SIBC SIGNALS

June 2007

In the News:

Congress: The House approved almost all of the U.S. Navy and Marine Corps' 2008 budget request outlined in the FY 2008 Defense Authorization Bill, including an additional $588 million for a second Virginia class submarine ship-set of reactor plant heavy components and main propulsion components. This action enhances the possibility of Congress funding 2 per year submarine construction in advance of the Navy's 2012 plan.

The U.S. Senate Committee on Armed Services also passed the 2008 Defense Authorization Bill. The $648.8 billion bill provides $470 million for the advanced procurement of submarine components and authorizes the Navy to increase the production of Virginia-class submarines to two a year beginning in 2010, two years ahead of the Navy's plan. The bill will go to the full Senate, and if it passes, the differences between the Senate and House bills would be worked out in conference. Actual funding for the provisions would still need to be approved during the appropriations process.

The House Appropriations Committee - Defense and Senate Appropriations Committee - Defense are expected to mark their bills in July.

"Maritime Component of the National Military Strategy": The Navy developed a new maritime strategy, still confidential and in draft form, that lists 2 main objectives – conducting a full range of operations to prevent and deter conflict, and countering aggression when necessary. The plan will inform the Navy's guidance, to be issued later this year, for the fiscal year 2010 budget process.

Navy: The debate over the 313-ship fleet plan continues. Eric Labs, a defense analyst with the Congressional Budget Office (CBO) criticized the plan for significantly underestimating costs, placing the average amount needed per year to meet the goal at $5.5 billion higher than the Navy's estimate of $17 billion per year. Navy Secretary Donald Winter responded that the Navy is reassessing the numbers as well as urging industry to stay within its projected costs.

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Quotes of Note:

"I have also come to believe…313 is the minimum number of submarines, minimum number of aircraft carriers, the minimum number of cruisers, destroyers and support ships in the world we are living."

CNO Adm. Michael Mullen
June 13, 2007

"As a member of the Senate Armed Services Committee, I have seen firsthand that sea power is crucial to defend our freedom and to extend the blessings of freedom to others. I have fought for shipbuilding and acquisition policies that will keep the United States Navy preeminent, our shipyards strong, and our skilled workers building the best ships in the world. Working together, we can ensure that what began four centuries ago at a remote outpost on the rocky coast of Maine continues far into the future, and that America's shipyards will always be there to defend freedom."

Sen. Susan Collins (R-ME)
June 17, 2007

The following articles are attached:

- May 31 – *Aerospace Daily & Defense Report* – Like House, Senate moving to double sub production
- June – *Armed Forces Journal* – A question of cost
- June 5 – *DefenseNews.com* – Expert Questions U.S. Navy Budget Credibility
- June 7 – *Navy Times* – SecNav: Shipbuilding will get a deep look
- June 10 – *The Day* – Lack of Submarine Production Brings Dangerous Risks
- June 15 – *Defense Daily* – Navy May Need More Than 313 Ships For Its Future, CNO Says
- June 18 – *InsideDefense.com* – Draft outline provides details
- June 17 – *Portsmouth Press Herald* – Shipyards: 'The arsenal of democracy'
- June 19 – *opinioneditorials.com* – An All-Submarine Navy
- June 27 – *washingtonpost.com* – Early Warning

AVIATION WEEK INTELLIGENCE NETWORK AEROSPACE DAILY & DEFENSE REPORT

News

Like House, Senate moving to double sub production

Aerospace Daily & Defense Report
05/31/2007, page 10

Michael Bruno

Following the House this month, the Senate in June likely will pass legislation that pushes the U.S. Navy toward dual production of Virginia-class submarines starting in fiscal 2010, two years ahead of current controversial plans for long-term shipbuilding.

The Senate Armed Services Committee (SASC) approved its fiscal 2008 defense authorization bill May 25, adding $470 million above the Bush administration's request for advance procurement funding for Virginias.

Independent Sen. Joseph Lieberman (Conn.), a senior member of the SASC and former Democratic vice presidential nominee, touted his role in shaping the bill, saying the day before that he was determined to accelerate manufacturing of two subs annually to 2010 instead of the Navy's proposed starting date of 2012.

Early start

The earlier ramp-up date, he asserted, is critical to national security in the face of China's growing naval capabilities. It also is important to workers of General Dynamics Electric Boat and Navy Submarine Base New London, Conn., whose numbers have dwindled.

Lieberman - a member of the SASC seapower panel and chairman of the airland subcommittee - also helped earmark $25 million for research and design on the Navy's next-generation ballistic missile submarine. That money, for new construction along with research, would shield the workforce at the base and at Electric Boat, including naval designers and engineers, he said.

"The workers and sailors in Connecticut have not only played an important role in our national security, but are developing innovative technologies that will spell out the future of defense," Lieberman said. "The bill as it now stands repays that commitment, providing more resources to the development and construction of new submarines. We will continue to fight for this investment, which, incidentally, will keep high-skilled jobs in Connecticut."

The Senate bill, which is headed for floor consideration in June, also authorizes $2.69 billion to build one Virginia next fiscal year as planned.

The chief of naval operations has been cautiously receptive in Capitol Hill appearances to accelerating dual-Virginia production (DAILY, May 7). Adm. Mike Mullen has stressed that a one-time boost to sub building before 2012 would be disruptive to the shipbuilding plan - industry has loudly complained of instability in recent years - so Congress must commit to maintaining dual annual production through and beyond then.

Armed Forces Journal
June 2007

A question of cost

BY REAR ADM. CHARLES "CHUCK" GODDARD, HOWARD FIREMAN AND CHRISTOPHER DEEGAN

Chief of Naval Operations Adm. Michael Mullen has outlined the Navy's plan for constructing the next-generation fleet in the 30-year shipbuilding plan, which details the road to a 313-ship force structure required to support the National Security Strategy. The goal is a future fleet that balances capability with affordability.

Shipbuilding is a national security issue that will require an average annual shipbuilding investment of $13.4 billion in fiscal 2005 dollars. The Congressional Budget Office has challenged the Navy's estimate and believes the required investment may be as much as $19.5 billion per year. The question is not who is right or wrong, but rather how will the Navy and industry control historical cost behavior to recapitalize the fleet?

