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On

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Introduction

Chairman Udall, Ranking Member Sessions, and members of the Subcommittee, thank you for giving me the opportunity to testify regarding U.S. nuclear forces. It gives me great pleasure to join Assistant Secretary of Defense Creedon, General Kowalski, General Harencak, and Admiral Benedict to discuss these vital topics.

I have the privilege of serving as the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs (NCB), as well as the Nuclear Weapons Council (NWC) Staff Director. In this capacity, I am the principal advisor to the Secretary of Defense, Deputy Secretary of Defense, and the Under Secretary of Defense for Acquisition, Technology and Logistics (AT&L) for nuclear matters. AT&L plays a key role in managing the U.S. nuclear deterrent and leading the Department's efforts to acquire the strategic delivery systems for nuclear weapons in order to meet the operational needs of our armed forces. Chief among my responsibilities are the missions of providing the United States and its allies with a safe, secure, and effective nuclear deterrent capability and ensuring the nuclear-survivability of U.S. military forces and DoD infrastructure.

Today's testimony will focus on DoD's work with the Department of Energy (DOE)/National Nuclear Security Administration (NNSA), particularly over the past year, to ensure that the United States continues to maintain a safe, secure and effective nuclear deterrent. The partnership between the Departments is marked by extensive collaboration and a shared commitment to the Nation's security. To ensure that the success of this relationship continues, it is essential that Congress supports the President's FY 2014 budget request for nuclear weapons activities executed by DoD and NNSA. This request includes funds to ensure a safe and effective stockpile, to modernize the nuclear infrastructure, and to upgrade ballistic missile and bomber delivery systems. Today, I would like to share with you the progress the NWC has made in ensuring our two Departments achieve its goals and our approach to accomplishing these objectives in the coming year.

Today's fiscal uncertainty presents greater challenge to the talented and unique personnel who support the mission of ensuring a safe, secure, and effective nuclear deterrent. The challenges facing our aging complex continue to demand a highly skilled workforce. Civilian hiring restrictions, salary freezes, and possible unpaid furloughs and their effects on our readiness are some of my gravest concerns.

Over the past year the NWC met frequently to focus attention on the most pressing challenges faced by the nuclear weapons enterprise. These challenges include managing life extension of warheads in the U.S. nuclear stockpile, modernization of the nuclear infrastructure that supports the stockpile, and modernization of DoD's nuclear delivery platforms..

Additional challenges remain. For example, section 3166 of the Fiscal Year 2013 National Defense Authorization Act establishes a Congressional advisory panel on governance of the nuclear weapons enterprise. Its purpose is to explore options to strengthen governance and thereby ensure that national security needs are being effectively and efficiently met. The DoD looks forward to the panel's recommendations and to follow-on dialogue on this important issue.

Sufficient and timely funding for the enterprise remains a critical challenge for the NWC. The Council has worked hard to align resources, plans, and requirements. The NWC performed extensive cost assessments and leveraged other programmatic expertise to ensure the NNSA and DoD budget request reflects the most urgent priorities of the nuclear weapons enterprise. This exercise reflects a much greater level of collaboration between the two Departments and an updated review of the many demands our aging enterprise requires.

A Path Forward for a New U.S. Nuclear Posture

Reversing decades of neglect and addressing the aging nuclear enterprise continues to be a priority for the NWC. We must ensure that the infrastructure, capabilities, and critical skills needed to support the nuclear deterrent are maintained over the long term. The NWC has created a long-term strategy to meet our Nation's future deterrence needs that better aligns the components of the enterprise so that our warfighter is served and our taxpayer is protected. The work of the Council has identified the enterprise's most pressing priorities and addressed means to ensure that both DoD and DOE were prepared to execute these critical modernization programs. The timing of multiple life extension programs, competing requirements, higher-than-anticipated program costs, and a constrained fiscal environment required the NWC to make difficult decisions over the past year.

