

STATEMENT OF

THE HONORABLE H. LEE BUCHANAN  
ASSISTANT SECRETARY OF THE NAVY  
(RESEARCH, DEVELOPMENT AND ACQUISITION)

AND

VICE ADMIRAL CONRAD C. LAUTENBACHER, JR. USN  
DEPUTY CHIEF OF NAVAL OPERATIONS  
RESOURCES, WARFARE REQUIREMENTS AND ASSESSMENTS

AND

REAR ADMIRAL MALCOLM I. FAGES  
DIRECTOR, SUBMARINE WARFARE DIVISION  
DEPUTY CHIEF OF NAVAL OPERATIONS  
RESOURCES, WARFARE REQUIREMENTS AND ASSESSMENTS

BEFORE THE  
SUBCOMMITTEE ON SEAPOWER  
OF THE

SENATE ARMED SERVICES COMMITTEE

ON

SHIP PROCUREMENT AND RESEARCH AND DEVELOPMENT PROGRAMS

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Madam Chairman, distinguished members of the Subcommittee, thank you for this opportunity to appear before you to discuss the Department of the Navy's Fiscal Year 2001 ship acquisition budget request.

When our Nation calls for military power, we demand it quickly. On the first night of the 1998 attacks against Iraq, firepower and air operations were drawn exclusively from Navy ships to avoid the associated security and political complications. While our sister services, the Army, Air Force and Coast Guard, provide complementary assets, the defining characteristic of the Navy and Marine Corps Team is that we accomplish our goals and exercise our influence readily and from the sea. We are expeditionary forces with virtually unlimited reach and we are often able to avoid political issues such as overseas basing and overflights. Our mobility, adaptability, and immense firepower make us an especially potent force.

Our Navy and Marine Corps units played key roles in the Kosovo operations. Strike aircraft from USS KEARSAGE, USS ENTERPRISE and USS THEODORE ROOSEVELT combined with Naval land based aircraft and flew thousands of combat sorties, achieving remarkable levels of precision, and suffering zero losses. Our surface ships and submarines struck 45 percent of the key headquarters and electrical power targets with Tomahawk land attack missiles during the campaign. They achieved a better than 80 percent success against targets in all weather conditions.

Carrier and land based EA-6B aircraft, the only standoff jammers available to NATO forces, accompanied all U.S. and allied strikes in over 1600 missions. Carrier group based S-3Bs and SH-60B helicopters, combined with P-3C Orion aircraft from shore to continuously patrol the Adriatic Sea throughout the campaign against sea-borne threats.

Combat ready Marines embarked in the NASSAU and KEARSARGE Amphibious Readiness Groups and supported by Navy and Marine Corps helicopters flying from USS INCHON, provided rapid presence ashore in support of humanitarian efforts to aid Kosovar refugees. As part of the Kosovo Force (KFOR), Marines of the 26<sup>th</sup> Marine Expeditionary Unit (MEU) were the first U.S. ground troops to enter Kosovo.

We would like to say this pace of operation is unusual. It is not, however. In the 84-month period ending this past September, Naval forces participated in 80 contingencies, from combat to disaster relief. This requires a sustained fleet and to that end, our Fiscal Year 2001 shipbuilding plan requests \$12.3 billion for new construction ships and ship refuelings.

## **CURRENT SHIP CONSTRUCTION**

Our Fiscal Year 2001 budget calls for construction of 39 ships across the Future Years Defense Plan (FYDP). We continue funding for DDG 51 procurement into the last year of the four-year multiyear contract. We have fully funded the CVN 77 in Fiscal Year 2001 as well as the third VIRGINIA Class submarine and have provided funding for advance procurement of the fourth and fifth VIRGINIA Class submarines. We also fund the fifth and sixth ships of the USS SAN ANTONIO (LPD 17) Class amphibious transport dock ship, which will serve as the functional replacement for four existing amphibious ship classes. Additionally, we fund the second Auxiliary Dry Cargo Vessel (T-ADC(X)) in Fiscal Year 2001. This twelve-ship class will serve as the replacement for the Navy's aging Combat Logistics Force.

### **ARLEIGH BURKE (DDG 51) Class Destroyer**

The DDG 51 Class guided missile destroyer program remains the Navy's largest surface ship program. The Fiscal Year 2001 budget request includes \$2.7 billion for the procurement of three DDG 51 Class destroyers. These ships complete the Fiscal Years 1998-2001, 13-ship, multiyear contract. In order to further leverage the stability brought to the shipbuilding industrial base and the savings afforded through the DDG 51 multiyear contracting strategy, we included \$357 million in the Fiscal Year 2001 budget for Advance Procurement funding. This funding will continue the current multiyear acquisition strategy through completion of the DDG-51 Destroyer program.

