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THE SENATE ARMED SERVICES COMMITTEE
STRATEGIC FORCES SUBCOMMITTEE

STATEMENT OF

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Introduction

Chairman Nelson, Senator Sessions, distinguished Members of the subcommittee, thank you for this opportunity to discuss Navy's strategic programs. It is an honor to testify before you this morning representing the Navy's Strategic Systems Programs (SSP).

SSP's mission is to design, develop, produce, support and protect our Navy's sea-based strategic deterrent, the Trident II (D5) Strategic Weapon System (SWS). The Trident II (D5) Submarine Launched Ballistic Missile (SLBM) represents the nation's most survivable strategic deterrent capability. 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 and Sailors who are standing the watch ensuring the security of the weapons we are entrusted with by this nation.

It has been eleven months since I assumed command as the 13th Director of SSP. This is a relatively small number of incumbents since the inception of the program 55 years ago. Since returning to SSP, I have focused on four priorities: Nuclear Weapons Security; the Trident II (D5) SWS Life Extension Program; the OHIO Replacement Program; and the Solid Rocket Motor Industrial Base. Today, I would like to discuss my four priorities and why these priorities are keys to the sustainment of the Navy's sea-based strategic deterrent and its future viability. I will also provide an update on our SSBN force and our flight test program.

Nuclear Weapons Security

The first priority I would like to address, and arguably the most important priority, is the safety and security of the Navy's nuclear weapons. Navy leadership has clearly delegated and defined SSP's role as the program manager and technical authority for the Navy's nuclear weapons and nuclear weapons security in SECNAV Instruction 8120.1.

At its most basic level, this priority is the physical security of one of our nation's most valuable assets. Our Marines and Navy Masters at Arms provide an effective and integrated elite security force at our two Strategic Weapons Facilities in Kings Bay, Georgia and Bangor, Washington. US Coast Guard Maritime Force Protection Units have been commissioned at both facilities to protect our submarines as they transit to and from their dive points. These Coast Guardsmen and the Navy vessels they man provide a security umbrella for our OHIO Class submarines. Together, the Navy, Marine Corps and Coast Guard team form the foundation of our Nuclear Weapons Security Program.

SSP's efforts to sustain the safety and improve the security of these national assets continue at all levels of the organization. On October 1st, I stood up a new division within SSP responsible for overseeing all nuclear safety and security operations, as well as managing the future acquisition planning for this mission. SSP continues to maintain a safe, reliable, and secure environment for our strategic assets as well as focus on the custody and accountability of the nuclear assets that have been entrusted to the Navy.

D5 Life Extension Program

The next priority I would like to discuss is SSP's life extension efforts to ensure an effective and reliable sea-based deterrent. We are executing the Trident II (D5) Life Extension Program in cooperation with the UK, under the auspices of the Polaris Sales Agreement. I am pleased to report that our longstanding partnership with the UK remains strong.

The Trident II (D5) SWS continues to demonstrate itself as a credible deterrent and meets the operational requirements established for the system almost thirty years ago. We have successfully conducted 135 consecutive flight tests of the D5 missile and continue to exceed our required performance. This record of success demonstrates our Navy's ability to respond if called upon. Our allies and any potential rivals are assured the US strategic deterrent is ready, credible, and effective.

However, we cannot simply rest on our successes. The Trident II (D5) SWS has been deployed on our OHIO Class ballistic missile submarines for over twenty years, and is planned for operational deployment for at least another thirty years, making it operational longer than any other missile system SSP has deployed. We must remain vigilant of age-related issues to ensure a continued high level of reliability.

The Navy is proactively taking steps to address aging and technology obsolescence. SSP is extending the life of the D5 Strategic Weapon System to match the OHIO Class submarine service life and to serve as the initial baseline mission payload for the OHIO Replacement submarine platform. This is being accomplished through an update to all

the Trident II (D5) SWS subsystems: launcher, navigation, fire control, guidance, missile and reentry. Our flight hardware - missile and guidance - life extension efforts are designed to meet the same form, fit and function of the original system, in order to keep the deployed system as one homogeneous population and to control costs. We will also remain in continuous production of energetic components such as solid rocket motors. These efforts will provide the Navy with the missiles and guidance systems we need to meet operational requirements.