Maintaining Fiscal Prudency and Revitalizing the Nuclear Infrastructure

An effective strategic deterrent consists of more than nuclear weapons and their delivery platforms. It also requires an infrastructure to provide agile

research and development and manufacturing capabilities. A responsive infrastructure will provide the United States with capabilities to address technical problems in the stockpile, or future adverse geopolitical challenges, with a substantially smaller stockpile than today's. Recapitalizing the Nation's nuclear infrastructure will require significant investments. The Departments of Defense and Energy share a common path forward to accomplish this task in a responsible, fiscally prudent manner.

Over the last year, the Department of Defense Office of Cost Assessment and Program Evaluation (CAPE) and NNSA collaborated on a joint review of DoD's nuclear weapons requirements and funding options, involving potential increased efficiencies, to meet those requirements. This holistic look enabled the NWC to adjust requirements and prioritize spending, and further enhanced the partnership between DoD and DOE/NNSA, as well as the NWC's ability to certify annually the NNSA budget.

Our Fiscal Year 2014 budget request supports essential DoD priorities: research and development to support the Ohio-class replacement submarine; life extension of the Trident II D5 missile; sustainment of Minuteman III activities; upgrades to the B-2 and B-52H heavy bombers; and completion of the Analysis of Alternatives for a Long-Range Standoff missile to replace the current air-launched cruise missile. Additionally, DoD plans to develop a new penetrating bomber and dual-capable aircraft with the F-35 Joint Strike Fighter. Finally, DoD is modernizing the command and control network that detects and characterizes an attack and links nuclear delivery systems to Presidential authority.

To address the aging weapons infrastructure, the NWC is advancing its plutonium strategy including options to replace the aging, unsupportable Chemistry and Metallurgy Research facility that currently provides plutonium capabilities.

As you know, after careful consideration of requirements, competing priorities, and existing capabilities, the Administration decided to defer construction of the Chemistry and Metallurgy Research Replacement–Nuclear Facility (CMRR–NF) by at least five years. This deferral allowed us to address competing demands such as construction of the Uranium Processing Facility at Y-12, which now has a sufficient funding profile, resulting in reduced life cycle cost and reduced risk to ongoing highly enriched uranium operations at antiquated existing facilities. It also provided flexibility to address critical warhead LEPs for the W76-1, the B61-12 bomb, and the W78/88-1 interoperable warhead.

We recognize that an enduring pit production capacity is needed not only to support current and future LEPs, but also, as pointed out earlier, to provide an ability to respond to technical failure in the stockpile or geopolitical reversals. To manage the risk of deferral, we must develop means, in the near term, to respond more rapidly to technical or geopolitical challenges pending the coming on line of planned enduring production capacity. The NWC approach to managing this risk includes a resourced plan to utilize pit reuse in ongoing LEPs while growing the manufacturing capacity we have today to 10 pits per year by 2019, 20 pits per year by 2020, and 30 pits per year by 2021. All of this is contingent upon the sustainment of today's capabilities for analytical chemistry and other processes in support of pit production. It is also contingent on congressional approval of NNSA's FY 2012 $120 million reprogramming request to provide funds to carry out these activities.

To ensure the Nation maintains an enduring plutonium capability, NNSA is working with the NWC to advance a strategy to support both near- and long-term stockpile requirements. We are exploring a concept that would provide the essential capabilities planned for CMRR with a phased, more responsive, and more readily implementable approach. This approach will also provide opportunities to address aging issues associated with LANL's PF-4 pit manufacturing facility.

Initial concept review suggests a new, modular concept could serve the warfighter's needs in a way that best protects the taxpayer. We need to conduct more analysis. Over the next two months, the NWC, with support from DoD's CAPE organization, will work with Los Alamos to carry out a comparative analysis of the concept; address risks and benefits, pros and cons; and gain some initial insights into feasibility of delivery of key capabilities earlier than planned for CMRR-NF. If the concept is assessed to be feasible, and with congressional support, NNSA will develop its plan to move forward on engineering development and construction for this new, modular approach. We remain committed to a modern responsive nuclear weapons infrastructure that recognizes the new fiscal realities we now face and look forward to congressional engagement on our activities.

