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THE HOUSE ARMED SERVICES COMMITTEE
STRATEGIC FORCES SUBCOMMITTEE

STATEMENT

OF

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BEFORE THE

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OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

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Introduction

Chairman Rogers, Ranking Member Cooper, distinguished Members of the subcommittee, thank you for this opportunity to discuss the sea-based leg of the triad. It is an honor to testify before you this morning representing the Navy's Strategic Systems Programs (SSP).

The nation's nuclear triad of intercontinental ballistic missiles, strategic bombers, and submarine launched ballistic missiles (SLBM) is essential to our ability to deter major warfare with adversaries and assure our allies. Each leg provides unique attributes and provides an effective hedge. The 2018 Nuclear Posture Review reaffirms that the nuclear triad is the bedrock of our ability to deter aggression, assure our allies, and hedge against an uncertain future. It also reaffirms the need to recapitalize each component of the triad.

The Navy provides the most survivable leg of the triad with our OHIO Class ballistic missile submarines (SSBNs) and the Trident II (D5) strategic weapon system (SWS) they carry. SLBMs are responsible for a significant majority of the nation's operationally deployed nuclear warheads. The Chief of Naval Operations (CNO) has made clear the priority the Navy places on the maintenance and modernization of the undersea leg of the triad, saying it "is foundational to our survival as a Nation."

SSP's mission is to design, develop, produce, support, and ensure the safety and security of the Trident II (D5) SWS. The men and women of SSP and our industry partners remain dedicated to supporting the mission of our Sailors on strategic deterrent patrol and our Marines, Sailors, and Coast Guardsmen who stand watch, ensuring the security of the weapons we are entrusted with by this nation.

Our Fiscal Year (FY) 2019 budget request provides the required funding to support the program of record for the Trident II (D5) SWS. To sustain this capability, I am focusing on my top priorities: Safety and Security; the Trident II (D5) SWS Life Extension Program; Trident II (D5) SWS Long-Term Sustainment; the COLUMBIA

Class Program; the Solid Rocket Motor Industrial Base; and my Navy Nuclear Deterrence Mission Oversight responsibility.

The men and women of SSP and their predecessors have provided unwavering and single mission-focused support to the sea-based leg of the triad for over six decades. As an organization, SSP is facing a bow wave of critical work, as most recently evidenced by the 2018 Nuclear Posture Review. The organization must be prepared to sustain and modernize a credible and effective strategic weapon system to support our ballistic missile submarines and our strategic deterrent mission until the 2080s. It has been my highest honor to represent the men and women of SSP for the past eight years, and my goal, as the Director, is to ensure they are properly positioned to execute the mission with the same level of success today and tomorrow as they have done since our program's inception in 1955.

Safety and Security

The first priority, and the most important, is the safety and security of the Navy's nuclear weapons. Accordingly, Navy leadership delegated and defined SSP's role as the program manager and technical authority for the Navy's nuclear weapons.

At its most basic level, this priority is the physical security of one of our Nation's most valuable assets. Our Marines and Navy Master at Arms Sailors provide an effective and integrated elite security force at our two Strategic Weapons Facilities within their area of operations to include the Limited Area, Convoy Route, and the Waterfront Restricted Areas in Kings Bay, Georgia, and Bangor, Washington. U.S. Coast Guard Maritime Force Protection Units have been commissioned at both facilities to protect our ballistic missile submarines. Together, the Navy, Marine Corps, and Coast Guard team form the foundation of our security program, while headquarters' staff ensures that nuclear weapons-capable activities comply with safety and security standards.

We thank the Congress for the authorities provided in the FY 2017 National Defense Authorization Act allowing the Services to use technological means to counter unmanned aerial systems (UAS) at our installations. This authority has enabled us to

deploy systems that give our security forces a greater ability to identify, track, and defeat unauthorized small UAS.

The Navy and SSP maintain a culture of self-assessment in order to ensure safety and security. This is accomplished through formal biennial self-assessments, periodic technical evaluations, formal inspections, and continuous on-site monitoring and reporting at the Strategic Weapons Facilities and on submarines. We also strive to maintain a culture of excellence to achieve the highest standards of performance and integrity for personnel supporting the strategic deterrent mission and continue to focus on the custody and accountability of the assets entrusted to the Navy. SSP's number one priority is to maintain a safe and secure strategic deterrent.

