NOT FOR PUBLICATION UNTIL RELEASED BY
THE HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON SEAPOWER AND
EXPEDITIONARY FORCES

STATEMENT OF

VADM PAUL SULLIVAN
COMMANDER, NAVAL SEA SYSTEMS COMMAND

AND

MS. ALLISON STILLER
DEPUTY ASSISTANT SECRETARY OF THE NAVY FOR
SHIPBUILDING

AND

RADM BARRY McCULLOUGH
DIRECTOR, WARFARE INTEGRATION

AND

MR. DUB SUMMERALL
EXECUTIVE DIRECTOR FOR SURFACE COMBATANTS,
PROGRAM EXECUTIVE OFFICER, SHIPS

BEFORE THE

SUBCOMMITTEE ON SEAPOWER AND EXPEDITIONARY FORCES

OF THE

HOUSE ARMED SERVICES COMMITTEE ON

SURFACE COMBATANT CONSTRUCTION UPDATE

JULY 24, 2007

NOT FOR PUBLICATION UNTIL RELEASED
BY THE HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON SEAPOWER AND
EXPEDITIONARY FORCES

Chairman Taylor, Mr. Bartlett, distinguished members of the Subcommittee, thank you for the opportunity to appear before you today and discuss the current status of surface ship construction programs, and particularly the Navy's Littoral Combat Ship (LCS) program.

The Department is committed to the effort to build an affordable 313-ship fleet by 2020 tailored to support the National Defense Strategy and the 2006 Quadrennial Defense Review. The Department continues to utilize a Long Range Strategic Shipbuilding Plan with an eye on further stabilizing workload and funding requirements. A stable plan will enable the shipbuilding industry to maintain critical skills and to make business decisions that increase efficiency and productivity in order to meet the Navy's projected shipbuilding requirements.

We still face challenges. Recent setbacks with the LCS have underscored the need for an evaluation of our acquisition process from contracting practices to ship production monitoring. As a result of Hurricane Katrina and the recent strike at Northrop Grumman Ship Systems (NGSS) Ingalls Operations, the Navy is working along with NGSS to review the baselines for current NGSS contracts with the Navy, and to also understand how best to execute future shipbuilding efforts. The review effort will help both the Navy and NGSS to closely monitor and best utilize NGSS manning resources and facilities. We thank the Committee for its support of split funding for dual lead ships of the ZUMWALT Class to maximize competitive efficiencies and focus design efforts.

At the Subcommittee's request, the Department is pleased today to discuss the status of our current surface ship shipbuilding programs, including recovery efforts from Katrina. We will also discuss the Navy's revised plan for the LCS program, and will describe how the lessons learned from LCS are being applied to Navy acquisition.

LPD 17 Program

The LPD 17 Class of amphibious warfare ships represents the Department of the Navy's commitment to a modern expeditionary power projection fleet that will enable our naval force to operate across the spectrum of warfare. The LPD 17 Class provides personnel, vehicle, and cargo movement and staging areas to support both vertical and surface assault operations in support of Marine Expeditionary Brigade (MEB) or a smaller Marine Expeditionary Unit (MEU). LPD 17 (SAN ANTONIO) was accepted with incomplete work as a result of higher than planned ship construction costs, and to mitigate potential schedule or cost impacts to follow-on LPDs and other shipbuilding programs at NGSS. When the Navy took delivery of the LPD 17 in July 2005, the ship was 93% complete and the estimates to complete exceeded the available funding. Given the ship's crew was in place, and the ship was functionally complete and able to safely transit to its homeport, the Navy decided to complete portions of the ship in the ship's homeport area after delivery. This improved the Sailors' quality of life and allowed the remaining work to be completed more affordably by local ship repair/maintenance companies using competitively bid contracts. Additionally, this approach permitted the identification of any technical and operational problems with the class design as early as possible, allowing time to efficiently roll corrections into follow ships of the class. Over the past year LPD 17 has spent a great deal of time at sea. In fact, it was underway for over 200 days in 2006, more than the standard six-month deployment, demonstrating her combat systems, aviation, replenishment and landing craft capabilities.

LPD 17 recently completed a Post Shakedown Availability at BAE Systems Ship Repair, Norfolk, VA, on July 11, 2007. The work package included the planned installation of new systems, planned system upgrades, maintenance work and the remaining ship completion work. All compartments and mission critical systems are now complete. The remaining items, mainly routine maintenance work, are scheduled to be completed in the upcoming maintenance availabilities.

