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SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON STRATEGIC FORCES
UNITED STATES SENATE

DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE
SENATE ARMED SERVICES COMMITTEE
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UNITED STATES SENATE

SUBJECT: Department of Defense Nuclear Enterprise

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Introduction

Chairman Udall, Ranking Member Sessions, distinguished Members of the Committee, thank you for the opportunity to discuss Air Force nuclear programs.

As the Assistant Chief of Staff for Strategic Deterrence and Nuclear Integration, my team, on behalf of the Chief of Staff of the Air Force, leads planning, policy development, advocacy, integration, and assessment for the Airmen and weapon systems performing Nuclear Deterrence Operations, a core function of our United States Air Force. Stewardship and continuous improvement of this mission remains a top Air Force priority, in support of the President's mandate that the United States maintain a safe, secure, and effective nuclear deterrent.

The stability that a safe, secure, and effective nuclear deterrent provides in today's increasingly complex, multi-polar, proliferated environment is essential to U.S. national security. In order to maintain this vital capability for our nation and our allies who rely on it, the Air Force remains fully committed to making the necessary long-term investments in the development of our personnel and in the sustainment, modernization, and recapitalization of our nuclear forces and supporting infrastructure

Deliberate Development of Our Airmen

The exacting nature of Nuclear Deterrence Operations requires a cadre of experienced, motivated professionals committed to the highest levels of performance and accountability. For that reason, the Airmen we entrust with the special responsibility of supporting and conducting the nuclear mission are the single most important element of the enterprise and are foundational

to its success. Growing and sustaining a cadre of officers, enlisted Airmen, and civilians who possess the necessary quality and depth of nuclear expertise is a multi-dimensional effort that incorporates force development, personnel management, education, and training processes. In our ongoing effort to strengthen the nuclear mission, we have worked hard in recent years to institutionalize a more deliberate and holistic approach to human capital management.

In support of that effort, the Air Force instituted a Nuclear Enterprise Human Capital Strategy to strengthen manning and management of nuclear career fields. We recently formalized our processes and policies for identifying, designating, and tracking Key Nuclear Billets (KNBs), select positions of responsibility within the nuclear enterprise that are vital to its health and sustainment. KNBs require defined levels of nuclear experience based on each specific position and are given the highest assignment priority. The program allows us to more effectively manage the assignment of qualified personnel to critical nuclear positions, and we rely on a periodic re-validation process to ensure KNBs are aligned to meet the constantly changing needs of the enterprise.

We are leveraging the best practices learned from the KNB process to address specific areas of need, for example, in the identification of personnel supporting the nuclear command, control, and communications (NC3) mission. This process allows us to better assess and address experience gaps in order to ensure a continuous pipeline of NC3 personnel with the right combination of training and expertise will be available in the years to come. Through a separate effort, we are in the early stages of establishing best practices for developing our civilian nuclear workforce, a critical facet of the enterprise on which we depend to provide continuity and highly specialized technical expertise. We are also revising the methods we use to select senior nuclear commanders to include a more robust screening and interview processes. Our efforts to instill

critical thinking on nuclear deterrence concepts into training and professional military education are also progressing.

In order to more deliberately structure the career progression of our of ICBM officers, we stood up an ICBM-experienced career management team focused solely on the development of missileers. Beginning last February with the creation of a separate career field for ICBM operations (13N), a development team of senior nuclear leaders was established that now convenes regularly to manage the career field. This effort has led to increased competitive selection among missileers for developmental education opportunities, codification of the process used for managing the transition of officers from the ICBM force into other career fields, and the creation of a career pyramid aimed at producing seasoned leaders within the ICBM community.

Lastly, another important area of sustained effort is the streamlining of the Air Force's Personnel Reliability Program (PRP), a tool we use to ensure Airmen with nuclear weapons-related duties meet the highest standards of individual reliability and trustworthiness. Our work to strengthen and restore this program's focus on its intended purpose is yielding results. We are in the process of finalizing new policies governing PRP that will standardize its implementation across the Air Force and reemphasize its role as a Commander's program.

Fostering Continuous Improvement in Our Operations

Excellence in nuclear operations is underpinned by a culture of compliance and accountability, adherence to high standards, and critical self-assessment. Upholding these values requires effective processes and structures to identify and correct systemic weaknesses across all

levels of the enterprise. In the years since 2008-2009, when major organizational changes realigned the Air Force's focus on the nuclear mission, we have applied persistent effort to institutionalizing a comprehensive system of problem identification and solving based on self-assessment, trend/root cause analysis, and communication that complements external inspection processes.

