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SENATE COMMERCE, SCIENCE, AND TRANSPORTATION COMMITTEE

STATEMENT OF
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BEFORE THE
SENATE COMMERCE, SCIENCE, AND TRANSPORTATION COMMITTEE
SUBCOMMITTEE ON FISHERIES AND THE COAST GUARD
HEARING ON
THE COAST GUARD'S REVISED DEEPWATER IMPLEMENTATION PLAN
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Madam Chair, Senator Cantwell, distinguished members of the subcommittee, thank you for the opportunity to appear before you to discuss issues relating to the Coast Guard's revised Deepwater implementation plan. My testimony will focus on the following:

- the level of overall mission performance that would be achieved under the revised implementation plan;
- the option of accelerating and possibly expanding procurement of Deepwater National Security Cutters (NSCs) and Offshore Patrol Cutters (OPCs) cutters;
- the relationship between Deepwater cutters and the Navy's planned Littoral Combat Ship (LCS) for homeland security/homeland defense operations;
- the timeliness of delivery to Congress of detailed Deepwater cost and schedule information, and potential implications for congressional oversight of the Deepwater program; and
- the acquisition strategy for the Deepwater program and potential implications for government management of the program.

Mission Performance Under Revised Implementation Plan¹

Deepwater Capability and Capacity Levels

In discussing the revised Deepwater implementation plan, the Coast Guard uses "capability" to refer to the kinds of tasks that individual Deepwater platforms (ships and aircraft) will be equipped to perform, and "capacity" to refer to the numbers of platforms that will be available for performing these tasks. The Deepwater force's overall mission performance, the Coast Guard says, will be a product of its capability and capacity. Differing combinations of capability and capacity, the Coast Guard says, would result in differing levels of overall mission performance.

The Coast Guard has identified the following Deepwater capability and capacity levels.

Capability Levels.

- **Baseline** (or Increment 0), which is the capability of platforms as proposed under the original Deepwater plan;
- **Increment I**, the lowest-cost addition to the baseline, which the Coast Guard describes as the minimal additional capabilities needed to begin aligning the Deepwater platforms with Department of Homeland Security (DHS) goals;

¹This section is based largely on an April 28, 2005, Coast Guard briefing to CRS and follow-on April 29, 2005, telephone discussion with CRS, on the performance gap analysis and force structure determination process underlying the revised Deepwater implementation plan, and on supporting documents provided by the Coast Guard to CRS.

- **Increment II**, the middle-cost addition to the baseline, which the Coast Guard describes as adding a larger amount of homeland security-related capabilities to a larger fraction of the platforms; and
- **Increment III**, the highest-cost addition to the baseline, which the Coast Guard describes as the changes that would fully align Deepwater platforms with DHS goals, but would still not meet the new Deepwater program System Performance Specifications (SPS v2.0).

Capacity Levels.

- **Baseline** (or Level 0), which the Coast Guard describes as the force levels sufficient to perform Coast Guard missions at 1998 (i.e., pre-Deepwater) levels;
- **Level 1**, which the Coast Guard describes as the Baseline plus additional forces for performing the additional port, waterways, and coastal security operations that were added after 9/11;
- **Level 2**, which the Coast Guard describes as Level 1 plus additional forces for:
 - achieving an increased degree of maritime domain awareness (MDA),
 - maintaining continuous presence of two cutters (i.e., 2.0 presence) in the Bering Sea, and
 - performing additional air interdiction operations;²
- **Level 3**, which the Coast Guard describes as Level 2 plus additional forces for achieving long-term (FY2005-FY2009) Government Performance and Results Act (GPRA) goals; and
- **Level 4**, which the Coast Guard describes as Level 3 plus additional forces for:
 - conducting fisheries enforcement in certain areas where fisheries enforcement is not currently performed, and
 - performing additional counter-drug operations, should the Department of Defense (DOD) reduce its efforts in this area so as to make DOD resources available for other DOD missions.³

Level 4, the Coast Guard says, is the level that RAND used in its 2004 report on the Deepwater program. The RAND report calculated force levels that would be required for fully performing both traditional Deepwater missions and emerging (i.e., post-9/11) Deepwater responsibilities.⁴

²Coast Guard officials stated that the Bureau of Immigration and Customs Enforcement (ICE) is, for the time being, performing the fixed-wing portion of these operations.

³The briefing materials used by the Coast Guard for its April 28, 2005, briefing to CRS show an unlabeled capacity level beyond Level 3 that fits the description provided here. Coast Guard officials agreed at the briefing that, for purposes of this discussion, this capacity level could be called Level 4.

⁴John Birkler et al, *The U.S. Coast Guard's Deepwater Force Modernization Plan, Can It Be Accelerated? Will It Meet Changing Security Needs?* RAND Corporation, Santa Monica (CA), 2004. See especially Table (continued...)

