enhance combat support, strengthen and expand our relationships with interagency and international partners, foster innovation to develop capabilities to counter weapons of mass destruction and improvised threats, and to empower the DTRA workforce.

Since I last appeared before the committee, we have continued to focus our efforts on these priorities and the guidance outlined in the National Defense Strategy that requires DOD to build a more decisive and lethal force, strengthen our nuclear deterrent, and compete below the level of armed conflict. DTRA plays an important role in all three of these.

We maintain our counter WMD improvised threat capability development and operational support to the conventional warfight. We are strengthening our efforts that support a secure and effective nuclear deterrent. We have enhanced our analytic capabilities

to enable DOD, the U.S. Government, and international partners to counter and deter adversary WMD and improvised threat networks. In doing so, we will enable the U.S. to compete below the level of armed conflict and counter the malign influence and disruptive capabilities of our adversaries.

To do this, we are working closely with the combatant commands and the interagency to illuminate these adversarial networks comprised of surrogates, proxies, criminal organizations, in order to disrupt and defeat them. We also develop specialized tools and capabilities to be used in disrupting these networks. Additionally, we are working with international partners to forge relationships, build partnership capacity, and counter adversary influence.

As we return to great power competition, we will continue the pressure on VEOs [violent extremist organizations]. We must develop agile, integrated, and tailored solutions to address this global threat environment. To be successful, we must have a laser-focused workforce that is motivated by the common purpose of protecting our Nation.

I am proud and honored to be staffed with people that are dedicated in this mission working with us side by side every day. Again, thank you for your continued support, and I look forward to your questions.

[The prepared statement of Mr. Oxford can be found in the Appendix on page 65.]

Mr. LANGEVIN. Thank you, Director Oxford.

Members now will be recognized for 5 minutes, and I will start with the questioning recognizing myself.

Let me begin, if I could, with you, Secretary Whelan. The Office of the Assistant Secretary of Defense for Homeland Defense and Global Security is well situated to see across many different areas and understand how different threat areas intersect. For example, Secretary Rapuano is not here today because he is testifying in our Strategic Forces Subcommittee, as I mentioned, in the hearing on space down the hall and was recently here testifying on cyber and the border.

Can you speak to this broad perspective and how you're acting upon this responsibility to take—to shape holistic CWMD policy for the Department? And in your opinion, does the office require additional resources or restructuring to ensure that space, cyber, homeland defense, and CWMD all receive the level of attention that each of these issue areas demand, all of which are obviously very important?

Ms. WHELAN. Thank you, Congressman. So it is quite a broad portfolio in some ways, but in other ways, it is actually quite tightly and nicely nested. I actually served in the office some years ago when it was Homeland Defense and Western Hemisphere, and I think its current organizational structure is actually much more suited.

The homeland defense mission is, of course, very interrelated to space policy and also cyber, as well as CWMD. This provides the opportunity having them all under one assistant secretary for Assistant Secretary Rapuano to see across these areas, make linkages, and ensure that we essentially have our own internal cross-functional teams to move forward on linked issues, whether they

be linkages between cyber and our mission assurance policies or space and cyber or even the impacts of cyber, for example, on the proliferation of knowledge related to CWMD.

We think that the office is structured quite effectively, and we appreciate the support that it has had from Congress to date and we look forward to continuing that support and relationship with Congress.

Mr. LANGEVIN. Thank you. I think you touched on my next question I had, but in really thinking about more specifically how the Department is thinking about cyber and opioids and other non-traditional research materials and capabilities that could be used to cause mass destruction. Can you go into a little more detail on those issues?

Ms. WHELAN. Yes, absolutely. And thank you again. That is a very important question for the Department. Let me just briefly first address cyber, and that is a really interesting one because, of course, cyber can theoretically be used as a tool to produce effects that result in mass destruction. For example, you could use cyber as a tool and trigger a release of CBRN-type materials, chemical, biological, radiological [and nuclear]. You could also use cyber as a tool to trigger a cascading series of events that would have the cumulative effects of mass destruction, or even use cyber as a tool to, say, force a dam to release all of the water, destroying towns that were below the dam.

In all of these cases, though, cyber is a tool that enables the release of some sort of lethal material or kinetic event, such as an explosion. Cyber isn't in and of itself lethal and its effects are not assured.

So the common characteristic of the materials that we have traditionally characterized as WMD is that they are all in and of themselves lethal materials, and then when weaponized for use in warfare, they are inherently indiscriminate and large-scale in effect. The cyber tool, though, when used as a weapon, is really not inherently indiscriminate or large-scale, and, in fact, it can actually be quite precise.

Similarly, if you look at even conventional weapons, they can be targeted and aggregated in such a way as to produce a mass destructive effect, so—but we don't consider them weapons of mass destruction.

So we don't consider cyber a weapon of mass destruction, but we do see that cyber has complicated the CWMD threat arena by, again, allowing information to proliferate.

As to opioids, very serious issue for us, something that the Unity of Effort Council is going to take up specifically with regard to fentanyls. DOD is very concerned about the use of fentanyls. Countries like Russia and Iran, for example, are using fentanyls or repurposing them as incapacitants, they call them, for supposedly law enforcement purposes. We think this is a very dangerous precedent and have supported the State Department in their efforts to reduce and engage with countries that export fentanyls and reduce those exports.

But if you would allow me, I would like to just turn briefly to Dr. Hassell to address what else we are doing on the opioid front.

Dr. HASSELL. Yes. I am glad you brought that up because it has been a big area of emphasis for us, especially over the last few years. We had been concerned about fentanyls for many years, ever since the 2002 incident in Russia in the theater when fentanyls were used. Since then, though, with the opioid crisis, we have seen much more proliferation and much more availability of these materials. So that has raised our concern.

We have an immediate issue with our civil support teams, the part of the National Guard that provides support to law enforcement and first responders for State and locals. We provide their equipment, so we need to make sure that they are protected now.

We are also looking at what is the potential impact on the battlefield use of this. So as mentioned, we are looking at it with the Unity of Effort [Council] to bring about all the issues, not just the material solutions, but what are the training, what are the policy doctrine, and other issues that would be brought to bear on that. And then looking at the specific things, like toxicology, detectors, medical treatment.

But I would emphasize, we are doing this with the interagency. DOD doesn't often work with, for example, Drug Enforcement Administration, but that has been a good example of sort of a new lash-up that has been very helpful, just bringing the departments together, everyone who has a stake in this thing. And I am hopeful that is actually going to help move us forward on this much more quickly.

Thank you.

Mr. LANGEVIN. Good point, Secretary Hassell. And I thank both of you for your answers, and I think this—again, the challenges that we face here reinforce the need for much more of a whole-of-government approach and getting the oars pulling in the same direction. I see some serious challenges.

I would like now to just give Vice Admiral Szymanski and Director Oxford a chance to weigh in here. And to both of you, what are you doing operationally to maintain situation awareness, continuing to help combatant commanders plan, maintain, a left-of-boom approach on these topics?

Admiral SZYMANSKI. Chairman, thank you for that question. So with the signing of the functional campaign plan, the subset to that is developing operational frameworks so we can get after the five specific threats from the National Defense Strategy. So those are the global campaigns that the geographical combatant commanders are working on.

So how are we working out? We are taking our methodology from the functional campaign plan, which is basically a holistic approach to countering through a taxonomy and a methodology of pathway defeat, much like in your opening statement when you discussed VEOs and how over the years in 18 years, how we have developed the targeting methodology. It is a pathway as well, VEOs. So we see the WMD problem set through that same sort of methodology at least for, again, taxonomy purposes.

So we are taking that methodology and trying to use that, again, very threat specific—or threat specific to the NDS, but the modalities are different for the different threats, but applying that same sort of operational framework for the operations, activities, invest-

ments that we are doing in each of those theaters to ensure across all instruments of the interagency and partnerships, international partnerships, that we are getting after that pathway defeat short of conflict. So the things we are doing to build partner nation capacity, security force assistance, you know, against all the different pathways.

Thank you.

Mr. LANGEVIN. And as the coordinating authority, can you expand a little more on how you are working a whole-of-government interagency functional campaign plan on these issues?

Admiral SZYMANSKI. So typically—thanks, again. Typically, through the CWMD coordination conference really twice a year for the larger instruments of the interagency and partnership. But for the GCCs [geographic combatant commands], the real aspects of coordinating authority is—in my opening statement is the actual planning, so really trying to baseline the campaign plan, the functional campaign plan in concert with the geographical combatant commanders' global campaign plans, assessing where our operations, activities, and investments are not meeting the mark or they are meeting the mark and then making recommendations through—up to the Secretary through the global integrator, the chairman, on where we need a change in those plans or resources to get after that pathway defeat.

Mr. LANGEVIN. Thank you, Admiral.

And finally, Director Oxford.

Mr. OXFORD. Thank you, Mr. Chairman. I will break this down into three easy bins. First is we are directly involved using our WMD expertise with Admiral Szymanski's planning cell that is colocated with us, so we are working with his operational planners to help with the plans for the combatant commands.

Secondly, on situational awareness, we are using our software development team to actually develop visualization tools that highlight different aspects of the WMD threat in various AORs [areas of responsibility]. We have done this extensively with USFK [United States Forces Korea], with SOCOM, with 1st Special Forces Group, Seventh Air Force. And in many cases, we are able to give some of these planning tools to the Republic of Korea so we are able to put it onto their network so they have similar situational awareness of the information on the ground inside Korea so we can share across the forces. So we are doing that routinely in terms of visualization, which has common databases people can draw from.

The second thing we have done for situational awareness is we have established what we call a global integration center within DTRA. What we are doing now is we have about 400 people forward embedded with the forces overseas at the COCOMs [combatant commands], at the embassies, in places like that, so we now have cross-information flow coming from the community that is externally based through the combatant commands into this global integration center that is at my headquarters. So that is allowing the cross flow of information to go across all the commands so we have equal awareness of what is going on in each of those and we can share across the global force.

The last area I will talk about is the command support itself. I mentioned the embedded support we have forward. That allows us to have situational awareness on the ground so we understand the requirements. We can rapidly meet those requirements by understanding the operational pressures and what the needs are.

And then the last thing I will mention is I have operational requirements documents from four-star levels for all combatant commands. We have been in direct contact with the commanders of each of the combatant commands to understand what they need in the counter WMD mission set, and then we address those through our capability development process.

Mr. LANGEVIN. Very good. Thank you, Director.

I want to turn now to the ranking member for questions.

Ms. STEFANIK. Thank you.

Vice Admiral Szymanski, SOCOM has now been in the coordinating authority capacity for 2 years. Can you explain how SOCOM views this responsibility, how you have tasked and organized yourself, and what is different now from when that coordinating responsibility was in STRATCOM [U.S. Strategic Command]?

Admiral SZYMANSKI. I certainly thank you for the question. So maybe I will start with the last piece first, how we are different from the STRATCOM. I think it goes a little bit to my last response and that we have maybe taken a different targeting methodology that we have learned from lessons learned with the violent extremist organization, transregional nature of that threat, and have applied that on how we can organize at least planning efforts transregionally on a blue force look against that threat, against those that—that methodology I talked about through pathway defeat.

What we have done internally to organize is, obviously, we stood up the CWMD Fusion Cell headed by Joe—Rear Admiral Joe Diguardo, "Digger" Diguardo, sitting behind me, that co-located with Mr. Oxford's team there up here in DC. And we ensure that we have kind of separated our title 10 responsibilities to man, train, and equip for operating in a contaminate environment and our typical counterproliferation operational role, but—and really put the focus on the three aspects of what the chairman's definition of a coordinating authority, the planning, the—you know, and that is—the basis of that is the functional campaign plan, the annual assessments on all the global campaign plans, our nesting and alignment of our methodology with those global campaign plans, and then finally, making recommendations to the chairman—to the SECDEF [Secretary of Defense] through the chairman for where we again may have to shift resources.

Ms. STEFANIK. Thank you. I wanted to follow up with you, and also Mr. Oxford can weigh in. In addition to my position as ranking member on this subcommittee on HASC [House Armed Services Committee], I also sit on the Intelligence Committee, so I view this CWMD problem through a national intelligence lens as well. Can you comment or how would you grade the intelligence support to CWMD as we compare it to other mission spaces such as counterterrorism? Do you believe that DTRA, SOCOM, and the geographic component commands' intel requirements are being met? I will start with you, Vice Admiral.

Admiral SZYMANSKI. Yes, thanks for the question. I think the enterprise—the intelligence enterprise is well positioned to answer requirements. I think the focus for geographical combatant commanders has largely been on deter strategic effects and attacks, and we are trying to bring, I think, maybe the aspects of the shift to—of the mission towards SOCOM is to bring some focus through that target methodology that may not have been there before. And I think as Mr. Oxford just mentioned, he has got operational requirements now, I think, that are much more tailored towards the CWMD request for support and understanding of the threat, the nature of the threat. It is a complex problem and it needs, you know, a partnered integrated global solution.

Ms. STEFANIK. Mr. Oxford.

Mr. OXFORD. Yes, thank you. I agree with the admiral. We have actually looked at this pretty hard recently. We sat down with a senior group from USDI [Under Secretary of Defense for Intelligence], talked about the collection process, the assessment process. We think we are getting everything we need. We are working hard now to understand where we need to be looking better, but I will tell you that we have got full support. I was with Secretary Kernan last Friday. He said whatever we need we will get from his community. He is committed to that. So it is a matter of us identifying, as we get into great power competition, how do we ask that question better. Sometimes it is one thing to say do you have what you are getting at, but if you are not asking the right questions it is hard for the intel community to respond.

Separately, I will say we have also reestablished some interagency working groups that had gone into default. When I came back into the office, I started working with the IC [intelligence community], with SOCOM. We now have some interagency groups that are looking at this in detail and sharing information better than we ever had. I will have to go into the details in the closed session in terms of what those groups look like.

Ms. STEFANIK. Thank you. I look forward to following up in closed session.

I yield back.

Mr. LANGEVIN. Thank you.

I now recognize Mr. Larsen for 5 minutes.

Mr. LARSEN. Thank you.

Mr. Oxford, can you talk a little bit about how current events are impacting DTRA's operations and plans and how emerging technology is impacting DTRA's operations and plans, and whether or not you are budgeted for that?

Mr. OXFORD. So there is a—it depends on what you mean, Congressman, by current events. There are so many on a daily basis. We are faced with the evolving counter UAS [unmanned aircraft system] threat as one example that has grown rapidly in the CENTCOM [U.S. Central Command] AOR with CENTCOM and SOCOM forces at risk. We have been working that hard for the last 2½ years.

When that threat emerged, we were able to do some things to deal with some of the early threats. Again, I can go into the details in the closed session in terms of how we did that, but we are seeing that threat evolve every 60 to 90 days.

Mr. LARSEN. The counter UAS?

Mr. OXFORD. The counter UAS threat. The adversary is evolving to our countermeasures, and we have to just stay in front of that through predictive analysis and some of the analytic capabilities we have. It is a challenge. Right now, I think we are properly resourced to get after that problem. We have just got to stay in front of the evolving threat.

