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ON ARMED SERVICES

TESTIMONY OF

THE HONORABLE KENNETH J. KRIEG

UNDER SECRETARY OF DEFENSE

(ACQUISITION, TECHNOLOGY AND LOGISTICS)

BEFORE THE UNITED STATES HOUSE

COMMITTEE ON ARMED SERVICES

SUBCOMMITTEE ON PROJECTION FORCES

July 19, 2005

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INTRODUCTION

Good morning Mr. Chairman and Members of the Committee. Thank you for the opportunity to appear before you and express the Department's views on the DD(X) multi-mission surface combatant program. The DD(X) program is an important program within the Navy's family of surface combatants and the technologies developed within this program will benefit many other shipbuilding programs in the future.

DD(X) is the Navy's next generation, multi-mission surface combatant that will provide naval surface fire support for the United States Marine Corps and Joint forces ashore. The DD(X) destroyer, when deployed as part of an Expeditionary Strike Group, will provide Joint Fire Support, Joint Strike, and undersea and surface warfare dominance. The DD(X) will also be able to operate independently or with a Carrier Strike Group. As designed, the DD(X) will also have the capability and internal growth capacity to be a platform for new warfighting systems as they emerge.

Requirement for DD(X)

The Joint Staff validated the Operational Requirements Document for the DD(X) multi-mission destroyer in February 2004. The DD(X) requirements enable the Navy to counter the projected threat in 2015 and later years, and fill a critical naval fires gap for forces ashore. The key performance requirements include two Advanced Gun Systems that can deliver 10 rounds per minute each (20 rounds per minute per ship). The gun

system and long-range land attack projectiles combined will enable DD(X) to conduct fire support missions 24 hours a day, 7 days a week, even in adverse weather conditions out to ranges well beyond any other naval guns. In addition to the naval surface fire support capability that this ship will provide, the DD(X) will be highly automated and have a reduced crew size of about 114 plus the helicopter detachment. This reduced manning will result in significant savings to the Department in operating costs for this platform relative to the current DDG 51s that require a crew of 360. The technologies developed to reduce manning on this ship can be applied to reduce operating costs for many other programs in the future.

The Department's current force structure requirement for DD(X) is 8-12 ships in support of the Navy's Expeditionary Strike Groups. The Department will review this requirement as the Quadrennial Defense Review concludes and will make any needed adjustments.

Program Status

The next major milestone decision for the DD(X) program is Milestone B at which time the Navy will seek my approval to enter into the System Development and Demonstration phase. We are planning for a Milestone B review in the fall of this year, after the Department finalizes the acquisition strategy for the program and the Navy satisfies all of the Milestone B requirements. The Navy plans to award the detail design and construction contract after Milestone B approval. The Navy is completing final work on 10 Engineering Development Models (EDMs) for critical technologies in order to reduce risk for the lead ship. The Critical Design Review is on track for September 2005. Navy has satisfied the exit criteria and is working to meet the other requirements for Milestone B. The Navy will return to the Defense Acquisition Board for another review before exercising the construction options.

Acquisition Strategy

As you know, the President's Budget for FY06 included only one DD(X) per year, as compared to the previous budget that included 2 ships per year. Additionally, the

Navy decided that the total DD(X) class size required is 8-12 ships, down from the previous plan of 24 ships. Because of these two decisions, the Navy rightfully reassessed their acquisition strategy before entering into detail design for the lead ship. The variables have changed and the Navy no longer considers the currently approved strategy a cost-effective strategy at this lower production rate.

Earlier this year, the Navy proposed a "winner-take-all" strategy for the detail design and construction of all DD(X) ships. This strategy held the promise of $1 billion in savings over the FYDP and up to $3B in savings over 10 ships. However, in response to the Fiscal Year 2005 Emergency Supplemental Appropriations Act prohibition of any "winner-take-all" strategy for DD(X), the Navy again had to reassess the remaining strategy alternatives.