Force Recommended Under Revised Implementation Plan

Figure 1 below, which was created by CRS on the basis of consultations with the Coast Guard, depicts in graphic form the Coast Guard’s view of the combinations of capability and capacity recommended under the revised implementation plan, under the originally planned Deepwater force, and in the 2004 RAND report.

As can be seen in the figure, the Coast Guard states that the force recommended under the revised implementation plan falls between Increments 2 and 3 in terms of capability and between Levels 1 and 2 in terms of capacity. In comparison, the Coast Guard states, the originally planned Deepwater force and the force recommended in the 2004 RAND report used platforms with baseline-level capabilities. In terms of capacity, the originally planned Deepwater force was between Baseline and Level 1, the Coast Guard states, while the force in the force in the 2004 RAND report was at Level 4.

Figure 1. Deepwater Capability and Capacity

CAPABILITY	Increment III					
	Increment II					
	Increment I					
	Baseline		Original Deepwater force			2004 RAND force
		Baseline	Level 1	Level 2	Level 3	Level 4
		CAPACITY				

Source: Figure prepared by CRS based on consultations with Coast Guard officials on April 28 and 29, 2005.

While the number of platforms in the revised implementation plan is not obviously higher than the number in the originally planned Deepwater force, the Coast Guard believes that the value of networking, superior knowledge, and better tools (i.e., equipment) on the platforms will permit the revised Deepwater force to achieve a higher level of capacity per platform than the originally planned Deepwater force. In this sense, the Coast Guard’s revised implementation plan is implicitly arguing, in a reversal of the old force-planning aphorism, that “quality has a quantity all its own.”

⁴(...continued)
4-2 on page 70.

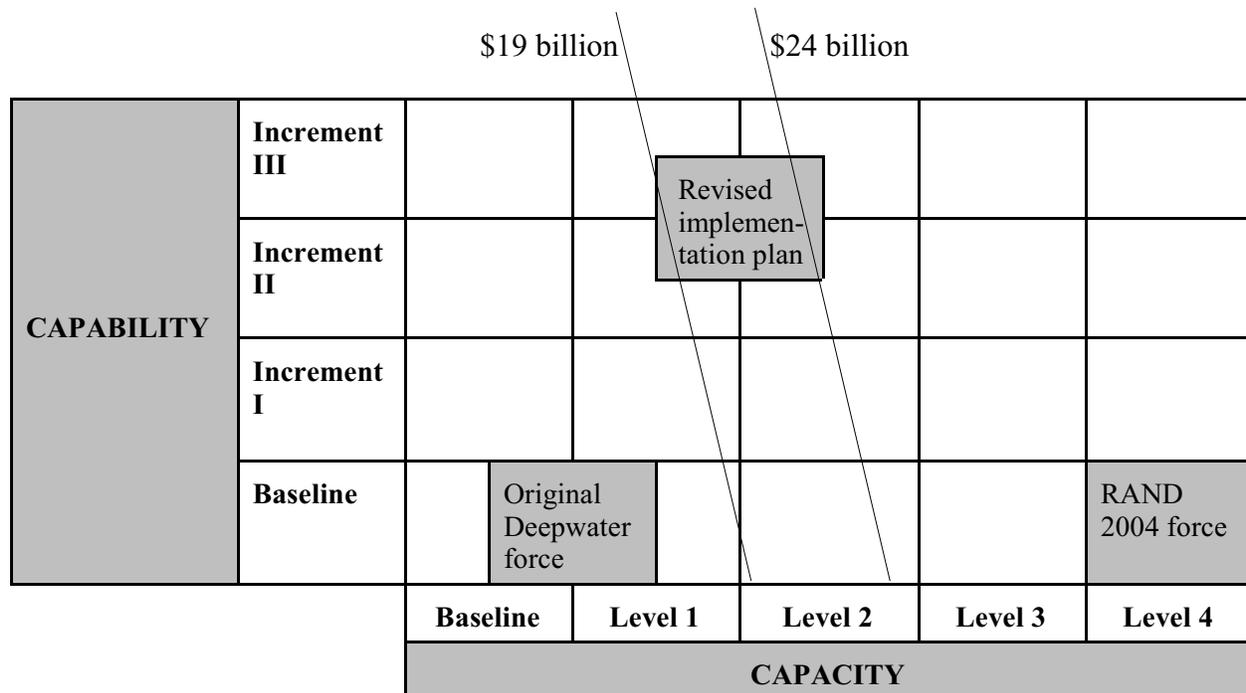
A Force Optimized Within A Certain Resource Level

The Coast Guard believes that the force recommended under the revised implementation plan represents the highest-performing combination of capability and capacity with a total acquisition cost of \$19 billion to \$24 billion. The recommended force, in other words, can be viewed as one that the Coast Guard believes has been optimized for overall mission performance within a total acquisition resource level of \$19 billion to \$24 billion.