If the Navy and shipbuilding industry do not change our cost behavior, the country will be unable to afford the needed recapitalization of our fleet and the death spiral will accelerate. We cannot continue to perpetuate 29 models of ships, 16 surface-ship combat-system baselines and multiple configurations of shipboard hardware, such as 4,171 different pumps. The Navy cannot continue to add desirable attributes on top of our essential requirements. Industry cannot continue to overrun contracts and source material locally on a contract-by-contract basis. The bottom line: We must change our technical and business shipbuilding strategies.

The Navy is taking positive action to control costs and prevent requirements-creep. Controlling costs to achieve $13.4 billion means building ships with capabilities that meet requirements, not objectives, and partnering with industry to explore alternative acquisition strategies, improve productivity and to source material strategically. This involves:

• Buying the right level of capability and preventing requirements-creep. The CNO created and empowered the Navy Capabilities Board (NCB) and the Resources, Requirements and Review Board (R3B) to review requirements that drive costs in ships, aircraft and weapons.

• The Navy has clearly delineated a long-range shipbuilding plan. We must now commit to and remain on track toward a 313-ship force structure so our shipbuilders can make appropriate long-term investments in skilled workers and infrastructure.

• Naval Sea Systems Command (NAVSEA) is exploring reduction of types and models of ships to reduce nonrecurring costs and increase learning benefits. This includes maximizing reuse of ship designs, components, use of open architecture and mission systems modularity.

• The acquisition community and industry are exploring alternative acquisition strategies where we segregate risk and purchase material strategically, increase leverage and reduce risk in contracting.

Mike Petters, president of Northrop Grumman Newport News, said stability is the key to success. If the Navy can avoid unnecessary changes and put a shipbuilding plan in place that is realistic and consistent from year to year, then industry will be willing to invest in people and facilities that enable them to build ships more efficiently. Navy Secretary Donald Winter forwarded the 30-year shipbuilding plan to Congress in February, and he and the CNO have repeatedly stated their commitment to the plan. Leadership has put the entire acquisition community on notice that this is the plan, and we must stick to it.

Naval ships are complex systems. They require design periods from concept to start of construction of five to 10 years, and construction time from two to seven years. They are procured in low rates and their service life is long: 25 years for smaller, less-complex ships and up to 50 years for aircraft carriers. As a result, 30 to 40 years are required to substantially change the Navy's force architecture. With this in mind, the Navy uses a planning methodology that incorporates three phases that reflect the appropriate focus of each period. These phases, as described in the 30-year plan, are:

• Near-term. This period includes the current budget year and future years defense plan (FYDP). During this phase, the Navy endeavors to minimize adjustments to the plan to balance the mix of ships, unit cost and resources available in the budget, while addressing industrial and vendor base concerns. Given known requirements, return costs on ships in construction and quantities, the cost estimates are reasonably accurate.

• Mid-term. This period is beyond the FYDP out to 10 to 15 years. Requirements are based on Defensewide planning scenarios and incorporate intelligence assessments of future threats and operating environments. Cost estimates are parametrically derived from analogies to current ship classes.

• Far-term. This period begins 15 or more years into the future. Because requirements are not fully recognized, the number and types of ships are rough targets based on joint and Navy analytical models and are focused on capability sufficiency and potential fleet architectures. Cost estimates are notional rough order of magnitude because of the uncertainties.

The plan establishes a force level of notionally 313 ships indexed to the 2020 threat (see table on Page 26). It provided the baseline for the president's 2007 budget submission. Overall, the plan reflects the Navy's commitment to stabilize the demand signal to the industrial base while achieving the appropriate balance of affordability and capability.

To provide stability and control costs in the near term, the CNO has established the NCB and R3B. The NCB is a one- and two-star board from the requirements and acquisition communities. The director of the Warfare Integration Division, Office of the Chief of Naval Operations (OPNAV), chairs the board. The NCB is chartered to review cost vs. capability

trade-offs and is authorized to make cost avoidance changes to programs that do not require changes in approved requirements. Cost avoidance recommendations that require changes in approved requirements are referred to the R3B. The R3B is a three-star board that is authorized to make changes in key capability attributes if the cost trade-off warrants. It is chaired by the deputy chief of naval operations, integration of capabilities and resources. Cost avoidance recommendations that require changes to key performance parameters on shipbuilding programs are referred to the CNO executive board. A series of reviews have been conducted on the Littoral Combat Ship (LCS), the DDG 1000 Zumwalt-class destroyer, the CVN 78 Ford-class aircraft carrier and the SSN 774 Virginia-class submarine to understand the cost drivers, ensure that only needed capability is being procured and to examine opportunities for cost reduction. Program scope and capability reductions have been made where appropriate.

The mid- and far-term offer different opportunities to control costs. During these phases, the fleet will evolve through a round of recapitalizations. Each phase offers an opportunity to examine alternative fleet architectures that neck down the types and models of ships and introduce more modularity into designs. The goal is to provide approximately the same total numbers of ships but to look at alternatives for spreading capability and providing a more affordable mix compared with replacing like with like.

EXPLORING ALTERNATIVES

As the CNO's shipbuilding plan was being developed, the commander of the Naval Sea Systems Command, Vice Adm. Paul Sullivan, tasked a team of experts in program management, systems engineering and cost engineering to lead a study to investigate technical and business strategies that will result in an affordable and executable 30-year shipbuilding plan. He specifically challenged the team to develop a fleet architecture with 10 or fewer ship types and explore alternative approaches to procuring the fleet.

The team's approach began with creating alternative fleet architectures that reduced the types and models of ships, and exploited modularity while matching overall capability of the fleet. The broad-based team consisted of the revitalized future concepts design groups at NAVSEA; representatives from the Program Executive Offices for Ships, Carriers, Submarines, and Integrated Warfare Systems; engineers from Naval Surface Warfare Center Dahlgren and Carderock; and NAVSEA cost engineers. Options were developed along three broad themes:

• Maximum re-use of existing ship designs.

• Minimum number of ship types.

• Maximum modularity.