As many people in this committee know, the 4G, the 5G kind of evolution provides both us advantages, it provides the adversary advantages in how they can essentially get out in front of some of our countermeasures. So we need to look at that every day, and we can talk a little bit more about that in the closed session if that helps.

Mr. LARSEN. Yes, that would be great. Does the same principle then apply on emerging technology, increased use of artificial intelligence [AI] and the collection of data and what adversaries are doing with it but what you are doing with it as well?

Mr. OXFORD. Clearly, from our vantage point, as we have talked to some of you about, we are applying this in abundance because we have to get after the great power competition these days. And we are taking AI, we are using it with all the ops intel data that we are actually collecting through two analytical cells, one that we have through our Joint Improvised Defeat Office that is in Reston, the other one that we have that we share with Admiral Szymanski, the SOCOM support program that is in Herndon. We bring in large data sets. We have to apply the AI to that, but to drive to operational outcomes in this case it is to get after the nodes of the network to identify the people, places, and things that are operating those networks to be able to counter those.

Mr. LARSEN. Do you have the people to do that or is that a restriction for you to expand your capabilities?

Mr. OXFORD. So I think this falls into similar categories of cyber and big data analytics, and the fact that there is a growing demand so it is a competition that we face. What we find in many cases, if you are doing this in an applied way as opposed to a pure research way, people enjoy the national security nature of the work. But clearly, as we look at the growing threat space, we are going to need more people, because it is not the people that does AI, it is the people that actually interpret the AI results that make decisions.

Mr. LARSEN. Secretary Hassell, on chemical demilitarization, the program has had two Nunn-McCurdy breaches in the last 8 years, and your budget request is about $985 million, a little under a billion dollars. Will the program—I am sure the answer is yes, so why don't you just say yes and then I will just agree with you. Will the program be able to complete all required destruction by the 2023 deadline?

Dr. HASSELL. So thank you, Congressman. If I may, I will tell you why I am going to say yes.

Mr. LARSEN. Perfect.

Dr. HASSELL. There has been a change. I have been in this office for 5 years, and I have observed it, because it was somebody else's program, but I have observed the problems that they have had. And two things have happened that give me good cause for hope.

One is simply a change in leadership, very, very good leadership right now that is making a difference. They are making measurable headway against the stockpile, and you can almost track that with some of these people being in place now.

Mr. LARSEN. So, well, how are they doing that, how are they accelerating then the destruction?

Dr. HASSELL. Well, one thing they are doing is also bringing in some alternative technologies. So there is——

Mr. LARSEN. Such as?

Dr. HASSELL. New technology, some of the explosive chamber systems. I am going to quickly get outside of my area here, but I do know there is some new technologies that they are bringing in to augment what they were already building in those facilities. They are improving just the process throughput on those facilities, holding the contractors more accountable.

Mr. LARSEN. Okay. So Nunn-McCurdy breaches are about cost control. Is—do you foresee this fiscal year 2020 request being adequate?

Dr. HASSELL. I believe so, but I guess I would prefer to defer to DASD [Deputy Assistant Secretary of Defense] Ball who leads that, and we can get you a written response to that, if you don't mind.

[The information referred to can be found in the Appendix on page 87.]

Mr. LARSEN. I wouldn't mind that at all. I wouldn't mind that at all.

Dr. HASSELL. Thank you.

Mr. LARSEN. With that, I yield back. Thank you.

Mr. LANGEVIN. I recognize Mr. Gallagher for 5 minutes.

Mr. GALLAGHER. Thank you, Mr. Chairman. Thank you all for testifying this afternoon.

So basically, since the nineties we have seen Russian military doctrine changing in the direction of consistently lowering the threshold for its nuclear firebreak. And given this so-called escalate to deescalate doctrine, how, if at all, and we will start with you, Ms. Whelan, are we planning to deter or mitigate the effects of low-yield nuclear weapons on the battlefield? Is it even something we can mitigate?

Ms. WHELAN. Thanks for the question. That actually falls to our Deputy Assistant Secretary of Defense Soofer, who handles nuclear and missile defense issues. I will say just from a WMD perspective, we do—we are concerned about the low-yield nuclear weapons in terms of creating greater risks of proliferation, because as you have tactical weapons, you push them farther down into the units, you reduce security. So that is a problem from a WMD or a counterproliferation perspective. But in terms of deterrent strategy, I would defer to my colleague, Dr. Soofer.

Mr. GALLAGHER. Well, for anybody on the panel, I mean, are there any capabilities that we can field or any capabilities conversely that we are seeing the Russians field that would give them the ability to operate in a post-radiation environment? Whoever wants to volunteer.

Mr. OXFORD. Congressman, one of the things we are doing is not necessarily the operations, but we are—for example, one of the requirements that I won't go into great detail on, we can do this in

the closed session, from General Scaparrotti is how to counter the influence of those low-yield Russian nuclear weapons. What does it mean for the operability of his entire command? It becomes a deterrent strategy that you can't take down part of the network and defeat his capabilities. We are working daily at mission assurance looking at his command and control systems, his theater ballistic missile systems, and looking at their hardness and their survivability to such attacks so we understand how they would operate.

Mr. GALLAGHER. And then the final thing I would ask is, as we consider the North Korean scenario, obviously, you know, any outbreak of kinetic conflict would involve enormous destruction. I mean, Seoul, I think, is the second largest metropolitan area in the world. You have thousands of pieces of artillery in Kaesong Heights that can range Seoul. Give us a sense of how we should be thinking about the WMD component of that. And do you get the sense that, when we do our war gaming, what does it reveal? Maybe part of this will have to be in classified session, but to the extent you can address it in an unclassified scenario, how should we be thinking about that as we try and support efforts to solve this crisis diplomatically?

Ms. WHELAN. So from—I will just start out very briefly from a policy perspective, and you are right, much of that would need to be discussed in a classified session. But from a policy perspective, it is our intent that our forces on the peninsula are able to operate in a contaminated environment, if need be.

We certainly are aware of the North Korean capabilities and potential intent to use in contingency. So it is a top priority for us to be prepared or have our forces prepared to address that. I will let my colleagues, though, speak to some of the details.

Mr. OXFORD. So I will let Dr. Hassell address the personnel protection, collected protection. One of the things we have done is recognize that some of the modeling of nuclear weapons' effects and other effects were inadequate to understand what the contaminated environment looked like to begin with. We have developed some capabilities now where we have radiation detectors mounted on Army Stryker vehicles, so they at 40 miles per hour can navigate through an environment and find out where the radiation actually is as opposed to considering an entire area off limits. It no longer exposes the soldiers to the actual atmospheric environment. It gives us the opportunity then to be mobile in that contaminated environment.

Dr. HASSELL. I would just add about the preparedness aspect. The NDAA last year directed us to do a study specifically on the issue of preparedness on the peninsula of the U.S. forces. So we submitted that report about a month ago and it highlighted that things had improved over the years but there were some gaps. And so we are going through right now and looking at what are the gaps we need to fill, both from our program but also from the services who were responsible for the long-term sustainment.

So we are working for the response to this, the implementation plan for this, and this is another example working through the Unity of Effort group. Like I said earlier, this is one that is going to need an approach, not just on the materials and, you know, the physical materials, but it is going to need to make sure that we are

addressing training, doctrine, policy, all aspects of this. And again, this is one of the priorities for the Unity of Effort.

Mr. GALLAGHER. Thank you. My time has expired.

Mr. LANGEVIN. Thank you, Mr. Gallagher.

Ms. Houlahan is recognized for 5 minutes.

Ms. HOULAHAN. Thank you, sir.

My first question is probably for Ms. Whelan and Dr. Hassell. It is sort of a 30,000-foot question, which is it looks as though the budget, the proposed budget is about a 5 percent increase year over year in terms of the chemical warfare CWMD, but I also see that it looks as though RDT&E [research, development, test, and evaluation] has gone down by about $36.4 million in the proposed budget as well. So I am curious kind of what was the calculus. Why did we decide not to invest a proportionately 5 percent more in RDT&E or at least flat?

Dr. HASSELL. So if you look at this historically, there is a cycle that takes place. So even though it looks like the RDT&E is going down, the total budget, the procurement is going up. We are transitioning things from RDT&E into procurement. So over the next 5 years, the procurement budget will be doubling. And just if you look at historically at programs like this, there will be a cycle going in there, and then we will be filling in the RDT&E to kind of come along behind that and start developing the next generation of systems.

Ms. HOULAHAN. Ms. Whelan.

Ms. WHELAN. The only thing that I will say with regard to sort of the overall level of effort is that I think the Department has actually increased the level of effort in the last couple of years, particularly with the UCP [Unified Command Plan] transfer of the mission to SOCOM and the establishment of SOCOM as the coordinating authority. So I think you have seen an increase in overall level of effort on this topic within the Department.

Ms. HOULAHAN. So my specific question or a little bit more of a deeper dive question, do you feel like, by effectively reducing RDT&E, although it may be cyclical, that on areas like synthetic biology or gene editing or any of those other kinds of things that are moving really fast, that we are maybe vulnerable?

Dr. HASSELL. So that is a specific area we are looking at right now on synthetic biology, just take that as one example. So we are going back and looking at what have we been doing to date, because we have been dealing with this for some time, looking at our internal resources, our own infrastructure, and our personnel that we have internally, and it kind of touches on an earlier question too about personnel, but also looking at our engagement with industry and academia.

And what we are finding is there are also some efficiencies we can gain there, so we have joined some academic industry consortiums. So rather than having to individually engage with these, we can go and present things to the consortium, and they can take it on. We have implemented other transactional authority, and we formed several consortiums specifically for DOD. So in one case, there is a CWMD consortium for the other transactional authority system. We have almost 200 member companies that are part of that. That is much more efficient. We can move much more quick-

ly, and that in turn saves money, so it looks like we are not spending as much, but we are getting more for it.

Ms. HOULAHAN. Thank you. I very much appreciate that. With the remainder 2 minutes of my time, I just have a question on this map here, which just visually, if you kind of look at it, the blue indicates the biothreat reduction efforts that are going on in DOD. And I also sit on the Foreign Affairs Committee specifically in Asia and Africa as well, and obviously, blue seems to be lighting up the map here in terms of our efforts.

So my specific question is how are the State Department and DOD working together on these efforts? And do you feel as though the coordination is strong or that there are any barriers that we might perhaps be helpful on or that you have identified between DOD and State?

Ms. WHELAN. So I will go ahead and take that, Congresswoman, and thank you for that. Actually, as a reformed Africanist, I can speak specifically to that area that that is my regional area of expertise. But in general, we actually have terrific cooperation with the State Department in our CTR [Cooperative Threat Reduction] programs and also in our security cooperation programs writ large, which are mutually reinforcing.

So in the blue areas that we are working, particularly in Africa, we have the State Department actually looks to us to work on these particular programs because not only do they enhance these countries' capabilities to detect nefarious activities regarding a biothreat, but they also help build our relationships with these countries government-to-government, mil-to-mil, so it is quite an effective partnership.

Ms. HOULAHAN. Thank you. And I have about 20 seconds if you have—Dr. Hassell, if you have anything else to add.

Dr. HASSELL. I just give one example, perhaps the Ebola response in 2014 and 2015. We were on the phone with the State Department several times a week, a consortium, I am sorry, I am using that word too much, but a group of many different offices within DOD working together with the offices there to coordinate our response to that, and so it has been very good. There is other examples as well, but beyond just these areas on the map, but——

Ms. HOULAHAN. Perfect. Thank you.

I apologize for going over, and I yield back.

Mr. LANGEVIN. Thank you, Ms. Houlahan.

Mr. Bacon is now recognized for 5 minutes.

Mr. BACON. Thank you, Mr. Chairman. I thank you and the ranking member for how you lead this subcommittee. I appreciate the bipartisan spirit. And thanks to all four of you for being here today.

I would like to ask a little about the university research, and do we have it funded at the right levels, do you need more? I would love to get your feedback on it. But specifically, University of Nebraska is very involved. I mean, we have a UARC [University-Affiliated Research Center] that works on WMD and WMD detection. They are the Ebola center of excellence in our country. I mean, they were one of the hubs during the Ebola crisis. For example, they do foot-and-mouth disease detection, which could be weapon-

ized. There are a lot of research there. They have a cyber research center.

So I just want to get your feedback from you all. Are we—just the research with our universities at all, are you seeing good dividends or could you just give me your thoughts on it? Can we fund it more or should we? Whoever would like to tackle it.

Dr. HASSELL. So I will give you my standard answer. It depends. I think there is assumptions sometimes that we should start with the assumption we are going to do everything internally. We have fantastic laboratories and fantastic people in them. But there is so much talent, as you well know, outside of the Department and outside of the government laboratories. So especially on the earlier stage research, we always work very closely with the universities. Our proposal calls especially for the very early stage research are really aimed at that community, and that is the foundation, that is the seed corn from what we build from.

And as I mentioned before, we are exploring the use of consortia and professional societies and other things that will help us to get at that academic community a little more efficiently.

So I think it is very good, and I come from an academic background and spent several years running a university institute, so I am sensitive to the question. There are times, though, where it has to cross over into classified areas and more sensitive issues, so sometimes we do have to bring it in-house.

Mr. BACON. Which in this case they have vaults.

Dr. HASSELL. I was about to say——

Mr. BACON. Those folks have security clearances, at least the ones at University of Nebraska do.

Dr. HASSELL. Right. I was going to add, we have worked to actually get clearances for a lot of people. So in some cases, they don't have to have the facilities, but at least we can draw them in as consultants. And then as you point out, we have other places that do have those facilities that can actually do classified work. We just want to make sure, because of academia, they want to publish, so it is kind of a balance there.

Mr. BACON. My sense is, in this case, they like serving the customer, which is you, and that is my impression. They are proud of it.

Admiral, do you have any other thoughts?

Admiral SZYMANSKI. Only, and it is not really related to CWMD, but since you are asking, I just recently visited Johns Hopkins Applied University—Applied Physics Lab on AI and some other things they are doing for SOCOM, and I just was nodding my head based on your comment there because they are some very talented people and they do want to help. And as Mr. Oxford mentioned earlier, they are really interested in national security. Even if you can't pay them a lot, because we don't have a lot of those skills in uniform, you know, in either CWMD or in AI, and I think we are trying to make them—you know, leverage the full power of that human capital in the universities.

Mr. BACON. Any other comments?

Mr. OXFORD. I think we are funding New York and Nebraska, but I will get back to verify that. But we recognize that, just based on our work with STRATCOM and others out there, that there is

a center out there that we are related to. We can get you the details on what that looks like.

Mr. BACON. I just know they are very proud of it, they are putting a lot of emphasis on it. In fact, I was just talking to the president of the university today, talking about how much he enjoys working this. And maybe in my just closing question or comment for the admiral is they do have a UARC, and they were working close with STRATCOM when they had the mission for WMD, but now that is moved over to SOCOM. I just hope you all are taking it—build on that relationship, because they have 350 researchers, 65 subcontracts working WMD and WMD detection, and I know they want to continue to serve in this capacity more so now that it is even SOCOM. They don't want to stop. So thank you.

Mr. Chairman, I yield back.

Mr. LANGEVIN. Thank you, Mr. Bacon.