As shown by the sloped lines in **Figure 2** below, Deepwater forces consisting of other combinations of capability and capacity could be acquired for a total acquisition cost of \$19 billion to \$24 billion. The slope of the lines in the figure is notional and is intended only to illustrate the general principle that, within a certain total acquisition cost, capability and capacity can be traded against one another. The Coast Guard believes, based on its analysis, that other capability-capacity combinations lying along these lines would result lower levels of overall mission performance than its recommended force.

Forces with total acquisition costs lower or higher than \$19 billion to \$24 billion would lie along sloped lines that would be shifted to the left and right, respectively, of the lines in Figure 2.

Figure 2. Deepwater Capability and Capacity
 (sloped lines notionally illustrate capability-capacity tradeoffs within \$19 billion-\$24 billion total acquisition cost; Coast Guard believes its recommended force would be the highest-performing force lying along these lines)



Source: Figure prepared by CRS based on consultations with Coast Guard officials on April 28 and 29, 2005. Slope and position of the \$19-billion and \$24-billion lines are notional only and not meant to indicate precise tradeoffs.

Performance Of The Revised Force

Although the Coast Guard states that the Deepwater force recommended under the revised implementation plan would generate much more overall mission performance than the originally planned force, and would be able to meet certain DHS and Coast Guard long-range performance goals, the Coast Guard also stated to CRS that the revised Deepwater force:

- might not have enough capacity for performing certain operations included in Level 2;
- almost certainly would not have enough capacity for performing certain operations included in Level 3, which includes operations for fully achieving long-term (FY2005-FY2009) Government Performance and Results Act (GPRA) goals; and
- would not have enough capacity for performing certain operations included in Level 4.

Potential Oversight Questions For Congress

Potential oversight questions for Congress arising out of this discussion include the following:

- Why was a range of \$19 billion to \$24 billion, rather than some lower or higher figure, used as the acquisition cost range within which to optimize the revised Deepwater force?
- Rather than optimizing the force to achieve the highest possible performance within an acquisition cost of \$19 billion to \$24 billion, why was the force not optimized to fully meet the long-term (FY2005-FY2009) GPRA goals at the lowest cost?
- What are the potential operational risks of not having enough capacity for certain operations included in Levels 2, 3, and 4? What are the operational potential risks, in other words, of not having enough capacity to
 - achieve a Level-2 degree of maritime domain awareness?
 - maintain a 2.0 cutter presence in the Bering Sea?
 - conduct Level-2 air interdiction operations not conducted by other agencies?
 - conduct Level-3 operations needed to fully meet the long-term (FY2005-FY2009) GPRA goals?
 - conduct Level-4 fisheries enforcement and counter-drug operations?
- What would be the most cost-effective combination of capability and capacity that could perform all Level-2 operations (or all Level-3 operations, or all Level-4 operations)? What would be the composition of this force in terms of platform types, platform numbers, and platform features? What would be the acquisition cost of this force?

Accelerating and Possibly Expanding NSC/OPC Procurement

Congressional Interest

There has been interest in Congress since 2002 in the idea of accelerating Deepwater procurement so as to compress the program's acquisition period from 20 or more years to as little as 10 years.⁵ Supporters of accelerating Deepwater procurement argue that it would reduce total Deepwater acquisition costs and more rapidly increase Coast Guard capabilities toward post-9/11 requirements.

Surface Combatant Industrial Base

As discussed in CRS reports on the Deepwater program and Navy ship-acquisition programs, accelerating procurement of Deepwater National Security Cutters (NSCs) and Offshore Patrol Cutters (OPCs) could help support the two shipyards that have built the Navy's larger surface combatants in recent years — General Dynamics' Bath Iron Works (GD/BIW) of Bath, ME, and Northrop Grumman's Ingalls Shipyard of Pascagoula, MS, which forms part of Northrop Grumman Ship Systems (NGSS).⁶

GD/BIW and Ingalls currently face some uncertainties regarding the amount of Navy surface combatant construction work they will receive over the next several years. The FY2006-FY2011 Future Years Defense Plan (FYDP) reduces planned DD(X) destroyer procurement to one per year in FY2007-FY2011. In addition, the Navy is interested in changing the shipyard portion of the acquisition strategy for the DD(X) program.⁷ Estimated DD(X) procurement costs, moreover, have

⁵For example, Section 888(i) of H.R. 5005/P.L. 107-296 of November 25, 2002, the bill that established DHS, required a report to Congress on feasibility and potential implications for cost, capability, readiness, and operational efficiency of compressing Deepwater procurement from 20 years to 10 years.

