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HOUSE ARMED SERVICES COMMITTEE  
PROJECTION FORCES SUBCOMMITTEE

STATEMENT OF

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BEFORE THE

PROJECTION FORCES SUBCOMMITTEE

OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

SUBMARINE INDUSTRIAL BASE

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Mr. Chairman, distinguished members of the Subcommittee, thank you for providing me with this opportunity to appear before you to discuss submarine industrial base.

The submarine industrial base is composed of two major components, the construction base and the design base. As you know, the Navy is currently procuring one VIRGINIA Class nuclear attack submarine (SSN) per year from Fiscal Year 2004 to Fiscal Year 2008 under a Multi-Year Procurement contract. One-third of the proposed 30-submarine Class is under contract with one ship delivered and another seven currently under construction. For the first time in more than a decade, the submarine construction base is stable and will remain so for the next six years. The Navy's long-range shipbuilding plan calls for procuring two VIRGINIA Class submarines per year starting in Fiscal Year 2012 with a cost goal of \$2B per hull calculated in Fiscal Year 2005 dollars. Though the submarine construction base will remain stable until Fiscal Year 2012, this does not imply that the submarine construction base is at its optimal level. Instead, while far from robust, it is at a sustaining and constant level, two attributes that could not have been said ten years ago.

Just by procuring two VIRGINIA Class submarines per year in Fiscal Year 2012 as part of a Multi-Year Procurement contract with Economic Order Quantity, the Navy will realize a cost savings equal to about half of what is needed to meet the Department's goal of \$2B per hull. The Navy has identified five areas that must be addressed to achieve the remaining cost savings in order to meet the Fiscal Year 2012 threshold of \$2B. First, the General Dynamics Electric Boat and Northrop Grumman Newport News team can redistribute work to the most efficient operations to maximize savings – a modification that is allowed under the current teaming arrangement. Second, the Navy must refrain from making requirements changes to the VIRGINIA Class design. Requirement creep can add significantly to the cost of a submarine. Third, the shipbuilders must meet the contractual requirements and apply lessons learned to the submarines now under construction. Fourth, the Navy and the shipbuilders must continue investing in producibility improvements through the capital expenditure funds set aside in the current

Multi-Year Procurement contract. Fifth, the Navy needs to invest in design changes that will make the submarines easier, and therefore less costly, to build.

Unlike the submarine construction base, the submarine design base is in a much more precarious position. For the first time since the 1950s, the Navy does not have a new SSN on the drawing boards. Once the design work on the SSGN conversions and the VIRGINIA Class is complete, design work will decline. Consequently, the number of experienced submarine designers is starting to fall. The submarine design base would be extremely difficult and expensive to reconstitute if allowed to dissipate. It is therefore imperative to keep these uniquely talented designers employed to meet future requirements.

During a hearing before this Subcommittee on March 15, 2006, the Navy discussed some of the actions being taken to better understand the health of the design industrial base. Specifically, we are anticipating the completion of the RAND study and the on-going work with General Dynamic's Electric Boat Division and Northrop Grumman Newport News to address the 24 design skills that we must maintain to ensure we remain capable of designing nuclear-powered submarines in the future. Following these actions the Navy will be better able to make appropriate decisions for the future. This study will conclude Fall 2006.

Maintaining the submarine design industrial base is in part tied directly to achieving a \$2B VIRGINIA Class SSN in Fiscal Year 2012. As previously stated, implementing cost-reducing design changes into the ship is key to reaching the \$2B cost goal. However, there is insufficient work in today's VIRGINIA Class to keep enough of the design force employed in the future.

As the VIRGINIA Class ships are built, there will be a need for a cadre of designers to address engineering issues and modifications. However, the demand may not be sufficient to retain a critical level of submarine designers. Maintaining all 24 submarine design skill areas will, at some point, require designing a new class of nuclear-powered

submarine. The Navy, informed by the RAND study, will explore ways to preserve this capability. There are many examples of other navies throughout the world where the atrophy of critical submarine design skills has resulted in diminished capability to meet warfighting requirements.

## **Summary**

The submarine industrial base is comprised of two components – construction and design. The submarine construction industrial base is stable at one ship per year, but it is not functioning at its optimal level. Over the next six years, the Navy and its industrial partners will work to reduce the per-unit cost of the VIRGINIA Class and, by Fiscal Year 2012, when the Navy will begin purchasing two VIRGINIA SSNs per year, each ship will be \$2B.

The submarine design industrial base is in a more precarious position. With no new nuclear-powered submarine under development, the workload for this highly specialized group will diminish. While there is a need for good designers to identify and develop cost-reducing design features in order to achieve the \$2B per ship goal in Fiscal Year 2012, these efforts alone are unlikely to keep the necessary minimum number of skilled workers required for future nuclear-powered submarine design work employed over the long haul. Options will be explored once the RAND study is completed.

In closing, Mr. Chairman, thank you for the opportunity to testify before the Subcommittee regarding submarine industrial base. I will be happy to answer any questions that you may have.