The NAVSEA Logistics Center has been tasked to lead and conduct the LPD 17 Program's Logistics Readiness Assessment (LRA) for Initial Operational Capability (IOC). The LRA is an independent review to advise the program manager on the readiness of the logistics program for Fleet introduction and Initial Operational Capability (FOC). The LRA will also assess logistics readiness in conjunction with the Fleet. The LPD 17 LRA is scheduled to complete this fiscal year.

Lessons learned and improvements identified on LPD 17 have been incorporated on follow ships. LPD 18 (NEW ORLEANS) was 97% complete at delivery to the Navy and has now been commissioned, and LPD 19 (MESA VERDE) is scheduled to be delivered this fall. LPD's 20-24 are under construction and will be delivered in the next few years.

In light of competing priorities for resources, the President's Budget for FY 2008 represents the best balance of resources to requirements. However, an additional LPD 17 Class ship was identified by the Chief of Naval Operations in his February 13, 2007, Unfunded Program Requirements letter. The LPD 17 ship was the number one item on the list with an approximate price of $1.7 billion. If sufficient additional funds were provided, they could be used for the procurement of a tenth LPD 17 Class ship in mid-2008, which would start construction about one year after LPD 25. If Congress intends to add funds for an additional LPD in FY 2008, the Navy requests that full funding be included. A significant disruption to the current shipbuilding plan will be created by including additional ships in the procurement plan without accompanying full funding from outside Navy's accounts.

T-AKE Program

The T-AKE 1 Class was designed to replace our aging combat stores (T-AFS) and ammunition (T-AE) shuttle ships. Working in concert with an oiler (T-AO), it can perform a station ship mission which will allow the retirement of four fast combat support ships (AOE 1 Class). Nine T-AKE hulls are under a Fixed Price Incentive contract with General Dynamics National Steel and Shipbuilding Company (NASSCO). T-AKE 1 (LEWIS AND CLARK) was delivered in June 2006, T-AKE 2 (SACAGAWEA) delivered February 2007 and T-AKE 3 (ALAN SHEPARD) was recently delivered to the Navy on June 26, 2007.

NASSCO was awarded a contract in FY 2002 for the construction of up to 12 Dry Cargo and Ammunition Ships (T-AKEs) for the Combat Logistics Force. The T-AKE contract required that options for each vessel be exercised within the specified option window in order to maintain the price in the contract. When the Navy chose not to exercise contract options in FY 2006, it necessitated a price negotiation for all ships procured after that decision.

The Navy and NASSCO have restructured the contract to procure T-AKE ships to address the procurement of the next five ships (two more than the original 12-ship contract). This approach

will benefit both the Navy and the shipbuilder. By restructuring the contract to include the existing nine and the additional five ships, the Navy will procure the entire class at the lowest overall cost per hull. The restructuring also includes a release from the company's Request for Equitable Adjustment (REA). An offer agreement that defines the revised pricing, terms and conditions and release from the REA was signed on July 13, 2007 with contract modifications forthcoming. The contractor has been performing well with three ships delivered, a successful operational evaluation, a fourth ship to be delivered later this year, the fifth and sixth ship production well underway, and the seventh ship in the early construction phase.

The Department would support congressional increases in T-AKE ship procurements. Two additional T-AKE's were identified by the Chief of Naval Operations in his February 13, 2007 Unfunded Program Requirements letter. The T-AKE was the number two item on the list with an approximate price of $600 million per ship. The current contract structure could accommodate earlier T-AKE procurements and the increased backlog would enhance stability and could yield benefits to both industry and the Navy in execution. If Congress intends to add funds for an additional T-AKE in FY 2008, the Navy requests that full funding be included. A significant disruption to the current shipbuilding plan will be created by including additional ships in the procurement plan without accompanying full funding from outside Navy's accounts.

CVN 21 Program

The CVN 21 Acquisition Program will replace the USS ENTERPRISE and the NIMITZ Class with the CVN 78 (GERALD R. FORD) Class, designed to improve operational capability while simultaneously driving down manpower and total ownership costs. CVN 78 Class warfighting capability improvements include a 25% increase in Sortie Generation Rate, increased operational availability, nearly three-fold increase in electrical generating capacity, restoration of Service Life Allowances, and an enhanced Integrated Warfare System. These capability improvements will ensure that the CVN, the centerpiece of the Navy's Carrier Strike Group, continues to pace projected threats.