⁶See CRS Report RS21059, *Navy DD(X) and CG(X) Programs: Background and Issues for Congress*, by Ronald O'Rourke; CRS Report RL32109, *Navy DD(X), CG(X), and LCS Ship Acquisition Programs: Oversight Issues and Options for Congress*, by Ronald O'Rourke; and RS21019, *Coast Guard Deepwater Program: Background and Issues for Congress*, by Ronald O'Rourke.

⁷Until recently, the DD(X) was being developed by a national industry team lead by NGSS and Raytheon. The team also included GD/BIW as well as Lockheed Martin, Boeing, and several other companies. Under the Navy's DD(X) acquisition strategy of record, which was approved by DOD in February 2004, the first DD(X) would be built by NGSS, the second DD(X) would be built GD/BIW, and contracts for building the first six DD(X)s would be equally divided between NGSS and GD/BIW.

In February 2005, Navy officials announced that they would seek approval from DOD to instead hold a one-time, winner-take-all competition between NGSS and GD/BIW to build all DD(X)s. On April 20, 2005, DOD deferred this proposal as premature, but agreed to a Navy proposal to separate the DD(X) system-development and software-development contracts from the DD(X) detailed-design effort. Section 1019 of the Emergency Supplemental Appropriations Act for 2005 (H.R. 1268/P.L. 109-13 of May 11, 2005) effectively prohibits a winner-take-all competition to build all DD(X)s. The provision does not prohibit the Navy from shifting to a new DD(X) acquisition strategy that somehow involves a second shipyard, even if that involvement were limited, for example, to building only one ship in the DD(X) program.

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recently increased significantly, raising questions about the DD(X) program's prospective affordability and cost effectiveness. These developments have heightened concerns among supporters of GD/BIW and Ingalls regarding the futures of the two yards.

Potential Annual Rates and Total Procurement Quantities

Ship deliveries as shown in the revised Deepwater implementation plan suggest that the plan would procure National Security Cutters (NSCs) at a rate of one per year over the next few years, and Offshore Patrol Cutters (OPCs) at a rate of one per year starting a few years from now, growing to two or three per year a few years after that. It appears that a combined NSC-OPC procurement rate of three ships per year is reached around the end of this decade or early in the next decade, depending on which funding plan is pursued, and that in almost all cases, the three ships procured each year are all OPCs.

Although the shipyard skill mix for building NSCs and OPCs is somewhat different from the shipyard skill mix for building DD(X)s, based on their light-ship displacements, procuring a total of four or five NSCs and OPCs per year might provide about as much total shipyard work as procuring one DD(X) per year. The Coast Guard currently estimates that, in FY2002 dollars, NSCs will cost about \$277 million each to procure (or somewhat more if the design is expanded to include certain additional equipment), and that OPCs would cost an average of about \$200 million each to procure. The Navy currently estimates that in FY2002 dollars, follow-on DD(X)s would cost roughly \$2.1 billion each to procure. Using these figures, procuring four or five NSCs and OPCs per year would cost roughly half as much as procuring one DD(X) per year.

If the scope of the Deepwater program is expanded to include a higher level of capacity, the total number of NSCs and OPCs might increase. The 2004 RAND report recommended a Deepwater Force with Level-4 capacity that included, among other things, 44 NSCs and 46 OPCs. As shown earlier in Figure 1, however, the RAND analysis used Deepwater platforms equipped with a Baseline-level of capability. The force levels recommended under the Coast Guard's revised implementation plan suggest that, if Deepwater platforms are equipped with a level of capability equivalent to Increment II or III, then a Deepwater force with Level-4 capacity might include substantially fewer than 44 NSCs and 46 OPCs, and that a Level-3 or Level-2 force would include even smaller numbers.

Even so, an optimized Deepwater force with increased unit capability and Level-3 or -4 capacity would likely include more than the total of 31 to 33 larger cutters (6 to 8 NSCs and 25 OPCs) that are included in the revised implementation plan. Since differences in recommended ship numbers between the revised plan and the 2004 RAND report are more dramatic for NSCs than they are for OPCs, increasing the Deepwater program to an optimized force with Level-3 or Level-4 capacity might increase the number of NSCs more dramatically than the number of OPCs. An optimized

⁷(...continued)

On May 25, 2005, the Navy announced that, in light of Section 1019, it wants to shift to a DD(X) acquisition strategy under which two DD(X)s would be procured in FY2007, with one to be designed and built by NGSS and the other by GD/BIW. Each ship might be split-funded (i.e., incrementally funded) in FY2007 and FY2008. The two yards might then compete for the right to build all subsequent DD(X)s, in which case this strategy could be viewed, at that point, as a "winner-takes-all-remaining-ships" approach.