Concept designs were completed and build plans were created to match capabilities and numbers year-to-year to those of the 30-year plan. From these, a least-procurement-cost selection was made. The team's effort began with a search of fleet architecture studies that have been a topic of high interest over the past year. The Office of Force Transformation, the Center for Strategic Business Studies and the Congressional Research Service have all published recent studies. The team was briefed by the director of the OPNAV Assessment Division on the analysis that was done in support of the 30-year plan to understand what drove the baseline fleet. The team then developed more than 30 designs based on the three themes.

For example, to maximize re-use of existing designs to reduce nonrecurring engineering and take advantage of the learning curve, a potential strategy for surface combatants is to derive the planned CG(X) cruiser from DDG 1000 and the DDG 51 Arleigh Burke-class destroyer replacement from LCS. Upgrading the radar on DDG 1000, and replacing the Advanced Gun System with additional vertical launch cells to create CG(X) would be similar to how the CG-47 Ticonderoga-class Aegis cruiser was derived from the DD 963 Spruance-class destroyer. Similarly, installing the multifunction radar on one of the LCS variants and retaining the modular mission packages would provide a replacement for DDG 51s.

In addition, we can reduce the types and models of ships we have in the fleet and standardize their components, resulting in reduced logistic tails. For example, we can reduce the types of amphibious ships to one type vs. three. This would combine the landing ship dock and landing helicopter dock recapitalization in an LH(X) single type with two models, one optimized for short takeoff/vertical landing operations and the other for vertical takeoff and landing and surface movement.

The 2007 fleet has 21 types and 29 models of ships. The 30-year shipbuilding plan has 19 types and 27 models in 2020. The team found that we can potentially reduce the types to six with 10 models. The types and models in the alternative fleet are:

• CVN 78. Single type; we did not develop an alternative.

• LH(X). Single type; two models as explained above.

• Combat Logistics Force. Single type; two models: T-AKE and T-AO(X) variant.

• Common sub. Single type with modular mission sections.

• Surface combatants. Two types, a DDG and an LCS derivative.

The numbers of ships were about the same, with equivalent capacity (amphibious lift, D5 launchers, Vertical Launch System cells, etc.) but distributed differently across classes. This offers the potential to significantly reduce procurement cost as compared with the current long-range plan, because nonrecurring costs are reduced and there is more opportunity to extract production learning. To achieve such reductions in types and models, the Navy needs to develop a long-range fleet architecture. This architecture has the potential to achieve acquisition cost as well as significant life-cycle cost savings.

In addition to reducing ship types and models, we must implement open architecture, reduce our surface ship combat systems baselines from 16 to eight or fewer, and enforce more commonality and standardization in our components. The Office of the Assistant Secretary of the Navy (Research, Development and Acquisition) has executive committees in place to pave the road to open architecture and component standardization.

ACQUISITION STRATEGIES

In addition to studying alternative fleet architectures, NAVSEA and the program executive offices are also pursuing risk-based acquisition strategies based on benchmarking studies with the petroleum and automobile industries. Preliminary findings point to a profound change in the way the Navy can strategically source material in a sole source shipbuilding market. Although simple in concept, executing risk-based acquisition strategies will be complex in the ship construction market.

The first step is to quantify the amount of risk in any given portfolio. NAVSEA recently completed development of a probabilistic risk profile of the Navy's ship construction account. This assessment provides Navy leadership with the comparative, quantitative means to understand developmental and production risk inherent to any program. On a macro scale, this decision tool provides greater insight into balancing the risk in Defense Department investments, much in the manner private industry approaches investment decisions.

Understanding the degree of risk will present the ability to alter contractual behavior. Competitive industries aggressively isolate risk to leverage economies of scale, develop alternative sources and determine contract type. On a national scale, this can enhance the competitive supplier base and lower cost in a sole source market. Adopting this approach at the program level requires insight into the total cost equation of suppliers. In the end, increased commonality will enhance our potential to leverage greater economic order quantities, decrease the Navy's cost reimbursable contract behavior and lower costs.

The Navy is recapitalizing its fleet with significant contractual risk. This risk is largely owned by the Navy, based on cost-sharing relationships with five shipyards, which pass the risk to systems integrators, developers and production plants. Many of these activities share contracts with more than 100 Navy program offices. As we begin the ramp up to a $13.4 billion ship construction account, nearly 90 percent of the near-term ship construction budget is targeted to sole-source shipbuilders (the LCS program is the sole exception). Of this 90 percent, only one-third is targeted at shipbuilder labor, and the remaining two-thirds represents material. Strategically sourcing this material through packaging commodity and equipment buys across contracts and introducing competition is where opportunity exists. More than 40 percent of ship material planned for the next four years is dedicated to warfare systems, and another 40 percent to complex engineered components such as power and auxiliary systems. War-fighting requirements, industry specialization, the burdens of government contracting, legislative restrictions, low volume buys and the lack of an integrated procurement strategy are fuel for aggressive strategic sourcing initiatives.

Fiscal 2007-08 provides an extraordinary opportunity for the Navy and industry to isolate risk, reduce cost and increase earnings. Strategically sourcing material within corporations, among industry partners and/or joined with the Navy can be a win-win proposition for all. Such a strategy will need to recognize the realities of a declining government workforce, corporate growth models and constituent influence. Above all, strategic sourcing demands the will of the Navy, industry and Congress to effect change.

By working together on a consistent plan, NAVSEA, OPNAV, industry, Congress, the secretariat and the program executive offices can:

- Procure the right level of capability and no more.
- Reduce the types and models of ships and components.
- Develop risk-based acquisition strategies that maximize fixed-priced contracts.
- Source material strategically to increase buying leverage.

We have a strategy and intend to make the CNO's shipbuilding plan a reality. Our Navy's future depends on it.

Expert Questions U.S. Navy Budget Credibility

BY CHRISTOPHER P. CAVAS

The U.S. Navy's plans for building new ships and aircraft are in jeopardy from potentially shrinking future defense budgets and significant underestimation of costs, a key analyst said June 4.

Risks in cost growth are greater for ships than aircraft, Eric Labs, a defense analyst with the Congressional Budget Office (CBO), told an audience at the Heritage Foundation in Washington.

"The Navy shipbuilding plan is primed for significant cost growth," he said, referring to the 30-year, 313-ship fleet plan that is guiding Navy acquisition.