Since Milestone B in April 2004, the CVN 21 Program has made significant progress. The ship specification has been certified and the product model is 70% completed, reflecting a rapidly maturing design. The Navy plans to award the Detail Design and Construction Contract for the lead ship of the Class, CVN 78 (GERALD R. FORD), in FY 2008 with delivery planned for FY 2015. The program is fully funded to the current cost estimate, which was independently validated by OSD's Cost Analysis Improvement Group at Milestone B and is within the Congressional cost cap. With the award of the construction contract in FY 2008, the Navy plans to implement rigorous cost monitoring and control measures, including an integrated baseline review within six months of contract award, monthly cost performance reports from the shipbuilder and an independent cost analysis group within the on-site Supervisor of Shipbuilding field office.

On July 6, 2007, the Deputy Under Secretary of Defense (Science and Technology) (USD(S&T)) concurred with the Chief of Naval Research Technology Readiness Assessment for the CVN 21 Program. Fourteen Critical Technology Elements (CTEs) were assessed by an independent panel. Six CTEs rated a Technology Readiness Level (TRL) of 6 or better. Six CTEs with 5 TRL ratings have technology maturation plans that lead to TRL 6 demonstration in time for integration with the carrier construction. The Evolved Sea Sparrow Missile (ESSM) data link

improvements will mature to TRL 5 in FY 2008 and TRL 6 in 2011, well before required on the ship. The status of the ESSM program will be reported to the Office of the USD(S&T) again in March 2008.

Three new systems of particular note include the Electromagnetic Aircraft Launch System (EMALS), the Advanced Arresting Gear (AAG) and the Dual Band Radar (DBR). These systems provide vital capability to the new carrier, and a robust risk mitigation strategy is in place to prove each system before fielding on the CVN 78. The EMALS technology was demonstrated in 2004 on a full scale, half length prototype installed at Naval Air Warfare Center, Lakehurst, NJ. Full scale, shipboard representative prototypes of both EMALS and AAG will be thoroughly tested at Lakehurst before procuring the equipment for CVN 78. AAG will be backfit on a NIMITZ Class ship and tested at sea before delivery of CVN 78. DBR will be thoroughly tested at the Navy's Wallops Island facility, and radar systems will be tested at sea on DDG 1000 before delivery of CVN 78.

The CVN 78 Warfare Systems components include the self-defense systems, air traffic control capabilities and command and control systems. The Senate has expressed concern regarding the unit cost of the CVN 78 Ship Self Defense System (SSDS) relative to a similar system procured for the FY 2007 amphibious assault ship, LHA 6. CVN 78 is incorporating the Dual Band Radar into the warfare system to replace five radars along with four illuminators associated with the Evolved Sea Sparrow Missile. The cost delta between the SSDS on LHA 6 and CVN 78 is due to the integration with Dual Band Radar system, which is a significant difference from LHA 6.

DDG 51 Class Ships

The DDG 51 Class is a 62-ship class that was developed in three incremental flights, with upgraded technology and capability built into each subsequent hull. All 62 ships in the class have been authorized and appropriated. Ships are being constructed at both NGSS, Ingalls Operations and General Dynamics - Bath Iron works. The Navy accepted delivery of three ships in 2006, bringing the total to 51 ships delivered by the end of the calendar year. The final ship, DDG 112, is scheduled for delivery in 2011.

In the President's Budget request for FY 2008, the Department requested $78.1 million. The majority of the FY 2008 budget is for production shutdown requirements ($65.9 million). The DDG 51 Class Program expects to incur obligations with the shipbuilders and Government Furnished Equipment (GFE) manufacturers for production shutdown activities during FY 2008. The final DDG at Bath Iron Works (DDG 112) will start fabrication at the Hardings, East Brunswick Manufacturing Facility, and proceed into the Pre-Outfit Building number 1 during 2008. The last NGSS DDG 51 Class ship (DDG 110) will start fabrication during FY 2008. Similarly, the last AEGIS Weapon System and MK 41 Vertical Launch System will complete assembly and test by the end of FY 2008. As work moves through the production lines, the Government will incur obligations associated with production shutdown and the shipbuilders and GFE manufacturers are expected to submit invoices for costs incurred with production shutdown efforts. Congressional reductions to the requested budget may prevent the Navy from meeting contract obligations it expects to incur during FY 2008. The Department's request reflects the best balance of resources with requirements.