The Navy has since proposed a "dual lead ship" strategy for the DD(X) program that my office is currently evaluating. This strategy has several unique features for a shipbuilding program that provide an opportunity for controlling costs on these lead ships. The Department needs to consider innovative contracting strategies when they show promise of reducing unit cost and life-cycle costs. In support of Milestone B, we will ensure that the DD(X) acquisition strategy complies with statutory requirements and will acquire the class of ships in the most cost effective manner available.

The Department has not decided upon a new acquisition strategy at this time. However, while our assessment continued, my predecessor prudently directed the Navy to separate the software development and key system development contracts such as the Advanced Gun System from the shipbuilder's detail design and construction contract. In an Acquisition Decision Memorandum, he authorized the Navy to take actions to implement this change in the strategy in order to minimize the impact to ongoing work in these key areas. The Navy has awarded two contracts to keep these efforts on track. The software development effort is key to achieving the reduced manning plan and integral to the overall success of this program. Continuing the software development and advanced gun system development will further reduce the schedule risk in the program.

Cost

The Department will consider the total life cycle cost of this platform when assessing the program at the Milestone B review in the fall. However, it is clear that the DD(X) destroyer will cost more to build than a current DDG 51 ship because it will go to sea with superior capability in every aspect. The Navy estimates that the lead ship will be $3.3 billion and that the average cost of a DD(X) will be 2.6 billion in Fiscal Year 2007 dollars. The higher procurement cost provides the Navy with increased naval fire support capability, superior survivability, and automation that will enable substantial operating and support cost reductions in this ship as compared to the DDG 51 ships. For example, in the area of ship manning, the DD(X) will operate with a crew of about 114, compared to a crew of about 360 on a DDG 51 ship. Over the 35-year life of a 10 ship class this equates to a cost avoidance of nearly $4.2 billion in personnel costs compared to DDG 51s.

Your committee recently proposed language to impose a $1.7 billion cost cap on each ship of the DD(X) program. The Department would like to buy all of the DD(X) capability for $1.7 billion if that was possible. However, the reality is that the less capable DDG 51 off the production line would be approximately $1.7 billion. As stated earlier, the Navy's estimate for a DD(X) is considerably more than $1.7 billion. This cost cap simply means that the naval fires capability gaps will continue. The Department needs more than what DDG 51 ships can deliver. These needed capabilities are in the DD(X) destroyers. In light of these facts, the Department is committed to finding ways to control costs and improve shipbuilder cost performance and we should focus our efforts in areas that will yield savings.

Technology and Design Maturity

The Navy is nearing completion on all 10 Engineering Development Models (EDMs) for the DD(X) program. These EDMs were established when the program was restructured from DD-21 to DD(X) to minimize the technology risk for the program. The Navy has conducted extensive land-based and/or at-sea testing for the 10 EDMs and the knowledge gained from these efforts has been used to mature the design for the ship and its systems. While some testing continues, the Navy is on track to complete the Critical

Design Review in September 2005. We will assess the results of the CDR at the Milestone B review in the fall.

In April of this year, and in support of Milestone B, the Deputy Under Secretary of Defense for Science and Technology on my staff concurred with the findings of the Technology Readiness Assessment (TRA) conducted by the Office of Naval Research. The TRA concluded that 8 of the 10 critical technologies will be at technology readiness level (TRL) 6 at the Critical Design Review. The remaining 2 technologies, the Total Ship Computing Environment (TSCE) and the Integrated Deckhouse and Apertures will be at a TRL of 6 by ship installation, as required. The TSCE is tightly linked to the software development schedule which is why the Navy awarded a contract to preclude interrupting the ongoing software development. While there are areas to continue watching, the Navy has demonstrated a technology readiness level that is appropriate for proceeding to Milestone B in a ship program, and the Navy has a solid plan for maturing these remaining technologies to support ship construction.

