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**AMERICAN
SHIPBUILDING**
ASSOCIATION

Statement of
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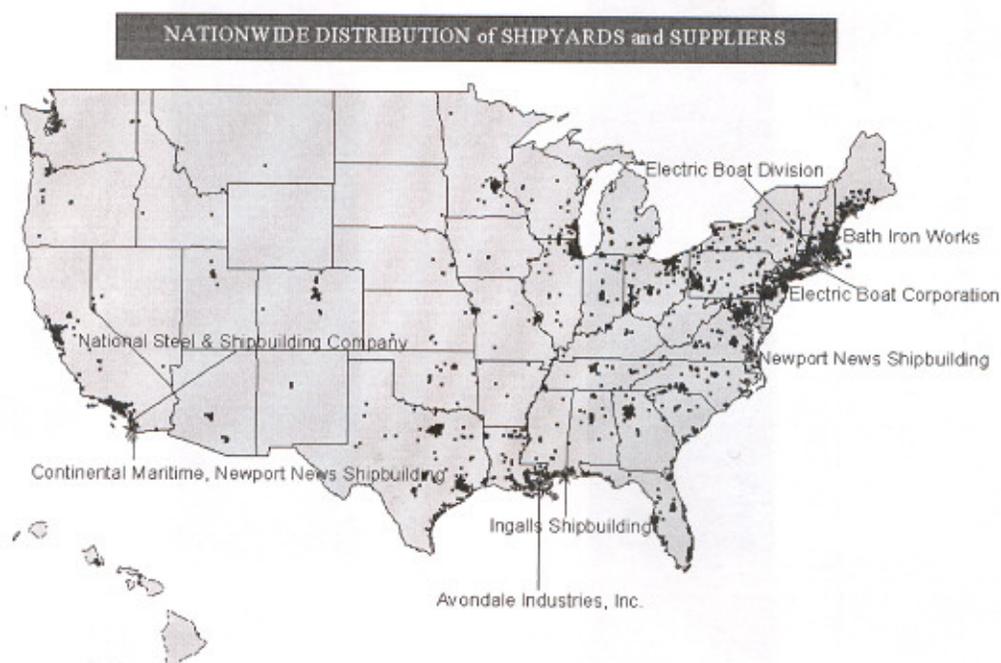
Before the
House Armed Services Committee
Subcommittee on Projection Forces

April 5, 2006

Thank you, Mr. Chairman, Members of the Subcommittee, for the opportunity to testify on the state of our Nation's defense shipbuilding industrial base.

The American Shipbuilding Association is the national trade association of the six largest shipbuilders in the United States that build all of the capital ships for the U.S. Navy, and 70 companies that design and manufacture major ship systems and components. A membership list is attached.

The shipbuilding industry is in 47 states of the Union. The map below shows the location of ASA member shipyards and the shipbuilding manufacturing base.



Today, the defense shipbuilding industry employs approximately 350,000 people. By comparison, the industry numbered 490,000 in 1991. Lays offs are underway as I speak in our shipyards and in our supplier manufacturing base. With respect to our supplier base, we once had two or three manufacturers of each of the critical systems and components that go into ships. Today, there is only one domestic source left -- and in some cases -- none.

The contraction of the industrial base is directly attributable to a dramatic drop in naval shipbuilding budgets. Small budgets and low rates of naval ship production have persisted for the past decade and a half.

During the 1980's, the Navy ordered an average of 19 new naval ships a year – including four to five submarines a year, five multi-mission surface combatants a year, and in one year, two Nimitz Class aircraft carriers.

During the 1990's, average annual production rates dropped to six ships -- a 61 percent drop -- and have continued at six ships a year up until today. Until the 1990's, our nation had not ordered as few as six naval ships since 1932.

In 2001, the U.S. Navy fleet numbered 341 combat force ships. Today, the fleet numbers just 280, and is expected to drop to fewer than 200 by 2024 if naval budgets are not increased.

Since fiscal year 2001 the Department of Defense budget (excluding war supplementals) has increased by 51% while budgets for new ship construction have decreased by 16.8%. Clearly, the Navy needs to receive a larger share of the DOD top line if it is to recapitalize the Nation's sea power fleet.