The three ARLEIGH BURKE Class destroyers procured in Fiscal Year 2001 will be Flight IIA ships configured with the Baseline 7 Phase I Aegis Combat System, which we introduced on the third ship in Fiscal Year 1998. This baseline incorporates new integrated mission capability and makes these ships more capable in the littoral than any other combatant in the world. The upgrades include the SPY-1D(V) radar system, Area Theater Ballistic Missile Defense, Cooperative Engagement Capability, the 5"/62 gun firing Extended Range Guided Munitions, advanced processing, and a Remote Minehunting System.

### **Carrier Construction**

We continue construction of RONALD REAGAN (CVN 76), the ninth ship of the NIMITZ Class at Newport News Shipbuilding. As the result of a 119 day strike by Newport News Shipbuilding as well as our decision to avoid adverse impact on the crew, CVN 76 delivery will be delayed approximately 3 months. Now approximately 60% complete, the christening and launch is scheduled for March 2001, and ship delivery for March 2003.

The fully funded Fiscal Year 2001 procurement of CVN 77, the tenth and final ship of the NIMITZ Class, begins an evolutionary aircraft carrier acquisition strategy, which we will use to develop the next generation of aircraft carriers. The CVN 77 will serve as a technology bridge to the next generation of aircraft carriers designated CVNX. The Fiscal Year 2001 budget request includes RDT&E funding of \$38 million to continue

incorporating critical transition technologies in CVN 77. We have focused RDT&E efforts on a new, fully integrated combat system and related initiatives to reduce Total Ownership Cost (TOC). We will forward fit technological innovations fielded in CVN 77 into the next class, CVNX achieving cost savings and risk reduction. Additionally, we will evaluate design changes in CVN 77 and CVNX for backfit into NIMITZ Class carriers to reduce life cycle cost. Transition technology insertion along with full funding for basic ship procurement is reflected in the Fiscal Year 2001 SCN budget submission.

### **VIRGINIA (SSN 774) Class Attack Submarines**

The keel for the first VIRGINIA Class submarine was laid in September of 1999. Construction on the TEXAS, second in the class, is well underway. The Fiscal Year 2001 budget request includes \$1.7 billion for full funding of the third ship and advance procurement for the fourth and fifth ships of the VIRGINIA Class. The third and fourth ships are part of the unique single contract and construction teaming plan approved by Congress in 1998. Teaming has already achieved significant cost savings for the first four submarines when compared to a typical four-ship allocation plan. The current FYDP includes level-loading of one ship each year for Fiscal Years 2001-2005 providing a cost effective steady production rate that helps both shipbuilders achieve level manning and more economic material buys.

The VIRGINIA Class submarine will surpass the operational performance of SEAWOLF in stealth, special warfare, mine warfare, surveillance, battle group operations, and mission flexibility— at a 28% reduction in procurement cost. To maintain such margins, the design incorporates flexibility to adapt future advanced technologies rapidly and affordably. This strategy requires steady investment to succeed.

The VIRGINIA Class is the first major combatant designed in the post cold war era to meet post cold war multi-mission requirements. It was also designed in a cost conscious manner—reducing TOC was a key design factor—providing the best value for the future. To reduce TOC, the VIRGINIA Class includes the disciplined application of commercial specifications and components, fewer developed specifications, and fewer construction drawings. Additionally, the modular design and the use of digital design tools will allow seamless integration of new technologies into each subsequent ship. The program continues to examine innovative ways to reduce acquisition and life cycle costs.

### **SEAWOLF (SSN 21) Class Attack Submarines**

The SEAWOLF Class submarine program has delivered and commissioned the first two ships and has awarded a \$887 million (RDT&E) contract modification for design and construction changes to the third and final SEAWOLF Class submarine.

USS SEAWOLF (SSN 21) completed its Post Shakedown Availability (PSA) in November 1999. Post PSA Acoustic Trials, Target Strength Measurement Trials, and Hydrodynamic Performance Trials are complete, demonstrating that the SEAWOLF Class

is the quietest, stealthiest and most maneuverable submarine in the Fleet. The ship has commenced a 15-month Operational Testing/Developmental Testing (OT/DT) period.

USS CONNECTICUT (SSN 22) commenced PSA in September 1999 and is scheduled to complete it in September 2000. The addition of a second SEAWOLF Class submarine provides the Navy with an essential submarine platform to meet fleet mission requirements.

Pre-Commissioning Unit JIMMY CARTER (SSN 23) is being modified with additional volume to accommodate advanced technology for Naval Special Warfare, tactical surveillance, and mine warfare operations. As part of the December 1999 contract modification, the base ship contract was converted to a Firm Fixed Price contract with a revised ship delivery date of June 2004.

### **SAN ANTONIO (LPD 17) Amphibious Transport Dock Ship**

The SAN ANTONIO Class of amphibious transport dock ships represent the Navy and Marine Corps future in amphibious warfare, and is one of the cornerstones in the Department's strategic plan known as "Forward...from the Sea". The 12 ships of the SAN ANTONIO Class will functionally replace 27 amphibious ships from the classes now in service. This plan will not only modernize our amphibious forces, but will also result in significant manpower and life-cycle cost savings.