DDG 1000 Destroyer Program

This multi-mission surface combatant, tailored for land attack and littoral dominance, will provide independent forward presence and deterrence and operate as an integral part of joint and combined expeditionary forces. DDG 1000 (ZUMWALT) will capitalize on reduced signatures and enhanced survivability to maintain persistent presence in the littoral in future scenarios. The program provides the baseline for spiral development to support future surface ships. DDG 1000 with the Advanced Gun System (AGS) and associated Long Range Land Attack Projectile (LRLAP) will provide volume and precision fires in support of joint forces ashore. A GPS guided, 155mm round, LRLAP will provide extended range, all weather fires capability. DDG 1000's Dual Band Radar represents a significant increase in air defense capability in the cluttered littoral environment. Investment in open architecture computing infrastructure and reduced manning will provide the Navy life cycle cost savings and technology options that can be retrofitted to legacy ships allowing adaptability for an uncertain future.

Under the dual lead ship strategy, a lead ship will be constructed at both NGSS and General Dynamics Bath Iron Works (BIW). Contracts for detail design were awarded to the shipbuilders in August 2006. Both shipbuilders were also awarded contracts for long lead material and pre-production planning to support detail design and construction in June 2007. Additionally, BAE Systems was awarded a contract in June 2007 for the detail design and construction of the AGS. Construction contracts for the dual lead ships are planned to be awarded this year. The FY 2008 President's Budget request of $2.8 billion provides the second and final increment and completes full funding of the dual lead ships.

The DDG 1000 program continues to execute on cost and on schedule for both software development and detail design, and will be ready to start construction in late 2008 on both lead ships.

In preparation for Milestone B, the DDG 1000 program successfully completed an independent TRL Assessment (TRA). The TRA was conducted by the Office of Naval Research (ONR) and validated by an Independent Expert Review. The Deputy Under-Secretary of Defense (Science and Technology) concurred with the report of successful TRA on April 19, 2005. The TRA noted satisfactory progress in all key technology areas, particularly those associated with the Engineering Development Models, to demonstrate technology readiness at Milestone B. All the major technologies for DDG 1000 will achieve TRL 6 or 7 prior to ship installation.

CG(X) Program

CG(X) is envisioned to be a highly capable surface combatant tailored for Joint Air and Missile Defense and Joint Air Control Operations. CG(X) will provide airspace dominance and Sea Shield protection to joint forces. The Maritime Air and Missile Defense of Joint Forces (MAMDJF) Initial Capabilities Document (ICD) was validated by the Joint Requirements Oversight Council (JROC) in May 2006. The MAMDJF Analysis of Alternatives (AoA) started in June 2006 and is scheduled to complete this year.

The FY 2008 National Defense Authorization Bill (HR 1585) passed by the House would require that major combatant vessels, to include CG(X), be constructed with integrated nuclear power systems unless the Secretary of Defense submits a notification to Congress that the inclusion of

an integrated power system in such a vessel is not in the national interest. The Navy opposes this requirement as it presupposes the outcome of the Department's process for arriving at a decision of a new platform. The Navy supports a process that includes a rigorous technical analysis of alternatives and matches requirements with operational demands of the warfighter for the projected threats. Implementation of language without such analysis would more than likely result in unrealistic requirements for future combatant classes of ships.

The Navy's Report to Congress on Alternative Propulsion Methods for Surface Combatants and Amphibious Warfare Ships submitted in January 2007 demonstrated that the selection of a ship propulsion method is an extremely complex process with many variables, and is highly dependent on ship operational requirements. There is no optimum solution across ship classes. The Navy also must always weigh the design decision for a single ship class against wider considerations, including: total ship procurement and life cycle costs and their impact on affordability of the overall shipbuilding plan; the capabilities and capacity of the shipbuilding industrial base; technology benefits and risks; and operational support considerations.

The MAMDJF AoA, which will include recommendation of a CG(X) platform alternative, is incorporating the methods of the Navy's FY 2006 study, and is examining both fuel efficient conventional power plants and nuclear power alternatives. The Navy takes seriously the House's desire that we carefully consider nuclear power for the CG(X) and other future platforms. The Navy will examine all of the relevant factors when making future power system choices.

SCN Outfitting and Post Delivery

SCN Outfitting and Post Delivery funding ensures that US Navy hulls receive their full allowance of outfitting spare parts and operating space items and post-delivery correction of deficient government-responsible items, along with the ability to perform essential Post Delivery tests and trials. In FY 2007, the Congress assessed a $40 million mark on SCN Outfitting and Post Delivery based on delays in ship deliveries. However, the FY 2007 President's Budget request had already adjusted the outfitting and post delivery account for delivery delays resulting from Hurricane Katrina. Furthermore, any other delays that have occurred have already been accounted for in subsequent budget cycles. An additional reduction to the FY 2008 request would severely jeopardize the Department's ability to deliver fully operational, capable, and safe ships. If potential congressional marks are sustained, vertical program cuts will be applied eliminating funding essential for successful completion and delivery of hulls to the Fleet. It is critical that the Department's full request be approved, particularly in light of Congressional marks to post delivery and outfitting in FY 2006 and FY 2007.