The industry is encouraged by statements made by the Secretary of the Navy and the Chief of Naval Operations that the Nation cannot afford to let the fleet continue its fall, and that ship procurement budgets must be increased and stabilized. The Navy has indicated that \$14.1 billion in 2007 dollars is needed annually for new ship procurement to rebuild the fleet. While the FY07 ship procurement budget of \$8.9 billion falls \$4.5 billion below the stated budget requirement, we would hope that the FY08 budget submission to Congress would include the \$14.1 billion for **new ship procurement** to meet the call of Navy leadership.

Shipbuilding Cost Drivers:

Much attention is being placed on the need to reduce the cost of naval ships. Our industry is committed to working with the Navy and Congress to reduce costs. To achieve this objective, however, all parties need to agree on what drives costs so that a joint solution can be achieved.

1) **Low production rates.** Low production throughput in the shipyards and throughout the manufacturing supplier base increase the unit cost of every ship. Low production raises shipyard costs and the costs for every system and component that goes into a ship.

2) **Unstable budgets and programs.** Ships are priced based on a specific quantity to be built on a specific schedule. When the numbers are reduced and orders are delayed, the cost goes up. Unstable profiles lead to major workforce disruptions, whereby we are forced to layoff highly skilled engineers and craftsmen, and then later have to recruit and train new employees. Every company in the shipbuilding business invests years and significant money to train its workforce. For example, the cost to train a welder to just **minimum** proficiency is \$50,000. Multiply that cost thousands of times over, and it is easy to understand the magnitude of the investment needed to train a quality workforce. When that workforce is forced out the door for lack of work or changing program schedules, there are huge cost implications for every ship in terms of lost people investment and lost efficiency.

3) **Capabilities.** U.S. shipyards build the most capable and technologically advanced naval ships in the world. Ships are built to the highest of safety standards. They are built to survive in the harshest battle environment. The hulls and all systems and components that go into them are shock tested to survive a missile hit, and redundancy is designed and built into each ship. The USS Cole and USS San Francisco speak to the survivability of American-built ships. Multi-

mission surface ships and submarines also have the most advanced weapon systems. In fact, two-thirds or more of the cost of most combatant ships is in the weapon systems.

4) **Short production runs and high customization.** Production efficiencies are gained by building the same ship multiple times. There is a high upfront cost in designing a new ship, the tooling to produce a new design, and workforce training to build it. The greater the number of ships built to a design, the lower the design and tooling cost per ship, and the greater the production efficiencies. Very few naval ships of a class are the same, and fewer numbers of a class of ships are being ordered. Examples: Only three Seawolf Class submarines were built; The LPD-17 program of record was 12 ships, yet revised plans call for only 9; The DDX program of record was 32 ships – the latest plan calls for only 7, and; No two Nimitz Class Aircraft Carriers are the same. While new technologies need to be inserted into ship classes to reflect real life circumstances and keep pace with technology, there needs to be smart change management based on the appropriate time in the production of a class, and based on a cost to benefit analysis.

5) **Facilities and Equipment.** The latest in automated machines, design tools, covered facilities, and the layout of facilities all increase production efficiencies and reduce costs. ASA member shipyards are continually making investments in their facilities and equipment. A few recent and on-going investments include: Avondale – a new electric grid, new cranes, covered facilities, robotic welding machines; Bath Iron Works – a 14.5 acre new state-of-the-art land-level construction facility; Electric Boat – Laser Cutting Machines, waterjet cutting machines, new coatings facility, 2000 ton module transporters, software design and testing tools; Ingalls – New outfitting and assembly facilities, robotic welding machines, new cranes; NASSCO – new panel line, new cranes, heavy lift transporters; Newport News – thick plate steel panel line, new

facilities for large module outfitting and assembly, and specialty cutting machines. These examples of major investments exceed \$1 billion, and have been or are being made in the midst of historically low rates of naval ship production. Every shipbuilder will tell you that they would like to make more facility investments. Their ability to do so, however, depends upon current and projected workload to provide the financial wherewithal and contracting terms that provide incentives for investment.

Recommendations to Strengthen the Industrial Base & Reduce Costs:

If Congress truly wants to save and strengthen our shipbuilding industrial base, and reduce the unit costs of ships, our industry recommends the following.