The Fiscal Year 2001 budget request includes \$1.5 billion for the fifth and sixth ships of this 12-ship program. Design of the class is underway and lead ship construction will commence this spring. The ship program has experienced cost growth and schedule delays, causing a 10-month delay on the lead ship and affecting other ships of the class. This is not unusual for the lead ship of a new class that is overcoming technical challenges. We attribute the delay to concurrent development of the design tool with the detail design and insufficient ramp up of engineering and design resources; and non-recurring start-up costs with design. The associated delays on LPD 18 and LPD 20 are three and four months, respectively. The costs associated with the delays are \$285 million and have been fully funded in the Fiscal Year 2001 SCN request (Completion of Prior Year Programs line).

One of the goals of the LPD 17 program is to achieve a 20 percent cost avoidance in the operating and support costs for this 12-ship class of new, advanced technology, complex warships while building 12 ships for approximately \$1 billion less than a traditional two-shipyards production program. This goal is being achieved through the application of Integrated Process and Product Development teams and development of advanced product modeling in the Integrated Product Data Environment. Current estimates of operating and support cost avoidance exceed \$4 billion to date with more initiatives expected before completion of the program. Thus, while we experienced some cost growth and schedule delays, we feel that we should build on these successes and extend these reforms even further, perhaps into other acquisition programs.

### **Auxiliary Dry Cargo Vessel (T-ADC(X))**

The Navy has several supply ships that have been in service for over 30 years. Many of them are steam ships whose service lives will expire in Fiscal Year 2007. We plan to replace these aging vessels with the T-ADC(X) Auxiliary Dry Cargo Vessels. The Fiscal Year 2001 budget request includes \$339 million in SCN funding for the second ship of this 12-ship class. T-ADC(X) is a new class of ship that will replace the aging Ammunition and Dry Stores Ships (TAEs and TAFs).

The Navy awarded Phase I contracts to four shipbuilders in August 1999 for cargo system integration studies for efficient methods of handling material within the ship. Contract award for Phase II, detail design and lead ship construction, will occur in Fiscal Year 2000 with scheduled delivery in Fiscal Year 2004.

### **Advanced Seal Delivery System (ASDS)**

The Advanced SEAL Delivery System (ASDS) is a Special Operations Command sponsored program. A specially designed combatant submarine being developed for the clandestine insertion and extraction of Special Operations Forces, the ASDS will provide a quantum leap in SOF undersea mobility.

Design and construction of the lead ship is complete and shallow-water testing is currently underway at the Aberdeen Proving Grounds in Maryland. So far, the ship has successfully completed a number of slow speed surfaced and submerged operations. Testing of the ship's submerged anchoring and lock-in/lock-out capability using actual fleet divers is imminent, and the ship will be ready for deep-water testing at Pearl Harbor early this Spring. Delivery to the Fleet is anticipated sometime this Summer.

This program remains a top warfighter priority at SOCOM. Construction of five additional ships is scheduled to begin in Fiscal Year 2002 at a rate of one ship every other year.

### **Prior Year Completion Budget Line**

We added a Prior Year Completion budget line to the Fiscal Year 2001 Budget to fund prior year SCN program increases addressed in the Fiscal Year 1999 Ship Cost Adjustment (SCA) process but not fully financed within the SCA. Further growth in SCN program costs, combined with unfunded Fiscal Year 1999 SCA requirements, necessitated that this action be taken in order to execute the Navy's shipbuilding program. Specifically this funding addresses additional costs to the CVN-76 and VIRGINIA programs resulting from the Newport News labor settlement, cost growth to the LPD 17 program, and repricing of the DDG 51 program associated with revised requirements and cost growth on current requirements.

## **FUTURE CONSTRUCTION**

In the last decade, the focus of maritime warfare operations has necessarily shifted from open ocean, blue-water, sea-superiority roles to execution and support of operations in the littorals. Projecting U.S. maritime power from the sea to influence events ashore directly and decisively is now the essence of the Navy and Marine Corps Team's contribution to national security.

In support of this shift in focus, construction of the SAN ANTONIO Class amphibious transport dock ships and the VIRGINIA Class attack submarines, both of which were designed for the post-Cold War era, is well underway. Additionally, we are in the midst of designing two more platforms, the DD 21 Class destroyer, and CVNX, the next generation aircraft carrier. DD 21 will be a multi-mission surface combatant tailored for land attack and maritime dominance while the new CVNX Class carrier will use an evolutionary process for inserting new technologies to enhance warfighting.