SSP previously restructured the D5 Life Extension Program to ensure sufficient time for additional missile electronics design evolutions. I am pleased to report that our restructured program is on track. SSP successfully conducted a system Critical Design Review of the missile electronics in January 2011. Our life extended guidance system also completed its Critical Design Review and is scheduled for its first flight test in FY 2012. Our first flight test of a D5 life extended missile is scheduled in FY 2013. The Initial Operating Capability of the combined missile and guidance systems is scheduled in FY 2017.

Another major step to ensure the continued sustainment of our SWS is our SSP Shipboard Integration (SSI) efforts, which utilizes open architecture and commercial off-the-shelf hardware. The first increment of this update is now being installed throughout the fleet and training facilities. To date, installation is complete on four US SSBNs and two UK SSBNs. This effort is a technical obsolescence refresh of shipboard electronics hardware and software upgrades, which will provide greater maintainability of the SWS and ensure we continue to provide the highest nuclear weapons safety and security for

our deployed SSBNs. The first end-to-end operational test of the SSI Increment 1 was successfully conducted in March 2011 on the USS NEVADA (SSBN 733).

To sustain the SWS, SSP is extending the life of the W76 reentry system through a refurbishment program known as the W76-1. This program is being executed in partnership with the Department of Energy, National Nuclear Security Administration. The W76-1 is now in full production and has achieved Initial Operating Capability. The W76-1 refurbishment maintains the military capability of the original W76 for approximately an additional thirty years. This program successfully incorporated commercial off-the shelf hardware and other economies to achieve Navy component production costs 75% less than previous nuclear Arming, Fuzing and Firing systems.

In addition to the W76-1, the Navy is in the initial stages of refurbishing the W88 reentry system. The Navy is collaborating with the Air Force to reduce costs through shared technology. This refurbishment will reach Initial Operation Capability in the SLBM Fleet in 2018. These programs will provide the Navy with the weapons we need to meet operational requirements throughout the OHIO service life and the planned follow-on platform.

OHIO Replacement Program

My third priority and one of the highest Navy priorities is the OHIO Replacement Program. 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 team is taking aggressive steps to ensure the OHIO Replacement Program is

designed, built and delivered on time with the right capabilities at an affordable cost. The Office of the Secretary of Defense (OSD) Defense Acquisition Board approved the OHIO Replacement Program Milestone A in January 2011 and authorized entry into the Technology Development Phase.

The Navy team has the benefit of leveraging the success of the Virginia Class build program and the opportunity to implement many of those lessons-learned to help ensure we design the OHIO Replacement for affordability both in terms of the acquisition and life cycle maintenance. Maintaining this capability is critical to the continued success of our sea-based strategic deterrent now and into the future.

The OHIO Replacement Program will replace the existing fourteen OHIO Class submarines. To lower development costs and leverage the proven reliability of the Trident II (D5) SWS, the OHIO Replacement will enter service with the Trident II (D5) SWS and D5 life-extended missiles onboard beginning in 2029. These D5 life extended missiles will be shared with the existing OHIO Class submarine for approximately thirteen years until the OHIO Class retires. Maintaining one SWS during the transition to the OHIO Class Replacement is beneficial from a cost, performance and risk reduction standpoint.

A critical component of the OHIO Replacement Program is the development of a Common Missile Compartment that will support Trident II (D5) deployment on both the OHIO Class Replacement and the Successor to the UK Vanguard Class. The US and the UK have maintained a shared commitment to nuclear deterrence through the Polaris Sales Agreement since April 1963. The US will continue to maintain its strong strategic

relationship with the UK for our respective follow-on platforms, based upon the Polaris Sales Agreement. As Director, SSP I am the US Executor of this agreement. Our programs are tightly coupled both programmatically and technically to ensure we are providing the most cost effective, technically capable nuclear strategic deterrent for both nations.

The New START Treaty, which entered into force on February 5, and the Nuclear Posture Review reinforce the importance of strategic submarines and the SLBMs they carry, as the most survivable leg of the Triad. The reductions in warheads and launchers will result in ballistic missile submarines carrying the majority of the Nation's strategic force. Our continued stewardship of the Trident II (D5) SWS is necessary to ensure a credible and reliable SWS is deployed today on our OHIO Class submarines, as well as, in the future on the OHIO replacement.

The OHIO replacement will be a strategic, national asset whose endurance and stealth will enable the Navy to provide continuous, uninterrupted strategic deterrence into the 2080s. The development of this follow-on capability requires the cooperation of the Executive branch and the Congress to deliver an effective sea-based deterrent on time with the right capabilities to sustain the most survivable leg of our Triad at the right cost for many decades to come.

