

TESTIMONY
OF
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NORTHROP GRUMMAN LITTON SHIP SYSTEMS
SASC SEAPOWER SUBCOMMITTEE
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Introduction

Thank you, Chairman Sessions, Senator Kennedy, and distinguished members of the subcommittee for giving me this opportunity to testify on behalf of two of the six major shipbuilding facilities remaining in this country, and, more importantly, to do so on behalf of the 17,000 men and women of Litton Ship Systems, the newest operating sector within the Northrop Grumman Corporation. Litton Ship Systems includes Ingalls Shipbuilding in Pascagoula, Mississippi, and Avondale Industries, in metro New Orleans, Louisiana, and other locations.

This morning, I will discuss with you key programs and issues important to Ingalls and Avondale, as well as give you our Company's thoughts on a number of issues relating to this nation's shipbuilding industrial base, and the way the U.S. Navy buys and maintains its surface combatant fleets.

Litton Ship Systems was initially formed in August 1999, following the acquisition of Avondale by Litton Industries. By joining Avondale with Ingalls, Litton combined two of the strongest, most diverse shipbuilders in the country. In addition to having similar histories and capabilities, the two shipyard facilities are in close proximity (approximately 100 miles) and both are strategically located on the Gulf of Mexico, providing opportunities for optimizing shared and specialized services to a much greater extent than other major shipbuilding companies.

In March 2000, Litton further strengthened the team by creating the Litton Ship Systems (LSS) Full Service Center as a focal point for full service contracting, in response to the U.S. Navy's Full Service Contracting initiatives. The LSS FSC is now a one-stop source for support to

naval and commercial shipbuilding programs throughout all phases of a program and a product's operational lifetime. All of the individual efforts previously underway at Ingalls and Avondale in research and development, integrated logistics and fleet support were moved into the single FSC organization.

Already, the three Litton Ship Systems companies have identified hundreds of millions of dollars in merger synergy savings and expect to identify much more as we continue to enhance our shared services concepts within Northrop Grumman. These savings will be passed along to the government in the form of savings on existing programs and lower bids on new programs. These savings will come from a broad range of opportunities, including combined material procurement, combined marketing, common financial and engineering tools, shared work and a stable work force, optimal use of geographically-close facilities, sharing of best practices, a combined approach to capital improvements and sharing of lessons learned.

Two examples of this synergy are that within a few months of the Ingalls-Avondale merger, Ingalls began filling production requirements for Avondale by fabricating certain steel modules for Avondale's Sealift Ship Program; and when Ingalls' Project America cruise ship construction got underway last summer, Avondale stepped up to the partnership by producing a significant amount of the hull stiffeners and t-beams required for this project.

The total employment of Litton Ship Systems is approximately 17,000 with current revenues of \$2.2 billion and backlog of more than \$6.5 billion.

The acquisition of Litton Industries by Northrop Grumman, finalized on Monday, is the most recent step in an ongoing consolidation of the defense industry, will significantly strengthen our ability to compete in an environment where the way in which the Navy procures ships is changing significantly. This acquisition will result in a much stronger competitor for all non-nuclear, surface ship programs and services and will generate significant savings for the American taxpayer.

Current Programs

The DDG 51 Aegis Destroyer program underway at Ingalls is a mature program, running very smoothly, resulting in a highly capable and affordable warship being delivered by Litton Ship Systems at a rate of about 1.5 ships per year. To date, 24 DDG 51s have been awarded to Ingalls, many of these through multi-year procurement authority granted by the Congress. We recently completed our 14th of these ships. The program has been made even more affordable with the use of multi-year procurement, shared processes and material purchasing between Ingalls and Bath Iron Works, close government-industry teaming and a stable production rate of at least three ships per year divided between Ingalls and Bath Iron Works. The proposed reduction in the DDG 51 procurement rate to two ships per year in FY2002-04, and the end of this highly successful program in FY04 – well before the Navy plans to begin building DD 21s – gives us great cause for concern in the areas of affordability, skill retention and optimal facility utilization.

We believe that a minimum procurement rate of at least three ships per year until DD 21 construction begins is essential to the successful introduction of the DD 21 Program at both Ingalls and Bath Iron Works at the least cost to the taxpayers.