### **DD 21 Class Destroyer**

The Fiscal Year 2001 budget request includes \$550 million to continue development of the 21st Century Land Attack Destroyer. Armed with an array of land attack weapons, DD 21 will provide offensive, distributed, and precise firepower at long ranges in support of forces ashore. Entering the fleet as our frigates and DD 963 class ships retire, DD 21 will sustain the Quadrennial Defense Review-mandated 116 surface combatant force level. It will also drive down the fleet's operating and support costs by leveraging increased automation to significantly reduce manning requirements, by incorporating an integrated power system designed to reduce fuel cost, and by leveraging commercial technology which offers reliable performance, reduced maintenance and reduced support cost. DD 21 will provide independent forward presence and deterrence, and operate as an integral part of Joint and Combined Expeditionary Forces. To ensure effective operations in the littoral, the Navy's new surface combatant will be powered by an Integrated Electric Drive propulsion system, and possess full-spectrum signature reduction, active and passive self-defense systems, and cutting-edge survivability features.

The Navy has successfully engineered a competitive acquisition strategy for DD 21 that effectively employs industry's broad resources, expertise, and ingenuity to achieve the requirements of tomorrow's Fleet. DD 21's streamlined acquisition approach seeks maximum design innovation and flexibility, minimum cycle time from ship design to delivery, and significant cost savings through the use of advanced commercial technologies and non-developmental items. Advanced design and construction techniques, and an innovative maintenance and support concept—included under the auspices of Full Service Contractor support—will result in significant reductions in procurement and lifecycle operating and support costs, including significant manning reductions along with improved quality of life for the crew.

In the context of the DD 21 program, Full Service Contractor support is the industry-based portion of the life cycle engineering and support program required to ensure operational readiness of the ship. In the course of developing ship concept designs, the industry is defining its concepts for performing life cycle support; including functions which are currently performed or brokered by the government. The Navy will evaluate these support concepts to determine the scope of the Full Service Contractor concept, based on such factors as feasibility, improvement to operational readiness, cost-effectiveness, and compliance with existing Navy infrastructure, policy, procedures and public law. The Navy does not envision changes to current policy governing ship depot maintenance, or the conduct of ship certifications and tactical training. In these vital areas, the Navy cannot transfer its authority to private industry, but rather intends to expand industry/government partnering to continue to improve on our current practices.

On November 23, 1999, the Navy signed the Contract Phase II agreement for Initial System Design with the two industry teams competing for DD 21. Contract Phase II will continue industry's initial design efforts through Fiscal Year 2000 culminating in the competitive selection of a single team for completion of System and Subsystem Design occurring in Fiscal Year 2001. The President's Fiscal Year 2001 Budget request emphasizes the Navy's commitment to the DD 21 mission by increasing the Research & Development investment to the level required to ensure industry's ability to deliver the innovation and technology required to meet the program's aggressive cost and performance goals. Accordingly, the President's Fiscal Year 2001 Budget also rebaselines the DD 21 first ship award for detailed design and construction to occur in Fiscal Year 2005 with scheduled delivery in 2010.

The results of this competition, through the completion of System Concept Design and at this stage in Initial Systems Design, demonstrate that the competition is driving the innovative solutions, in a cost-conscious, creative direction, necessary to meet the DD 21 performance requirements. The Navy is extremely pleased with the teaming arrangements and the broad spectrum of talent and experience on both teams. The competition to date, as well as the competition planned throughout the life of the program, will maintain the desired focus on innovation and efficiency.

## **CVNX**

The new CVNX Class aircraft carrier program will use an evolutionary, multi-ship process for inserting new technologies that will enhance warfighting, enable critical features for future flexibility, and dramatically reduce TOC. In September 1998, the Defense Acquisition Board concurred with Navy recommendations for a large-capacity (75 aircraft) nuclear powered aircraft carrier and the evolutionary acquisition strategy. CVN 77, as the first step toward CVNX, will receive a new integrated combat system. CVNX 1 will receive a new nuclear propulsion plant, electrical system, and Electromagnetic Aircraft Launch System providing immediate warfighting capabilities and substantially reducing TOC. They are also the critical enablers for future carrier improvements. CVNX 2 will receive restoration of service life allowance, balanced

survivability and warfighting improvements. The \$5-7 billion reduction of TOC, including backfit of applicable initiatives to in-service carriers, will be a recurring and underlying focus throughout this evolutionary approach. The CVNX Class will encompass critical warfighting improvements to improve sortie rates and quality of life for our Sailors. We include \$236 million of RDT&E funding in the Fiscal Year 2001 budget request for the continued implementation of the CVNX plan, and \$22 Million in SCN funding for long lead time reactor plant forgings.

## **MODERNIZATION AND TECHNOLOGY INSERTION**

Although building new platforms for the future is a prime priority, maintaining and modernizing our current platforms enables them to continue to be valuable warfighting assets in the years ahead while concurrently trying to mitigate escalating support costs of aging equipment. Also, as technological cycle times are now shorter than platform service life, it is fiscally prudent to modernize the force through timely upgrades and technology insertion. In support of this priority, we plan to modernize the TICONDEROGA cruisers, conduct planned maintenance and refueling of our NIMITZ Class aircraft carriers and extend the service life our air cushioned landing craft. Our technology insertion efforts include the “Smartship” initiatives, a spectrum of new capabilities for both existing and in-development submarines, and the MARITECH Advanced Shipbuilding Enterprise (ASE).