Hurricane Katrina Impact on Shipbuilding

The impact of Hurricane Katrina on the workforce and facilities on the Gulf Coast, primarily NGSS Ingalls and Avondale Operations, continue to affect Navy shipbuilding programs, and the recovery from this disaster is taking longer than originally anticipated. Numerous factors have impacted both the workforce and the shipyard facilities restoration.

The Navy continues to work with NGSS to adjust schedules to best utilize manning resources and facilities. The company has been extremely cooperative in providing the Navy multiple metrics to monitor performance including employment vs. demand, attrition, labor resources, overtime and attendance.

At the direction of the Assistant Secretary of the Navy for Research, Development & Acquisition (ASN(RDA)), a multidisciplinary Navy team including representatives from DASN Ships, Program Executive Office Ships, and Naval Sea Systems Command (including the Supervisor of Shipbuilding) is evaluating the ability of Gulf Coast shipyards to execute current and future workload. Those efforts are ongoing. Due to the magnitude of current and projected ships under contract, the first shipyards under review were NGSS Ingalls and Avondale. The Navy is working closely with NGSS to manage its programs as a portfolio, implement revised performance management baselines, and establish a set of ship construction performance metrics for Navy and industry review.

Early this year, the Navy selected projects from six Katrina-affected shipyards eligible for funds provided by Congress under Section 2203 of Public Law 109-234, commonly referred to as Katrina Supplemental IV. This law provided that, "not less than $140,000,000 of emergency hurricane relief Shipbuilding and Conversion, Navy funds appropriated . . . shall be made available for infrastructure improvements at Gulf Coast shipyards that have existing Navy shipbuilding contracts and that were damaged by Hurricane Katrina in calendar year 2005." The purpose is to expedite recovery of shipbuilding capability in areas affected by Hurricane Katrina by repairing and / or replacing shipbuilding facilities, to make lasting improvement in shipyard facilities that would result in measurable cost reductions in current and future Navy shipbuilding contracts, and to improve the ability of shipbuilding facilities on the Gulf Coast to withstand damage from potential hurricanes or other natural disasters.

On July 12, 2007 the Navy awarded the first of these contracts to NGSS for a Panel Assembly Line at NGSS Ingalls Facility in Pascagoula, MS, a Composite Manufacturing Facility at NGSS Gulfport Facility in Gulfport, MS, and an option for the Panel Assembly Line at NGSS Avondale Facility in New Orleans, LA. The Navy is also in negotiations with five additional companies selected for projects, including: Atlantic Marine in Mobile, Ala.; Austal USA in Mobile, Ala.; Seemanns Composites in Gulfport, Miss.; Swiftships in Morgan City, La.; and Textron Marine and Land Systems in New Orleans, La. The Navy intends to award the remaining contracts by the end of FY 2007.

To date, the Congress has appropriated $2.3 billion in supplemental funds for Hurricane Katrina recovery excluding the $140 million set aside in Section 2203 for shipyard recovery. Of that total, the Navy has to date requested allocation of $1.7 billion to affected Navy shipbuilding programs and plans to fully utilize the remaining funds.

Littoral Combat Ship (LCS) Program

LCS will be a fast, agile and networked surface combatant with capabilities optimized to assure naval and joint force access into contested littoral regions. LCS will operate with focused-mission packages that deploy manned and unmanned vehicles to execute a variety of missions, including littoral anti-submarine warfare (ASW), anti-surface warfare (SUW) and mine countermeasures (MIW). Mission packages will continue to mature through spiral design. LCS will also possess inherent capabilities including homeland defense, Maritime Interception Operations (MIO) and Special Operation Forces support.

LCS is needed now to fill critical, urgent warfighting requirements gaps that exist today. The capability provided by LCS in the areas of:

- Sea mine hunting, identification and neutralization
- Detect, classify, track and successfully engage small boats
- Detection and neutralization of quiet diesel submarines in shallow-water environments.

LCS is required now to establish and maintain U.S. Navy dominance in the littorals and sea lines of communication choke points around the world.

The Navy awarded contracts for construction of the first four LCS seaframes. Lockheed Martin (LM) and General Dynamics (GD) have been awarded two ships each. LCS 1 (FREEDOM), the first LM ship was launched in September 2006. Fabrication on LCS 2 (INDEPENDENCE), the first GD ship, began in November 2005. LCS 3 and 4 options were exercised in June and December 2006, respectively.