Since 1998, Litton Ship Systems has been funded and actively participating in the follow-on destroyer program to the DDG 51, the DD 21 program. The unique acquisition approach has Ingalls as leader of the DD 21 Gold Team – with Raytheon Corporation as systems integrator – and as co-leader of the DD 21 Alliance, with Bath Iron Works. The competition has been intense, and the investment of time and people has been significant. The result will be a revolutionary ship design produced in an affordable and stable manner by this country's two premier surface combatant shipyards.

The DD 21 Program is essential to bringing to the Surface Navy the latest and best technology, warfighting improvements and quality of life for our sailors that industry and government can provide. We urge your continued strong support for this program.

Ingalls is now completing the 7th LHD, USS IWO JIMA, which will join the fleet this summer. Over the past three fiscal years, the Congress has provided a total of \$856 million for

advance procurement, detail design and advance construction of LHD 8. Included in the LHD 8 design will be new gas turbine propulsion, electric auxiliaries, and a number of other improvements to reduce manning and life-cycle costs, and to improve war fighting capability.

The gas turbine modification alone will enable the Navy to reduce LHD 8's crew size by about 90 personnel, and will result in the elimination of more than 3,000 valves in the ship's propulsion system. These reductions, along with the more efficient combination of gas turbine and electric propulsion will result in over \$300 million in life cycle cost reductions.

We look forward to obtaining the remaining funding for this ship, and to starting construction soon. We appreciate the support of this committee for the approach we suggested three years ago for building this ship in a timely manner, saving the Navy and the taxpayers hundreds of millions of dollars and providing timely replacement for our aging LHA fleet.

Because both the industry and the Navy see LHD 8 as an excellent transition toward future amphibious assault ships, we are concerned about budget-driven plans to move the next "big deck" amphib out beyond FY06. Indeed we believe the Navy / Marine Corps team would be better served by procuring the next ship in FY05, while it can take full advantage of the "hot" production line at Ingalls working on LHD 8, which will also save the taxpayers hundreds of millions of dollars.

The Avondale Alliance of Avondale Industries and Bath Iron Works is also involved in a major Amphibious Ship effort with the 12-ship LPD 17 program. These highly capable ships replace 41 older ships and will introduce significant reductions in life cycle costs. The Navy's acquisition strategy for these ships specifically called for an unprecedented level of engineering completion prior to construction start – using a unique three-dimensional design tool and Integrated Product Model – as a way to reduce the cost of design changes and rework. Indeed, over \$4 billion in reductions to total ownership costs have already been identified and designed into the ship. However, delays in developing this new and unique "design / build" process led to removal of funding for the fifth and sixth ships in the program during FY01.

I am here to tell you today that most of the obstacles have been overcome – both to our satisfaction and to that of our customer. The design is about 80 percent complete, and we laid keel for the first ship in February, so this program is now well underway, with sustaining levels of production.

Full funding, therefore, of the two FY02 ships is essential to keeping this program on track, to avoiding a costly break in production, and increased acquisition costs.

The aforementioned military shipbuilding programs, and other critical future programs such as T-AKE and JCC(X), form the core of ship programs at Litton Ship Systems, but are not sufficient to operate our facilities at optimal levels. We have pursued successfully additional core commercial programs that capitalize on the expertise at Ingalls and Avondale and that contribute to stabilizing the business base, retaining skills and generating significant commercial expertise at both facilities. We are building cruise ships at Ingalls and tankers for the Alaska oil trade at Avondale – the first of which has completed sea trials and will soon begin operations on the west coast.

Let me point out that our cruise ship programs would not be possible without DoD's former MARITECH Program, now known as the National Shipbuilding Research Program, or NSRP, which enabled Ingalls to learn about and observe cruise ship building practices around the world, as well as develop teaming relationships with those companies who truly know how to design and build large cruise ships. We strongly support NSRP, and encourage its consistent and full funding.

These and future commercial programs being pursued aggressively by Litton Ship Systems are critical elements of our overall strategy to maintain stability in production, retain skills and apply commercial lessons to improve our overall efficiency. They also reduce overhead expenses for our Navy customers. For this reason, it is critical that MARAD and the Title XI ship loan guarantee program remain in place.