Citing budget numbers issued by the Navy, Labs noted the service needs an average of $17 billion a year over the next 30 years to meet its fleet goal. But Labs has testified to Congress on numerous occasions that his calculations show a figure of about $22.5 billion is more realistic, and only then if the Navy can put a hold on cost growth.

Bill Balderson, deputy assistant secretary of the Navy for aviation, speaking before Labs, noted the five primary causes of program volatility that often provoked cost growth: program complexity; requirements fluctuation; budget instability; schedule demands; and government and industry optimism in their cost and schedule estimates.

Labs, who emphasized he was speaking on his own behalf and not for CBO, pointed to the troubled Littoral Combat Ship (LCS) program as an example of the Navy's lack of progress on those points, calling the program "a poster child" for most of Balderson's causes of program volatility.

Since the turn of the year, the Navy has been working to deal with cost growth and construction delays on the first LCS, which has seen its price rise from $220 million to around $400 million and is about a year behind schedule. Another LCS has been canceled, and the Navy recently asked Congress to raise a $220 million cost cap for the fifth and sixth ships to $460 million.

Labs cited inconsistencies in the service's estimation of the costs of the new $3.3 billion DDG 1000 Zumwalt-class destroyer and questioned the Navy's hope that the follow-on CGX cruiser variant will be less expensive.

"What credibility do the Navy numbers have?" Labs asked.

Labs noted growing budget pressures from Army and Marine Corps expansion that are expected to result in cuts to Navy and Air Force budgets and observed the skyrocketing costs of Social Security and Medicaid.

"At some point, all this is not going to add up for the Navy and hard choices will have to be made," he said. "No one should walk away from here thinking that the Navy has a stable shipbuilding plan and that we only have to worry about aviation. Both have foundations that are built on sand and are not

built on rock."

Balderson and Rear Adm. Bruce Clingan, director of the Navy's Air Warfare Division, confined the bulk of their remarks to describing the Navy's current aviation budget and aircraft programs. The Navy and Marine Corps are in the midst of a large modernization program to "neck down" the number of different types of aircraft in the fleet.

Brig. Gen. Robert Walsh, deputy assistant commandant for Marine Corps aviation, reiterated the service's commitment to the F-35B short-takeoff-or-vertical-landing (STOVL) variant of the Joint Strike Fighter (JSF), and declared "the Joint Strike Fighter is our future."

Christopher Griffin of the American Enterprise Institute placed the export versions of the JSF in the context of a power struggle between Western and Russian and Chinese weapon suppliers in Asia. The aircraft, he said, "is a capability enhancement that will shift the balance of power back to the U.S. and its allies."

Griffin noted the issue of technology transfer in relation to Japan's efforts to enter the JSF program and purchase F-22 Raptor fighters and cited the country's recent scandal where secrets of the American Aegis combat system were compromised. Japan will have to improve its ability to keep secrets, Griffin said, "to convince the U.S. that they are viable for the F-22 and F-35."

NavyTimes

SecNav: Shipbuilding will get a deep look

By Andrew Scutro - Staff writer
Posted : Thursday Jun 7, 2007 10:32:51 EDT

NORFOLK, Va. — Navy Secretary Donald Winter reacted to criticism of the shipbuilding budget Wednesday, saying the sea service is taking a hard look at its spending habits — but industry must keep up its end of the deal, too.

"We have some pressurization on the shipbuilding budget. That's evidenced, if you will, in challenges we've seen on programs like the Littoral Combat Ship," he said. "We're putting a lot of pressure on contractors there, to live up to their commitments — what they have stated these ships will cost. And we're engaged in a very significant reassessment of how we acquire our ships."

On Monday, an analyst for the Congressional Budget Office reiterated criticism of the Navy shipbuilding cost estimates during a conference at the Heritage Foundation in Washington, D.C. Experts contend that costs are being underestimated and annual spending on ships will need to rise if the Navy wants to achieve its 30-year, 313-ship fleet plan.

For 2008, the Navy asked Congress for $13.6 billion to build ships.

But Navy hopes for a fleet of 55 Littoral Combat Ships have been crippled at the outset by a cost increase from $220 million to $400 million in the first ship and the cancellation of the another LCS due to cost increases.

Winter, who was in Hampton Roads on a tour of Navy facilities, told local reporters that a thorough examination of how the government buys warships as well as the sheer scale of the LCS plan might help control costs.

"We should be able to reduce the cost of shipbuilding as we see it today," he said. "We will need to do that to be able to live within the projected budgets but I think it's possible to do so."

Lack Of Submarine Production Brings Dangerous Risks

By Joe Buff, The Day (Conn.), June 10, 2007

If the past five centuries of geopolitical history teach one unchanging lesson, it's that maritime superiority vacuums get filled by emerging rivals in a destabilizing, warlike way. The United States at present appears dangerously close to long-term decline in at least one crucial arena of transoceanic defense preparedness.

The ability to sustain a Submarine Force rightsized for national needs — as one organic part of a properly balanced U.S. Navy — is endangered by a confluence of nearly inescapable trends in timing, funding, manpower, and international competition. The looming shortfall in American undersea power puts at risk global standards of living, and could even impair worldwide life expectancies.

Will the submarine industrial base wither away due to lack of enough work to sustain its critical mass of unique, ultra-high-value personnel expertise? The Catch 22 is that unless we as a country take active steps soon, we might permanently lose the ability to ever regain the ground lost in submarine platform capabilities and numbers — relative to already projected needs — in the out-years of the current longterm shipbuilding plan.

The greater undersea warfare community, and other interested parties, have for some time been actively debating how to redress the significant shortfall, anticipated on a 2030 timeframe, between advanced nuclear powered fast-attack subs required, 48, vice the number actually expected to be in commission then, only 40. A promising avenue to help plug this gap is to raise the Virginia-class build rate, boosting it from one per year to two per year earlier than the officially planned 2012.

Doing so demands both a reduction in unit price and a steady multi-year increase in funding. The U.S. Navy and the industrial base are working very hard to lower costs, while members of Congress struggle to free up the money. Later in 2007, a decision will be made whether to appropriate enough extra cash to start building a second Virginia in 2010. The capacity to do so is there if the financial wherewithall is forthcoming.

But last year, the opportunity was lost to procure more Virginias as early as 2009 when the necessary congressional appropriations failed to pass. In fact the original time intended to buy and build two Virginias annually had been 2002. Due to repeated deferrals, it slipped by a full decade.