Industrial Base Considerations

The currently approved acquisition strategy allocates the first 6 ships evenly between Northrop Grumman Ingalls Shipyard and General Dynamics Bath Iron Works, with Ingalls building the first ship. The Department approved this strategy based on a production profile of 2 ships per year. Now that the Navy will only be building 1 DD(X) per year, the previous strategy may not offer sufficient workload to keep two yards efficiently building DD(X). Each yard has the capacity to handle building all of the planned DD(X) ships. Bottom line - there is less DD(X) work to be accomplished. Because of this the Navy is pursuing an alternate strategy. The Department will carefully consider industrial base implications in the decision process leading to any change in strategy.

Potential Cost Reduction Alternatives

During the restructuring of the DD-21 program into the DD(X) program, the Navy re-evaluated each DD-21 Key Performance Parameter (KPP) to determine the potential for minimizing the size of the ship and ultimately the cost. The Navy made

many adjustments and the resulting DD(X) KPPs represent the Navy's minimum requirements. No other known alternative meets all of the DD(X) KPPs and provide the sustained, precision, long-range naval surface fire support that the United States Marine Corps requires.

Some have proposed more DDG 51s instead of DD(X) because they are less expensive. However, the Department does not need more DDG 51s. We have sufficient DDG 51 ships that are outstanding in their mission within the naval force. The unique capabilities of the DD(X) are what the Marine Corps needs and what the Department needs to fill the current capability gap in providing sustained, precision, long-range naval surface fire support.

Cost Analysis Improvement Group (CAIG) Process

The CAIG is an important advisor to the Defense Acquisition Board and to me in my role at the USD(AT&L). The CAIG provides a cost estimate of life-cycle costs for major defense acquisition programs, independent of the Service estimate. I will consider the CAIG estimate along with the Service estimate and input from the other DAB advisors to determine the appropriate funding required for the particular program. CAIG estimates are required to support the decision to enter into the System Development and Demonstration phase at Milestone B and to enter the Production and Deployment phase at Milestone C.

The CAIG process starts 180 days before the planned Defense Acquisition Board (DAB) Milestone review. The CAIG receives a Cost Analysis Requirements Description (CARD) from the program office to begin developing the CAIG Independent Cost Estimate (ICE). The CARD represents the common baseline description of the system from which the CAIG will develop its estimate. The cost estimation techniques used by the CAIG vary by program acquisition phase. In the Concept and Technology Development phase, the CAIG uses parametric cost estimate models. Parametric models rely on prior analogous efforts to project costs for the new program and therefore have less certainty than the cost models used during the later stages of a program. As programs enter into subsequent acquisition phases, the CAIG begins to build their ICE using actual program costs. The CAIG finds cost information captured during the early

acquisition phases of a program to be the best data to project future costs of the program with better certainty. As the program moves into production, early engineering and manufacturing development actual cost data provides the best basis for the ICE.

The CAIG has several principles that analysts follow to develop an ICE. The CAIG uses the best available data sources to estimate costs including: actual costs from earlier phases of the program, actual costs from analogous programs, recent proven cost estimating relationships, and historical learning curves. The CAIG avoids black-box cost models that do not permit insight into the data points on which the model is derived. The CAIG will also include technical and schedule risk by adjusting program parameters based on program knowledge and historical comparisons. For example, the CAIG might adjust weight growth, software productivity, and schedule durations to reflect historical experience on prior programs.

Again, for all of these reasons, the CAIG's independent cost estimate is a valuable input to the Department when considering a program's readiness to enter System Development and Demonstration.

CONCLUSION

In summary, the Navy's DD(X) program will provide the capability needed to close the naval surface fire support warfighting gap. The Department will ensure that the acquisition strategy will provide this capability in a reasonable and cost effective manner. At the Milestone B review planned for this fall, I will review the program schedule, technical maturity, and program budget. In the interim, we have allowed the Navy to continue key system and software development while the Department reviews the Navy's proposal for the shipbuilder portion of the DD(X) acquisition strategy. These actions minimized impact to ongoing efforts and will help maintain the schedule for critical development. And I assure you that we will consider the implications on the shipbuilding industrial base as we move toward a decision on the acquisition strategy.

Mr Chairman, this concludes my prepared remarks, I will entertain any questions you may have.