Deepwater force with increased unit capability and Level-2 capacity might include slightly more than 31 to 33 cutters.

Management Burden Of Cutter Acceleration

Accelerating the entire Deepwater program could increase the Coast Guard's burden in managing the large and complex Deepwater program, and thereby increase program risk. Accelerating procurement of NSCs and OPCs only, however, might not materially increase the Coast Guard's management burden — provided that design work on each class of cutter was completed before procurement of that class was accelerated — because NSCs and OPCs are to incorporate proven rather than developmental systems and because the Coast Guard already plans to overlap procurement of the two classes.

Indeed, accelerating NSC and OPC procurement might actually reduce the Coast Guard's Deepwater management burden by eliminating more quickly the management challenges associated with maintaining legacy cutters and by shortening the period during which the Coast Guard would have to manage NSC and OPC procurement.

Summary Of Potential Advantages And Disadvantages

Potential Advantages. Potential advantages of accelerating and possibly expanding procurement of NSCs and OPCs include the following:

- reducing NSC and OPC unit procurement costs by achieving better production economies of scale (i.e., more economic rates of production);
- more quickly replacing the high operation and support (O&S) costs of legacy cutters with the lower O&S costs of new cutters;
- more quickly increasing the Coast Guard's capabilities toward post-9/11 requirements;
- more quickly eliminating the management burdens associated with maintaining legacy cutters and supervising procurement of the new cutters; and
- providing additional work for GD/BIW and Ingalls during a period of uncertain Navy surface combatant construction work.

Potential Disadvantages. Potential disadvantages of accelerating and possibly expanding procurement of NSCs and OPCs include the following:

- increased annual funding requirements for the next several years for procurement of NSCs and OPCs, which could require, in a situation of constrained funding, offsetting reductions in annual funding for procurement of other Deepwater assets, other Coast Guard priorities, or other DHS priorities;
- a shorter procurement time period to learn about better technologies and incorporate them into cutters that have not yet been built;

- increased shipyard (as opposed to Coast Guard) management burdens associated with supervising a larger number of workers involved in building NSCs and OPCs;
- increased Coast Guard management burdens associated with training crews for the new cutters; and
- a more compressed cutter retirement period (i.e., bloc obsolescence) years from now, when the new Deepwater cutters reach the ends of their service lives, possibly requiring a similarly compressed procurement period at that point to replace the retiring ships.

Navy LCSs vs. Coast Guard Cutters For Homeland Defense

The Littoral Combat Ship (LCS) is a planned new Navy surface combatant. The Navy announced the start of the LCS program in November 2001 as part of a larger restructuring of its surface combatant acquisition efforts. The LCS is to be a small, fast ship that would use modular “plug-and-fight” mission payload packages, including unmanned vehicles (UVs).

The LCS, with a full load displacement of 2,500 to 3,000 tons, is to be close in size to the 3,200-ton OPC. Navy officials in the early stages of the LCS program said that the LCS might prove suitable as the basis for the OPC design, but the Coast Guard did not adopt this approach, apparently in part because of the LCS’s cost. The Navy wants each LCS to cost no more than \$220 million to procure, exclusive of its modular mission packages, while the OPC, as mentioned earlier, is to cost an average of about \$200 million, including all of its built-in mission equipment.

The Navy’s primary intended missions for the LCS are countering enemy mines, submarines, and fast attack craft (i.e., “swarm boats”) in heavily contested littoral (near-shore) waters. Secondary LCS missions, also to be performed in littoral waters, include intelligence, surveillance, and reconnaissance (ISR); maritime intercept; special operations forces (SOF) support; and logistics support for movement of personnel and supplies.

In recent months, some DOD and Navy officials have stated that the LCS might also be suitable for homeland defense operations.⁸ Such missions, however, might also be performed by NSCs, OPCs, and other Deepwater assets.

Navy officials earlier spoke about building a total of perhaps 30 to 60 LCSs. A March 2005 report to the congressional defense committees on potential future Navy force levels, however, shows a potential total force level of 63 to 82 LCSs.⁹ The Chief of Naval Operations has spoken of the possibility of building a total of 75 to 100 LCSs.¹⁰

⁸See, for example, John T. Bennett, “Defense Officials Say Littoral Combat Ships Could Defend U.S. Shores,” *Inside the Pentagon*, October 21, 2004.

⁹For more on the LCS program, see RS21305, *Navy Littoral Combat Ship (LCS): Background and Issues for Congress*, by Ronald O’Rourke, and CRS Report 32109, *op cit*.