Mr. Waltz is now recognized for 5 minutes.

Mr. WALTZ. Thank you, Mr. Chairman. Thank you so much.

I am an OSD Policy alum, and so good to see some familiar faces and a special operator. Vice Admiral, it is good—I think you were in Policy sometime back, maybe 10 years ago, so it is good to see you as well.

One of the things that keeps me up at night at least is where we are going with the synthetic biology piece, and I would welcome anyone on the panel, how advanced is that capability from a threat perspective, particularly from a terrorist perspective? I mean, we sit on many of these hearings, and we are spending literally hundreds of billions of dollars on hardware, on carriers, on bombers, on traditional defense mechanisms, and yet the ability to—for our adversaries to re-create infectious diseases, many of which have long been dormant, I would postulate that our public health infrastructure is not prepared to fully deal with and to employ it. Is this something that is over the horizon or is this something that you are viewing as a threat now? And if so, where does that kind of rack and stack? And I will open that up for any volunteers on that one.

Dr. HASSELL. So I will take that one, because it has been a principal area of emphasis. I would actually move the time scale back, though, because we have been looking at this for a long time. It was possible to use classical gene-editing techniques for many years. I was doing it in the nineties. Things have changed, though, as you point out, things with CRISPR-Cas9 [clustered regularly interspaced short palindromic repeats and CRISPR-associated protein 9], some of these other things that are suddenly on the front page of The New York Times, it has raised a profile and it highlights how things are changing.

We were getting——

Mr. WALTZ. Sorry to interrupt. So is it—and that is what I am trying to get at, is this just a spotlight that is now on something that has existed or has the threat truly evolved and the technology evolved and/or—and, Admiral, I welcome your input there and yours as well, Mr. Oxford—the enemy's ability, particularly ISIS, al-Qaida, traditional terrorist organizations.

Dr. HASSELL. That is where the concern is raised is what is the potential now for a lone actor, small, you know, violent extremist

organization to do that. So that has raised the democratization, as the term is used oftentimes.

One of the things we did is I went and funded a study at the National Academy of Sciences to actually look at this, because we were getting reports all over the place, one, that this is a marketing hype, kind of your—to answer your question, the answer was yes to both, because it was a marketing hype, it really wasn't a change. Others, it is a huge change, everything is new again, and the end of the world is nigh. Where was the truth in between those two?

So we empaneled the national academies. They did two things. One is they developed a framework, so everybody was jumping into doing an assessment, but they weren't stepping back and saying how were you doing that assessment? So they developed their framework and then they used that framework to do the assessment. And I brought a prop. So what they did is they came out with a report this past summer, I am happy to give you a copy of it, and we have talked about this with the staff here for a couple of years now, so this is out now. We are now looking at how we respond to this.

Again, this is interagency working on this very heavily and with the intelligence community to make sure we are looking at——

Mr. WALTZ. Okay. Thank you. Thank you. Just in the interest of time, I do want to commend, I think so far from everything I have heard, it has been a success story in the shift from STRATCOM to SOCOM and the relationship with DTRA and talking to folks. Where are we in doing CTR—in CTR with Russia? And I understand that we no longer are. And where does that—I mean, what effects are you seeing, to the extent we can talk about it in an open hearing?

Mr. OXFORD. So we are not doing CTR. We don't have the authority to work there right now. We probably have the closest working relationship with the Russians through our other treaties—or the New START [Strategic Arms Reduction] Treaty and the Open Skies treaties. We have routine engagements with the Russians, but there is no determination or authority to work CTR with that program, and right now, there has been no push to get in that space.

Mr. WALTZ. And just finally in the interest of time, my understanding is the majority of JIEDDO's [Joint Improvised-Threat Defeat Organization] budget or all of JIEDDO's budget now is in OCO [overseas contingency operations].

Mr. OXFORD. It is.

Mr. WALTZ. So if we go to a continuing resolution, what effect is that going to have on your capability?

Mr. OXFORD. So we have yet to look at what the provisions of that may be. If it is to zero base, to some other level, we would have to go back in and look at the entire agency and figure out what the right blend would be as a result of that. In other words, if you say——

Mr. WALTZ. The effect on operators——

Mr. OXFORD [continuing]. Here is the top line, if you have got to go down to this top line, I would have to figure out the impacts across the entire agency. In my mind, it wouldn't just automati-

cally be an impact to JD; it would be what else would I have to trade off with the rest of the agency mission. So we would have to do a zero sum game across the portfolio.

Mr. WALTZ. Thank you.

I am over my time. Thank you, Chairman.

Mr. LANGEVIN. Thank you, Mr. Waltz, an important line of questions too. And I touched on that in my opening statement, but, you know, I am becoming increasingly concerned about the dual-use technologies, the threats of bioweapons, and we need to have a continued and strengthened focus on this area to keep our country safe, keep our troops safe, and our allies around the world as well.

So, with that, we are going to now move to the closed session. Members will likely have follow-up questions, and we ask you to respond to those questions in writing as expeditiously as possible.

Thank you all for your testimony, the work you are doing every day to keep our country safe.

And, with that, this hearing stands adjourned, and we will now go into the closed session.

[Whereupon, at 3:50 p.m., the subcommittee proceeded in closed session.]

A P P E N D I X

APRIL 3, 2019

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

APRIL 3, 2019

Opening Statement
Chairman James R. Langevin
Intelligence and Emerging Threats and Capabilities Subcommittee

Reviewing Department of Defense Strategy, Policy, and Programs for Countering Weapons of Mass Destruction for Fiscal Year 2020

April 3, 2019

The subcommittee will come to order. Welcome to today's hearing on Reviewing Department of Defense Strategy, Policy, and Programs for Countering Weapons of Mass Destruction (CWMD) for Fiscal Year (FY) 2020.

This past year, both Russia and North Korea famously employed chemical weapon nerve agents in England and Malaysia, respectively. In Syria, pro-regime and ISIS forces have continued to use chemical weapons on civilian populations since 2013 to achieve their tactical and strategic objectives. The President's recent decision to withdraw from the Intermediate Range Nuclear Forces (INF) Treaty could open the possibility of proliferation of intermediate-range and shorter-range missiles. Emerging capabilities in biotechnology may allow individuals acting with nefarious intent—or even just by chance—to produce biological agents in a scope and scale not yet encountered. More emerging capabilities like cyber and hypersonics, among others, threaten to exacerbate the complexity of the world's WMD threats.

In 2014, the Department approved its Strategy for CWMD which outlined three end-states—no new actors possess WMD, no WMD use, and minimization of WMD effects—with associated objectives and lines of effort. The strategy notes fiscal constraints will require that the Department make strategic choices and accept some risk, but rogue actors and technological advances still challenge the strategy's goal of ensuring that "the US. and its allies and partners are not attacked or coerced by adversaries possessing WMD."

Today we will hear from five of the major players in the Department who develop CWMD policies, oversee and execute CWMD programs, and coordinate the Department's CWMD efforts.

We welcome today Dr. D. Christian Hassell, the Deputy Assistant Secretary of Defense for Chemical and Biological Defense who is here today for the Assistant Secretary of Defense for Nuclear, Chemical and Biological Defense Programs in the Office of the Under Secretary of Defense for Acquisition and Sustainment, and we thank him for stepping in. This office is responsible for developing capabilities to detect, protect against, and respond to WMD threats; ensuring DoD compliance with nuclear, chemical, and biological treaties and agreements; continuing to work with allies and partners to strengthen our collective CWMD capabilities; and advancing the United States' nonproliferation goals.

Next, we welcome Ms. Theresa Whelan who is the Principal Deputy Assistant Secretary of Defense for Homeland Defense and Global Security the Office of the Under Secretary of Defense for Policy. The ASD HDGS is

responsible for developing policy guidance; providing policy advice; and overseeing planning, capability development, and operational implementation to assure warfighting and national security advantages in the mission areas of: CWMD; Cyber; Space; and Defense Support of Civil Authorities, among others. The ASD HDGS also supervises the Department's Homeland Defense activities.

Ms. Whelan, we thank you for acting on behalf of Assistant Secretary Rapuano today, who is currently down the hall testifying at our Strategic Forces subcommittee's Space hearing. He was recently before this subcommittee testifying about cyber. Clearly, he's got a big portfolio. We look forward to hearing about the Department's current CWMD policies from you, including: how the Department is ensuring that its Cooperative Threat Reduction programs, which have achieved notable accomplishments in the past, are oriented to address today's threats; and how the Department is thinking about cyber, opioids, and other non-traditional materials and capabilities that could be used to cause mass destruction.

Over the last few years since the strategy was released, the Department has taken some initial steps to strengthen CWMD efforts since the strategy was released. In 2017, Special Operations Command (SOCOM) was designated as the Coordinating Authority for CWMD.

Today, we will hear from Vice Admiral Timothy Szymanski, the Deputy Commander of SOCOM, about how the command is leveraging best practices from its traditional missions and lessons learned in its Coordinating Authority role for countering violent extremism to reinvigorate and integrate CWMD awareness, planning, capacity, and capability across the Department and with the interagency. Welcome, Admiral.

Finally, we welcome Director Vayl Oxford from the Defense Threat Reduction Agency, the execution arm that falls within Secretary Robert's ASD(NCB) office. Before departing, Secretary Mattis approved a new mission statement for DTRA, redirecting the mission from countering and deterring WMD and improvised explosive device threats to countering WMD and improvised threat networks. This, and DTRA's participation in the counter Unmanned Aerial System mission, are substantial evolutions. I am interested in understanding where this agency fits into the Department's CWMD organization today and what effects this change is having on your core mission responsibilities. Director Oxford, we welcome you and look forward to hearing about the changes.

Together, these individuals hold positions that comprise the bulk of assigned roles and responsibilities associated with aligning CWMD policy to strategy and programs, executing CWMD programs, and delivering current and future personal protective equipment and other CWMD capabilities to our warfighters.

In the last few years the CWMD bureaucracy has evolved as the Department has reorganized. In addition to the movement of the CWMD mission from U.S. Strategic Command to USSOCOM, in section 901 of the FY17 NDAA Congress split the former Under Secretary for Acquisition, Technology and Logistics into two positions, the Under Secretary of Defense for Research and Engineering and

the Under Secretary for Acquisition and Sustainment in the hopes of simplifying and focusing the responsibilities of each.

The split of USD(AT&L) into two Under Secretariats serves as both an opportunity, and a potential area of risk, to the CWMD effort. Though both ASD(NCB) and DTRA fall under USD(A&S), there must continue to be coordination within all elements of the Office of Secretary of Defense on CWMD, including with the USD(R&E). This is especially true for the science and technology investment and research and development portfolio so characteristic of DTRA's past focus. There must also be continued focus on, and prioritization of, CWMD by all those with assigned roles and responsibilities, especially considering connected roles and responsibilities of each of your offices. We are looking forward to hearing how the CWMD Unity of Effort Council is operating.

To that end, the Fiscal Year 2019 NDAA included a section mandating that the Secretary of Defense designate a Principal Advisor on CWMD to coordinate the CWMD activities of the Department. Additionally, it directed the development of a plan to streamline the oversight framework of OSD; that plan was to focus on any efficiencies that could be realized and the potential to reduce, realign, or otherwise restructure current ASD and Deputy ASD positions with responsibilities for overseeing CWMD policy, programs, and activities. It also directed a report on these and related efforts be submitted with the FY20 budget. We look forward to hearing about where these all stand today.

Finally, I am concerned that due to almost two decades of war in Afghanistan, Iraq, and Syria, our preparedness for a significant state-level WMD event has atrophied. A few years ago, General Scaparrotti said that he believed we were unprepared, and the Congress has expressed its continued dissatisfaction with our preparedness for such an event, and whether our troops are trained and equipped to operate in a contaminated environment. Thus, the FY19 NDAA directed the Department to submit an assessment on material shortfalls in United States Forces Korea for chemical, biological, radiological, and nuclear defenses. GAO has just begun work on this project.

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

I look forward to hearing from our witnesses on the FY20 CWMD request and note that following this discussion, we will continue in a closed, classified, follow-on hearing.

I'll now turn to Ranking Member Stefanik for her remarks.

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HOUSE ARMED SERVICES COMMITTEE

STATEMENT OF

MS. THERESA M. WHELAN
PRINCIPAL DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR
HOMELAND DEFENSE AND GLOBAL SECURITY
BEFORE THE HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON INTELLIGENCE AND
EMERGING THREATS AND CAPABILITIES
APRIL 3, 2019

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HOUSE ARMED SERVICES COMMITTEE

INTRODUCTION

Chairman Langevin, Ranking Member Stefanik, and members of the subcommittee, I am honored to testify today regarding the Department of Defense's (DoD) efforts to counter weapons of mass destruction (CWMD). Our principal document guiding the Department's efforts remains the 2018 National Defense Strategy (NDS), which established as a key objective the need to dissuade, prevent, or deter State adversaries and non-State actors from acquiring, proliferating, or using WMD. Acting Secretary of Defense Patrick Shanahan issued guidance in February 2019 that reaffirmed the Department's NDS commitment to 1) restore military readiness as we build a more lethal force; 2) strengthen our alliances and build new partnerships; and, 3) drive business reform for innovation and modernization. Although the Department's Strategy for Countering WMD preceded the NDS, our CWMD Strategy provides the pivotal framework that guides our efforts to 1) prevent WMD acquisition; 2) contain and reduce threats of extant WMD; and 3) respond to crises involving WMD. To implement the NDS and CWMD strategy effectively, we must continue to leverage the full support of expertise resident within the Department, including the Department's research and development community, defense and combat support agencies, and the warfighters themselves.

OFFICE OF THE UNDER SECRETARY OF DEFENSE FOR POLICY ROLE IN CWMD

The Office of the Under Secretary of Defense for Policy (OUSD(P)) is the principal staff element of the Secretary of Defense for all matters on the formulation of national security and defense policy and the integration and oversight of DoD policy and plans to achieve national security objectives. As the Principal Deputy Assistant Secretary of Defense for Homeland Defense and Global Security (ASD(HD&GS)), within OUSD(P), I support the ASD(HD&GS) in executing responsibilities for the Department's CWMD policy and strategy. Our staff develops and oversees the Department's policies and plans to protect and respond to a chemical, biological, radiological, nuclear (CBRN) attack and any type of destabilizing CBRN-related event to include natural, accidental, or intentional spread of dangerous pathogens and toxins that may threaten the U.S. Armed Forces, our homeland, and other U.S. interests. We represent DoD's interests in traditional counter-proliferation and non-proliferation policy matters; we coordinate the Department's assistance, through the Department of Homeland Security, to

Federal, State, and local officials, including responses to threats involving nuclear, radiological, biological, and chemical weapons, high-yield explosives, and related materials or technologies; and we coordinate assistance identifying, neutralizing, dismantling, and disposing of these weapons and materials. We develop priorities for, and advise the Secretary on, the Department's CWMD building partner capacity programs to counter WMD proliferation and use, including guidance for DoD's Cooperative Threat Reduction (CTR) Program, the Department's CWMD security cooperation and building partnership capacity activities under the authority of Section 333 of Title 10, U.S. Code, and the Department's Proliferation Security Initiative (PSI) engagements. We also work with Allies and partners to coordinate, de-conflict, and leverage our respective non-proliferation and threat reduction expertise.