Had these slippages never occurred, we would not now be looking at a future gap of eight near-Virginia-equivalent subs, and would not now be forced to ponder the vexed question of redressing this substantial cumulative inadequacy. Nor would we be facing the permanent erosion of advanced nuclear-powered submarine design and construction talent caused by repeated layoffs which were in turn forced by the insufficient build rate.

Decisive action is required promptly to keep this troubling Catch 22 from becoming an irrecoverable crunch. It will surely be much less expensive to America in the long run, and less risky to world peace, to appropriate sufficient funds for that second Virginia starting in 2010.

Joe Buff is a defense commentator who writes frequently about undersea warfare. He has contributed to The Submarine Review, the U.S. Naval Institute Proceedings, Sea Technology, and Military.com. He has written several novels about submariners.

Defense Daily 6-15-07

Navy May Need More Than 313 Ships For Its Future, CNO Says

By Geoff Fein

NEWPORT, R.I.--The Navy's plan for a future fleet of 313 ships may need to be readjusted as the service looks to make sure it has the right number of ships for the future, said the Chief of Naval Operations (CNO).

"I have also come to believe...313 is the minimum number of submarines,

minimum number of aircraft carriers, the minimum number of cruisers, destroyers and support ships in the world we are living," CNO Adm. Mike Mullen told attendees at the Current Strategy Forum at The Naval War College on Wednesday.

"I am pushing myself on that at this point from the standpoint of, I'm not sure that's right anymore, and we are looking at how do we have it right for the future," he added.

A defense analyst told *Defense Daily* he had not heard anybody imply that 313 was the not the right number.

Yesterday, a spokesman for the CNO elaborated on Mullen's comments.

"The 313 number has always represented the minimum number of ships the Navy believes it will need and can afford to meet combatant command requirements for balanced, capable naval forces in the future. The CNO recognizes that, as the threats and challenges of that future continue to evolve, so too must our assessment of the logic that led us to this number. The Navy remains committed to its long term shipbuilding plan even as we continue to evaluate--as we must--the risks and the costs associated with it," Cmdr. John Kirby, the Navy spokesman, told *Defense Daily*.

According to a June 2007 Congressional Research Service (CRS) report on the Navy's force structure and shipbuilding plans, "the Navy in 2006 stated in general that it may change the 313-ship proposal at some point. The Navy in 2007 has suggested more specifically that it may change the planned numbers of amphibious ships, MPF(F) (maritime preposition force future) ships, and SSBNs (ballistic missile submarines)."

"A May 2006 Navy planning document stated that the Navy will continue to refine capability and capacity requirements in POM-08 [the Program Objective Memorandum for the FY '08 budget] by reviewing the force mix against emerging and evolving threats. [The] Navy will conduct an analytic review and analysis of potential alternative capacity and capability mixes that will support Joint Force requirements and enable stable shipbuilding and procurement accounts," according to the CRS report.

In April, the CRS report's author, Ron O'Rourke, told attendees at the Navy League Sea, Air and Space expo that how much stability the Navy has maintained in its ship force structure plans is not as "pristine" as it appears.

"To begin, there's a paragraph in the Navy's report on the 30-year shipbuilding plan about how the Navy might reconsider its stated requirements for amphibious and maritime prepositioning ships. This paragraph is in really small type, but it's there, and it's basically a warning that the numbers for these two ship categories might change. In addition, the Marine Corps is testifying

that they want the amphibious ship number to be 33, as opposed to the 31 in the 313-ship plan," O'Rourke said.

The 313 ship plan also includes 14 SSBNs. However, O'Rourke said in April that the Navy might change that number from 14 to 12 since the next SSBNs will have a life-of-the-ship core and consequently won't need a mid-life refueling. There is also the issue of just how many aircraft carriers are in the 313 ship plan. The ship plan had been based on 11 carriers. However, O'Rourke noted that the number had changed when the Navy started to describe the 313 ship fleet as one centered on 11, and eventually 12, carriers.

"So there it is--possible changes in the numbers of amphibious ships, MPF ships, and SSBNs, and a changed description about the number of carriers. I'm not saying the Navy hasn't managed to keep its ship force requirements more or less stable over the last year or so. But, like I said, the situation isn't as pristine as it first appears," he said at the Sea, Air and Space expo.

Mullen, who has been CNO since July 2005, took over at a time when shipbuilding was drifting downward. He acknowledged that getting ship construction back on track is going to take time.

"I have my challenges with the shipbuilding program. We had a destabilized shipbuilding program for a long time. It is not going to settle out if Mike Mullen comes in and says 313 and a month later everything [shifts]," he said. "We commissioned another ship the other day. I am at 277 and I am on our way up. When I came in as CNO we were on our way down. We stopped it and we are going in the right direction. We clearly need to start there to get to 313."

Mullen, who was recommended last week for nomination to be the next chairman of the Joint Chiefs of Staff, told the audience that one of the lessons the Navy is learning from developing its new maritime strategy is the concept of deterrence.

Mullen said it was alarming to him what little work has been done in the areas of deterrence, escalation and de-escalation, since 1989. "That deterrence now is much tougher."

Mullen encouraged students at the Naval War College to do some work on proliferation issues, examining where weapons of mass destruction are and who is trying to gain access to them.

"Some of us may have put this in the 'too hard category' before. We can't afford to do that now. We have got to address this," he added. "How do we use the principle tied to escalation, de-escalation, and deterrence, in the world we are living in now, where we have state actors who are bad guys, and we have non state actors who are bad guys, all of whom are seeking this kind of technology and capability."

Mullen added he was taken aback at how little intellectual energy and effort has gone into looking at deterrence, escalation and de-escalation.

"We need to work on that. There is great potential there. It's hard work," he said. "What I found was many of the individuals who have done this for a living as I was growing up, they are not doing it anymore and we have not found their relief. We need to do that."

It is also important for the nation to reach a diplomatic resolution, and not a military one, with Iran, Mullen said.

He was pleased the United Nations passed a resolution on sanctions against Iran, adding that "a diplomatic path is the right path."

"I am concerned with what Iran is doing in Iraq and Afghanistan. They are broadly providing capability to which we are losing American soldiers and Marines on the ground and I consider that not to be acceptable," Mullen said.