The Navy identified significant cost growth with the lead LM ship and issued a 90-day stop work order in January 2007 for the second LM ship, LCS 3, to provide time to assess factors contributing to the cost growth and to develop an executable program plan for the way ahead. The Navy evaluated the overall performance of the program, working closely with the contractor to address cost overruns and root causes. The ASN(RD&A) established a Program Management Assist Group (PMAG) to conduct a review of cost growth associated with LCS 1, and to review projected costs for LCS 2, LCS 3 and LCS 4. The PMAG assessment was completed, and identified the following root causes of cost growth:

- Aggressive cost goal and schedule
- Pressure to build to schedule was strongly emphasized and generated cost growth.
- The ambitious schedule relied upon concurrent design and construction that was not achieved.
- For LCS 1, the timing of LM's bid to the finalization of Naval Vessel Rules resulted in underestimated efforts for design and construction by the contractor.
- The competitive environment created disincentive for the contractor to surface execution challenges to the Navy.

The PMAG made several recommendations based on the assessment of LCS root causes:

- Emphasize rigorous risk management for high risk programs, including incorporation of risk mitigation strategies directly into shipbuilding contracts.
- ASN(RD&A) issue guidance highlighting critical program management functions and emphasizing chain of command notification of unexpected results, including details surrounding changes in contract baselines.
- Conduct formal independent cost estimates before exercising future options or contracts in LCS. Incorporate appropriate risk margins in budgets for future LCS procurements.
- Implement organizational changes across supporting offices: improving timing and staffing levels of on-site government oversight (Supervisor of Shipbuilding, SUPSHIP) to better match construction schedules; providing adequate resources and manning to the acquisition program office and supporting NAVSEA offices; and improving experience and training levels of the program managers and their staffs.
- Implement contractual and acquisition policy changes to improve visibility and performance expectations.

Responses to these recommendations will be addressed in the following discussion of the revised LCS program plan, and in a later overview of changes being made to prevent reoccurrence of LCS lessons across all Navy acquisition programs.

LCS Program Plan

After the extensive program assessment, the Navy has developed an executable program plan that adjusts the acquisition profile, ship cost estimates, budgets and schedules. It also provides resources for effective management of cost, production and technical risk to deliver ships to the Fleet to support the urgent and revalidated warfighting requirement. This plan for LCS includes four core elements:

- Increased Navy oversight
- Selective contract restructuring
- Reprogramming of resources largely within the LCS program
- Execution to an achievable schedule

The Navy sought to restructure the LM contract for LCS 1 and 3 to Fixed Price Incentive terms to more equitably balance cost and risk, but could not come to terms and conditions that were acceptable to both parties. On April 12, 2007, the Navy partially terminated construction of LCS 3 for convenience under the Termination clause of the contract.

The Navy will continue to monitor GD performance on LCS 2 and LCS 4. If GD experiences cost growth comparable to LCS 1, the Navy will seek to restructure the contracts from cost plus to fixed-price incentive.

Projected cost growth on LCS 1 and LCS 2 varies between 50-75% depending on the basis of comparison, and the Navy has seen increases on LCS 4. With the approval of Congress, the Navy will forgo LCS procurements currently budgeted in FY 2007 (two ships) and use the FY 2007 Shipbuilding and Conversation, Navy (SCN) funding to cover LCS 1, 2, and 4 cost overruns. The Navy appreciates Congress's support of the recent reprogramming request for $279M of the FY 2007 SCN funds, and looks forward to working with the Congress on the remaining funding required to execute the Navy's revised program plan. The FY 2007 Omnibus reprogramming request recently submitted by the Department includes an additional $206 million of the FY 2007 SCN funds. The remainder of FY 2007 SCN, approximately $34 million, is still required due to cost growth seen on LCS 4.

The restructured LCS plan also includes procurement of Flight 0 seaframes in FY 2008 and FY 2009 to address critical warfighting gaps. The FY 2008 President's Budget request ($911 million) is required to procure two LCS in FY 2008.

The FY 2006 National Defense Authorization Act (Public Law 109-163) included a cost cap on the fifth and sixth ships of the LCS Class. Due to program cost growth, the Navy seeks a change in the cost cap to reflect the restructured program and revised ship end cost estimates. To accommodate the Navy's investigative results that determined recurring estimated ship and program costs, the Navy is requesting a change in the cost cap to $460 million per ship end cost in FY 2008 dollars, based on a two-ship procurement in FY 2008. This represents a 55% increase in seaframe cost. This adjustment would reflect updated cost estimates for ship end cost that include: incorporation of lessons learned from lead ship contract execution; a more refined

cost estimate of the required changes to the designs; and a higher allowance for program management costs to provide for the additional government oversight that was recommended as a result of the Navy's root cause analysis of the LCS 1 cost growth. This cost cap adjustment must be adopted into law in order for the Navy to procure any new LCS in FY 2008.