As with any major systems acquisition program, building large, one-of-a-kind nuclear facilities presents significant challenges in terms of planning, design, and development—one of our principal requirements in today's fiscally constrained environment is to control costs.

DoD Stockpile Requirements

Looking to the future of the nuclear arsenal, DoD and NNSA are moving forward with several weapon system LEPs in Fiscal Year 2014 to support long-term deterrent capabilities. The B61-12 and W76-1 LEPs are the most critical LEPs to our stockpile, and NNSA will continue funding these LEPs in Fiscal Year 2014. Given fiscal challenges, the NWC agreed that slipping the W78/88-1 interoperable warhead and W88 alteration created manageable risk while allowing resources to continue to support the B61-12 and W76-1 LEPs. These decisions allow us to meet Air Force and Navy requirements while more efficiently managing annual costs among our various programs.

In 2012 DoD and NNSA entered into Phase 6.2, *Feasibility Study and Option Down-select*, for the W78/W88-1 interoperable warhead study to examine a warhead option that could be deployed with both intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs). To leverage this effort, DOE, the Air Force, and the Navy are teaming to develop a modern Arming, Fuzing and Firing (AF&F) system, initially for the W87 ICBM warhead, but adaptable for use in a W78/W88-1 interoperable warhead. Efforts to develop an interoperable warhead for deployment on multiple platforms would allow the DoD to reduce the number of warhead types and the number of reserve warheads needed to hedge against unforeseen technical or geopolitical contingencies. When fielded, the W78/W88-1 LEP interoperable warhead will provide opportunity for further reductions in reserve warheads. Warhead interoperability would also allow for substantial reductions in life-cycle and production costs. The Secretaries of the Air Force and Navy, and the NWC will provide statements and assessments of these plans to Congress pursuant to section 1044 of the FY 2013 National Defense Authorization Act.

For the bomber leg of the Triad, DoD requires life extension of the B61 gravity bomb. The B61 mod 3/4 non-strategic bombs are deployed with NATO dual capable aircraft to provide U.S. extended deterrence to our Allies. The B61-7/11 strategic bombs are carried by the B-2 bomber and are an essential component of air-delivered strategic deterrence. In April 2010, the Nuclear Posture Review reaffirmed both the extended and strategic deterrent roles of the B61 and directed proceeding with its full-scope life extension. The result will be a single bomb, termed the B61 mod 12, which will replace four types of the B61––one strategic and three non-strategic––further promoting efficiencies and minimizing costs.

The B61-12 is currently in Phase 6.3, *Development Engineering* and is on schedule for this year's milestones. We have worked successfully to ensure

that the development of DoD-provided hardware, in this case, a tail kit, is on track to meet LEP requirements. The Air Force has funded both the tail kit development and production to synchronize with NNSA needs as well as the cost of integration of the B61-12 digital electronics into the B-2 Bomber. The overall LEP schedule has been revised for DOE/NNSA to complete the first production unit by no later than the end of Fiscal Year 2019. Meeting this date for the first production unit is essential to meeting U.S. Strategic Command's requirements and also critical in meeting U.S. commitments to our NATO allies to sustain their non-strategic nuclear capabilities and to provide extended deterrence. As the effects of sequestration unfold, the NWC will carefully monitor potential impacts to the B61-12 and mitigate risk to our extended deterrence commitments. We are acutely aware of the burgeoning costs of the B61-12 LEP; increased management attention is essential to controlling these costs.

In addition to our efforts to revitalize weapons, delivery systems and facilities, we continue efforts to enhance physical security in the nuclear enterprise. The July 2012 protestor incursion at the Y-12 facility highlighted the need for continued collaborative efforts to address physical security challenges within both DOE and DoD. Most notably, in the 2011 U.S. Nuclear Physical Security Collaboration Memorandum, we formalized collaboration between DoD and DOE and agreed to common protection standards for nuclear weapons and materials.