### **TICONDEROGA (CG 47) Cruiser Conversion Plan**

The Navy plans to add new mission capabilities and extend the mission-capable service life of the CG 47 Class cruisers. Twelve ship conversions are funded in the Fiscal Year 2001- 2005 FYDP. The Fiscal Year 2001 budget request includes \$71 million in RDT&E for an upgrade of these ships to add new and enhance existing combat system capabilities for Theater Ballistic Missile Defense, Land Attack, and Area Air Defense Commander missions. These new mission capabilities will dramatically improve the ability of these warships to operate in Joint and Coalition warfare environments. The program is essential to maintaining a mission-relevant force of approximately 116 surface combatants over the next 20 years.

### **Carrier Maintenance and Modernization**

The Navy accomplishes the maintenance and upgrade of our NIMITZ Class carriers through the Incremental Maintenance Plan (IMP). The mid-life Refueling Complex Overhaul (RCOH) is the industrial availability of the IMP necessary to achieve the full 50-year service life potential of the NIMITZ Class without requiring a late-in-life Service Life Extension Program (SLEP) or another, similar program. The RCOH accomplishes repairs and modernization necessary for reliable ship operations, extends docking requirements to a 12 year cycle, refuels the reactors, prepares the ship for entry into the IMP, implements the TOC reduction initiatives, and recapitalizes the ship.

The RCOH for USS NIMITZ (CVN 68) began in May 1998. As the result of the 119 day strike at Newport News Shipbuilding, as well as a Navy decision to avoid adversely impacting the crew, the CVN 68 RCOH delivery was delayed approximately three months and is expected to be June 2001.

USS DWIGHT D. EISENHOWER (CVN 69) will enter its RCOH in May 2001. We are currently executing the Advance Procurement/Planning portion of the EISENHOWER RCOH. Our Fiscal Year 2001 budget request contains \$703.4 million to execute the Fiscal Year 2001 portion of the EISENHOWER RCOH. USS CARL VINSON (CVN 70) enters Advanced Procurement/Planning with a \$25 million Fiscal Year 2001 request in support of its Fiscal Year 2005 RCOH. These investments are vital to the recapitalization of these national assets.

### **Landing Craft Air Cushioned (LCAC) Service Life Extension Program (SLEP)**

The Navy is continuing the LCAC SLEP in Fiscal Year 2001. This program combines major structural improvements with Command, Control, Communications, Computer and Navigation upgrades and adds 10 years to the service life, extending it to 30 years. In Fiscal Year 2001, it is funded at \$15.6 million and will extend the service life of 1 craft. The SLEP is planned for a total of 74 craft.

### **Smartship**

Our budget request includes \$28 million to fund the procurement of “Smartship” upgrades for five CG 47 Class cruisers in Fiscal Year 2001. These upgrades will vastly reduce the workload on our Sailors. We have programmed a total of over \$400 million across the FYDP for these “Smartship” improvements Fleet-wide, including the associated “Smart Gator” and “Smart Carrier” initiatives. Smartship technology consists of automation upgrades to the ship’s navigation, machinery controls, and damage control and provides an information management network and a condition based maintenance tool for machinery. By eliminating mundane tasks through automation and allowing the crew to concentrate on high priority items, this technology is an enabler for reduced manning. Smartship technology will continue to cause constructive policy change in the Navy. Our budget request for the DDG 51 shipbuilding also continues the forward fit installation of “Smartship” technologies.

### **Smart Carrier**

The “Smart Carrier” project is a similar initiative to reduce shipboard workload on our carriers through industry standard process reengineering and the insertion of enabling technologies. Like the Smartship program, the goal is to enhance Sailors’ quality of life and lower TOC. Smart Carrier funding is \$12 million in Fiscal Year 2001 and includes advanced planning and procurement for technology insertion. The Smart Carrier Program has adopted an Integrated Product Team (IPT) approach whereby the IPT determines the technology package for each carrier backfit.

## **Submarine Technology**

The Navy continues to pursue a strategy of increasing the capabilities of the VIRGINIA Class submarine force through the insertion of advanced technology into new construction and follow-on ships. The Fiscal Year 2001 budget request includes \$113 million in RDT&E funding for advanced submarine technology development emphasizing capability improvements in sonars and major electrical/mechanical systems. Additionally, the Navy is pursuing R&D in other areas of submarine technology that address a spectrum of new capabilities for existing submarines, planned construction, and future submarine classes.

Both submarine shipbuilders are playing important roles by assisting the Department's efforts to identify additional technologies for insertion opportunities and by identifying design changes that bring a life cycle cost avoidance benefit. The shipbuilders have provided 49 Design Improvement Proposals that were approved and funded since inception of this program. Nine proposals were approved and funded last year alone. Additional details of the design improvement are provided in the Fiscal Year 2001 Design Improvement Report submitted with the President's Budget.