OUSD(P) staff works closely with our colleagues across the Department to develop policy that guides these specialized programs, many of them implemented by the Defense Threat Reduction Agency (DTRA), to ensure cohesion as we support the three NDS lines of effort. We work closely with our partners in the office of the Under Secretary of Defense for Acquisition and Sustainment (OUSD(A&S)), specifically the Assistant Secretary of Defense for Nuclear, Chemical, and Biological (ASD(NCB)) Defense Programs, to ensure DoD has the capabilities and capacities necessary to protect our forces. Of course, all of these efforts take into account the priorities of our geographic Combatant Commands (CCMD), and seek to complement the activities of other Federal departments and agencies and our international partners. We work closely with the Chairman of the Joint Chiefs of Staff and the Combatant Commanders, particularly the Commander of U.S. Special Operations Command (USSOCOM) in his role as Coordinating Authority for CWMD, to ensure our CWMD efforts integrate with the CCMD regional activities while addressing the global nature of the CWMD threat. We also work closely with the Commanders of U.S. Northern Command (USNORTHCOM) and U.S. Indo-Pacific Command (USINDOPACOM), who are responsible for Homeland Defense and Defense Support of Civil Authorities (DSCA)

THREAT ENVIRONMENT

The Department's CWMD Enterprise is postured to address current and evolving CBRN threats. North Korea poses a near term risk across the WMD spectrum to the United States and to our allies and partners. The regime continues to advance its nuclear, missile, chemical, and

biological programs in violation of multiple United Nations Security Council Resolutions (UNSCRs). The Administration's diplomatic efforts to achieve the final, fully verified denuclearization of North Korea, combined with sustained pressure to enforce broad sanctions, led the North Korean regime to pause its nuclear and missile testing over the past year, and to dismantle elements of its missile and nuclear testing infrastructure. Nevertheless, the current breadth of North Korea's WMD and missile programs continues to undermine regional and international security as well as the broader nonproliferation architecture. The Department must remain postured to prevent WMD and missile-related proliferation to or from North Korea, counter and respond to WMD and missile attacks from North Korea, and continue to work with allies and partners to ensure they are postured to mitigate North Korea- CBRN threats.

Russia and China continue to advance their strategic and nonstrategic arsenals, forcing the DoD CWMD community to continue to assess risks and capabilities in a traditional combat sense. We must ensure that our policies focus on meeting requirements to enable our forces to fight and win in a contaminated environment, in part, so our adversaries see that our preparedness will deny them the advantages they seek. Chemical weapons (CW) use is one of our top concerns: Russia in the United Kingdom in 2018, the Syrian regime against its citizens, North Korean agents in a Malaysian airport in 2017, and ISIS in Syria and Iraq. This continued use of CW, including increasingly advanced agents, erodes long-standing established global norms against CW use and threatens global security.

The United States remains committed to denying Iran all paths to a nuclear weapon. Iran's potential intent to pursue WMD capabilities remains poorly understood and, consequently, worrisome. The intelligence community assesses that Iran needs at least one year to develop a nuclear weapon from a decision to do so, though that timeline assumes Iran would continue to adhere to all current restrictions on its nuclear program. Additionally, the U.S. remains concerned Iran is developing chemical weapons (CW) agents intended to incapacitate for offensive purposes and did not declare all of its traditional CW agent capabilities when it ratified the Chemical Weapons Convention. Iran's uncertain WMD pursuits heighten the WMD risk in an already-volatile region of the globe.

Rapid technological advancements, such as those mentioned in the Worldwide Threat Assessment, combined with increased access to dual-use materials and expertise, further complicates the WMD threat environment thus compelling us to expand our focus beyond the

"traditional" threats to those posed by novel and emerging technologies. Looking forward, we are increasingly concerned about advances in cyber technology, unmanned aircraft systems, and other technologies, which threaten to create a new set of weapons with potential WMD-like impacts. Biotechnology in particular remains an area of keen focus for the DoD CWMD Enterprise, both because of the benefits that biotechnology advancements can lend to the broader Department, and because of the risks that may come from the misuse – by State and non-State actors – of emerging capabilities. The potential for wholly novel bio-agents to challenge the Department's detection and countermeasure capabilities means we must ensure that our experts are pursuing agile approaches to protecting our personnel, the U.S. homeland, and our nation's interests. Working closely with its partners, DoD strives to understand and anticipate both the promise and the peril of cutting-edge biotechnologies. We want to improve our forces' ability to fight effectively against the most likely threats they could confront today, while developing the policy and guidance necessary to ensure our forces in the future will be similarly able to deter and if necessary defeat any adversary.

DEPARTMENT CWMD PRIORITIES

Our four priority CWMD objectives are to 1) reduce incentives to pursue, possess, and employ WMD; 2) increase the barriers to WMD acquisition, proliferation, and use; 3) manage WMD risks emanating from hostile, fragile, or failed states and safe havens; and 4) deny the effects of current and emerging WMD Threats through layered, integrated defenses. As the DoD official responsible for the Department's CWMD policy and strategy, we must respond to these CWMD objectives efficiently and effectively in support of our National Defense Strategy. Close cooperation with our partners within the Department and with other Federal departments and agencies enables DoD to prioritize efforts to identify risks and counter WMD threats when and where appropriate.

Restore Military Readiness, Build Lethal Force

To prevent adversaries from acquiring WMD or delivery system-related capabilities, DoD supports a broader interagency approach to prevent the proliferation of WMD and related materials. The threat of interdiction can serve as a deterrent to point-to-point transfer of WMD. In particular, when other U.S. government or foreign partners are unable to prevent the point-to-

point transfer of WMD-related or dual-use materials, DoD retains the capability to interdict materials. This capability is not often required but is crucial to a layered approach to increasingly adaptable adversaries who are constantly searching for new ways to transfer materials outside of the reach of the nonproliferation architecture.

In line with the NDS objectives, the Department remains prepared, with unique and flexible capabilities, to respond to and resolve CBRN crises rapidly and decisively, whether at home in support of civil authorities, or abroad. Our overall approach to countering WMD threats emphasizes efforts to contain and reduce risks, and if those efforts fall short, to emphasize deterrence. A Joint Force that is prepared to prevail in a CBRN environment both reinforces our deterrence and alternatively, should deterrence fail, ensures the nation is postured to address any threat. To guarantee our warfighting capabilities, we take deliberate action to protect the force and manage the consequences of CBRN use through identifying indications and warnings of use or anticipated use, coordinating with our Allies and partners, resolving acute CBRN hazards, recovering casualties rapidly, and decontaminating personnel, equipment, and logistics nodes.

One of our top military CBRN defense priorities is to target the source of a CBRN attack to prevent ongoing or future threats. For instance, at the direction of the President in April of 2018, the Department, along with our UK and French Allies, struck the Assad regime's chemical weapons targets in response to the regime's use of chemical weapons in Douma killing and injuring its civilians. Prior to the Syrian regime's use of chemical weapons last year, we advised on the development of a framework that would inform DoD's recommendations and response options should the regime again employ chemical weapons. In the immediate aftermath of the Syrian regime's use of chemical weapons, staff from Policy's regional and functional offices were able to advise the Secretary of Defense on specific implications with regard to the response options under consideration.

Our staff also works to identify opportunities with partner nations to ensure they have the capability and capacity to respond to and mitigate the effects of CBRN incidents, as well as to scope CWMD engagements with those partners. Building partner capacity 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 to enhance the Department's capabilities. Following the use of 'novichok' nerve agent by Russia in its failed attempted to assassinate two individuals in

the United Kingdom, DoD's policy, technical, operational, and intelligence experts worked closely with North Atlantic Treaty Organization (NATO) allies to enhance understanding of the threat and strengthen NATO's posture to counter threats posed by Russia's chemical weapons program.

DoD, supported by other U.S. departments and agencies, works closely with Republic of Korea and Japanese counterparts to prepare regional alliances to respond to WMD contingencies on, or emanating from, the Korean Peninsula. Our staff organizes bilateral fora for operations, intelligence, policy, and research and development communities of experts to identify weaknesses and deficiencies in U.S. and bilateral contingency plans. These fora enable us to forge bilateral consensus on priorities, and to provide policy guidance enabling effective CBRN defense operations with our partners and allies. This year, members of our staff and ASD(NCB) staff began implementing a significant program to enhance the Republic of Korea's capability to support allied CBRN defense missions in a contingency operation, bolstering our interoperability and strengthening our alliance. The CBRN engagements have succeeded in bringing together stakeholders to face a common problem set and encourage future planning and interoperability.

From the homeland perspective, in accordance with Section 2313 of Title 50, U.S. Code, Mr. Rapuano is the DoD official responsible for coordinating the Department's assistance, through the Department of Homeland Security (DHS), 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. We work closely with USNORTHCOM and USINDOPACOM to ensure that DoD forces remain ready to deter, defend against, and, when required, defeat and respond to nation-State or terrorist WMD attacks on the homeland in the air, maritime, and land domains. DoD's primary objective is to prevent or counter WMD attacks militarily to preclude further attacks; however, DoD may also be called upon to provide additional CBRN response capacity and capabilities in support of the national response system.

DoD supports the efforts of its Federal- and State-partners to prepare to respond to CBRN incidents in the homeland, through integrated regional planning, training, and exercises conducted in coordination with DHS, the Federal Emergency Management Agency, the Department of Health and Human Services (HHS), the Federal Bureau of Investigation (FBI), and other Federal partners. DoD assists civil authorities' efforts to detect, identify, neutralize,

dismantle, and dispose of CBRN threats before they reach our nation's borders and if they succeed in penetrating our borders, DoD leverages its capabilities to prevent employment against our nation and its population. 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 of civil authorities to help save and sustain lives in the aftermath of a CBRN incident.

Strengthen Alliances and Building Partnerships

DoD's Cooperative Threat Reduction Program is a powerful tool for CWMD. As Mr. Roberts and Mr. Oxford will describe further, the DoD CTR Program continues to be the Department's, most comprehensive and most effective strategic-level tool for working cooperatively with international and interagency partners to mitigate WMD-related threats, before an incident or crisis occurs. Title 50, Chapter 48, of the U.S. Code provides authorities for the DoD CTR Program to carry out activities in a uniquely flexible way with its own appropriation, to reduce the threats posed by WMD and related materials. The ability to obligate and expend appropriated funds over three years, the authority to accept foreign contributions, and the authority to work directly with our partners' civilian and military establishments allow the DoD CTR Program to address emerging WMD threats rapidly with our new and existing partners.

In recent years, the DoD CTR Program's authorities, along with its established capabilities and expertise in reducing the WMD threat, have allowed Germany, Canada, and the United Kingdom, to provide funding to the DoD CTR Program for activities that achieve common CWMD objectives. Our office is responsible for providing the DoD CTR Program with strategic policy guidance and for representing the Program on policy matters to interagency and international partners. We continue to engage with our international Allies and partners in the CWMD space to coordinate and de-conflict our programs with an eye toward burden-sharing, enhancing capabilities, promoting interoperability and leveraging regional strengths for the DoD CTR Program's future. The DoD CTR Program uniquely fills a strategic void that traditional DoD Security Cooperation programs cannot address. It also aligns global strategic priorities with our authorities to enable the program to work with host nation institutions beyond traditional security entities, enabling a whole-of-government approach to threat reduction efforts

in our partner nations. Together with DTRA, OUSD(A&S), and USSOCOM, we are able to leverage the CTR Program as a policy-driven CWMD tool where and when partnerships are the best and most efficient avenue for mitigating WMD threats. Additionally, we are able to align the CTR Program with traditional security cooperation authorities, security cooperation programs, and with CCMD priorities for maximum effectiveness. Our interagency and international cooperation has enabled the DoD CTR Program to carry out CWMD activities in South Asia & Southeast Asia, Sub-Saharan and North Africa, and throughout the Middle East.

Section 333 of Title 10, U.S. Code, provides DoD with a consolidated authority to build partner nation capability. For the CWMD mission, Section 333 enables DoD to train and equip foreign national security forces to conduct CWMD operations. In Fiscal Year 2019, DoD is helping nearly two dozen countries in Europe, the Middle East, and Southeast Asia to develop CBRN incident-response capacity. The Department is optimizing this authority to mitigate the potential consequences of a CBRN crisis and to ensure our partners contain the threat. Our engagements supported by Section 333 funding enable our partners to enhance their support to common regional and international counter-proliferation objectives.

One of our priority efforts to contain and reduce threats is the multinational effort to enforce North Korea-related UNSCRs. The United States, via USINDOPACOM, is coordinating partners through an UNSCR Enforcement Coordination Cell embarked on the USS Blue Ridge. The cell is charged with disrupting and ending illicit ship-to-ship transfers of refined petroleum in contravention of UNSCR 2375 and preventing deliveries of refined petroleum beyond the UNSCR 2397-permitted 500,000 barrels per year. The intelligence community assesses that this petroleum is available to both the WMD and missile programs, and that disrupting these transfers will likely be one of the key efforts to spur the North Korean regime to engage in meaningful denuclearization negotiations. Australia, Canada, France, Japan, New Zealand, the Republic of Korea, and the United Kingdom have all contributed personnel or assets (aircraft or surface vessels to take images of illicit transfers) in support of diplomatic and intelligence efforts to disrupt networks and, where possible, to prevent transfers from occurring. This effort continues, even as North Korea works to adapt to our enhanced surveillance efforts, and our CWMD policy role is to ensure that our enforcement actions are producing the desired effect.

Multilateral arms control, particularly through the Nuclear Nonproliferation Treaty (NPT), remains the primary means for the international system to contain and reduce extant

nuclear threats. The NPT remains the cornerstone of the nuclear nonproliferation regime. It enables international cooperation in the peaceful uses of nuclear energy in conformity with the nonproliferation requirements of the Treaty, and spurs the development of measures that may be effective in enabling nuclear disarmament when security conditions allow. OUSD(P) will represent DoD in supporting the Department of State at the April NPT Preparatory Committee, the last before the 2020 NPT Review Conference, which will also mark the NPT's 50th anniversary. As part of these efforts, DoD will continue to engage partners as required to make clear that the Nuclear Weapons Ban Treaty is an extremely problematic document that takes no account of the prevailing security environment, risks undermining the NPT regime because of language in the treaty, and will not result in the elimination of a single nuclear weapon.

The international community works together to prevent adversaries from acquiring CBRN and delivery-system related capabilities through diplomatic, law enforcement, customs, financial, military, and intelligence channels. One way DoD supports these efforts is through the Proliferation Security Initiative (PSI), which now has 107 endorsees worldwide, with Palau and the Federated State of Micronesia – two flag-of-convenience States – committing their support this past year. The Department of State is PSI's diplomatic lead, but DoD remains a primary force behind engagements, planning 9 events with 57 endorsing and non-endorsing countries last year alone, with another 9 events planned for 2019. Each of these engagements works to build the political will and capacity of States to interdict WMD, WMD-related materials, and delivery systems.