Solid Rocket Motor Industrial Base

The fourth priority I would like to discuss is the importance of the defense and aerospace industrial base. In particular, the decline of the Solid Rocket Motor industry has placed a heavy burden on Navy resources. The Navy is maintaining a continuous

production capability at a minimum sustaining rate of twelve rocket motor sets per year through the Future Years Defense Plan (FYDP). However, we have faced significant cost challenges as both NASA and Air Force demands have declined. We will continue to experience those cost increases if demand shrinks further in coming years.

Reduced industrial demand has resulted in overhead costs spread over a smaller customer base. The Navy's growing percentage of the Solid Rocket Motor business base has already resulted in increased unit costs. In addition, Trident II (D5) is the only program in production of Class 1.1 type propellant. This type of propellant is highly energetic and necessary for use in submarines due to volume constraints.

Navy added funding to the budget to address the unit cost increase. While these additional funds are essential for the continued production of D5 rocket motors, the long-term sustainment of this vital national capability must also be addressed.

We are working with our industry partners, DoD and Congress to sustain the Solid Rocket Motor industrial base and find ways to maintain successful partnerships. The OSD (Industrial Policy)-led Inter Agency Task Force, with membership from Navy, the Air Force, OSD along with the Missile Defense Agency and NASA, is developing a Solid Rocket Industrial Base Sustainment Plan. SSP is an integral part of this process. We look forward to continuing this collaborative process to find an inter-agency solution to maintain this crucial national capability.

Today's Force

The final topic I would like to address is our SSBN force. Our fourteen US Navy SSBNs, eight of which are home ported in the Pacific and six in the Atlantic Fleet,

continue to provide a credible, survivable and reliable sea-based strategic deterrent for our national leadership.

Last month, the USS NEVADA (SSBN 733) successfully conducted her Demonstration and Shakedown Operation (DASO) involving the launch and flight test of a Trident II (D5) missile and is now ready to return to strategic service. The completion of this test marks the 135th consecutive successful flight test of a D5 missile. Therefore, I am pleased to report to you the Trident SWS continues to demonstrate itself as a credible deterrent and meet the operational requirements established for the system almost thirty years ago.

USS TENNESSEE (SSBN 734) will soon complete her Engineering Refueling Overhaul, enter post availability testing, prepare for her Demonstration and Shakedown Operation, and return to the operational force in the Spring of 2012. Two more of our SSBN submarines are undergoing Engineering Refueling Overhauls, which will maintain the viability of these platforms through the service life of the OHIO Class.

We must continue to be vigilant of age-related issues to ensure the high reliability needed for our SWS. With the Trident II (D5) missile planned for operational deployment through the service life of the OHIO Class and as the initial payload on the OHIO Replacement, D5 hardware will age beyond our previous experience base and will be operational almost twice as long as any previous sea-based strategic deterrent. Therefore, SSP has adjusted our flight testing philosophy to focus on older flight hardware in order to best predict aging characteristics. We tested our oldest missile to

date from the USS NEVADA last month. The first and second stage rocket motors were nearly 22 years old.

Conclusion

This is an exciting time to be the Director at SSP. The New START Treaty reduces both deployed and non-deployed nuclear weapons, which will require the US to continue to rely heavily on the survivable capability provided by ballistic missile submarines. As you know, the ballistic missile submarine is only one leg of the nuclear Triad. Land based ICBMs, nuclear capable heavy bombers, and the SSBN force work together to provide the total US nuclear deterrent. Each leg of the deterrent provides unique capabilities.

The 2010 Nuclear Posture Review also committed to strengthen conventional capabilities and reduce the role of nuclear weapons in deterring non-nuclear attacks, with the objective of making deterrence of nuclear attack on the United States or our allies and partners the sole purpose of U.S. nuclear weapons. SSP stands ready to support and participate in future Conventional Prompt Global Strike efforts should leadership authorize our participation. However, the NPR makes clear that as long as nuclear weapons exist, the US will sustain a safe, secure and effective nuclear deterrent. This includes modernizing nuclear weapons infrastructure; sustaining the science, technology and engineering base; investing in human capital; and ensuring that these goals remain a senior leadership focus. As the Navy's primary stakeholder, SSP is accountable for the technical oversight, safety and security of Navy nuclear weapons and we understand the vast responsibility entrusted to us.

Our nation's sea-based deterrent has been a critical component of our national security since the 1950s and will continue to assure our allies and deter our enemies well into the future. I am privileged to represent this unique organization as we work to serve the best interests of our great Nation.