- 1) The most fundamental and imperative action is to increase, and sustain larger shipbuilding budgets. To this end, we urge Congress to press the Department of Defense to increase the Navy's top line to provide \$14.1 billion for ship procurement in FY08, in keeping with the budget the Navy states it needs to rebuild the fleet to meet current and emerging threats to our national security. Increased ship production will stop the hemorrhaging of our highly skilled workforce, reduce the unit prices of ships, and provide the means for greater investment. The unit costs of ships will not be reduced until production rates are increased and stabilized.
- 2) Compliance with the letter and spirit of U.S. acquisition laws is critical. Congress should put a halt to the growing DOD practice of outsourcing dedicated defense auxiliary fleet missions to foreign-built and foreign-owned ships. Industry applauds the leadership of Representatives Jo Ann Davis and Gene Taylor, and a majority of the members of the Armed Services Committee in working for enactment of legislation to limit leases of foreign-built defense auxiliary ships to a contract period of no longer than two years. This legislation is required to remove the financial incentive of foreign ship owners to convert used commercial ships to military ships, and then

lease them to DOD for periods of 10 years using multiple 59-month lease contracts. A long-term lease is a de facto purchase.

When long-term requirements exist for military ships, they are required to be bought by DOD and built in the United States in keeping with the Budget Enforcement Act of 1990 and section 7309 of Title 10 U.S. Code. The Budget Enforcement Act was passed to require the purchase of capital assets by DOD and section 7309 states that a vessel purchased by DOD shall be built in the United States. Production of defense auxiliary ships in the U.S. strengthens our national security, strengthens the defense shipbuilding industrial base, and reduces the unit cost of naval ships through increased domestic ship production. Congress established the National Defense Sealift Fund in 1990 for the express purpose of budgeting for ships needed to meet DOD strategic sealift requirements. Industry urges this subcommittee and the full committee to support the Davis/Taylor lease limitation legislation and fight for its retention in conference with the Senate.

3) Urge the Navy to remove contract clauses from shipbuilding contracts that serve as a disincentive to capital investment, and encourage the incorporation of contract clauses that will provide an incentive for investment. Examples of disincentives in naval contracts include:

- The practice of using changes in weight, size, configuration and functionality of Government Furnished Equipment, all of which may have a direct and significant effect on costs, as a basis for reducing performance fees to shipbuilders. These changes are beyond the control of the shipbuilder but totally within the control of the Government, and;
- Prohibit the use of clauses to penalize a shipbuilder for not meeting cost estimates that are calculated years before the ship is fully designed.

Examples of contract incentive clauses are:

- Allow shipbuilders to receive an incentive fee for making capital investments that demonstrate improved efficiencies and result in a net savings over and above the cost of the capital investment;
- Reward a shipbuilder with higher fees for meeting **realistic** target costs that are calculated to coincide with the award of the contract as opposed to unrealistic cost estimates that are made two to five years before the contract is even awarded, and;
- Provide contractual provisions to allow the shipbuilder to share in the savings generated by alternatives in the design process of ships that do not degrade the capability of the ships.

4) Support larger research and development budgets to help the industry develop and apply the best technology and the best design and manufacturing practices to reduce the construction and life-cycle cost of each class of ship. There are numerous examples where a new technology or design alternatives could significantly reduce the manufacture and operating cost of a new class of ships but money for the required up-front investment was just not available. DOD R&D budgets for ships and their systems and components have historically paled in comparison with R&D investments in aircraft and their components.

Let me close by stating that the United States is quickly losing her defense shipbuilding industrial base. If we continue on the current path, America will lose the ability to design and manufacture ships for our national and homeland security. Once we lose this capability, we will not get it back. Just ask Great Britain. As a concerned citizen, I beg you to reverse course before it is too late.

Thank you.

Membership of the American Shipbuilding Association

Shipyards

Avondale

New Orleans, LA

Bath Iron Works Corporation

Bath, ME

Electric Boat Corporation

Groton, CT

Quonset Point, RI

Ingalls Shipbuilding

Pascagoula, MS

National Steel & Shipbuilding Co.