Business Reform

The DoD CWMD mission is extensive and complex, requiring expertise from across the Department's components to ensure the effective development and implementation of guidance, analysis, capabilities, and activities. In addition to OUSD(A&S), DTRA and SOCOM, here with me today, the Joint Staff, the Military Departments and Services, and the CCMDs, all play their unique role in developing policy, strategy, research, capabilities, intelligence and forces to address DoD CWMD mission requirements. The Department's existing organizational structure and processes enable the DoD CWMD Enterprise to provide both narrow technical expertise and a broad strategic approach to countering WMD threats.

The Department is committed to ensuring DoD CWMD stakeholders are organized, resourced, and energized to address CWMD challenges; that business processes are in place to ensure relevancy into and beyond 2019; and that a suitable mechanism exists to identify and resolve gaps and challenges in the CWMD mission. In 2018, we established the DoD CWMD-Unity of Effort (UoE) Council, which Mr. Rapuano co-Chairs with Lt. Gen David W. Allvin (Director for Strategy, Plans and Policy, Joint Staff) and for which Mr. Roberts (ASD(NCB)) is Vice Chair. In developing the UoE Council, we considered a number of approaches and models and ultimately drew from the cross-functional Special Operations Policy Oversight Council (SOPOC). The CWMD-UoE Council promotes unity of effort among DoD CWMD stakeholders by leveraging existing processes and systems across DoD to share information; improve cooperation; identify issues; generate solutions; and determine actions consistent with the NDS and CWMD Strategy objectives and lines of effort. The CWMD-UoE Council Charter gives the Council the ability to direct subcommittees to execute tasks to streamline coordination across the Enterprise and to raise unresolved issues and recommendations to the Secretary and Deputy Secretary of Defense when necessary. The Charter established the following three working-level fora: Strategy, Plans, Policy, Operations, and Doctrine; Capabilities; and Intelligence (led by the OUSD for Intelligence). Even prior to the Council's endorsement of the Charter in December 2018, the Council began tackling some long-standing issues such as developing operational decontamination guidance to determine how much residual hazard presents a risk and developing an assessment of additional risks that would occur to a non-combatant evacuation (NEO) from a CBRN-contaminated environment. In 2019, among other crosscutting issues we are addressing, we are developing a structured, repeatable approach to setting priorities within the CWMD Enterprise, leveraging the work USSOCOM conducted in developing the Functional Campaign Plan for CWMD, and aligning these plans with the NDS.

Implementation of the 2018 National Biodefense Strategy (NBS) required by Section 1086 of the National Defense Authorization Act for Fiscal Year 2017 (Public Law 114-238) has helped integrate and coordinate our biodefense efforts. The NBS directed a government-wide assessment mechanism that should help identify and correct gaps in government-wide capabilities. The first integrated review is underway now. The Biodefense Coordination Team led by HHS is gathering data to help assess government-wide information about capabilities and start the process of identifying gaps. DoD has provided a defense professional to work at HHS

to help pull together and assess all of the information to identify any gaps. We are confident that this process will yield important insights about DoD's capabilities and identify gaps, some of which our interagency partners may help with and others that will require a shared government effort, to include reform across Federal departments and agencies, to secure a solution.

CONCLUSION

The Department, the U.S. Government and the international community faced a number of WMD challenges in 2018, but with every challenge came opportunity. The Department leveraged those opportunities to increase lethality, build partnerships, and drive reform at every turn. Though we still face significant WMD threats, we remain structured, organized and postured to address any challenge 2019 brings. We thank the members of the HASC-IETC for their continued commitment to and support of this mission space, and your dedication to ensuring that we are identifying and addressing threats and gaps most effectively.

Chairman Langevin, Ranking Member Stefanik, and Members of the subcommittee: We value and appreciate your continued leadership and advocacy for the Department of Defense, within and beyond the CWMD arena. Thank you and I look forward to your questions.

Theresa Whelan
Principal Deputy Assistant Secretary of Defense for Homeland Defense and Global Security

Ms. Theresa Whelan assumed the duties as the Principal Deputy Assistant Secretary of Defense for Homeland Defense and Global Security (HD&GS) as of July 10, 2017. She is a career member of the Senior Executive Service, and prior to coming to HD&GS, from January 20, 2017, until June 5, 2017, Ms. Whelan Performed the Duties of the Under Secretary of Defense for Policy. In this capacity she advised the Secretary of Defense on all matters pertaining to the development and execution of U.S. national defense policy and strategy. Ms. Whelan brings over thirty years of experience in the defense intelligence, defense policy and national intelligence communities.

From March 2016 through January 2017, Ms. Whelan served as the Acting Assistant Secretary of Defense for Special Operations and Low Intensity Conflict.

From July 2015 through March 2016, Ms. Whelan served as Principal Deputy Assistant Secretary of Defense for Special Operations/Low Intensity Conflict.

Before returning to the Department of Defense, Ms. Whelan served as the national intelligence officer for Africa on the Director for National Intelligence's National Intelligence Council. Between 2003-2011, she held three separate deputy assistant secretary of defense (DASD) positions within the Office of the Under Secretary of Defense for Policy: DASD, Homeland Defense Domains and Defense Support to Civil Authorities; DASD, Defense Continuity and Crisis Management; and DASD, African Affairs.

In addition to the deputy assistant secretary positions, her other assignments in the Department include Under Secretary of Defense for Policy's Balkans Task Force, Senior Program Director for the US/South Africa Joint Defense Committee, Countries Director for Southern Africa and West Africa, and African military capabilities analyst for the Defense Intelligence Agency covering West, Central and East African countries.

Ms. Whelan has a Master of Arts in national security studies from Georgetown University, a Master of Science in national security strategy from the National War College, and a Bachelor of Arts in international relations with a minor in Russian studies from the College of William and Mary.

Her awards include three Presidential Rank Executive Awards, two at the Distinguished level and one at the Meritorious level; two Department of Defense Medals for Distinguished Civilian Service; the National Intelligence Superior Service Medal; the American University Roger W. Jones Award for Executive Leadership; the Paul H. Nitze Award for Excellence in International Security Affairs, and the French National Order of Merit.

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House Armed Services Committee

Statement of
David C. Hassell
Deputy Assistant Secretary of Defense
for Chemical and Biological Defense

Representing
The Office of the Assistant Secretary of
Defense for Nuclear, Chemical, and
Biological Defense Programs

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

April 3, 2019

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

INTRODUCTION

Chairman Langevin, Ranking Member Stefanik, 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), and to provide context on the President's Fiscal Year 2020 (FY2020) budget request.

The Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs ("NCB") is responsible for advising the Secretary of Defense on nuclear weapons, some aspects of nuclear energy, and chemical and biological defense matters. The office provides oversight of the Department's nuclear weapons-related programs, chemical and biological defense, chemical demilitarization, and the Defense Threat Reduction Agency (DTRA). Together, we help to ensure the Department's investments both align with the National Defense Strategy's three lines of effort: to increase lethality, strengthen alliances, and reform how we do business, as well as aligning with the Department's Countering Weapons of Mass Destruction (CWMD) strategy to prevent WMD acquisition, contain and reduce threats, and respond to crises.

Toward these ends, the President's FY2020 budget request includes resources to reduce threats and protect warfighters in several areas. The Chemical and Biological Defense Program's (CBDP) budget request of $1.4 billion will continue to develop capabilities to increase the resiliency of our warfighters and support efforts to deter, prevent, mitigate, respond to, and recover from chemical, biological, and radiological threats and their effects. Our Chemical Demilitarization budget request of $985.5 million will support the safe, complete, and treaty- compliant destruction of the U.S. chemical weapons stockpile. Our Nuclear Matters budget request of $64.6 million will continue the development of policies that guide the safety and security of the nation's nuclear deterrent and counter threats of nuclear terrorism and nuclear proliferation. The DTRA budget request of $1.9 billion includes resources to address the full spectrum of WMD-related threats, including Cooperative Threat Reduction programs, improvised threat networks and support to Combatant Commands in their efforts to identify and reduce threats globally. Lastly, our Threat Reduction and Arms Control budget request of $61 million will accelerate the advanced development and delivery capabilities to counter weapons of mass destruction by meeting requirements and closing gaps for key stakeholders such as U.S. Special Operations Command, U.S. Central Command, the Air Force Technical Applications Center, and the Military Services.

ENHANCING LETHALITY AND RESTORING READINESS

The lethality of the Joint Force depends on our warfighters' ability to deter, prevent, protect against, mitigate, respond to, and recover from chemical, biological, radiological, or nuclear (CBRN) weapons and their effects.

CBRN agents pose uniquely destructive threats. They can empower a small group of actors with terribly destructive potential. Thus, countering weapons of mass destruction (WMD) as far from our homeland as possible, is a key mission for the U.S. military we help enable.

Our focus is on ensuring that our nuclear deterrent is safe, secure, effective, and survivable; providing an adequate nuclear force posture to deter aggression and the use of WMD against the United States or our allies; expanding resiliency in our capabilities and

defenses so our forces can fight through new and emerging threats; and strengthening our conventional defenses to optimize warfighter performance against traditional threats.

Ensuring a safe, reliable, and effective nuclear deterrent

A robust and modern nuclear deterrent has been the cornerstone of American security for more than seventy years, and underwrites U.S. security, diplomacy and conventional military operations worldwide. Given the strategic environment, nuclear deterrence is more important now than at any time since the end of the Cold War, and it is the highest priority mission of the Department of Defense. The diverse capabilities of the nuclear triad provides the flexibility and resilience needed for a credible deterrent and our nuclear posture that is critical to preventing both the use and proliferation of WMD. Through our extended deterrence commitments to allies in Europe and the Asia-Pacific region, our nuclear forces have helped address allied concerns with regional threats and, in turn, have also helped prevent the proliferation of nuclear weapons by reducing incentives for U.S. allies to develop their own nuclear weapons. Further, our nuclear deterrent helps ensure competition and conflict with potential adversaries does not escalate to large-scale war and discourages the use of WMD of any kind against the U.S., our allies, and our partners.

Nuclear Physical Security and Nuclear Forensics

To sustain effective deterrence against dynamic and uncertain future threats, we are not only modernizing our triad, we are also improving nuclear security exercises and technologies and investing in enhanced nuclear forensics and attribution capabilities.

Ensuring the safety and security of U.S. nuclear weapons is a top priority. NCB is currently rewriting physical security guidance regarding protection of nuclear weapons and nuclear command and control facilities, as well as special nuclear material under our auspices. 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 as determined by the Defense Intelligence Agency. This exercise accounts for foreign and domestic threats, including those posed by evolving technologies, such as unmanned systems. We are expanding the scope of the MIGHTY GUARDIAN program to include evaluating security of our critical nuclear command and control platforms, and in the future, we will seek to include cyber threats as part of the evaluation.

Further, through the Physical Security Enterprise and Analysis Group, our office works with the Military Departments and other U.S. government departments and agencies to solve gaps in our ability to detect, delay, deny, defeat, and ultimately deter threats to our nuclear and non-nuclear assets, both at home and abroad. Examples of the projects we manage include identifying "best-of-breed" countermeasures to defeat select unmanned system threats and developing, with the Department of Energy's National Nuclear Security Administration, a portable intrusion detection system to protect nuclear weapons and special nuclear material.

Deterring, attributing, and responding to nuclear terrorism remains among the highest priorities of the United States and our allies and partners. The U.S. government maintains advanced nuclear forensics capabilities to attribute the source of any nuclear or radiological material intended for or

used in a terror attack. DoD maintains National Technical Nuclear Forensics capabilities and works with our interagency partners to support an effective national forensics capability. Further, we actively engage with our international partners to counter nuclear terrorism and nuclear proliferation threats using our collective forensics capabilities.

Expanding resiliency and strengthening defenses of our forces facing Chemical, Biological, Radiological and Nuclear threats

Through our Chemical and Biological Defense Program, we supply material solutions to enable our service members to operate in a CBRN environment, whether they are conducting combat operations abroad or supporting first responders in a domestic incident. The Department's CBRN defense capabilities are 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 our Service partners to ensure our products are responsive to operational priorities and requirements. Currently, we are focused on improving personal and collective protection, advanced medical countermeasures, detection and identification of next generation threat agents, diagnostics for clinical samples, and the capability to disable tactical-level WMD threats. Delivering these capabilities protects service members and improves decision making, which sustains the lethality of the Joint Force to operate in a CBRN threat environment.

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 countermeasures work is coordinated with the Office of the Secretary of Defense for Health Affairs. Examples of this ongoing cooperation include coordination to manage stockpiles of medical countermeasures, and especially in the case of the HHS, coordinating medical countermeasures development and implementing incentives that maximize value while mitigating risk.

These investments and interagency engagements have incentivized industry engagement, and we anticipate they will continue into the future. For example, 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 on a smaller scale than needed for the public health sector overall. 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 has established a platform capability at the ADM to build medical countermeasures more efficiently, rapidly, and at a lower cost. Our office will continue to augment this capability, which stabilizes the industrial base for medical countermeasures by allowing the Department to mitigate risks for industry early in the development process, and to have more control over the process overall.

Chemical and Biological Weapons Elimination

Drawing from our experiences assisting in the elimination of declared Libyan and Syrian chemical weapons in 2014, we know it is important for DoD to maintain the material readiness to eliminate other nation's 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, propose 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. To achieve the necessary readiness, we must improve our operational flexibility by identifying and rapidly developing novel solutions through collaboration with industry, academia, and our international partners. Recently, we executed a first-of-a- kind joint industry competition with the United Kingdom to engage international industry and academia partners in advancing solutions to disable and destroy chemical and biological weapons in non-permissive and austere environments. Retaining flexible authorities and resources to ensure we are best postured to address these needs is vital.

CWMD Systems

NCB sponsors research, development, and integration of CWMD capabilities. We focus on accelerating the development of technologies that can transition to fielded capabilities in response to warfighter needs. For example, we are organized to leverage science and technology investments (for example, those produced by DTRA) to enable advanced technology development and its transition to Special Operations Forces (SOF) and other military units. We employ acquisition strategies that allow us to provide innovative capabilities cost-effectively and quickly.

We further focus on CWMD situational awareness capabilities, which include analytical fusion cells, information systems, and software applications. Since FY 2018, we increasingly have invested in equipment to detect, disable or defeat WMD systems and the proliferation networks that sustain them. We base these investments on needs identified and prioritized by U.S. Special Operations Command and its subcommands, U.S. Central Command, the Military Departments, and other DoD Components. For example, through a partnership with the Joint Program Executive Office for Chemical, Biological, Radiological, and Nuclear Defense, we are developing and fielding technologies that will enhance SOF capabilities to operate in WMD environments. We are enhancing the Air Force Technical Applications Center's (AFTAC) mission to monitor nuclear treaty compliance and detect nuclear events. Further, the CWMD Systems Program aligns with the CWMD Unity of Effort Council the Department established last year. As capability needs are identified, we have the means to close those gaps, if appropriate.

STRENGTHENING ALLIANCES AND ATTRACTING NEW PARTNERS

Countering WMD best succeeds as a global effort. Thus, we focus on empowering our allies and partners, and enhancing the capacity of regional and international organizations and initiatives to stop WMD threats close to the source.