In support of that ongoing effort, we significantly strengthened the nuclear inspection process by revising the inspection guidance, establishing independent oversight, standardizing inspector training, and issuing guidance for root cause analysis. Our work to enhance trend analysis and resolution from nuclear surety inspections continues, one of five focus areas identified in 2010 as part of the Air Force's nuclear enterprise update to the Secretary of Defense. Additionally, we have carried forward our use of the Air Force Comprehensive Assessment of Nuclear Sustainment (AFCANS) process to critically examine the sustainment activities needed to keep our aging weapon systems safe, secure, and effective.

We continue to apply sustained, senior-leader oversight and governance to the nuclear enterprise through the Nuclear Oversight Board (NOB), chaired by the Secretary and Chief of Staff of the Air Force, and the three-star level Nuclear Issues Resolution and Integration (NIRI) board. These structures provide a forum for resolution of issues affecting the enterprise, coordination of strategic guidance, and alignment of institutional priorities. As the Secretary of the Air Force recently emphasized, we will continue to examine policies, practices, and culture throughout the enterprise to uncover, and, when necessary, confront systemic institutional deficiencies that may be hindering innovation and improvement.

Sustaining Investment in the Nuclear Enterprise

Despite the challenge of prioritizing investments within increasingly stringent fiscal constraints, the Air Force's Fiscal Year 2015 budget request for nuclear deterrence operations reflects a careful balance of investment between near-term readiness and long-term recapitalization requirements. The Air Force made a number of difficult cost and schedule adjustments to our programs in order to maintain affordability without incurring undue risk. Considerable work lies ahead as we endeavor to revitalize our delivery platforms, weapons systems, and NC3 systems. Accordingly, the Air Force appreciates Congress's continued recognition of the importance of nuclear deterrence to our national security, as well as your support for our major modernization and recapitalization plans.

The FY15 budget request continues robust investment in the development of the dual-capable Long Range Strike-Bomber (LRS-B), one of the Air Force's top acquisition priorities. LRS-B's extended-range, significant payload, and ability to penetrate and survive in non-permissive airspace will provide unmatched operational flexibility to Joint commanders upon delivery in the mid-2020s.

The Long-Range Standoff (LRSO) missile, the follow-on to the aging AGM-86B Air Launched Cruise Missile (ALCM) first fielded in 1982, will serve as the next-generation nuclear-capable standoff weapon compatible with the B-52, B-2, and LRS-B. Although the FY15 budget request delays the LRSO program for three years, the Air Force continues risk reduction and early systems engineering work, as well as coordination with the National Nuclear Security Administration (NNSA) to ensure the production schedule for a life-extended LRSO warhead is synchronized with operational requirements. To make sure deterrence requirements continue to

be met prior to the fielding of LRSO, the FY15 budget continues a comprehensive service life extension program for the ALCM that will sustain this weapon system through 2030.

For our current generation of nuclear-capable bombers, the B-2 and B-52, the FY15 budget request funds a range of modernization and sustainment initiatives that will extend the combat effectiveness of these long-range strike platforms through the 2020s and beyond. In particular, the budget request fully funds the installation across the entire B-52 fleet of the Combat Network Communication Technology (CONECT) system, a suite of technologies that equips the B-52 with 21st century communications, retargeting, and situational awareness capabilities. Other enhancements include smart-weapon carriage capability in the internal weapons bay, anti-skid brake upgrades, and modern transponders that will ensure the B-52 is compliant with impending U.S. and international requirements. Key upgrades for the B-2 funded in the FY15 budget request include the Defensive Management System Modernization, the Common Very Low Frequency/Low Frequency Receiver, and Flexible Strike, a capability that will allow for the eventual integration of advanced digital weapons such as the B61-12 and the LRSO. Together, these programs will ensure the B-2 retains its unique and highly valued ability to hold the global target set at risk.

The FY15 budget request also supports significant modernization of the Air Force's Intercontinental Ballistic Missile (ICBM) force, comprised of 450 Minuteman III missiles geographically dispersed in hardened underground silos. America's venerable ICBM force, on continuous alert since 1959 when the Atlas ICBM went operational, provides unsurpassed stability and responsiveness at a cost far lower than other strategic systems. Several key modernization programs are continued in the FY15 budget request that will sustain Minuteman III and its associated support and test equipment through 2030. These include upgrades to solid

rocket motors, guidance systems, Advanced Extremely High Frequency (AHEF) connectivity in our Launch Control Centers, and a joint warhead fuze program that is leveraging commonality between Air Force and Navy systems to deliver a cost-effective material solution.

In July, we anticipate completion of the Analysis of Alternatives (AoA) for the Ground Based Strategic Deterrent (GBSD) effort, an ICBM solution that will extend the nation's land-based strategic deterrent beyond 2030. Final validation of the AoA is expected this October. The FY15 budget supports a Milestone A decision for GBSD in FY15.