¹⁰A recent press article stated that Admiral Vernon Clark, the Chief of Naval Operations,

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Navy statements about the LCS's possible suitability for homeland defense, and the recent apparent increase in the Navy's planned number of LCSs, raise several potential oversight questions for Congress, including the following:

- Do the Coast Guard and Navy have a common view on the division of responsibilities between Navy LCSs and Coast Guard NSCs, OPCs, and other Deepwater assets for performing homeland defense and homeland security missions? Have the two services adequately coordinated their plans for procuring assets that can perform homeland defense and homeland security missions, consistent with the Navy-Coast Guard National Fleet policy statement?¹¹
- Does the Coast Guard believe that the LCS would be better than NSCs, OPCs, or other Deepwater assets for performing certain homeland defense and homeland security missions? If so, which ones, and why? If the Coast Guard believes the LCS would be better for performing these missions, should the revised Deepwater plan be amended to include the procurement of LCSs for the Coast Guard?
- Was the Coast Guard's revised Deepwater implementation plan influenced by an awareness that the Navy might be interested in using the LCS for homeland defense missions, and if so, in what way was the plan influenced?
- What role, if any, did the homeland defense mission play in the Navy's decision to increase the planned procurement quantity of LCSs from a range of 30 to 60 to a range of 63 to 82 (or possibly 75 to 100)?

¹⁰(...continued)

is "absolutely convinced" there will be "a rush to [build] 50," and then a move to construct another 25 or 50 ships. "I think we'll see more than" just 50 or 60 of the vessels, he said in an interview.

(Dave Ahearn, "CNO Clark Sees LCS Fleet Of 75-100 Ships," *Defense Today*, June 3, 2005: 1-3. Bracketed word as in the article.)

An earlier article stated that in a January 2005 speech at the annual Surface Navy Association symposium,

the CNO acknowledged that "the navy is not correctly balanced and optimized for the world of the future, and... faces a three-decade-long effort to fully reform its forces to accommodate national security needs such as anti-terrorism and homeland security."

"This is going to be a dramatically different navy," Adm Clark concluded. "I expect to have 50 to 75, maybe even 100 LCSs out there. Why? Because I think that's the kind of platform you're going to need for the world that we're living in."

(Scott C. Truver, "Transformation: A Bridge Too Far," *Jane's Navy International*, March 2005: 24-26, 28-31. Ellipsis as in the article.)

¹¹The National Fleet policy statement is a joint Navy-Coast Guard document first signed in 1998 and updated in 2002 that commits the two services to coordinate their activities in several areas, including acquisition. Among other things, the document commits each service "to build a National Fleet of multimission surface combatants, major cutters, patrol boats, and aircraft to maximize our effectiveness across all naval and maritime missions."

Timeliness of Detailed Cost And Schedule Information

The Deepwater program is comparable in terms of total acquisition cost, complexity, and lengthy period of acquisition to major DOD acquisition programs. Until the submission to Congress on April 29, 2005 of the Deepwater supplement to the Coast Guard's FY2006 budget,¹² however, information available to Congress on the cost and procurement schedule of the Deepwater program, particularly for years beyond FY2006, appears to have been much less detailed and complete than information that is normally made available to Congress in February or March of each year on the costs and procurement schedules of typical DOD ship or aircraft acquisition programs.

For DOD acquisition programs, information on the costs and procurement schedules of major acquisition programs for the fiscal year under consideration and the next four or five years (e.g., FY2006 and FY2007-FY2011, respectively) is presented in detail in the Future Years Defense Plan (FYDP) and extensive supporting budget-justification documents. This information is usually submitted each year soon after the initial submission of the top-line DOD budget in early February. The defense committees of Congress consider this detailed information on costs and procurement schedules necessary, even critical, to ensuring adequate congressional oversight of these programs. Receiving this detailed information in February or March permits the defense committees to review it in depth in preparing for their budget-review hearings in February, March, and early April. Receiving it in late April, after most or all of these hearings are usually concluded, would significantly reduce its value in supporting the defense committees' oversight and markup activities.

In past years, when planned Coast Guard acquisition programs were not of the scale and complexity contemplated in the Deepwater program, the absence until late April of detailed future-year cost and procurement schedule information may have had only a limited effect on Congress' ability to conduct effective oversight of Coast Guard acquisition efforts. With the advent of the Deepwater program, however, the absence of this kind of detailed information until late April raises the following potential issues for Congress:

- If the submission to Congress in February or March of detailed, multiyear information on costs and procurement schedules of major DOD acquisition programs is considered necessary, even critical, to ensuring adequate congressional oversight of these DOD programs, why would the submission to Congress in February or March of detailed, multiyear information on costs and procurement schedules of the Deepwater program or other large Coast Guard (or DHS) acquisition programs not be necessary or critical to ensure adequate oversight of these Coast Guard (or DHS) programs?
- If, for the Deepwater program, Congress lacks until late April the kind of detailed, multiyear information on costs and procurement schedules that is typically made available to Congress in February or March for major DOD acquisition programs, how might this affect Congress' ability to consider potential adjustments to the

¹²U.S., Coast Guard, *Budget Estimates, Fiscal Year 2006, Integrated Deepwater System*. 50 pp. Page ii of the document states that it is a supplement to the Coast Guard's FY2006 budget submission. The Coast Guard submitted this document to Congress on April 29, 2005, and provided CRS a copy on May 3, 2005. The Coast Guard submitted to Congress another document containing additional information on May 31, 2005, and provided CRS a copy on June 15, 2005.