Collaborating with Allies

The United States can dramatically improve its preparedness for and response to WMD threats through effective collaboration with its allies. This collaboration yields insights derived from a variety of perspectives, opportunities to share the cost of research and development, and the chance to improve the interoperability of systems and processes.

As an example, NCB maintains a bilateral relationship with the United Kingdom to improve our collective readiness to eliminate foreign chemical and biological weapons. This cooperation has resulted in intelligence and information sharing, identification of mutual gaps in capabilities, and shared investment to develop solutions to address them.

Building Partner Capacity

Through efforts executed by DTRA, such as the DoD Cooperative Threat Reduction Program, the Proliferation Security Initiative, and the 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. Our office provides the acquisition policy, governance, and portfolio management of these CWMD and building partner capability and capacity programs. We manage risk, demonstrate the impact of CWMD threat reduction to broader U.S. security objectives, and provide accountability to ensure programs are executed efficiently and in line with the Department's policies and CWMD priorities.

Treaty Management

As the lead for DoD, we manage the DoD's implementation of and compliance with existing and prospective nuclear, biological, chemical, and conventional arms control agreements. We also manage DoD's compliance with U.S. policies, as well as chemical and biological defense and destruction activities, in accordance 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.

Our office presents the U.S. Chemical Demilitarization briefing to the Organization for the Prohibition of Chemical Weapons (OPCW) Executive Council three times per year. In November 2019, we will brief the annual Conference of the States Parties. This past year, we successfully facilitated six inspections of DoD sites by the OPCW Technical Secretariat, further demonstrating the U.S. commitment to compliance with the CWC.

We also review the DoD Chemical and Biological Defense programs and activities for treaty compliance, and ensure all treaty-related requirements are met. In addition, we report DoD's portion of the annual U.S. Confidence Building Measures under the BWC.

The Department's Nuclear Arms Control Technology (NACT) Program, executed by DTRA with DoD oversight from our office, is considered to be one of six "safeguard" assurances that would be required if the United States chose to ratify the Comprehensive Nuclear-Test-Ban Treaty (CTBT) and the treaty entered into force. Regardless of whether this occurs, the U.S. government has made a policy commitment to support the International Monitoring System

(IMS), and the NACT program is instrumental in the fielding and maintaining of the US IMS stations.

We are working several efforts to ensure we continue to move forward in the U.S. participation in the Open Skies Treaty. Two of our efforts include replacing wet-film cameras with digital ones, and recapitalizing our current aircraft fleet. Efforts to develop and certify the new digital sensor are underway, and the aircraft recapitalization plan would replace the existing aircraft with a smaller, airliner-class aircraft. These endeavors will maximize U.S. benefits from the Treaty and continue to support allies and partners through shared observation missions.

REFORMING DoD BUSINESS PRACTICES

As the lead for the development of capabilities to counter WMD, our focus is on ensuring the Department delivers CWMD capabilities that are tailored to the threat and managed efficiently, to ensure the best use of taxpayer money.

Accelerating the 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 stockpiles located in Colorado and Kentucky. This investment highlights the U.S. commitment to, and importance of, strengthening international norms against the proliferation and use of chemical weapons. We are confident that complete destruction of the remaining chemical weapons will occur by the congressional deadline of December 31, 2023.

In Colorado, the team at the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) has started destruction operations and is projected to destroy approximately 780,000 mustard agent-filled projectiles and mortars at completion. To date, PCAPP has destroyed more than 105,000 munitions containing approximately 619 tons of mustard agent. While PCAPP initially experienced technical challenges causing delays in the destruction schedule, under new leadership the plant recently recorded its highest monthly throughput rates since the start of chemical weapons destruction operations. The addition of Static Detonation Chambers in 4th quarter FY 2020 will supplement the main facility for the destruction of problematic munitions. Use of the Static Detonation Chambers, combined with improvements to the main facility, will increase worker safety while improving schedule performance.

I am pleased to relay that the construction and systemization of our Blue Grass, Kentucky, Chemical Agent-Destruction Pilot Plant (BGCAPP) is substantially complete. Currently, staff is conducting the initial planning for the notifications on the start of destruction operations at Richmond, Kentucky, with the Static Detonation Chamber scheduled to begin destroying mustard-filled munitions in Summer 2019. The BGCAPP main facility is currently projected to begin destroying nerve agent-filled projectiles in Fall 2019. The team at BGCAPP is projected to destroy a little over 101,000 munitions containing either mustard or nerve agent. The program and plant leadership has also been working closely with Kentucky's Chemical Demilitarization Citizens' Advisory Commission, ensuring local citizens are frequently informed on matters leading up to the start of operations.

Establishment of the Geophysical Detection of Nuclear Proliferation (GDNP) University

Affiliated Research Center (UARC)

NCB has established the Geophysical Detection of Nuclear Proliferation (GDNP) University Affiliated Research Center (UARC) at the University of Alaska Fairbanks. The GDNP is the Department's 14th UARC, specializing in research, operations, and STEM (science, technology, engineering, and mathematics) activities for detecting indications of nuclear proliferation through seismic, infrasound, hydro-acoustic, or radionuclide technologies. The UARC will expedite the acquisition process for organizations such as DTRA and AFTAC to get GDNP task orders quickly approved and on contract.

Organization of the Office of the Secretary of Defense

As we implement the statutorily directed reorganization of the Under Secretary of Defense (USD) for Acquisition, Technology, and Logistics, the NCB Defense Program's organization and responsibilities have remained unchanged under the USD for Acquisition and Sustainment, maintaining continuity in the development of CWMD capabilities. We continue to work closely with the Office of the USD for Research and Engineering through expert-level engagements and formal bodies to ensure we effectively transition basic research and prototypes into useful warfighter capabilities.

In addition, the Department is improving integration across the DoD CWMD Enterprise to ensure effective oversight of the mission, such as through the establishment of the CWMD Unity of Effort Council. NCB works in close collaboration with other elements of the Office of the Secretary of Defense, the Combatant Commands, and the Services to align efforts and deliver effective capabilities to the warfighters.

CONCLUSION

Our highest priorities lie in ensuring our warfighters are postured to counter CBRN threats and the Department safeguards our nuclear deterrent. We will continue to collaborate and coordinate with key stakeholders in the Department, other U.S. government departments and agencies, and our international allies and partners to maximize our effectiveness and efficiency 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 population, and our nation. We must not, and will not, fail.

Thank you for this opportunity to testify.

Dr. D. Christian Hassell
Deputy Assistant Secretary of Defense for Chemical and Biological Defense

Dr. David Christian "Chris" Hassell serves as the Deputy Assistant Secretary of Defense for Chemical and Biological Defense. A member of the Senior Executive Service, he is responsible for Chemical and Biological Defense Program oversight throughout the Department of Defense and integration with our interagency and international partners. His primary goal is steering the enterprise in countering current and emerging biological and chemical threats to protect U.S. Service members and civilians at home and abroad.

Prior to joining the Department of Defense, Dr. Hassell was an Assistant Director of the Federal Bureau of Investigation (FBI), where he served as Director of the FBI Laboratory. During his tenure, he led major efforts to expand the Laboratory's role in National Security and Intelligence, including the Terrorist Explosive Device Analytical Center (TEDAC) and other technical areas related to Weapons of Mass Destruction. In addition, he strengthened and streamlined FBI programs in traditional forensics, particularly in such rapidly evolving areas as DNA, chemistry and the use of instrumentation to augment pattern-based forensic techniques (e.g., fingerprints, firearms, and documents). He also led many engagements with international counterparts, with focus on enhancing counterterrorism interactions with "Five-Eyes" partners, as well as new technical collaborations in Asia, Latin America and with such key multilateral groups as the International Atomic Energy Agency (IAEA) and INTERPOL.

Dr. Hassell joined the Bureau from the Oklahoma State University Multispectral Laboratories, where he led Research, Development, Testing and Evaluation. He previously served as Assistant Vice President for Science and Technology at Applied Marine Technologies Incorporated.

Prior to that position, Dr. Hassell led programs in analytical chemistry, instrumentation development, and nuclear weapons forensics at Los Alamos National Laboratory. This also included serving as an intelligence analyst with the Department of Energy Field Intelligence Element for a variety of issues related to Chemical, Biological, Nuclear, Radiological and Explosives (CBRNE) threats. During this time, he also served as a subject matter expert for chemical and biological weapons with the Iraq Survey Group in Baghdad.

Earlier in his career, Dr. Hassell was a Senior Research Chemist at DuPont, developing online analytical instrumentation for chemical and bioprocess facilities for both research and manufacturing. This included extensive R&D on fermentation-based processes for manufacturing small molecule commodity chemicals.

Dr. Hassell received his PhD in analytical chemistry from the University of Texas at Austin. He is a Fellow of the Society for Applied Spectroscopy and a member of the American Chemical Society.

STATEMENT OF

VICE ADMIRAL TIMOTHY G. SZYMANSKI, U.S. NAVY

DEPUTY COMMANDER

UNITED STATES SPECIAL OPERATIONS COMMAND

BEFORE THE

HOUSE ARMED SERVICES COMMITTEE

SUBCOMMITTEE ON INTELLIGENCE AND EMERGING THREATS AND CAPABILITIES

APRIL 3, 2019

Chairman Langevin, Ranking Member Stefanik, and Members of the subcommittee, thank you for the opportunity to address you today. I am here representing the U.S. Special Operations Command (USSOCOM) in its role as the Department of Defense (DoD) Coordinating Authority for countering weapons of mass destruction (countering WMD). This is a very different and distinct role from the operational countering WMD role USSOCOM's Special Operations Forces have traditionally held and with which you may also be familiar. USSOCOM assumed the DoD Coordinating Authority role just over two years ago under the revised Unified Command Plan, and I am pleased to report to you today on progress against key objectives since USSOCOM briefed this committee one year ago. In close collaboration with our DoD, interagency and international partners, our work has included: completion of the Functional Campaign Plan for Countering WMD; development of an operational framework that will facilitate and integrate future countering WMD operations, activities and investments via collaborative planning with Combatant Commands, interagency partners, and allies; and improvement on 2017's baseline assessment of the DoD countering WMD campaign plan by mapping this year's assessment to the five adversary-focused Global Campaign Plans. We still have much work to do to leverage the momentum from these accomplishments and to optimize prioritization and sequencing for how we apply our resources against known and constantly evolving WMD threats. We are grateful for the continuing support of this committee — and of the strong partners sitting next to me today — as we work to ensure the United States has the agility, flexibility, resilience, and strength to disrupt emerging WMD capabilities, protect the homeland and its interests from actors with existing WMD programs, and respond to WMD threats.

More than two years into the DoD countering WMD Coordinating Authority role directed in the Unified Campaign Plan, and building from the base of our traditional role in the tactical aspects of countering WMD, USSOCOM is enhancing the already strong community of action across DoD, the U.S. interagency, and foreign partner governments. USSOCOM recognizes DoD's primarily supportive role vis a vis the responsibilities of other U.S. departments and agencies during all but the most acute WMD crisis scenarios. We seek to optimize that DoD support role through enhanced collective awareness of threats, vulnerabilities, and opportunities for action. Located at both USSOCOM Headquarters and collocated with the Defense Threat Reduction Agency at Ft. Belvoir, USSOCOM's Countering WMD Fusion Cell executes the Coordinating Authority mission by working within national and Department policy guidance to conduct planning, assess countering WMD campaign progress, and make recommendations to the Chairman of the Joint Chiefs of Staff and the Secretary of Defense.

With its leadership based here in the National Capital Region, the Countering WMD Fusion Cell has worked with the Office of the Secretary of Defense, the Defense Threat Reduction Agency, and the Joint Staff to support DoD countering WMD unity of effort and enhance DoD's operational relationships across the interagency and intelligence community. We hosted more than 850 attendees at our annual Countering WMD Coordination Conference (previously called the Global Synchronization Conference) this past September, to include representatives not only from DoD, but also from a broad cross-section of the U.S. interagency as well as six partner nations (UK, Canada, Australia, New Zealand, France, and Germany). These attendees participated in some 20 working groups and 24 information sessions, as we continued the tradition, started by General Thomas, of relentless focus on distilling outcomes and actions required from the productive discussions. I would also like to take this opportunity to

note the strides the DoD has made in the past year in standing up the Countering WMD Unity of Effort Council, as directed by then Deputy Secretary of Defense Shanahan, under the leadership of ASD Rapuano and General Clarke in his former role as the Joint Staff J5 Director. The Council's multi-layered structure allows the Department to address complex issues deliberately and holistically, elevating only the most complex issues and recommended solutions for executive resolution.

Nature of Threats

This unity of effort is critical as the nature of the WMD threat continues to change and evolve, becoming ever more complex and difficult to address. In part, the change is driven by broader geopolitical shifts such as the re-emergence of great power competition, as highlighted by the National Defense Strategy. The threat of non-state extremist organizations acquiring and using WMD remains real and sobering, even as rogue regimes with WMD aspirations dominate headlines and demand vigorous and creative deterrent and disruptive approaches. Within this dynamic and dangerous global context, transregional proliferation of WMD material, technology, and expertise becomes harder to detect and disrupt even as the imperative to do so grows. Every day brings news of scientific and technological breakthroughs with the potential for enormous benefit-as well as the possibility of misuse, abuse, and in some cases catastrophic harm.

The Functional Campaign Plan for Countering WMD

The centerpiece of USSOCOM's approach to these threats as the DoD Countering WMD Coordinating Authority is the Functional Campaign Plan for Countering WMD, which General Thomas approved, signed, and disseminated this past November. The plan nests tightly with the National Defense Strategy, National Military Strategy, DoD Strategy for Countering WMD, and

other policy and strategic guidance documents developed by the offices of ASD Rapuano and ASD Roberts. It is also crosscutting with the Department's threat-specific Global Campaign Plans, as directed by the National Security Strategy, implementing an active, transregional, and adaptive countering WMD campaign to conduct and assess integrated military activities focused on networks and pathways that support an adversary's pursuit of WMD capabilities. In this way, the plan also provides critical support to the role of the Chairman of the Joint Chiefs of Staff as the Global Integrator, driving a partnered, joint, multi-domain, and integrated approach to the complex WMD problem. Active, rigorous, and persistent transregional collaboration between and among DoD commands and defense agencies and with interagency partners and partner nations is a critical element of this campaign.

The Functional Campaign Plan for Countering WMD provides the Joint Force with the "What" and "Why". It emphasizes efforts to defeat emerging WMD capabilities and protect the U.S. and its interests from actors with existing WMD programs, and sets the conditions to respond to WMD threats. We summarize these three central lines of effort as "Prevent, Protect, and Respond." The Functional Campaign Plan focuses most intensely on the Prevent line of effort, where relatively small amounts of United States treasure can have disproportionately effective outcomes with reduced risk to the Joint Force. In so doing, the Functional Campaign Plan conceptualizes WMD actors of concern navigating a "pathway" that progresses along the WMD continuum from WMD aspiration to development or use of WMD. The central idea driving the Functional Campaign Plan's approach is defeating adversary activities along these WMD pathways. Progress along this pathway can be halted or slowed, for example, by affecting the decision making of WMD aspirants, blocking the means to acquire infrastructure and expertise, or interdicting illicit materials or information in transit. The Prevent line of effort is

both the primary military effort of this campaign, yet also where DoD is most likely to play a supporting role to other Departments or agencies. A comprehensive understanding of those operations, activities and investments of the U.S. Government and other partners is critical to ensuring DoD alignment and effectiveness, as well as to the ultimate achievement of targeted end states. At the same time, preparations for activities under the Protect and Respond lines of effort, to include building preparedness for countering WMD and chemical, biological, radiological, and nuclear threats with capable partner nations, must be consistent elements of Combatant Command and the wider Joint Force campaign activities.