Finally, Litton Ship Systems continues to pursue aggressively foreign military programs throughout the world. The Defense Export Loan Guarantee remains a powerful potential tool to

aid in successfully winning international programs to produce and modernize surface combatants.

Maintaining the Industrial Base

In addressing some of the specific issues before this subcommittee, let me start by saying that we all know that building Navy ships is, and will always be, an expensive business. Clearly, though there are ways that we in industry can partner with our customers – which in my mind includes not only the U.S. Navy, but Congress as well – to remove some of the current obstacles to improving productivity and cost efficiency.

It should be said up front that the maintenance of a healthy shipbuilding industrial base that can produce ships at the lowest cost to the taxpayer depends on three key factors: A stable, long-term shipbuilding plan; adequate numbers of ships to utilize efficiently the shipbuilding capacity we have; and a commitment on the part of shipbuilder to invest in shipbuilding facilities, processes and technology.

While program instability – particularly in the areas of funding and scheduling – are unhealthy for Ingalls, Avondale and all other shipbuilders, the management of Litton Ship Systems and Northrop Grumman would be derelict in our responsibilities to the nation – and our shareholders – if we allowed ourselves to get into a “do or die” situation with one program. The recent industrial base study Congress required of DoD last year painted a somewhat bleak picture of the situation at Ingalls. The study focused only on surface combatants, and while we are very concerned about the DDG 51 building rate and transition to DD 21 production, we have been aggressive in bringing other kinds of work to Ingalls to help stabilize overall employment levels.

We do, however, remain concerned about the erosive impact on specific critical skills in our yard associated largely with construction of surface combatants. One lesson we have all learned in the past is that once highly skilled technicians, such as combat system test engineers,

leave our workforce, they do not come back. Commercial products just don't require many of the highly technical skills required in building surface combatants.

That said, recent history paints a clear picture that the most affordable way to achieve the Fleet size the Navy needs, at the lowest possible total program cost, is to allow mature shipbuilding programs to continue without disruption.

The Navy and its industry partners in the Aegis Shipbuilding Program, with the support of Congress, clearly demonstrated this in the production of 27 CG 47 Class cruisers, and continue to prove this theory in the production of DDG 51 Class destroyers. Just using our own company's work as an example, since 1982, when we delivered CG 47, Ingalls has sent 33 Aegis ships into the Fleet – 19 cruisers, 14 destroyers. Those 33 ships were completed a combined 170 weeks ahead of schedule, with savings to the taxpayers of more than \$600 million dollars. Much of the credit goes to the program stability provided by the Navy, and the funding stability provided by DoD and Congress.

I can tell you today that we have the same opportunities for success in the LPD 17 Program, in future DDGs as a bridge to the DD 21 Program, and in big deck amphibs, if we exercise the program and fiscal responsibility required to start these programs on time, and to continue them uninterrupted to completion.

Let me take a moment to explain what I mean by program and fiscal responsibility. If you look back at every first-of-a-class ship procured over the past 30 years, I can assure you that you won't find a single one of them that was built to the original contract schedule, or to the original cost estimate. Cost growth has ranged from 14 percent to above 200 percent; and schedule growth has ranged from one-third to three-fourths.

Taken out of context, these would be very sobering numbers. But a number of factors influence this reality, some of which the government is addressing in acquisition reform efforts.

First of all, procurement environments historically encourage unrealistic cost estimates. Sticker shock is bad...competition is good...realistic competition is better.

Further, over-optimism by the Navy, by Congress, and by industry, often produces unrealistic schedules for first-of-a-class vessels. Remember, ladies and gentlemen, we're not building cars, airplanes or furniture. There are no prototypes, other than some of the amazing computer simulation and modeling work we're doing these days...there are no competing concept "fly offs". The prototype of a ship class – the first one built – gets sailed into harm's way by America's sons and daughters.

That is a simple fact of life in shipbuilding. So is the length of time it takes to build these ship – four years for an LHD or LPD, three years for a DDG.

We all simply must take these factors into account in discussing ways to improve the acquisition process for ships. We must take a long-term approach, such as was successful in CGs and DDGs, and we absolutely must recognize that large, front-end investments can only be recaptured and maximized by allowing programs to run uninterrupted, with sustained levels of program and financial support.