Also funded in the FY15 budget request are risk reduction activities associated with Dual Capable Aircraft (DCA) integration for the F-35 Joint Strike Fighter (JSF). Current plans have JSF DCA capability being fielded in Block 4B in 2024. This initiative, along with the related B61-12 Life Extension Program (LEP) and its associated Tailkit Assembly, are of high interest to our North Atlantic Treaty Organization allies who view the U.S.'s continued support of extended deterrence capabilities as a visible and important commitment to the alliance.

Nuclear Weapon Modernization Programs

Another area of sustained focus is our partnership with the Department of Energy (DOE) to extend the service life of the warheads and gravity weapons that form the basis of the ground and air legs of the Triad. While the top priority is to prolong the lifespan of these systems, these LEPs represent an important opportunity to incorporate modern safety, security, and use-control features in systems that were first operationally deployed in the 1960s, 70s, and 80s. Among these programs, the life extension of the B61—which will eventually be the only gravity weapon employed by our long-range bombers and dual-capable aircraft to support extended deterrence

and assurance commitments—remains one of our top investment priorities. The FY15 budget request continues the Air Force's support of the B61-12 LEP. However, as a result of sequestration impacts, the FY15 budget reflects a one-year slip of the B61-12 LEP first production unit (FPU) from FY19 to FY20. Both the LEP and its associated Tailkit Assembly successfully completed all scheduled objectives and milestones for Calendar Year (CY) 13 and are on-track for CY14.

Our work to life-extend the W78 warhead used on the Minuteman III ICBM continues. Last fall, the Nuclear Weapons Council (NWC) directed an adjustment of the W78/88-1 FPU from FY25 to FY30, and in January, the Consolidated Appropriations Act funded the study of a W78 LEP. Lastly, my staff continues to collaborate closely with the NWC and our DOE mission partners in support of the selection of a life-extended warhead for the LRSO missile, the follow-on program to the AGM-86B ALCM. The Air Force was recently invited by NNSA to participate in the commencement of a Phase 6.1 study for the LRSO warhead, an effort that is expected to commence in July of this year.

Nuclear Command, Control, and Communications

Our nation's nuclear command, control, and communications (NC3) enterprise forms the backbone of a system that provides a secure and survivable communications capability between the President, senior leaders, and our nuclear forces. Day-to-day, these aging ground, air, and space systems are relied upon to provide assured connectivity across the spectrum of conflict, from peacetime to the most challenging wartime conditions. Our work to integrate efforts across the NC3 enterprise and to advocate for NC3 capabilities is producing steady progress. Internal

Air Force partnerships and joint relationships established in this area over the past four years have produced a strong collaborative framework for identifying requirements and synchronizing investment.

During the most recent Program Budget Review, we made strides toward prioritizing future NC3 funding. The Air Force Nuclear Weapons Center is building a strategic roadmap for NC3 sustainment. Air Force Global Strike Command (AFGSC) is working to more fully incorporate NC3 requirements into planning for nuclear deterrence operations. As part of that effort, AFGSC will host a first-ever user-level NC3 symposium in April. My staff is also partnering with AFGSC to identify, and if necessary, mitigate any NC3-related cyber vulnerabilities in the B-52 fleet, building on the success of a similar initiative we conducted for the Minuteman III system.

We are also working with Air Education and Training Command (AETC) to better equip our NC3 warriors with the proper training experiences and curriculum so they will be ready to advocate for these capabilities in the future. Furthermore, we are developing an Air Force instruction that will codify NC3 roles and responsibilities across the service. Lastly, my team continues to focus effort on extending assured communications capability to the bomber fleet, integral to ensuring these platforms remain mission capable in highly contested environments.

New START Implementation

Under the terms of the New Strategic Arms Reduction Treaty (New START), the United States and the Russian Federation have committed to reducing their strategic nuclear forces in accordance with the Treaty's central limits not later than February 2018. In support of that

obligation, the Air Force has fully funded activities necessary to align our ICBM and heavy bomber forces with the baseline force structure previously reported to Congress.

While the Department of Defense (DoD) anticipates making a final New START force structure decision before the end of FY14, Air Force efforts to eliminate treaty-accountable ICBM silos and bombers no longer used to perform the nuclear mission are well underway. To date, we have completed elimination of 50 empty Peacekeeper ICBM silos and 39 non-operational B-52Gs, as well as modification of two B-52H ground maintenance trainers. In addition, the procurement of conversion kits necessary to render B-52Hs conventional-only is on schedule, as are previously planned eliminations of "phantom" silos.

Closing:

Thank you for the opportunity to share the Air Force's views on Nuclear Deterrence Operations. Our focus on continually improving the nuclear mission—particularly through our support and development of the Airmen entrusted with carrying out that mission—is ongoing, and will remain one of the Air Force's top priorities.