The Operational Framework

To more quickly translate the functional plan into action, we have also developed an operational framework that applies to the priority challenges laid out in the National Defense Strategy. If the Functional Campaign Plan for Countering WMD is the "What" and "Why" of Joint Force countering WMD operations, the operational framework provides the "How". In close collaboration with other Combatant Command planners, we have completed the tailored application of the framework to one threat actor in particular, with versions in development that have application to other threat actors outlined in the National Defense Strategy. While I am limited in my ability to provide more detail in this open forum, I am pleased to report that this first tailored version of the framework has become a key element of the Geographic Combatant Command's official actor-specific countering WMD campaign planning. We have also begun work with ASD Rapuano, ASD Roberts, Director Oxford, and our interagency and international partners to refine the framework and ensure it has utility as a tool, not just for the Department, but for the whole U.S. Government countering WMD community of action. Using this tool to articulate common goals and build awareness of each other's countering WMD operations,

activities, and investments will facilitate understanding of how these activities should be sequenced and supported across the U.S. Government for maximum strategic effect.

The Countering WMD Assessment

While the Functional Campaign Plan for Countering WMD was only signed in November, the Combatant Commands, services, and key combat support agencies have been familiar with its core lines of effort and strategic objectives for more than a year during the formal coordination and staffing process. In coordination with the Joint Staff, we updated our 2017 countering WMD assessment by mapping the 2018 assessment to the five adversary-specific Global Campaign Plans as well as the Functional Campaign Plan for Countering WMD. In support of the Joint Staff's Global Integration framework, we are evolving our assessment process to facilitate continuous understanding of the WMD environment with more frequent and dynamic assessments of Joint Force countering WMD capabilities, as well as to prepare specific recommendations for the Chairman and the Secretary of Defense. For this assessment cycle, we also expanded our request for input to include the Services and numerous interagency partners. As these relationships mature and mutual understanding deepens in the years to come, we look forward to broadening the insights and recommendations from the annual assessment process.

Priorities for the Year Ahead

Even as we look back on the progress the countering WMD community of action has made in more clearly framing goals and effectively coordinating and sequencing authorities and resources against certain threats in the past year, we are mindful of the work still to be done. Over the coming year, our top priority will be to collaborate with DoD and interagency partners to complete the operational frameworks and begin applying the approach to other countering WMD operations, activities, and investments of the Joint Force. Related to those tasks, we will

sustain our focus on broadening the community of action's situational awareness of the network of operations, activities, and investments targeted against transregional and global threats, identifying gaps and vulnerabilities, and enabling action against threat actors. And, as always, we will strive to evolve as an organization to more effectively execute our mission and support national strategic and security goals. Thank you for your attention this morning and for your support of USSOCOM and our people.

Vice Admiral Tim Szymanski
Deputy Commander, U.S. Special Operations Command

Vice Adm. Tim Szymanski is a native of Wilmington, Delaware. He attended the U.S. Naval Academy Preparatory School and graduated from the United States Naval Academy in 1985. He completed a Master of Joint Campaign Planning and Strategy at Joint Advanced Warfighting School.

Szymanski's previous Naval Special Warfare and operational assignments include platoon and task unit commander at SEAL Delivery Vehicle Team 2. He served as troop and squadron commander and as operations officer and deputy commanding officer at Naval Special Warfare Development Group. He commanded Special Boat Unit 26, SEAL Team 2, O6-level Joint Task Force in Afghanistan and Naval Special Warfare Group 2. He served as deputy commanding general sustainment to Special Operations Joint Task Force- Afghanistan/NATO Special Operations Component Command-Afghanistan.

Szymanski served as assistant commanding general to Joint Special Operations Command prior to assuming command of Naval Special Warfare Command.

Szymanski's previous staff assignments include officer community Manager for NSW and enlisted community manager for SEALs, Navy Divers, EOD Technicians and Special Warfare Combatant-craft Crewmen. He served on the Joint Staff as the J3 deputy directorate for Special Operations as the Global War on Terror branch chief and as chief staff officer of Pakistan-Afghanistan Coordination Cell.

HOUSE ARMED SERVICES COMMITTEE

STATEMENT OF

VAYL OXFORD

DIRECTOR
DEFENSE THREAT REDUCTION AGENCY

TESTIMONY BEFORE THE

SUBCOMMITTEE ON INTELLIGENCE AND EMERGING THREATS AND CAPABILITIES
HOUSE ARMED SERVICES COMMITTEE
APRIL 3, 2019

Embargoed until April 3, 2019 at 2:30pm

HOUSE ARMED SERVICES COMMITTEE

Chairman Langevin, Ranking Member Stefanik, and distinguished members of the committee, thank you for your continued support of the Defense Threat Reduction Agency (DTRA). I am proud to represent DTRA, an adaptive, integrated, and agile agency with a uniquely skilled workforce. Our personnel have a strong foundation in specialized science, technology, engineering, mathematics, linguistics, and operational expertise with a focus on strategic deterrence, weapons of mass destruction, and improvised threats and their associated networks. Our whole-of-government approach and trans-regional focus enable DoD, and its interagency, and international partners to compete below the level of armed conflict as we work together to detect, deter, and defeat these threats.

DTRA is DoD's specialized agency focused on countering weapons of mass destruction (CWMD), improvised threats, and their facilitation networks. Our relationship with U.S. Special Operations Command (USSOCOM), focuses on identifying WMD threats and WMD-defeat options to support USSOCOM in its combatant command role. For example, we apply unique expertise and advanced subject matter expertise to inform CCMDs of emerging improvised threats and to provide material and non-material solutions to defeat those threats. DTRA's future insight and collaborative approach allows for quickly adapting to new and emerging threats and warfighter requirements. DTRA strives to be the "go-to" organization providing CWMD and improvised threat capabilities. We work in partnership with the Office of the Secretary of Defense, the Joint Staff, the CCMDs, and the Military Services and in close coordination with interagency and international partners.

Strategic Environment: We are facing the most complex, dynamic, and dangerous geopolitical

environment that we have seen as a nation. DTRA plays a significant role in ensuring the United States maintains a strategic advantage against its adversaries. An accelerated rate of technological change is increasingly leveraged by highly adaptable threat actors. Our adversaries remain intent on increasing the probability of strategic surprise from new improvised threats, catastrophic WMD incidents, and attacks on or attempts to undermine strategic deterrence. To decrease risk, we enable our partners with rapid, agile, and adaptive solutions to outpace competitors and maintain the U.S. competitive advantage.

DTRA Invests: We are implementing the National Defense Strategy (NDS) and Nuclear Posture Review (NPR) guidance to compete below the level of armed conflict. Our strategy and mission-driven Fiscal Year 2020 budget request prioritizes CCMD requirements. We assessed trade-offs and delayed or reduced lower priority activities to realign investments and close some gaps. Our investments will allow continued provision of integrated and tailored solutions to prevent expansion of global threat networks by State and non-State actors. DTRA is uniquely positioned to support CCMDs to compete against adversaries short of armed conflict and to counter malign foreign influence where it is detrimental to U.S. interests. We also reduce risk in the conventional fight and strengthen and enable the U.S. nuclear deterrent. For these investments, my priorities remain: Enhance combat support, expand relationships with international and interagency partners, develop capabilities through innovation, rapidly provide new solutions, and empower the workforce.

DTRA enhances lethality by investing in combat support. We plan to fund multiple assessments at key nuclear and nuclear mission support sites, and have invested to enable National Nuclear

Security Administration connectivity with our nuclear stockpile management system. We are investing in technology applications allowing U.S. forces to operate in a nuclear-contaminated environment, in the event deterrence fails. In support of conventional lethality, we fortified our Technical Reachback support to advise CCMDs. We boosted our support to meet CCMD technology requirements to see, stop, and defeat adversary capabilities with material and nonmaterial solutions. We are enhancing and accelerating technology transitions for mature technologies and facilitating prototypes and demonstrations. Further, we realigned funding to sustain knowledge management and situational awareness tools that influence how CCMDs and others plan for operations. All investments increase our agility to respond to new or changing requirements.

DTRA is expanding and strengthening relationships with current partners and building new partnerships. We have strategic long-term partnerships with countries in the Indo-Pacific, Europe, and the Middle East region. Those partnerships counter Chinese, Russian, and Iranian malign influence abroad. We also enable our South Korean counterparts to defend against North Korea's most lethal weapons.

To support priorities in innovation and to empower the workforce to facilitate greater performance and affordability, we developed a quick-reaction capability to bridge the gap between technology development and demonstration to accelerate the operational evaluation of low-volume and high-impact CWMD capabilities needed to succeed on the battlefield. We also combined, took on, or moved efforts to ensure efficiency. I will discuss specifics of these efforts to implement greater performance and affordability later in this statement.

National Defense Strategy (NDS) Implementation. In support of a decisive conventional force, DTRA maintains capability to support conventional capabilities to prevent and defeat proliferation. We are expanding efforts to enable a secure and effective nuclear deterrent. Last, but certainly not least, we are enhancing our analytical capabilities to enable DoD and our interagency and international partners to counter and deter WMD, improvised threats, and their associated facilitation networks.

NDS Line of Effort (LOE) 1: Build a More Lethal Force

We have a wealth of mission capabilities to support the warfighter for the planning and conduct of military operations. We anticipate, understand, and counter current and future threats, their associated facilitation networks, and pathways that lead to their development. This ensures we rapidly provide innovative capabilities and approaches to the warfighter at the right time to prevent battlefield surprise involving weapons of strategic influence. Further, we enable a safe, secure, reliable, and effective strategic deterrent.

DTRA Enables the U.S. Strategic Deterrent. To enhance a strong strategic deterrent, we work closely with DoD stakeholders, such as U.S. Strategic Command (USSTRATCOM), U.S. European Command (USEUCOM), the Military Services and the National Nuclear Security Administration. For example, we execute more than ten independent oversight inspections, certify 100 percent of nuclear weapons readiness data, and track all nuclear weapons to ensure positive control. In support of USSTRATCOM, U.S. Northern Command (USNORTHCOM),

and USEUCOM, we enable interagency nuclear weapons accident/incident response by executing annual large-scale exercises. DTRA assesses nuclear weapons effects, ensures survivability, and supports attribution through technology development. Further, our Joint Mission Assurance Assessment teams assess potential vulnerabilities, including cyber and unmanned aircraft systems (UAS), to Defense Critical Infrastructure and key assets for risk mitigation options. To improve force posture, we execute multiple assessments annually. Lastly, we enhanced consequence analysis capability for USSTRATCOM's mission planning and analysis system requirements.

Additionally, DTRA is a voting member of the Nuclear Weapons Council (NWC) Standing and Safety Committee and participates in the NWC principals meetings. In support of the NPR, we work closely with USSTRATCOM and other partners on modernizing our Nuclear Command, Control, and Communications (NC3) and are also intimately involved in modernizing NATO's NC3, and we provide DoD and NATO with nuclear security requirements through our experts.

Lethality through Technology. Through anticipatory, rapid solution development, we are on target to develop and transition more than 20 new technologies to USSOCOM for detecting, stopping, and destroying State and terrorist emergent threat networks. Using capabilities that detect, track, and stop signatures associated with nuclear threats and material, we find, fix, analyze, and defeat WMD proliferators.

Due to the demand from USSOCOM and USCENTCOM, we increased our research and development funds for CWMD and counterterrorism technologies to counter specific threat

networks. Through prototyping and demonstrations, we are enhancing and accelerating transitions for mature technologies, enabling a competitive technological advantage against our adversaries.

Battlefield Situational Awareness and Responsiveness. DTRA enhances warfighter agility and lethality against operational threats with research and development, quick-reaction capability and expert personnel. For example, in support of U.S. Indo-Pacific Command (USINDOPACOM), we enable integrated battlefield effects with advanced WMD sensors, surveillance, and target defeat planning technologies. DTRA provides the CCMDs on-demand Chemical, Biological, Radiological, Nuclear, and high-yield Explosives (CBRNE) crisis response and support via our consequence management support teams. We also provide the CCMDs with capability and expertise to search, locate, and identify CBRNE threats. As a result of greater CCMD demand for skilled expertise, we increased funding for 24/7 technical reachback capacity and operations support. To increase our CWMD effectiveness, we are also revamping CWMD modeling and simulation as well as expanding CWMD information sharing and data analysis to meet CCMD and interagency needs.

In support of USNORTHCOM's role to protect and defend the homeland, we leverage unique authorities to provide military and civilian incident first responders with chemical, biological, radiological, and nuclear (CBRN) training, analysis, and equipment. We are prepared to provide first responders across the United States with real-world hazard analysis, within 30 minutes of receipt of a request, for domestic emergencies involving significant hazardous atmospheric releases.

Our counter unmanned aircraft systems (C-UAS) mission began a few years ago and demand for our support has grown apace with the threat. In 2017, then-Deputy Secretary of Defense Shanahan assigned DTRA, through the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)), the responsibility to support C-UAS efforts in the USCENTCOM Area of Responsibility (AOR) operationally along three lines of effort: 1) Counter threat networks; 2) Protect the force; 3) Build Partner Capacity. Recognizing the operational importance of timely responsiveness to warfighter needs, we established a C-UAS Coordination Cell responsible for synchronizing efforts with the Military Services, the CCMDs, and the Joint Staff, as well as an operational framework and knowledge base. Our role increased when, in July 2018, Deputy Secretary of Defense Shanahan assigned the USD(A&S) to integrate and accelerate the DoD research, development, testing, evaluation, and deployment of C-UAS capabilities within the homeland. USD (A&S) delegated these responsibilities to DTRA. In support of DoD, we oversee a community of action consisting of more than 30 organizations from across DoD, the intelligence community, and interagency partners to coordinate and synchronize support to the CCMDs. This team coordinates and synchronizes C-UAS community of action efforts regularly to integrate and accelerate research, development, testing, and evaluation of C-UAS capability. Further, we enable a range of rapid capability delivery solutions for countering improvised explosive device (C-IED) and UAS threats, including sensor integration, signatures collection, and initiatives to detect, identify, and defeat UAS threats. This is just one example of fusing our operational and intelligence expertise for true operational impact to the warfighter.

DTRA Informs Through Network Illumination. DTRA identifies gaps and seams in WMD and improvised threat collection and facilitates intelligence analysis dissemination. By illuminating critical links and vulnerabilities within these networks, we inform operations and develop opportunities to counter those networks and enable CCMDs and interagency and international partners to disrupt the proliferation of expertise, supply chains, and infrastructure critical to our adversaries' ability to develop, proliferate, or employ these weapons. This is critical to our ability to get as far ahead of our adversaries as possible short of armed conflict.