The next generation of Submarine Large Scale Vehicle, CUTTHROAT (LSV 2), is under construction at Newport News Shipbuilding and Electric Boat Corporation. CUTTHROAT will support technology insertion in VIRGINIA Class submarines during a 20 year operating life at the Navy's Acoustic Research Facility at Lake Pend Oreille, Idaho. The design is an exact external replica of VIRGINIA. Quieter and more powerful than her predecessor, CUTTHROAT will enable advancements in submarine hydroacoustic and hydrodynamic testing. At 111 feet long and 200 tons displacement, CUTTHROAT will be the world's largest unmanned autonomous vehicle. Hull fabrication is complete and modules are being outfitted today in Newport News, Virginia and Groton, Connecticut. Shipment of three major sections to Idaho is planned for spring 2000. Following final assembly at the lake facilities, CUTTHROAT will be launched in September 2000 and begin lake trial testing before the end of the year. Delivery to the Navy is planned for February 2001.

## **MARITECH Advanced Shipbuilding Enterprise (ASE)**

The Navy's MARITECH Advanced Shipbuilding Enterprise (ASE) program builds on previous efforts initiated under DARPA (1993-1998). DARPA's MARITECH was the technology element of President's Five Part Plan to revitalize the U.S shipbuilding industry. It was aimed at improving the design and construction processes of U.S. shipyards. Productivity improvements achieved under MARITECH have helped stimulate commercial business opportunities such as construction of crude carriers, cruise ships and trailer ships at three U.S. shipyards. Other productivity improvements, such as increased throughput and reduced cycle times, will lead to savings in U.S. Navy shipbuilding.

## **SUBMARINE FORCE STRUCTURE**

The 1997 Quadrennial Defense Review stated that “contingent on a reevaluation of peacetime overseas presence requirements, submarines will be procured at a long-term rate of one-and-one-half to two per year, consistent with a target force level of 50 attack submarines.” In March 1998, the Deputy Secretary of Defense directed the Chairman of the Joint Chiefs of Staff to conduct the indicated study. The Attack Submarine Study has been completed and recently delivered to the Chairman and Members of this committee.

The Attack Submarine study stated three principle conclusions. Specifically, it concluded that 68 attack submarines (SSNs) in the 2015 and 76 in the 2025 time frames were required to meet all of the CINCs and national intelligence community’s highest operational and collection requirements. Next, it concluded that a force structure below 55 attack submarines in the 2015 and 62 in the 2025 time frames would leave the CINCs insufficient capability to respond to urgent crucial demands without gapping other requirements of high national interest. Finally, the study concluded that to counter the technologically pacing threat would require 18 VIRGINIA class attack submarines in the 2015 time frame.

Since the 1997 QDR decision to target a force structure of 50 attack submarines, flexibility and shock absorbency of the force has eroded away. Efficiencies to maximize mission accomplishment served to delay the effects of a dwindling force structure. Missions have had to be reprioritized and a growing number are being cancelled. This condition will worsen if force level drops any further. When the Attack Submarine Study was tasked, we had an Attack Submarine Force of 73 attack submarines. As of February 29, 2000, there are 56 attack submarines in the Force.

### **Options to Reach and Maintain Attack Submarine Force Structure.**

There are 2 options that present themselves in the near/mid term to reach and maintain an increased level of SSN force structure.

- Four pre-Vertical Launch System (VLS) 688 class submarines are scheduled for inactivation in Fiscal Years 2002 - 2005 before the end of their service life. These attack submarines could be refueled and remain in service an average of 12 years each, following refueling.
- Four OHIO Class ballistic missile submarines (SSBNs) are scheduled for inactivation in Fiscal Years 2003 - 2004. These ballistic missile submarines could be refueled and converted to guided missile submarines (SSGNs), providing an additional 21 to 23 years of service each, and used to fulfill Tomahawk Land Attack Missile and Special Operations Forces requirements currently being met by attack submarines.

In the long term, the only way to reach and maintain an increased attack submarine force structure is with an increased build rate. Navy will evaluate alternative procurement strategies for achieving increased force level during the development of POM 2002 budget. Achieving this force structure will place great stress on our SCN accounts.

The Fiscal Year 2001 President's Budget provides \$31 million for advance procurement to support four additional SSN 688 Class submarine refuelings. It also establishes a new procurement line item in the SCN appropriation for submarine force structure and provides funding in Fiscal Year 2002 and out to either continue efforts to refuel four SSN 688s or SSGN conversion. A decision must be made during the development of the POM 2002 Budget Request as to how to apply "submarine force structure" funds. Consistent with our nuclear engineering practices, when a nuclear submarine reaches the end of its reactor core life it is either refueled, if there is sufficient remaining ship life, or inactivated. The decision will balance the opportunity to refuel those ships scheduled for inactivation in Fiscal Year 2002 with the revolutionary opportunity posed by SSGN, but mitigated by arms controls issues associated with conversion of strategic submarines to non-strategic use.