Inside the Navy

Draft outline provides details

NEW MARITIME STRATEGY WOULD EMPHASIZE SOFT AND HARD POWER

Date: June 18, 2007

NEWPORT, RI -- The Navy should dispatch small groups of forces around the globe to foster diplomacy and security while deploying powerful warships to the Middle East and the Pacific to deter wars and prevail in the event of conflict, according to a draft outline of the Navy's new maritime strategy.

The sea service has remained relatively tight-lipped about the new strategy, even last week here at the Naval War College's annual Current Strategy Forum. But details are in the document -- marked "working papers" and "for official use only" -- a copy of which was reviewed by *Inside the Navy*.

The title page of the 25-page briefing describes it as the "framework and outline" for the "Maritime Component of the National Military Strategy," a sign that naval leaders believe the end product will resonate beyond the halls of the Navy, Marine Corps and Coast Guard.

For the maritime strategy to be successful, it must become part of the national security strategy and provide a foundation for global partnerships, Ashley Tellis, a senior associate at the Carnegie Endowment for International Peace, said here last week.

Chief of Naval Operations Adm. Michael Mullen talked in general terms about the new strategy at last week's conference. Service officials plan to release the strategy in some form later this year, he said.

Mullen, who is in line to succeed Marine Corps Gen. Peter Pace as chairman of the Joint Chiefs, said the purpose of the Navy is to win wars, protect commerce and protect the United States. But he stressed U.S. naval officials must start to look at the multipolar world through the eyes of other people around the globe. He underscored the importance of global partnerships. Mullen also said he finds it alarming how little work has been done on deterrence since the end of the Cold War.

The briefing lists two maritime objectives, the first of which is conducting a full range of operations to prevent and deter conflict. This includes fostering trust and confidence in the global system through new maritime relationships; easing sources of instability, countering extremist ideology, preventing or containing conflict and deterring aggression; and ensuring that key regions, lines of communication and the maritime commons remain accessible for free and open use. The second objective is countering aggression when necessary.

The briefing also lists six maritime strategic imperatives -- the ways to meet the goals. The imperatives are promoting cooperative relationships with other countries, preventing and mitigating disruptions to the world order by providing security, deterring and containing regional conflict, deterring war between major powers, winning U.S. wars and defending the homeland. Together, these form a systematic approach to the escalation and de-escalation of conflict, the briefing says.

Mullen told the audience he now views 313 ships as the minimum size for the fleet. The Navy may need even more ships, he said in a departure from previous statements.

Mission-tailored, distributed forces -- "strategic frigates and strategic corporals" -- will be needed to foster cooperative relationships; maintain order; provide new approaches for deterrence, escalation and the de-escalation of conflict; and provide homeland defense, according to the briefing. The Navy is already pursuing pilot programs for this sort of engagement in the Caribbean and the Gulf of Guinea.

By building ties with foreign fleets based on common interests, the Navy hopes to improve disaster-response efforts and curb regional conflicts. These bonds can prove critical in times of crisis, according to the outline.

“Trust cannot be surged,” the briefing says. The Navy expects these forward-deployed naval forces to provide security, suppress transnational threats, ease human suffering, enable interagency operations and help provide a layered defense of the homeland through maritime domain awareness.

Meanwhile, the Navy will maintain “robust maritime power” in the Middle East and the Pacific to deter and contain regional conflict, deter war between major powers, win U.S. wars and defend the homeland, the briefing says.

Weak governments, unequal distribution of wealth, religious extremism, and demographics may contribute to conflict in certain regions, the Navy predicts. The speed and accessibility of information will exacerbate human suffering, with the disadvantaged aware of their condition and facing temptations from increasingly attractive extremist ideologies, the briefing says. Climate instability will also disrupt the world, the briefing says.

The Navy will maintain preeminent maritime forces as other maritime nations “exert increasing claims of sovereignty over previously unclaimed expanses of the ocean,” the briefing says.

U.S. officials maintain the vast majority of militarized nations are building or expanding naval power. Asia-Pacific navies are expected to spend $108 billion to boost submarine and other maritime defenses over the next decade, the briefing says, citing data from an International Maritime Defense Exposition and Conference in Singapore.

Walter Mead of the Council on Foreign Relations told Current Strategy Forum attendees the rise of Asia is probably more of an opportunity than a threat.

Kurt Strauss of Raytheon asked panelists here whether U.S. officials ought to tone down rhetoric on China to avoid demonizing the country. Adm. Gary Roughead, the head of Fleet Forces Command and former chief of Pacific Fleet, touted U.S. engagement activities with China, including this year’s U.S. visit by China’s naval chief.

Tellis said the United States ought not to make any enemies before their time. China has capabilities that can seriously hurt the United States, but one must be careful what one infers, he said. U.S. officials need good intelligence but should also reach out, he said.

It is not inevitable or in U.S. interests for the U.S. and Chinese national strategies to become opposed, Tellis said. Robert Work of the Center for Strategic and Budgetary Assessments said China’s naval developments do not presuppose a conflict with the United States.

When asked about Iran, Mullen said a diplomatic solution must be found to address the tensions surrounding that country’s nuclear ambitions. He said it is unacceptable that Iran is providing U.S. enemies in Iraq and Afghanistan with capabilities that are hurting and killing U.S. troops.

The briefing, which predicts the appetite for nuclear weapons will grow among both nation states and non-state actors, also argues that U.S. presumptions on why or when others will use nuclear weapons must be re-examined. An expanded concept of deterrence should include missile defense, conventional weapons, nuclear weapons, an increased irregular warfare capability and theater- and threat-specific flexible deterrence options, the briefing says.

The Navy is increasingly concerned about the risks associated with the proliferation of technology and

information. The sea service predicts future conflict will increasingly apply a mixture of conventional and non-conventional tactics, multiple decision-making centers and state and/or non-state actors using advanced technology. Also, this conflict will increasingly involve legal, financial, informational tools; slow-motion, non-linear escalation; and actions by one party to incite conflict between two other parties, the briefing says.

Governments, nongovernmental organizations, international organizations and the private sector will need to form partnerships to address emerging challenges, the briefing says. Mullen also touted his service's partnership with the Coast Guard.