The Navy intends to conduct an operational evaluation of LCS 1 and LCS 2 against a variety of critical factors between the two LCS designs in FY 2009. The evaluation could be used to select a single seaframe for Flight 1 LCS in FY 2010.

Status of LCS 1 and 3

LCS 1 (FREEDOM) is reported by LM approximately 84% complete. The vessel is currently in the water at the shipbuilder's (Marinette Marine Corporation) facility undergoing post launch equipment installation, outfitting and testing. Machinery Trials are planned for December 2007. The ice period on the Great Lakes will prevent underway trials between December 2007 and April 2008. The Navy currently projects LCS 1 will conduct trials in the spring period, resulting in delivery in the summer of 2008.

LCS 3 construction was partially terminated for convenience to the Government on April 12, 2007. LM had procured long lead time material for LCS 3 primarily consisting of major propulsion and electrical power equipment and components for the ship combat system, such as radar equipment and the 57mm gun. The Navy and LM will negotiate the disposition and value of these procurements as part of the termination negotiation. The Navy is also directing LM to complete the manufacturing of certain key items, such as propulsion reduction gears, in order to provide useable end items to the Navy. The material will be assets available for continued execution of the LCS program.

Status of LCS 2 and 4

LCS 2 (INDEPENDENCE) is under construction at Austal USA, Mobile, AL, and is approximately 53% complete. The Navy projects LCS 2 to launch in early 2008 and deliver in late summer 2008. A production readiness review was performed for LCS 4 on June 28, 2007. Fabrication has not yet begun.

LCS Flight 1 Procurement in FY 2010 and Beyond

The two existing seaframe designs will undergo operational performance testing in FY 2009, and the results will be considered as part of the Navy's evaluation for a single seaframe design selection for the FY 2010 and follow Flight 1 ships of the LCS class. Flight 1 ships will be based on the selected design and will incorporate lessons learned from test and trials. The Navy also intends to implement a Government-furnished open architecture common combat system/C4I suite as part of Flight 1 to optimize lifecycle cost and capability across the family of surface combatants. Subject to OSD approval, the Navy intends to hold a full and open competition for procurement of the Navy's Flight 1 design in FY 2010 and beyond.

The LCS Flight 0 ships acquisition strategy allowed the industry teams to design and acquire the combat system/C4I suite. As a result, each team developed a combat system whose components varied greatly from those found in other Navy combat systems as well as being significantly different from each other. The lack of commonality between the two current designs and Navy components negatively impacts the expected combat systems ownership costs to support these

ship variants: i.e., materiel logistics, training programs, maintenance, system upgrades and technology refreshment. Additionally, some system components are foreign and/or proprietary designs that may not convey with Government Purpose Rights, limiting sources for obtaining component support.

To minimize impacts to the combat systems ownership costs to acquire, operate, and maintain the LCS 1 Class, the Navy is amending its acquisition strategy for acquiring the LCS combat system beginning with FY 2010 Flight 1 procurements. The Navy intends to transition from Contractor Furnished Equipment (CFE) designs to a single common combat system that will be provided as Government Furnished Equipment (GFE)/ Government Furnished Information (GFI). This strategy will incorporate, wherever possible, existing Navy programs of record combat system components. Where no Navy program of record or fleet-common component exists that meet LCS requirements, a full and open competition will be conducted. This strategy allows the Navy to establish commonality of LCS combat system components across all Flight 1 ships in the class, preserve Government Purpose Rights for the Navy, and assure that required capabilities are met with a set of combat system components that optimizes performance, acquisition and ownership costs.

The current Flight 0 combat system solutions consist of eight major elements: an open architecture combat management system, volume search radar, identification friend or foe system, electronic surveillance system, medium caliber gun, gun fire control system, electro-optical/infrared sighting system, and a close-in/self-defense weapon system. The common combat system that the Navy will provide as GFE/GFI is comprised of these same elements. The Navy is not developing a new LCS combat system or adding elements to the current solution configuration. Rather, for Flight 1 the Navy is replacing the two unique sets of Flight 0 combat system components with a single set of combat system components.