The SSGN project is currently in the Mission Area Assessment phase of program development. Funding provided in Fiscal Year 1999 and Fiscal Year 2000 is being used to further explore the concept design and fully develop the mission need and, if approved, the Fiscal Year 2001 funding will continue these efforts. Also, we have begun a study to determine the marginal utility of SSGN compared to other platforms, which will include an evaluation of the impact of the possible SSGN conversion on attack submarine force structure.

## **NAVAL SURFACE FIRE SUPPORT**

The Navy is executing a two-phase plan to develop new weapons systems, advanced munitions and a Naval Fires Control System to provide improved Naval Surface Fire Support capability. These new developments will provide long range, responsive, accurate and lethal fires in support of ground forces in amphibious and littoral operations through a combination of advanced guns, precision gun ammunition and precision land attack missiles.

In the first phase the Navy developed a 5-inch, 62 caliber gun and is developing the associated Extended Range Guided Munitions to engage targets between 41 and 63 nautical miles. The Navy also plans to modify its Standard Missile for land attack that will have a range of about 150 nautical miles. These weapons, and the Naval Fires Control System, a mission planning and execution tool to control their use, are to be installed on 28 newly constructed ARLEIGH BURKE Class destroyers to be delivered between Fiscal Years 2001 and 2010, and on 22 TICONDEROGA Class cruisers selected for modernization between Fiscal Years 2004 and 2009. However, these weapons are not

intended or expected to satisfy the full range of Marine Corps Naval Surface Fire Support requirements.

The second phase, to be completed by 2020, is intended to fully meet Marine Corps requirements. It includes developing a longer range, higher volume, larger caliber Advanced Gun System and associated increased lethality munitions and a longer range, increased lethality Advanced Land Attack Missile for the DD-21 Class Land Attack Destroyer. The Navy plans to accept delivery of 32 DD-21s between Fiscal Years 2010 and 2020.

### **NAVY THEATER WIDE (NTW)**

The Navy Theater Wide (NTW) Theater Ballistic Missile Defense (TBMD) system will provide defense in depth from the threat of Theater Ballistic Missile (TBM) attack for U.S. and allied forces overseas, including vital areas, critical military assets, population centers and large geographic regions. NTW takes advantage of available sea room and ship mobility to achieve intercepts on the target TBM in the ascent, mid-course and terminal stages of exo-atmospheric flight. NTW supports U.S. political and military objectives and reassures coalition allies without requiring allied permission or support.

The Navy will pursue development of the NTW Block I TBMD system through incremental upgrades including the missile seeker, warhead and propulsion, Aegis computer program modifications, and improved radar tracking and discrimination. The focus of the Navy Theater Wide Program is successful completion of the Aegis Lightweight Exo-atmospheric Projectile Intercept (ALI), initiating deployment of the Block I capability, and development of the NTW Block II follow-on system in cooperation with Japan.

The Navy is beginning ALI live fire tests and has successfully conducted the first Controlled Test Vehicle. USS SHILOH conducted the first ALI live firing test in September 1999. This test successfully demonstrated the launch and flight sequence through third stage separation and verified flight stability at extreme altitude. Though the original plan was to conduct all Flight Test Round shots from USS SHILOH, the need for further testing conflicted with that ship's operational schedule. Therefore, the CNO decided to shift to USS LAKE ERIE to conduct the next firings in the ALI testing program. LAKE ERIE, already equipped with Area Linebacker modifications, is currently receiving ALI equipment modifications in Pearl Harbor and will conduct system checks and training to support the planned test firings.

Initial Block I deployment capability will be as early as 2007 or as late as 2010 depending on test progress, funding, and realization of the long-range threat. The contribution of sea-based assets to National Missile Defense is to be addressed in a Ballistic Missile Defense Organization report due later this month.

## SHIPBUILDING INDUSTRIAL BASE

The Navy, in conjunction with the Maritime Administration, defines the primary industrial base for Naval shipbuilding as those U.S. shipyards capable of designing and building large, oceangoing ships over 400 feet in length with a draft of 12 feet or greater. As we began expanding the fleet in 1981, there were 22 shipyards actively constructing large commercial and Navy ships. Shortly after the elimination of the Maritime Administration's construction subsidies for commercial ships in the early 1980's, commercial shipbuilding in U.S. yards virtually collapsed and a declining shipbuilding industry became more dependent on Navy construction.

Since 1990, the Navy's active fleet and the active Navy shipbuilding infrastructure has seen considerable downsizing: from 550 ships to 316 ships today and from 14 shipyards to six shipyards. During the 1980's, the Navy was ordering an average of about 20 ships per year. That average fell to about eight ships per year during the 1990's our force levels and budgets were drawn down to the levels dictated by the QDR. As a result of overcapacity, the industry went through several restructuring phases during which these key six major shipyards were consolidated into three corporations. We view these mergers as positive steps toward right-sizing the shipbuilding industrial base.