The new maritime strategy will inform the guidance the Navy plans to issue later this year for the fiscal year 2010 budget process, Mullen said. But the Navy also plans to revisit the maritime strategy regularly in the future to make sure it remains relevant. Service officials might seek to update the strategy in late 2009, the briefing indicates. -- *Christopher J. Castelli*

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Portsmouth Press Herald

Shipyards: 'The arsenal of democracy'

By **Sen. Susan Collins**
June 17, 2007 6:00 AM

The writer has served Maine as a Republican member of the U.S. Senate since 1997.

This year, our nation celebrates the 400th anniversary of American shipbuilding, a birth that took place right here in Maine. When a small band of rugged English settlers at Popham Colony built the 30-ton Virginia in 1607, their goal was to demonstrate they had the natural resources and the skilled hands to launch this vital industry in North America. Four centuries later, shipbuilding continues to play an important role in our state's economy and our culture.

One of the most rewarding moments of my Senate service was when I served as the sponsor of the USS Farragut as she was christened at Bath Iron Works in 2005. As I smashed the champagne bottle on the ship, I thought of the brave Americans who would serve on that ship. I thought of all the brave Americans who have served in the United States Navy throughout our history, and the legacy of courage, devotion to duty, and sacrifice they have created.

But I also thought of the dedicated, highly skilled men and women who build our ships. From Old Ironsides to the ironclads, from Liberty ships to the Arleigh Burkes and now to the Zumwalts, from sail to steam to the atom, America's shipyards have truly been the arsenal of democracy. Much has changed over the years, but the threats to freedom remain. As a former chief of naval operations once said, "One of the best ways to deal with the global instabilities that will continue into the 21st century is by being there." The lesson of history is that sea power gets us there.

It is a lesson we must never forget. With the smallest United States Navy fleet since World War I, and with China advancing its naval fleet by leaps and bounds, we must reverse course. Low rates of procurement, combined with the year-to-year instability and lack of predictability in funding, are profound threats to our shipbuilding industry. Skilled shipbuilders and engineers are not likely to remain in the industry without the certainty of stable employment.

If this experience and brainpower are lost, and if new engineers are discouraged from entering the field, our nation will lose its ability to build ships. This would be disastrous for America and for the world. Fortunately, this year's Defense Department authorization will help put our Navy on track to achieve the 313-ship fleet that the chief of naval operations states is necessary.

I am grateful and honored that the American Shipbuilding Association recently presented me with its 2007 Herbert H. Bateman Award. The award is named for the late Herbert Bateman, who was a strong advocate of the U.S. maritime industry and America's shipyards during his 18 years of service in the House of Representatives. It recognizes those who have shown outstanding leadership in the promotion of a strong U.S. shipbuilding industrial base. The American Shipbuilding Association includes the nation's six largest shipyards, including Bath Iron Works, and more than 70 companies engaged in the manufacture of ship systems and components. Dugan Shipway, the president of Bath Iron Works, nominated me for this prestigious award.

As a member of the Senate Armed Services Committee, I have seen firsthand that sea power is crucial to defend our freedom and to extend the blessings of freedom to others. I have fought for shipbuilding and acquisition policies that will keep the United States Navy preeminent, our shipyards strong, and our skilled workers building the best ships in the world. Working together, we can ensure that what began four centuries ago at a remote outpost on the rocky coast of Maine continues far into the future, and that America's shipyards will always be there to defend freedom.

An All-Submarine Navy

Mike Burleson , http://www.opinioneditorials.com, June 19, 2007

Last week, the third in a new class of underwater battleships, the USS MICHIGAN, joined the fleet after a $1 billion face lift. The 4 converted subs of the OHIO class, former Trident missile ships, are the undersea equivalent of the reborn IOWA class from the 1980's. Armed with over 150 Tomahawk cruise missiles, plus the ability to carry special forces and unmanned vehicles, they give the Navy an incredible ability to strike decisively from the sea.

I am of the opinion that in full-scale shooting war at sea, the US surface navy will be devastated in the first day., by the combination of cruise missiles and stealthy submarines. The survivors would all be forced into port, unable to participate in the counterattack, which would likely be initiated by our own deadly nuclear attack submarines.

What this means is, our current force of colossal and pricey warships including aircraft carriers, cruisers, destroyers, and amphibious ships are obsolete in today's precision, push button warfare. They are also tremendously expensive to build and operate, with only the richest of earth's superpowers able to afford them in ever declining numbers. If this wasn't reason enough for maritime nations to reevaluate their shipbuilding priorities, there are few if any jobs the surface fleet can do which the submarine cannot. I'll elaborate:

Command of the Sea

Submariners say there are only 2 types of ships: submarines and targets. There's valid reasons for this. Since World War 2 anti-submarine defenses have failed to match the attack boat's advancements in speed, stealth, and weaponry. For instance, since 1945 the average speed of destroyers have remained at 30 knots, with only nuclear vessels able to maintain this rate for any period. In contrast, the velocity of nuclear attack submarines, beginning with the launch of USS NAUTILUS in 1954, has tripled and quadrupled from around 10 knots submerged to 30-40 knots.

Also, an antisubmarine vessel must get within a few miles of an enemy sub to fire its rockets or torpedoes. Its only long-range defense, the helicopter, is slow and must linger in a vulnerable hover while its sonar buoys seek out their prey. Some Russian-built boats come equipped with anti-aircraft missiles which makes this standard ASW tactic suicidal.

In contrast, a modern submarine can launch its missiles from 75 miles away and farther. Should it choose to close the distance, as occurred when a Chinese SONG class stalked the USS KITTY HAWK last year, to fire its ship killing torpedoes, it can do so at speeds as fast as and sometimes surpassing surface warships. Whether attacking with cruise missiles or wake-homing torpedoes the attack boat remains submerged; the preeminent stealth vessel.

The sub has likely held this dominate position on the high seas, since the dawn of the first nuke ships beginning in the 1950's. The only lacking factor has been a full-scale naval war to prove it. The single example is the sinking of the Argentine cruiser BELGRANO 25 years ago by the British submarine HMS CONQUEROR in the Falklands Conflict. Afterward, the Argentine Navy fled to port and remained there!