D5 Life Extension Program

The Trident II (D5) SWS has been deployed on the OHIO Class ballistic missile submarines for nearly three decades and is planned to be deployed more than 50 years. This is well beyond its original design life of 25 years and more than double the historical service life of any previous sea-based strategic deterrent system. As a result, SSP is extending the life of the Trident II (D5) SWS to match the OHIO Class submarine service life and to serve as the initial SWS for the COLUMBIA Class SSBN. This is being accomplished through an update to all the Trident II (D5) SWS subsystems: launcher, navigation, fire control, guidance, missile, and reentry. Our life extension of missile and guidance flight hardware components is designed to meet the same form, fit, and function of the original system, maintain the deployed system as one homogeneous population, control costs, and sustain the demonstrated performance of the system.

The Navy's D5 life extension program remains on track. In 2017, the Navy deployed 24 life-extended missiles to the Fleet and remains on track to complete deployment by FY 2024. Later this year, we will begin the Commander Evaluation Test (CET) program on life-extended missiles to measure the performance and capability of the system against the demonstrated performance.

Another major initiative to ensure the continued sustainment of our SWS is the SSP Shipboard Systems Integration (SSI) Program, which manages obsolescence and modernizes SWS shipboard systems through the use of open architecture design and commercial off-the-shelf hardware and software. The SSI Program refreshes shipboard electronics hardware and upgrades software, which will extend service life, enable more efficient and affordable future maintenance of the SWS, and ensure we continue to provide the highest level of nuclear weapons safety and security for our deployed SSBNs while meeting U.S. Strategic Command (STRATCOM) requirements. Twelve installations were completed in 2017; and two have been completed so far this year with an additional twelve planned.

The Navy also works in partnership with the Department of Energy's National Nuclear Security Administration (NNSA) to sustain our reentry systems. The Trident II (D5) is capable of carrying two types of warheads, the W76 and the W88. Both warheads are being refurbished. Deliveries of life-extended W76 warheads to the Navy are over 85 percent complete and on track to finish by the end of FY 2019. The W88 major alteration program remains on track to support a first production unit in calendar year 2019 with production scheduled to complete in FY 2024.

In accordance with the Nuclear Posture Review, the Navy's FY 2019 budget request supports two near-term additional efforts. The budget request supports investigating the feasibility of fielding the nuclear explosive package from the Air Force's W78 warhead replacement in a Navy reentry body. It also includes funding to begin efforts to modify a small number of SLBM warheads to provide a low-yield option. The Nuclear Posture Review directed that the modification to the existing warheads will not increase the overall number of deployed ballistic missile warheads. This near-term capability will bolster our deterrence posture by helping ensure that no adversary perceives an advantage through the use of limited nuclear escalation.

Trident II (D5) SWS Long-Term Sustainment

The Trident II (D5) SWS continues to demonstrate itself as a credible deterrent and exceeds operational requirements established more than 30 years ago. Our life extension efforts will ensure an effective and credible SWS on both the OHIO Class and COLUMBIA Class SSBNs until the 2040s. The Navy is also beginning an approach to maintain a credible and effective SWS beyond 2040, leveraging the work that is being done today to extend the life of the Trident II (D5) SWS as well as investigating opportunities to innovate, such as through the application of model-based engineering. In fact, the Nuclear Posture Review directs that the Navy "begin studies in 2020 to define a cost-effective, credible, and effective SLBM that we can deploy throughout the service life of the COLUMBIA SSBN."

SSP has a history of more than 60 years of developing, producing, and supporting SWSs to support the undersea leg of the triad. We have optimized our SWS by applying lessons learned from six generations of missiles and will continue to do so until the 2080s.

COLUMBIA Class Program

The Navy's highest priority acquisition program is the COLUMBIA Class Program, which replaces the existing OHIO Class submarines. The continued assurance of our sea-based strategic deterrent requires a credible SWS, as well as the development of the next class of ballistic missile submarines. The Navy is taking the necessary steps to ensure the COLUMBIA SSBN is designed, built, delivered, and tested on time with the right capabilities at an affordable cost.

To lower development costs and leverage the proven reliability of the Trident II (D5) SWS, the COLUMBIA SSBN will enter service with the life-extended Trident II (D5) SWS. Life-extended missiles will be shared with the OHIO Class submarines until their retirement. Maintaining a common SWS during the transition to the COLUMBIA Class is beneficial from a cost, performance, and risk reduction standpoint.