Assuming no further infrastructure changes, we expect these shipyards to retain their design and construction capabilities for producing the submarines, surface combatants, amphibious, and auxiliary ships in the Navy shipbuilding FYDP, as currently planned. However, we are concerned with the engineering industrial base and the impact of new Navy designs, such as CVNX and DD 21. While industry has been collaborative on programs such as the VIRGINIA Class submarine, we must pursue collaboration even more vigorously to minimize any impacts on the engineering workforce. From a facility perspective, five of the six major shipyards are still operating at about 40-60% of capacity, with the other yard operating at close to full capacity. Depending on the outcome of contract awards for Navy ships, these capacity utilization levels are expected to increase slightly at most of these shipyards.

Our shipbuilding plan helps stabilize the Naval shipbuilding industrial base including the suppliers that provide supporting equipment and associated engineering services. The Fiscal Years 2001-2005 plan provides a balance between the Department's requirements and affordable shipbuilding. The CVN 77 replacement carrier budgeted in Fiscal Year 2001, the innovative teaming strategy approved by Congress for the construction of four VIRGINIA Class submarines, advance procurement for the Fiscal Year 2002 and Fiscal Year 2003 VIRGINIA Class submarines, and the DDG 51 Fiscal Years 1998 - 2001 multiyear contract, all highlight an acquisition strategy aimed at lowering costs, reducing disruptions from hiring and layoff cycles, level-loading employment, and encouraging capital investments. Our shipbuilding plan maintains the LPD 17 program and accelerates the Auxiliary Dry Cargo Vessel (T-ADC(X)) program which will help the auxiliary vessel manufacturers capitalize on past and current program efficiencies. These actions are key steps in a continuing effort to ensure the long-term

viability of the shipbuilding industry to support our future construction programs for the 21<sup>st</sup> Century.

The budget reflects our significant added investment in Research and Development to achieve the performance and affordability requirements of the DD 21. Commensurate with the financial investment, we have also provided an additional year for development of the key technologies that are integral to the ship's capabilities. In conjunction with delaying the DD 21 first ship award to Fiscal Year 2005, and to mitigate any associated impacts on the surface combatant shipbuilding industrial base, the Navy has extended the DDG 51 program to 2005, and expanded the DDG 51 program to 58 ships (increased by one).

Adding the 58<sup>th</sup> DDG and extending the shipbuilding program to Fiscal Year 2005, in conjunction with shifting DD 21 first ship award to Fiscal Year 2005, stabilizes the surface combatant build rate at two ships per year throughout Fiscal Years 2002-2005. The reduced surface combatant shipbuilding rate strikes the necessary balance between the Navy's overall shipbuilding program requirements, resources, affordability and industrial base considerations.

The impact of the reduced surface combatant workload on the shipyards, assessed in the context of total shipyard workload, indicates that there are potential reductions in the shipyards' respective workforces, and potential impact on the workforce skill mix. However, each of the surface combatant shipbuilders have additional workload—LPD 17 and some commercial cruise ships—that augments their base surface combatant workload throughout the FYDP. The magnitude of these reductions will be determined by the strategy the shipbuilders employ to "level" their workload, and their success in executing this strategy across the multiple challenging programs comprising the workload.

The table below reflects corporate structures and selected facts about these key shipyards for Calendar Year 1999, including the corporate merger of Ingalls Shipbuilding Division and Avondale Shipyards under Litton Ship Systems:

Parent Company	Name	General Dynamics			Newport News	Litton Ship Systems	
	Business Operations	Ships (50%); Armored Vehicles(30%); Exec Aircraft (20%)			Ships (100%)	Ships (34%) Adv. Elex (31%) Info Sys (35%)	
Parent Sales (FY98 \$B)	\$7.4			\$1.8	\$4.8		
Govt % of Parent Sales	70%			97%+	70%		
Shipyard	Shipyard sales est. (FY98\$B)	\$2.7			\$1.8	\$0.8	\$1.1
	Shipyard Name	BIW	EB	NASSCO	NNS	Avondale	Ingalls

Current Orderbook	11-DDG	1 SSN 21 4 NSSN *	4 Sealift 2 trailer ships	1 CVN 1 CVN (RCOH) 4 NSSN *	5 Sealift 2 LPD 3 Crude Carriers	12 DDG 1 LHD 2 Cruise Ships
Total Employment	7,500	8,700	2,900	17,300	7,800	10,500

\*Teaming arrangement between NNS and EB for NSSN production

## SUMMARY

Madam Chairman, the Navy and Marine Corps Acquisition Team is continuing to work very hard to build a blend of ship acquisition programs that maximize our current benefits while buying smart for the future. We are institutionalizing reforms that make acquisition success a common occurrence. We continue to communicate fully and openly with Congress, industry, our warfighters, and our acquisition professionals, and are doing everything it takes to make sure our Sailors and Marines are provided with the safest, most dependable, and highest performance equipment available within fiscal constraints. We appreciate the support provided by Congress and look forward to working together with this Committee toward a secure future for our nation.