Commerce Raiding/Protection:

This traditional role of the submarine is one which it excelled in the last century. The difference today is, neither America nor Britain has the capability to mass produce the thousands of anti-submarine escorts which just barely defeated Germany's U-boats in 2 world wars, even if it would matter. In the next war at sea, the submarine would bring all commerce to a halt, making a mockery of the globalized free market system. The only counter to this menace is perhaps a combination of aircraft and submarine escorts, with the latter acting as the destroyer, shepherding its convoy through the "shark" ridden waters.

Amphibious Assault

Admittedly, this is not a role in which the submarine excels at , with its sparse crew and cargo capacity. Where they do stand out is the ability to land small raiding parties, like the elite Navy SEALs, and underwater demolition teams in preparation for a full-scale assault.

Still, with the submarine maintaining command of the seas, it would allow a surface amphibious task force free reign against an enemy beachhead. Rather than requiring expensive standing amphibs, reserve vessels could be maintained on both our coasts, with a cadre crew ready for any emergency. Some could also be rapidly converted with landing strips for heloes or whatever air assets are needed. Some small and inexpensive littoral ships fitted with cannon could provide escort close to shore.

For standard peacekeeping operations, some large subs could be built or converted for troop carrying, as in the above mentioned MICHIGAN. The ex-ballistic missile warship and her three sisters can load up to 66 SEALs, or more, I imagine, in a pinch, plus their equipment.

Conclusion

If America were to suddenly lose her preeminent surface fleet of carrier groups in such a future conflict, she would still have an excellent and capable submarine force to carry the fight to the enemy. The Navy says it must build 2 boats per year to maintain 50 in commission. Perhaps a doubling or tripling of this number would be necessary to replace the surface ships in the manner I propose. A fleet of 100-150 nuke submarines would be far cheaper to maintain, but also doubtless give the USN an unmatched mastery at sea for the rest of the century.

washingtonpost.com

Early Warning
By William M. Arkin

William M. Arkin on National and Homeland Security

More Subs, Fewer Boots on the Ground

When I wrote about the Navy's reconfigured Trident submarines, I heard from an active-duty officer serving on one of them. And he has prompted some further thoughts on the value of the gigantic in the war against terror.

My basic argument is that the conventional wisdom -- that there is no technological solution in Iraq, and that money spent on big items such as Trident submarines and F-22 fighter jets would be better spent on "boots on the ground" -- may be wrong. Trident submarines and F-22s have an important role in the war against terror, but it might not be the Osama-chasing, Iran-vanquishing, China-threatening role that shallow-minded strategists assign them.

The Naval officer serves aboard a Trident-class submarine, and he wrote to tell me that my post was "somewhat misguided." My problem, he says, is that I am "looking at too big of a picture to see the underlying details."

Here are some excerpts from his e-mail:

The reality is that the navy is divided into three major factions within: Submarines, Surface Ships, and Aviation. Aviation and surface ships have such a long storied history in the navy (as well as a far greater number of personnel, in general) that their very existence is never really in question. Submarines, however, having such a smaller number of people, are in a bit of an internal quagmire as they attempt to figure out how ... they can be relevant in a post cold war world.

The answer is really, that they can't be. Submarines, in this day and age have little to no practical use. I've been an officer aboard a Trident Class submarine for about two years, and can tell you that I have done nothing of value to this nation or its taxpayers in this time. In some esoteric sense, you could say that strategic deterrence is necessary, but in actual fact, the imminent nuclear threat doesn't REALLY exist anymore, and any idea that the USA would respond to a nuclear terrorist attack with a nuclear strike is at best COMPLETELY frightening to any level headed person. I also think it's highly unlikely, even with the current administration.

Further, the fast attack submarine community is at a loss due to the fact that there is no more cold war country producing similarly classed submarines to track and trace anymore. The threat just doesn't exist. The SSGN is an attempt by the submarine community to re-establish its relevance. Personally, I acknowledge the value of maintaining a submarine community for the sake of not losing the proficiency (submarining is highly specialized work, and developing it again from the ground up in 10-20 years would not be to nation's advantage), I really think that the current nuclear submarine community is perhaps the largest single waste of money in the military. I literally do nothing but train for inspections, go out to sea, wait for the supposed end of the world due to completely laughable scenarios as seen in your blog, and come home.

We're far too afraid of terrorist attacks to even let the people that work aboard the sub to park within 2 miles.... 2 MILES of the submarines, showing a complete sense of irrational fear, as well a complete disregard for the quality of life of the individual sailors. It's infuriating...

There is a lot of interesting stuff here. My basic response, in a slightly modified form from what I wrote to the officer in an e-mail, is that he may be performing a more valuable service than he realizes.

This officer's unhappiness, I submit, is not with the submarine but with our overall predicament: the way the war in Iraq has inflamed so much hate and put so many Americans in harm's way with no decent strategy for victory. In reality, we are involved in an ancient man-to-man battle with a well-motivated enemy. This is a battle we cannot win, at least the way we are fighting it, because our technologically oriented, electronically agile, modern nation is not willing to commit the same manpower -- that is, to sink to the level of barbaric attrition.

Still, this officer's Trident is doing more to counter terrorism than the boots on the ground are. Not because it can lob nukes at anyone, and certainly not because it can counter terrorists under some Strangelovian WMD scenario. Its power is more symbolic: It represents the true superpower. It is a quiet and unobtrusive behemoth that no one else can hope to own and everyone is a bit in awe of -- even if they won't admit it.

Think of the sub as a kind of "mansion on the hill." We drive by it and wonder what it would be like to live there, to have that amount of money. If its owners are good neighbors and not too ostentatious, if they contribute to the community and don't swagger around town arrogantly, we don't get too jealous. If someone breaks into their house, we don't say they deserve it (nor do we call out the Army to rid the county of all house thiefs). We may even shake our heads when the mansion's owners decide not to press charges, and feel a little sad when we see contractors installing a new security system.

My correspondent's submarine is that mansion. The struggle for hearts and minds that we all pay lip service to is not some distant and high-tech information war. It begins at home.

Before 9/11, I would have never thought the military needed more Trident submarines. Now, however, I see their value: Quietly patrolling, threatening no one directly, occupying no one's soil, they help to keep order. And they send a powerful message that says we all have no choice but to play by certain rules and respect each other.