DTRA's forward-deployed and embedded personnel are vital to the safety and effectiveness of our warfighters providing critical WMD and improvised threat subject matter expertise to national-level assets. These embedded resources are bolstered by reach-back to national-level assets and interagency, industry, and academic communities of action to provide WMD and improvised threat analysis and solutions rapidly. Leveraging our operational presence, intelligence analysts, and specific subject matter expertise meaningfully enhances Joint Force lethality. For example, we embedded dozens of subject matter experts forward in U.S. formations to enable rapid development and proliferation of tactics, techniques, and procedures for defeating improvised threats, which enhanced the Joint Force's ability to reduce the ISIS physical caliphate.

In 2019, due to CCMD demand, we are increasing our Joint Expeditionary Team (JET), Data Science Team (DST), and CBRN personnel to advise and assist U.S. Forces. These teams exemplify the value of DTRA expertise in combat support. We blend data scientists, engineers, information technology, intelligence, improvised threat expertise, and operational experience to

assist CCMD-specific needs. DSTs build repeatable data science tools and methodologies that answer CCMD priority intelligence requirements while JETs provide a critical link to our material, non-material, and training solutions in order to increase warfighter survivability. These one-of-a-kind teams increase the warfighter's operational efficiency and effectiveness in an improvised explosive device (IED)-laden or high-threat environment.

Additionally, DTRA provides intelligence and operational research products to CCMD-deployed forces to support the improvised threat fight. In 2018, we provided intelligence-informed responses supporting more than 1,400 operations resulting in more than 800 strikes for Combined Joint Task Force - Operation Inherent Resolve (CJTF-OIR) alone, and more than 570 raids. These actions resulted in the removal of high-value targets from the battlefield.

Lethality through Threat Prediction. DTRA also provides threat pattern analysis and prediction for dynamic targeting of enemy UAS teams. In 2018, per Combatant Commanders' demand, DTRA's cross-trained linguists, data scientists, and operators analyzed more than 200,000 foreign language documents in order to identify more than ten enemy tactical patterns. Their predictive analysis had real-world implications for how the Joint Force is postured on the ground, resulting in more than 25 next-event predictions with a 93 percent accuracy rate. Using predictive analysis to drive operational success is particularly important in today's resource-constrained environment.

We have also seen increased demand signal to help CCMDs get ahead of strategic problems spanning from conventional military and irregular warfare tactics employed by a near-peer

competitors, rogue States, and proxy organizations in today's complex security environment. Therefore, we are expanding our opportunity analysis team capacity, which utilizes design thinking approaches to develop operational activities and investments with interagency partners to counter a complex problem through DoD, interagency, and international options short of armed conflict. This enables greater whole-of-government unity of effort for greater effectiveness on CCMD prioritized problem sets.

Lethality through Quick Reaction Tools: DTRA's Quick Reaction Capability and technology-enabled analytics continue to create positive operational impacts for DoD and our interagency partners. For example, Catapult, a Program-of-Record, enables the Department and U.S. Government partners to counter threat facilitation networks. Catapult is a fully accredited advanced data analytics architecture that provides a common information and intelligence capability to access, ingest, analyze, exploit, and share data rapidly. Currently, it receives data from more than 1,040 unique data sources with more than 150 million records in support of more than 250,000 queries per month from across DoD, the interagency, and the Intelligence Community. To date, in Fiscal Year (FY) 2019, DTRA built and launched 44 new rapid prototypes and improved the average time to complete software code deployment from 23 days to 6 hours (92 percent faster).

Lethality through Training: Providing unparalleled expertise to the DoD community is a critical aspect of DTRA's mission. DTRA's nuclear weapons school educated 19,000 U.S. Government and military personnel this past year. The school also houses DoD's only live radiological field training site. Our accredited Joint Improvised Threat Analysis Course (JITAC)

ensures participating intelligence analysts and operations integrators are recognized experts in a specialty area of practice, with a unique, accredited set of skills. In 2019, DTRA experts will also participate in more than 100 CCMD and interagency training and exercises, providing enabling capabilities and expertise to counter and deter WMD, improvised threats, and associated networks.

NDS LOE 2: Strengthen Alliances and Attract New Partners

Through a wide-range of cooperative activities, DTRA strengthens and expands international partnerships and drives interagency actions to counter adversaries' malign global influence. It is very important to deepen and expand partnerships to enable the prevention or defeat of WMD or improvised threats and their associated networks. We recognize how our partnership programs contribute to broaden U.S. national security objectives. To assist us in those efforts, DTRA has unique military linguist and interpreter expertise that is leveraged extensively to support warfighter operations and to build partnership capacity efforts.

DTRA implements fundamental components of U.S. nonproliferation and counterproliferation efforts. The Cooperative Threat Reduction (CTR) Program and the Proliferation Security Initiative (PSI) are examples. Further, DTRA executes verification and inspection activities in support of U.S. treaty obligations. Consistent with the NDS, we are re-examining our partnership programs to ensure we are effectively applying our capabilities to counter the threats posed by Russia, China, Iran, North Korea, and violent extremist organizations. As such, we work closely with counterparts across DoD and interagency and international partners to ensure

these efforts are prioritized effectively to produce measureable impacts in support of the CCMDs. I would like to highlight a few examples of work we are undertaking in support of the NDS LOE 2.

USEUCOM. Though our strategic treaty activities have global impacts, they are particularly critical for USEUCOM. There are many activities we could highlight, but as we are planning to begin the certification process for a new U.S. Open Skies digital sensor, I will focus on a couple of related examples. We led the U.S. team for treaty certification of the new Russian Tu-214 Open Skies aircraft. Following Russia's unprovoked November 25, 2018, attack on three Ukrainian vessels in the Kerch Strait, the United States Government chose to respond via an Open Skies extraordinary mission over Ukraine. On short notice, we completed a flight with the most NATO partners on a single observation mission since the Open Skies Treaty went into effect in 2002. The rapid response reaffirmed U.S. commitment to Ukraine and other partner nations, providing a clear demonstration of how treaty implementation may be applied to achieve strategic effects.

In December 2018, we reached a milestone for WMD threat reduction efforts in USEUCOM. The DoD CTR Program concluded a project to eliminate SS-24 intercontinental ballistic missiles in Ukraine. This marked the conclusion of DoD CTR's historic elimination of Soviet-era nuclear delivery systems. Though this landmark project is complete, DTRA will continue to strengthen the CWMD network of allies and partners in USEUCOM and build CBRNE preparedness and response capabilities and capacity in the Balkans, the Black Sea, and the South Caucasus regions.

USCENTCOM. In parallel with our WMD-related activities to improve the capabilities of our allies and partners, we conduct a range of counter-improvised threat activities. We are executing C-IED programs with Egypt and Jordan and initiated a C-UAS program with Jordan. We continue to share information on precursor and dual-use material counter-facilitation, including commercial grade explosive marking and supply chain accountability. As an example, we enabled actions against ISIS facilitators of lethal aid materials by providing more than 200 intelligence reports to our DoD, interagency, law enforcement, and international coalition partners. In order to increase threat material exploitation and threat network information collaboration, we are also expanding our coordinating relationship with the FBI Technical Explosive Device Analytical Center and with Immigration and Customs Enforcement.

USINDOPACOM. In order to interrupt illicit WMD networks, DTRA improves the ability of our allies and partners to detect and interdict WMD-related trafficking across borders and through maritime jurisdictions. We have a network of allies and partners committed to disrupting illicit proliferation along key maritime routes. We will build on existing efforts by increasing maritime domain awareness and CBRN interdiction, preparedness, and response capabilities in this area of responsibility. More broadly, to build partner capacity to coordinate response to WMD threats, DTRA is facilitating the development and validation of national and regional CWMD strategies in the Indo-Pacific region.

USAFRICOM. DTRA's partnership activities in Africa reduce threats across the CBRN spectrum and provide an important means to reinforce U.S. relationships across the continent as

a counter to growing malign foreign influence. Recent efforts in Kenya with our Department of Homeland Security counterparts aided Kenya's Port and Airport Authority in developing an organic capability to detect, identify, and deter the transit of radiological materials through Jomo Kenyatta International Airport and Kilindini Harbour. This effort resulted in enabling the U.S. Transportation Security Administration to allow direct flights from Nairobi to New York. We also help contain biological threats by building partner capability to detect and report high threat disease outbreaks rapidly and accurately. Moreover, our team's executed and coordinated medical countermeasure, Ebola Bio-protection systems vesicular stomatitis virus-Ebola Zaire virus vaccine, which was shown in large-scale human studies to be almost 100 percent effective in preventing Ebola infection and disease following the Ebola epidemic in West Africa (2013-2016). This vaccine was used again in 2018 by the World Health Organization in response to an Ebola outbreak in the Democratic Republic of Congo. The well-established utility of the vaccine is a significant step forward in the protection of the warfighter against this deadly pathogen. To address future threats, we are working with the Department of Health and Human Services on the development of an Ebola Marburg therapeutic and vaccine. DTRA deployed counter-IED subject matter experts in support of improvised explosive device defeat training in five African countries. This training enables our African partners to prepare to operate in areas where IEDs are a significant threat. Through such efforts, DTRA enables force lethality and strengthens partnerships in the USAFRICOM AOR.

USSOUTHCOM. We recognize the criticality of enduring relationships with our regional partners in securing the pathways to our homeland as well as counterbalancing malign influence in Central and South America. The Proliferation Security Initiative (PSI) works to enhance the

capability to disrupt the proliferation of WMD, WMD-related materials, and delivery systems and is actively engaged with Argentina. Building on two previous years' successful PSI bilateral engagements, the U.S. and Argentina will co-host a multilateral PSI Workshop and Tabletop exercise in summer 2019, with participation expected from regional PSI Endorsees and Non-Endorsees alike. The CBRN Preparedness Program works to mitigate the impact of WMD incidents, and is actively engaged with Argentina, Dominican Republic, Panama, and Peru. These programs work to enhance the capability to disrupt the proliferation of WMD and to mitigate the impact of WMD incidents. We are working closely with USSOUTHCOM on how DTRA can best support USSOUTHCOM's priorities and partnerships through greater WMD and improvised threat awareness, capacity, and capability as it aligns with the NDS.

International Partners. DTRA collaborates closely with key international organizations and other partners in its worldwide capacity-building activities. DTRA collaborates on countering improvised threats with numerous partners as part of our collective efforts to identify and implement complementary solutions and coordinate counter-threat network actions. In the CWMD realm, DTRA collaborates with international organizations including INTERPOL, the International Atomic Energy Agency, the Organization for the Prohibition of Chemical Weapons, the Comprehensive Nuclear-Test-Ban Treaty Organization, the World Health Organization, and the World Organization for Animal Health. For example, CTR's Chemical Weapons Destruction program began a partnership with INTERPOL to assist North African nations with the security of industrial chemicals that could be used to build an improvised chemical weapon. Such collaborations act as force multipliers.

NDS LOE 3: Reform the Department for Greater Performance and Affordability

Quick-Reaction Capability. To facilitate greater performance and affordability, we developed a quick-reaction capability to bridge the gap between technology development and demonstration to accelerate the operational evaluation of low-volume and high-impact CWMD capabilities needed to succeed on the battlefield. We are implementing a quick-reaction capability framework across DTRA to reduce transition time and meet quick-turn emergent needs.

Acquisition Reform. DTRA is streamlining the acquisition process to accelerate statement of work development timelines and reduce incremental funding and administrative contract modifications by 30 percent. This is supported by flexible contract vehicles to deliver a broad range of services and products in collaboration with our interagency partners.

Research and Development Synergies. I announced this January that we are consolidating research and development functions. The Joint Improvised Threat Defeat Rapid Capability Delivery division is integrating into our Research and Development directorate. Full implementation is expected by September 30, 2019. Consolidation is consistent with congressional intent to integrate the Joint Improvised Threat Defeat Organization more fully into DTRA. Integration will lead to both requirements and resourcing synergies ultimately resulting in increased capability delivery to the warfighter. We will continue to pursue the right balance between technical excellence, expedient delivery, effective operability, and sustainability.

In FY 2020, the Mission Assurance Risk Management (MARMS) program management responsibilities will transfer from the DoD Chief Information Officer to DTRA. This change will heighten management of vulnerability mission assessments. For example, it will allow consolidation of risk assessments from no-fail functions, such as Defense Critical Assets, identify unknown risks, and increase understanding of implications of mission assurance trends. This change directly enables informed risk mitigation decisions on mission-essential functions. To support this effort, in 2020, we will continue improvements by completing a consolidated mission assurance dashboard.

Partnerships for the Future. To ensure DTRA stays ahead of threats, we leverage and advance human capital and financial resource investments by growing next-generational talent. We are working to retain and recruit critical skills that will be needed to anticipate the changes of future threat environments and envision the capabilities required. As such, we are expanding our university and interagency partnerships and blending talents, tools, and disciplines to achieve counter-threat network impacts.

Agile Workforce. DTRA's mix of military, civilian, and contractor personnel are key to our lethality, adaptability, and agility. Their strength, dedication, creativity, and resiliency are important to our mission. I am proud to have had the honor in August 2018 to present the Secretary of Defense Medal for Valor to three members of our workforce, the highest civilian award for valor presented by the Department of Defense. The medal recognizes government employees and private citizens who perform an act of heroism or sacrifice with voluntary risk to their personal safety in face of danger. There have only been 17 Medal for Valor civilian awards

given out since its creation in the aftermath of September 11, 2001. The three teammates, retired Army Master Sgt. William Timothy Nix, retired Army Chief Warrant Officer Michael Anthony Dunne, and retired Army Chief Warrant Officer Brandon Ray Seabolt, each received the Medal for Valor while supporting DTRA's mission. Nix and Dunne subjected themselves to direct enemy fire, hand grenades, suicide vests, and other explosives to suppress insurgents who had breached the camp. Seabolt exposed himself to enemy fire and suppressed the insurgents so Afghan commandos and U.S. Special Forces could move forward. He single-handedly fended off the insurgent onslaught until the return of other team members.

DTRA detects, deters, and defeats. We dynamically respond to the current environment by deterring, detecting, and defeating global threat networks that underpin the gravest threats to our Nation. Our collaborative approach and action enable DoD and interagency and international partners to prevent State adversaries and non-State actors from acquiring, proliferating, or using WMD and improvised threats. The rapidly evolving improvised-threat defeat mission continues to present a broad spectrum of new challenges from weaponized UAS to maritime threats. We remain dedicated to enabling our partners to hold threat networks at risk by addressing WMD and improvised threats and associated networks of competitive powers, rogue States, and transnational organizations.

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 positons 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.

WITNESS RESPONSES TO QUESTIONS ASKED DURING THE HEARING

APRIL 3, 2019

RESPONSE TO QUESTION SUBMITTED BY MR. LARSEN

Dr. HASSELL. Yes. Based upon the current program requirements, the Fiscal Year 2020 Chemical Agents and Munitions Destruction, Defense appropriation request for the Chemical Demilitarization Program of $985.5 million is adequate. [See page 18.]