Deepwater program that could affect procurement schedules and funding requirements in future years?

- Should the Coast Guard (or DHS) be required, for the Deepwater program or other major acquisition efforts, to provide Congress in February or March with the same kind of detailed, multiyear information on costs and procurement schedules that DOD provides to Congress in February or March for its major acquisition programs?
- Should the Coast Guard be given more autonomy to share with Congress detailed information on costs and procurement schedules for the Deepwater program or other acquisition programs?

Deepwater Acquisition Strategy

The Government Accountability Office (GAO) has testified and reported several times on the Deepwater program's acquisition strategy and the issues this strategy raises regarding Coast Guard management of the program.

In addition to this work, it can be noted that the Deepwater acquisition strategy appears similar in certain basic respects to the acquisition strategy for the Army's Future Combat System (FCS), which aims at acquiring an integrated collection of manned and unmanned ground vehicles, air vehicles, sensors, and munitions for the Army.¹³ In particular, the Deepwater and FCS programs are both large, system-of-systems acquisition programs for acquiring multiple types of equipment that are to operate in a networked environment, and both programs are being executed for the government by an industry entity acting as the prime contractor and system integrator. For the Deepwater program, the prime contractor and system integrator is Integrated Coast Guard Systems (ICGS), a business entity jointly owned by Northrop Grumman and Lockheed Martin, while for the FCS program, the lead system integrator (LSI) is Boeing and Science Applications International Corporation (SAIC). Using a private-sector lead integrator to execute a large, system-of-systems acquisition program appears to be a first for both services.

Using a private-sector lead integrator to execute a large, system-of-systems acquisition program offers potential advantages for the government in terms of taking full advantage of the lead integrator's knowledge of available technologies and integration approaches and giving the lead integrator flexibility to make tradeoffs between individual systems so as to optimize the government's investment at the overall, system-of-systems level. As a consequence of these potential advantages, some observers believe that the lead-integrator approach may offer a potential model for future system-of-systems acquisition efforts by DHS, DOD, or other executive branch departments.

¹³For more on the FCS program, see CRS Report RL32888, *The Army's Future Combat System (FCS): Background and Issues for Congress*, by Andrew Feickert.

Other observers, while acknowledging these potential benefits, are concerned that relying on a private-sector lead integrator to execute a large, system-of-systems acquisition program can also create one or more of the following risks for the government:

- Cost control and overall system optimization might be reduced because the lead integrator, in deciding who should provide various parts of the system, might not always employ full and open competition between potential supplier firms, or might sometimes face a conflict of interest in assessing bids from its own subsidiaries against those made by other firms.
- Cost control and innovation might be reduced because the lead integrator, as the incumbent on a large, complex effort, might face little or no real risk of losing the contract in any subsequent competition, and might reject innovations offered by outside firms that could threaten the lead integrator's chosen approach to the problem.
- The government's visibility into program costs and tradeoffs might be inadequate, and the government's in-house capacity for making independent assessments concerning the program might atrophy, possibly making the government overly dependent on information from the lead integrator for tracking, assessing, or making key decisions about the program.

Due in part to concerns over its acquisition strategy, the FCS program in recent months has been a matter of oversight concern in Congress.¹⁴ On April 5, 2005, the Army announced that it was restructuring the business aspects of the FCS program. The restructuring included, among other things, the following actions intended to strengthen the Army's management of the program:

- The Secretary of the Army and the Chief of Staff of the Army will conduct an in-depth review of the program at least three times a year.
- The Secretary and the Chief of Staff will serve as the lead Army officials for all major changes to the program.
- The Army will establish an Army Modular Force Integration Office to ensure that FCS technologies are incorporated into the Army as soon as they are ready, and to integrate and coordinate the FCS program with evolving Army warfighting doctrine and the Army's emerging global communication and information infrastructure. The new office will be overseen by the Acting Under Secretary of the Army and the Vice Chief of Staff of the Army.