A critical component of the COLUMBIA Class program is the development of a Common Missile Compartment (CMC) with the United Kingdom. The U.S. and the UK, one of our closest allies, have maintained a shared commitment to nuclear deterrence through the Polaris Sales Agreement since 1963. Today, the Trident II (D5) SWS is shared with the UK. Like the U.S. Navy, the UK is recapitalizing her four Vanguard Class submarines with the Dreadnought Class. The CMC will allow the life extended Trident II (D5) SWS to be deployed on the COLUMBIA and the UK Dreadnought Class SSBNs. It will also support production of two new classes of SSBNs in both the U.S. and UK build yards. We have begun construction of missile tubes to support building the U.S. prototype Quad-pack module, the SWS – Ashore (SWS Ashore) integration test site, and the UK's first Dreadnought SSBN.

To manage and mitigate technical risk to both the U.S. and UK programs, SSP is leading the development of the SWS Ashore integration test site at Cape Canaveral, Florida. This is a joint effort with the Navy and the state of Florida investing in the redevelopment of a Polaris site to conduct integration testing and verification for COLUMBIA and UK Dreadnought programs. We reached a programmatic milestone last year when test bay one, which will be used to test the Missile Service Unit first article, achieved initial operational capability. In 2019, test bay two will achieve initial operational capability for verifying and validating the SWS support systems for the COLUMBIA and UK Dreadnought programs.

To mitigate the risk in the restart of launcher system production, SSP developed a surface launch test facility at the Naval Air Warfare Center Weapons Division, China Lake, California. This facility will prove that the launcher industrial base can replicate the performance of the OHIO Class Trident II (D5) launcher system. Last year, we started launching refurbished Trident II (D5) test shapes originally used in the 1980s. Ten evaluation launches were conducted in 2017 and we have conducted four of sixteen planned this year.

The OHIO Class SSBNs will begin decommissioning in the late 2020s and the COLUMBIA Class must be ready to start patrols in FY 2031 to maintain a minimum

operational force of 10 SSBNs. The Navy has already extended the OHIO Class service life from 30 years to 42 years and there is no engineering margin left. Recapitalizing our SSBNs is a significant investment and something that happens every other generation, making it critically important that we do it right. Any delay has the potential to impact not only our ability to meet operational requirements, but also the UK's ability to maintain a continuous at sea deterrent.

Solid Rocket Motor Industrial Base

The defense and aerospace industrial base – in particular the solid rocket motor industry and its sub-tier supplier base – remains an important priority. While the Navy is maintaining a continuous production capability of rocket motors, the demand from both National Aeronautics and Space Administration (NASA) and the Air Force has precipitously declined. This decline has resulted in higher costs for the Navy and has put an entire specialized industry at risk. Though future Air Force modernization will provide some much needed relief beginning in the mid-2020s, our Nation cannot afford to lose this capability.

While the efforts of our industry partners and others have created short-term cost relief, the long-term support of the solid rocket motor industry, including its sub-tier supplier base, and maintenance of critical skills remains an issue that must be addressed. For example, we are concerned with ensured access to and affordability of certain critical solid rocket motor constituents, such as ammonium perchlorate. At SSP, we will continue to work with our industry partners, the Department of Defense, senior NASA leadership, Air Force, and Congress to do everything we can to ensure this vital national security industry asset is preserved.

Navy Nuclear Deterrence Oversight Responsibility

In 2014, the CNO directed establishment of a centralized Navy oversight authority for nuclear force readiness. As the Director of SSP, I have been assigned accountability, responsibility, and authority to serve as the single Flag Officer to monitor performance and conduct end-to-end assessments of the Navy Nuclear Deterrence

Mission (NNDM) elements and report issues to the NNDM Oversight Council and the CNO. As the NNDM regulatory lead, I am tasked with developing, coordinating, and implementing policies approved by the CNO, and conducting end-to-end assessments of the Navy's nuclear weapons and nuclear weapons systems and personnel, including Nuclear Command, Control, and Communications (NC3), for safe, reliable, and effective execution of the NNDM. In October of 2017, I submitted the second annual end-to-end assessment report to the CNO, and I assessed that the NNDM execution was effective and sustainable with some areas for improvement.

Conclusion

SSP ensures a safe, secure, and effective strategic deterrent and focuses on the custody and accountability of the nuclear assets entrusted to the Navy. Sustaining the sea-based strategic deterrent capability is a vital national security requirement. Our nation's sea-based deterrent has been a critical component of our national security since the 1950s and must continue to assure our allies and deter potential adversaries well into the future. I am privileged to represent this unique organization as we work to serve the best interests of our great Nation. I thank the committee for the opportunity to speak with you about the sea-based leg of the triad and the vital role it plays in our national security.