During the FY 2008-09 timeframe, ship design changes from the common combat system/C4I suite, lessons learned from LCS Flight 0 production, developmental/operational testing and at-sea testing will be incorporated into a Government-furnished design package. The Government-furnished design package provides the technical baseline for FY 2010 Flight 1 full and open competitive solicitation and subsequent Flight 1 ship production contract awards.

Methods and Procedures in Place to Correct LCS Root Causes in Navy Acquisition

As an initial response to the findings of the LCS program assessment, ASN(RD&A) directed a series of specific actions to reduce risk and improve management of Navy acquisition programs:

- A review, still in progress, of all Navy ACAT 1 programs to assess the amount of design/build concurrency to identify potential additional risks and ensure proper mitigation.
- A review, still in progress, of Program Office staffing for all ship new construction programs.
- A completed review of DAWIA qualifications required and as currently staffed for Navy ACAT I and II programs. This review did not identify problems with DAWIA qualifications as an issue in Navy programs.

- An ASN(RDA) review of each PEO's span of control to determine if changes in PEO organizational structures or portfolio alignment are required.
    - In one specific action, the span of control for PEO Ships has been reduced by establishing a Team Ships such that one flag officer is responsible for Fleet support, and one flag officer is responsible for ship acquisition.
    - Additionally, the System Commands are transitioning to a Competency Aligned Organization (CAO) to create an organization that responds to the workload "demand signal" in an agile, disciplined and cost effective manner.
- NAVSEA review of Supervisor of Shipbuilding (SUPSHIP) staffing for all ship new construction programs. This review identified the need for additional billets in the areas of Earned Value Management System (EVMS), technical authority (engineering), and on-site project management. ASN(RDA) has directed NAVSEA to work with the PEOs to develop a plan for the added capability.
- ASN(RDA) has directed a similar Navy review of Defense Contract Management Agency (DCMA) support for all of Navy acquisition.
- An increase of the frequency and scope of ASN(RDA) reviews of acquisition programs, now conducted within "portfolios" (Air, Ships, C5I, Expeditionary Warfare) to improve communication and management transparency.
- Conduct of a series of "Dialogues on Acquisition Excellence" with the leadership of the System Commands, PEOs, and Program Management offices to understand LCS Lessons Learned and new policies as a result of LCS cost overruns.

While these actions represent an immediate effort to identify and mitigate risk in current Navy acquisition programs, they have also informed a larger effort which ASN(RDA) is now leading - an Acquisition Reengineering effort within the Department of the Navy to:

- Better control cost and requirements growth,
- More accurately estimate the cost risk in Navy programs, and
- Match contracting models and incentives to the cost and risk of the program.

As part of this effort, ASN(RDA) is focusing resources where they are most needed; including ensuring that our higher risk and most critical programs are resourced properly.

The key tenets of Navy Acquisition Reengineering include:

- Aligning the organization
    - Ensuring business practices are based on accountability, transparency, and trust
    - Focusing business practices on delivering the required capabilities on time and within budget
    - Focusing organizational structure on PEOs and PMs who are responsible for delivering to the warfighter
- Aligning the resources
    - Focusing resources where they are most needed
    - Ensuring higher risk and most critical programs are resourced properly
    - Improving the timing and staffing levels of on-site government oversight (SUPSHIP/DCMA) to better match production schedules
    - Providing appropriate resources and manning the acquisition program offices and supporting SYSCOM offices
    - Improving experience and training levels of the PMs and their staffs

- Cost Risk Management
    - Understanding program cost risk
    - Exploring techniques for isolating/mitigating risk
    - Reflecting cost risk in contract terms and conditions
    - Moving to fixed price incentive contracts as soon as possible
    - Establishing shared understandings of risk across the Navy Enterprise
    - Stabilizing requirements

The Navy's greatest challenge is getting the right resources where they need to be across the Acquisition Enterprise. Like most areas of the Department, Navy Acquisition is faced with the realities of a fiscally constrained environment, and that means less people and funding than is optimum. At the same time, the nation is at war, and there is a true urgency to the programs that the Navy is working on. It is critical that the Navy execute its programs well, and in a productive partnership with the Navy's counterparts in industry. The Acquisition Reengineering effort will be a key component of the Navy's ability to affordably provide these critical capabilities.

Summary

In summary, the Navy is committed to ensuring fiscal responsibility in the shipbuilding process. We appreciate your strong support and the opportunity to testify before the Subcommittee regarding Navy surface ship construction, the LCS program in particular, and the efforts the Navy has taken to apply LCS lessons learned to Navy acquisition. We will be pleased to answer any questions you may have.