Efforts to Counter Nuclear Threats

Finally, I want to highlight DoD's efforts to counter nuclear threats, including those efforts that help ensure that terrorists and proliferators cannot access nuclear materials and expertise abroad. Since September 11, 2001, there has been valuable collaboration on this goal at the federal level. President Obama has called nuclear weapons in the hands of terrorists "the single biggest threat to U.S. security." As President Obama pointed out, just one nuclear weapon detonated in an American city would devastate "our very way of life" and represent a "catastrophe for the world." For this reason, this Administration has outlined a series of policies that reflect the gravity of this threat, and the interagency has made significant improvements in working to prevent, and preparing mitigation actions for, catastrophic nuclear events.

One of DoD's priorities is to truly "internationalize" the response to the nuclear terrorism threat. The United States has been aggressive in its threat reduction efforts, but it cannot meet this challenge alone. In President Obama's view, there is a pressing need to "deepen our cooperation and to

strengthen the institutions and partnerships that help prevent nuclear materials from ever falling into the hands of terrorists." To this end, we are expanding nuclear counterterrorism and threat reduction cooperation with two of our closest allies, the UK and France, building on all three countries' technical expertise and history of cooperation. At the 2012 Nuclear Security Summit, the three governments released a joint statement pledging cooperation and assistance to others facing nuclear terrorism threats. However, this work cannot be limited to a handful of countries. For this reason, we have made building international partnership capacity a high priority.

Next year, the third Nuclear Security Summit will be held in the Hague, Netherlands. This gathering brings together heads of state and international organizations to address measures to combat the threat of nuclear terrorism, protect nuclear materials, and prevent the illicit trafficking of nuclear materials. First introduced by President Obama in Prague in 2009, the Summit process formally began in Washington, D.C. in 2010 and endorsed the President's call for an international effort to secure all vulnerable fissionable materials worldwide. The U.S. has contributed to this global effort through an interagency strategy to eliminate as much material as practicable and ensure that all remaining sites are secured at least to the guidelines set forth by the International Atomic Energy Agency (IAEA). DOD has supported this effort by working to secure weapons-usable nuclear material in Russia and Kazakhstan and is expanding its efforts to collaborate with Japan, China, India through their planned nuclear security training centers. Ensuring that all nuclear material remains secure remains the first priority, but there are also critical efforts underway to address the risks of lost or stolen nuclear material and build capacity for responding to incidents involving nuclear material. DOD contributes to these activities by building partner capacity in detection, interdiction, border security and emergency response. While the focused four-year effort concludes at the end of calendar year 2013, nuclear security is an enduring responsibility as long as nuclear materials exist. To this end, DoD is exploring the potential for establishing national-level systems for nuclear material tracking. These systems would be designed to monitor and track nuclear material in use, storage and transit across all the nuclear facilities within a country's borders. In addition to providing assurance that nuclear material remains secure and in authorized locations, such systems would improve capability to counter insider threats and sustain nuclear security efforts over the long-term. NCB oversees the implementation of DoD's efforts in support of the President's nuclear security agenda.

On the domestic front, the Nuclear Weapons Accident Program (NUWAIX) focuses on developing the capabilities required to mitigate the consequences of a U.S. nuclear weapon accident or incident. This full-scale national-level exercise program is shared among the Air Force, Navy, and DOE/NNSA and addresses non-terrorist driven events in addition to those not caused by malevolent actions. We look forward to ongoing collaboration in future exercises and to continued progress in preparing for potentially catastrophic events.

Conclusion

The nuclear threat to the United States has evolved considerably since the end of the Cold War. No longer does the threat of a large-scale nuclear exchange hover constantly over the world. Yet, we cannot afford to be complacent. We must continue to field a strong nuclear deterrent that is supported by an agile and responsive infrastructure and we must continue to carry out the threat reduction and nonproliferation activities that help to manage nuclear terrorist threats. The Department of Defense remains committed to its vital partnership with DOE in meeting the Nation's most fundamental security needs. In closing, I respectfully ask for your support for the President's FY14 budget request. This will ensure that we are fully capable of providing safety and security to the American people.