San Diego, CA

Newport News Shipbuilding

Newport News, VA

Partners

Advanced Structures Corp.

Deer Park, NY

Alfa Laval, Inc.

Richmond, VA

Alion Science & Technology Corp.

JJMA Maritime Division

Alexandria, VA

ALSTOM Power Conversion, Inc.

Pittsburgh, PA

American Bureau of Shipping

Houston, TX

American Iron & Steel Institute

Washington, DC

American Metal Bearing Co.

Garden Grove, CA

AMSEC

Virginia Beach, VA

San Diego, CA

APEX Steel Corp.

Englewood, NJ

Atlantec Enterprise Solutions

Annapolis, MD

ATSCO

Mentor, OH

AVEVA Inc.

Wilmington, DE

Baker Sheet Metal Company

Norfolk, VA

BWXT

Lynchburg, VA
Idaho Falls, ID
Mt. Vernon, IN
Barberton, OH

Communications Company, DRS

Wyndmoor, PA

Curtiss-Wright Flow Control Corp.

Cheswick, PA

D.G. O'Brien, Inc.

Seabrook, NH

Dresser-Rand

Olean, NY
Painted Post, NY
Wellsville, NY
Houston, TX

DRS Technologies

Parsippany, NJ

Earl Industries, LLC

Portsmouth, VA

**Electric Power Technologies, Inc.,
DRS**

Hudson, MA

Electronic Systems Inc., DRS

Gaithersburg, MD

Empire Machinery & Supply Corp.

Norfolk, VA

EMS Development Corporation

Yaphank, NY

Fairbanks Morse

Beloit, WI

Flo-Tork, Inc.

Orrville, OH

G. E. Marine

Cincinnati, OH
Lynn, MA

General Atomics

San Diego, CA
Tupelo, MS

General Cable Corp.

Highland Heights, KY

Guill Tool & Engineering Co., Inc.

West Warwick, RI

Henschel

Newburyport, MA

Hose-McCann Telephone Co.

Deerfield Beach, FL

IMECO, Inc.

Iron Mountain, MI

IMO Pumps

Monroe, NC
Columbia, KY

Intergraph Corporation

Huntsville, AL

International Paint

Houston, TX
Union, NJ

Jamestown Metal Marine Sales
Boca Raton, FL

Jered LLC
Brunswick, GA
Iron Mountain, MI

L3 Communications Marine Systems
Leesburg, VA

L3 Communications
New York, NY

Laurel Technologies, DRS
Johnstown, PA

Marlo Coil
High Ridge, MO

Marotta Controls, Inc.
Montville, NJ

Nelson Stud Welding, Inc.
Elyria, Ohio

ODI Advanced Technology Systems
Daytona Beach, FL

Oil States Industries
Arlington, TX

Pacific Marine System
South El Monte, CA

PacOrd
San Diego, CA

PCE
San Diego, CA

Portland Valve, Inc.
South Portland, ME

Power & Control Technologies, DRS
Danbury, CT
Milwaukee, WI

Power Paragon
Anaheim, CA

Power Technology Inc.
Fitchburg, MA

Raytheon Integrated Defense Systems
Tewksbury, MA

Rolls-Royce Naval Marine
Walpole, MA
Pascagoula, MS
Annapolis, MD

Sargent Controls & Aerospace
Tucson, AZ

Sauer Compressors USA, Inc.
Stevensville, MD

The Sherwin-Williams Company
Cleveland, OH

SPD Electrical Systems
Philadelphia, PA

Sperry Marine
Charlottesville, VA

Westwood Corp.
Tulsa, OK

**Surveillance Support Systems.,
DRS**
Largo, FL

York International
York, PA

Tano/EDI
Metairie, LA

Technical Services, DRS
Chesapeake, VA
San Diego, CA

**Training & Control Systems, Inc.,
DRS**
Ft. Walton Beach, FL

Turnbull Enterprises, Inc.
Baltimore, MD

US Joiner
Waynesboro, VA

U.S. Pioneer, Inc.
Tulsa, OK

VACCO Industries
South El Monte, CA

Village Marine
Gardena, CA

Waggaman Crane Services
Waggaman, LA

Warren Pumps
Warren, MA