¹⁴See, for example, Jen DiMascio, "McCain Questions Army Leaders About FCS Contracting Agreement," *Inside the Army*, March 21, 2004; Jonathan Karp and Andy Pasztor, "Army Program Run By Boeing Faces Challenge By Sen. McCain," *Wall Street Journal*, March 15, 2005: 4. See also John Liang, "Wynne: LSI Concept Working Well For Army's Future Combat System," *InsideDefense.com*, February 13, 2005; Scott Nance, "Army Likely To Increase Use Of Systems Integration Contractors," *Defense Today*, January 10, 2005: 1, 2; Dave Ahearn, "Boeing Doesn't Eclipse Army Oversight Of FCS: General," *Defense Today*, October 27, 2004.

- As an additional oversight measure, the Army Audit Agency, the Army Science Board, and an outside panel of advisors will conduct periodic independent assessments of program cost, schedule, and technical viability.¹⁵

As points of comparison with the last of the above actions by the Army, the Coast Guard, has done, or is doing, the following:

- During the source-selection phase of the Deepwater program, the Coast Guard used an Independent Analysis Government Contractor (or IAGC, staffed originally by the MITRE Corporation and later by Booz Allen Hamilton) to provide the Coast Guard with independent assessments of the bids submitted by the three industry teams that competed for the right to become the Deepwater program prime contractor. The IAGC was stood down following the completion of source selection.¹⁶
- During the source-selection phase and on two subsequent occasions (including, most recently, during the analysis that led to the revised implementation plan), the Coast Guard turned to the Logistics Management Institute (LMI) for independent cost estimates relating to the Deepwater program.¹⁷
- In early 2004, the Coast Guard used MITRE to perform an independent assessment of the process the Coast Guard had developed for performing the Performance Gap Analysis (PGA) that eventually led to the revised Deepwater implementation plan.¹⁸
- As of late-April 2005, a third-party assessment of the use of competition by ICGS was in progress.¹⁹

The broad similarities between the Deepwater and FCS acquisition strategies, and the Army's recent actions to strengthen its management of the FCS program, raise the following potential oversight questions for Congress:

¹⁵U.S. Army News Release, "Army Announces Business Restructuring of the FCS Program," April 5, 2005. [http://www4.army.mil/ocpa/print.php?story_id_key=7125] See also Jen DiMascio, "Army Announces Future Combat System Contract Restructuring," *Inside the Army*, April 11, 2005; and Jonathan Karp and Andy Pasztor, "About-Face: Army's Decision On Boeing Changes Philosophy," *Wall Street Journal*, April 6, 2005.

¹⁶Source: Telephone consultation with Deepwater program office, May 3, 2005.

¹⁷Ibid.

¹⁸MITRE Corporation, *Independent Assessment of U.S. Coast Guard Deepwater Performance Gap Analysis Process*, McLean (VA), 2004. (Version 1.0, March 30, 2004, MITRE Center for Enterprise Modernization, Mclean, Virginia) A copy of this report was provided to CRS by the Coast Guard during the April 28, 2005 briefing.

¹⁹U.S., Coast Guard. *Oversight and Management of the Coast Guard's Integrated Deepwater System*, Washington, 2005. (Rear Adm. Patrick M. Stillman, USCG, Program Executive Officer, Integrated Deepwater System, U.S. Cost Guard Headquarters, Washington, D.C., 27 April 2005) p. 5.

- How do the Coast Guard's arrangements for managing the Deepwater program compare to the Army's arrangements, as recently restructured, for managing the FCS program?
- Are the Army's arrangements for managing the FCS program stronger in some ways than the Coast Guard's arrangements for managing the Deepwater program, and if so, should the Coast Guard consider adopting the stronger Army measures?
- How does the Coast Guard compare to the Army in terms of in-house acquisition-management and system-integration expertise? Does the Coast Guard have enough in-house system-integration expertise to conduct complete and fully independent assessments of ICGS decisions and recommendations regarding the Deepwater program's system-integration approach?
- Should the Coast Guard establish a standing independent organization — perhaps similar to the Deepwater source-selection IAGC (but permanent in nature), or to the Army's outside board of advisors for the FCS program — to provide periodic and ongoing assessments of ICGS decisions and recommendations regarding the Deepwater program, including decisions relating to the program's system-integration approach, or to solicit and assess, on an ongoing basis, proposed innovations for the Deepwater program, particularly from firms outside the ICGS team?
- Have the Coast Guard and Army established a regular process for sharing with each other their experiences in managing the Deepwater and FCS programs, and for trading ideas for improving their management of the programs? If not, would the Coast Guard and Army benefit from establishing such a process?

Madam Chair, Senator Cantwell, distinguished members of the subcommittee, this concludes my testimony. Thank you again for the opportunity to appear before you to discuss these issues. I will be pleased to respond to any questions you might have.