Now, I would be doing a disservice to thousands of small businesses around the nation if I didn't also express my concern about the impact that budget and program instability have on the hundreds of suppliers and subcontractors around the nation...companies that build our pumps, motors, elevators and other components. These are the people who can't just change product lines and diversify at a moment's notice when Congress or the Navy decides to delay a program or change a funding profile.

Certainly the shipbuilding industry is doing its part by maintaining world leadership in implementing shipbuilding technology to improve productivity and reduce costs. We have spent more than \$450 million in our two shipyards over the last decade – including a nearly complete \$130 million one-time investment at Ingalls over the past 18 months – to ensure that we have the most modern, most diversified facilities in the industry. We have a surge capacity unmatched in

the world, and an experienced craft base that has proven its ability to adapt to everything from hopper barges and drilling rigs to amphibians and destroyers.

Cost of Navy Ships

As to the issue of how much ships cost, we share the concern of Congress and our customer on this important issue. I believe, though, that the issues we have all discussed regarding stability of programs and consistent funding levels are major factors that we can all work on together to reduce per-ship costs.

The more of any product that goes into an order book in one block, the greater the efficiency and productivity of the design and construction process, the less it costs to make changes in the production line, and the less it costs to buy all of the components from the suppliers I noted earlier. A well thought out, disciplined approach to changes also helps to stabilize costs. This is true for cars, or airplanes, or widgets...and it is true for ships.

We understand that you are examining a number of different ship funding options. Advance material procurement...block buys...multi-year procurement...advance appropriations...are all potentially useful tools you can employ to stabilize shipbuilding programs and reduce their cost. We have direct experience with only one of these approaches – multi-year procurement on the DDG 51 Program. Multi-year has saved the taxpayers more than \$1 billion in the procurement of these ships at Ingalls and Bath Iron Works.

We fully support funding approaches that lead to more ships being constructed, under stable procurement and production profiles.

So as a team, we are all moving in the right direction. We simply must not let short-term challenges create long-term problems in major, important shipbuilding programs.

Technology Insertion

Some of you have raised the issue of improving the level of technology in the shipbuilding process, and in the ships we build.

Certainly, block upgrades work in airplane construction – the F/A 18 Hornet program, which, as you know involves our new parent corporation, Northrop Grumman, is a good example.

But we have also proven that the process will work in ships as well. If you go back to the original 30-ship DD 963 program, this was really the first ship class built for modular block upgrades. It was designed to accommodate weapons and other systems that, in the late 60s - early 70s were still on the drawing board...things like vertical launch missile systems...next-generation radar, and others.

The CG 47 Class is another example of block upgrades working. The first five ships of the class had dual rail launchers...the final 22 got VLS when that system was ready. The same can be said for sonar upgrades and Aegis improvements. And, for that matter, some of the upgrades being proposed in the Cruiser Conversion Program that you are funding today, are the types of block upgrades that extend the life of ships and make them more mission capable.

If you compare DD 963 as delivered to DD 997 at delivery, or CG 47 at delivery to CG 73, I think you will see that while the exterior hulls may look the same from first-of-a-class to last-of-a-class, they are certainly vastly improved ships.

Here again, the keys to the success of block upgrades, or modernizations of any type, are advance planning, and stable funding – both in R&D work to develop new systems and in ship production – to provide the platforms to demonstrate the new systems.

Conclusion

We in Litton Ship Systems are doing our part in aggressively responding to concerns about the way Navy ships are conceived, procured, designed, built and supported. We will

continue to exploit synergies among our companies and our new corporate partners to find ways to reduce the cost of the ships, and to ensure that the very best technology available in our industry is made available to the men and women who will sail our products into harm's way.

We appreciate efforts by the Congress to bring new approaches to ship acquisition into the mainstream, building on the success of multi-year procurement. We urge the Congress to help maintain stability in ship production rates at levels sufficient to sustain the nation's shipbuilding industrial base, and to maintain a Navy of more than 300 ships.

We look forward to playing our part in helping to sustain a highly capable, affordable United States Navy. I look forward to your questions. Thank you.